Stantec Consulting Services, Inc.
12034 134th Court NE, Suite 102
Redmond, Washington 98052
Tel: (425) 298-1000
Fax: (425) 298-1019

DATE: May 25, 2012

7-ELEVEN, INC. SEMI-ANNUAL REPORT

Store No.: 25821 Address:	1824 George Washington Way, Richland, Washington
7-Eleven Environmental Engineer:	Mr. Jose Rios
Consulting Co. /Contact Person:	Stantec Consulting Services, Inc. (Stantec) /Mr. Paul Fairbairn
Stantec Project Number:	212302332
Primary Agency/Cleanup Site ID:	Washington State Department of Ecology, CWRO/6650
Facility Site ID:	77113577
Contact:	Ms. Frosti Smith

WORK PERFORMED THIS PERIOD [First Semester - 2012]:

Performed the first semi-annual 2012 groundwater monitoring event and prepared this status report. Groundwater monitoring activities were conducted on March 27, 2012. Groundwater samples were collected from wells MW-3, MW-6, MW-7 and MW-8.

WORK PROPOSED FOR NEXT PERIOD [Second Semester - 2012]:

Perform the second semi-annual 2012 groundwater monitoring event and prepare a status report.

Current phase of project:	Groundwater Monitoring
Frequency of sampling:	Semi-annual
Frequency of monitoring:	Semi-annual
Are liquid phase hydrocarbons (LPH) present on-site:	No
Cumulative LPH recovered to date:	None
LPH recovered this quarter:	None
Bulk soil removed to date:	41 cubic yards
Bulk soil removed this quarter:	None
Water wells or surface waters within 2,000 feet:	Columbia River, approximately 2,000 feet east
Current remediation techniques:	None
Permits for discharge:	None
Approximate depth to groundwater:	16.16 to 17.22 feet below top of casing (TOC)
Groundwater gradient:	To the southwest at 0.003 vertical feet per horizontal foot (ft/ft).

DISCUSSION: The depth to groundwater measured on March 27, 2012 ranged between 16.16 feet below TOC in well MW-7 to 17.22 feet below TOC in well MW-3. For this sampling event, shallow groundwater beneath the site flows to the southwest at an average hydraulic gradient of approximately 0.003 ft/ft. For this sampling event, wells MW-3, MW-6, MW-7 and MW-8 were purged and sampled in accordance with the attached procedures.

Analytical results for this groundwater monitoring event include the following:

- Washington Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A cleanup levels (CULs) for total petroleum hydrocarbons as gasoline (TPH-G) were exceeded in the groundwater samples collected from the monitoring wells MW-6 and MW-7.

- Analyzed petroleum hydrocarbon concentrations were either not reported exceeding their respective Ecology MTCA Method A CULs or were not detected exceeding laboratory practical quantification limits (PQLs) in the groundwater samples collected this period.

Based on these results, Stantec recommends continued periodic groundwater monitoring and sampling of select wells to further evaluate dissolved contaminant concentration trends and seasonal water level fluctuations.

LIMITATIONS AND CERTIFICATIONS

This report was prepared in accordance with the scope of work outlined in Stantec's contract and with generally accepted professional engineering and environmental consulting practices existing at the time this report was prepared and applicable to the location of the site. It was prepared for the exclusive use of 7-Eleven for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Stantec. To the extent that this report is based on information provided to Stantec by third parties, Stantec may have made efforts to verify this third party information, but Stantec cannot guarantee the completeness or accuracy of this information. The opinions expressed and data collected are based on the conditions of the site existing at the time of the field investigations. No other warranties, expressed or implied are made by Stantec.

ATTACHED:

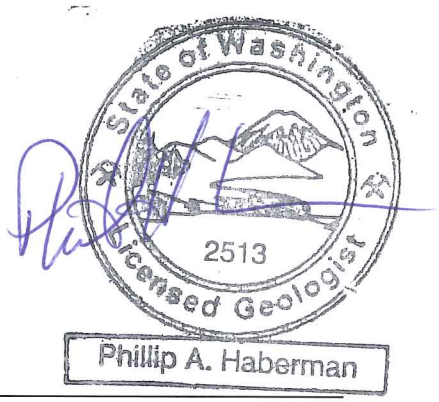
- Site Location Map (Figure 1)
- Site Vicinity Map (Figure 2)
- Groundwater Elevation Map – March 27, 2012 (Figure 3)
- Groundwater Analytical Results – March 27, 2012 (Figure 4)
- Groundwater Monitoring and Analytical Results (Table 1)
- Graph 1: MW-6 Dissolved TPH-G Concentration vs. Time
- Graph 2: MW-7 Dissolved TPH-G Concentration vs. Time
- Graph 3: MW-8 Dissolved TPH-G Concentration vs. Time
- Laboratory Reports and Chain-of-Custody Documentation
- Field Notes
- Stantec Monitoring Well Purging and Sampling Procedures

Prepared by:

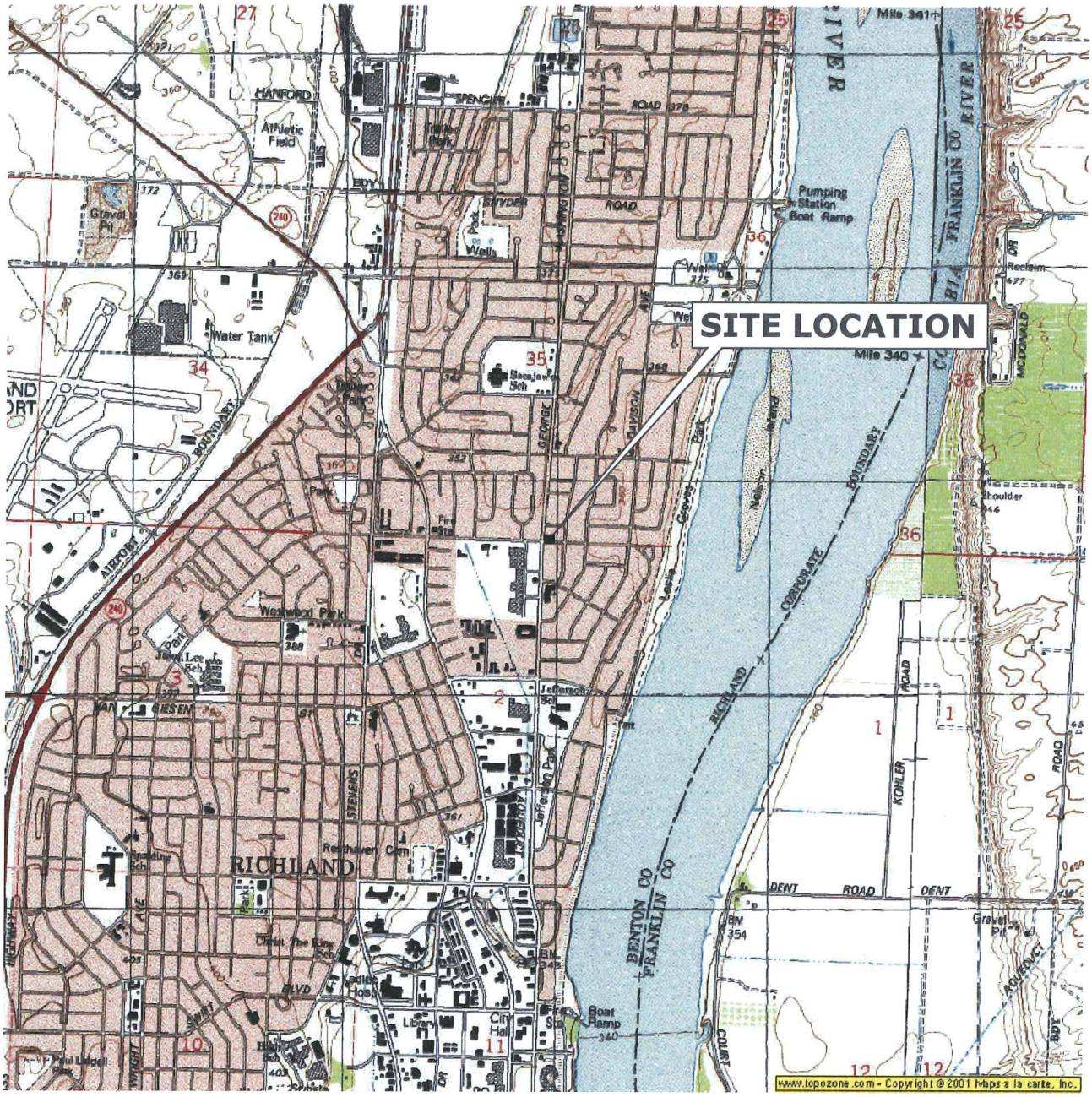
Deitrie Hanson
Geologic Project Specialist

Reviewed by:

Paul Fairbairn
Project Manager



Phil Haberman, L.G., L.E.G.
Senior Geologist



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WASHINGTON

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SCALE (MILES)

1000 0 1000 2000 3000 4000 5000 6000 7000

SCALE (FEET)

REFERENCE: USGS 7.5 MINUTE QUADRANGLE;
RICHLAND, WASHINGTON; 1992

Stantec
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REDMOND, WASHINGTON 98052
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FOR: 7-ELEVEN
FORMER FACILITY NO. 25821
1824 GEORGE WASHINGTON WAY
RICHLAND, WASHINGTON

SITE LOCATION MAP

FIGURE: **1**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
212302332	jr			7/31/09

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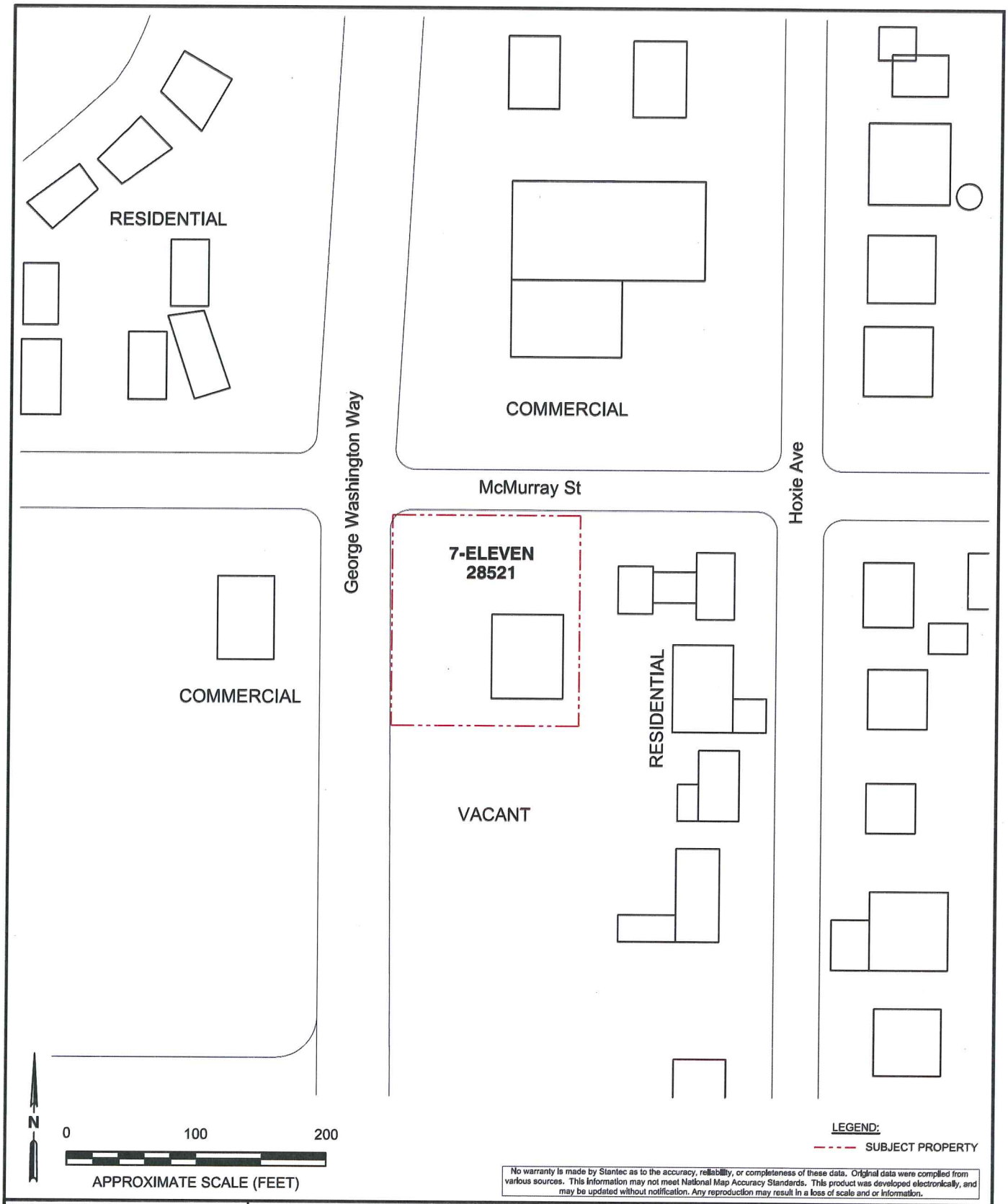

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SITE VICINITY MAP

FIGURE: **2**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
212302332	jr			7/31/09

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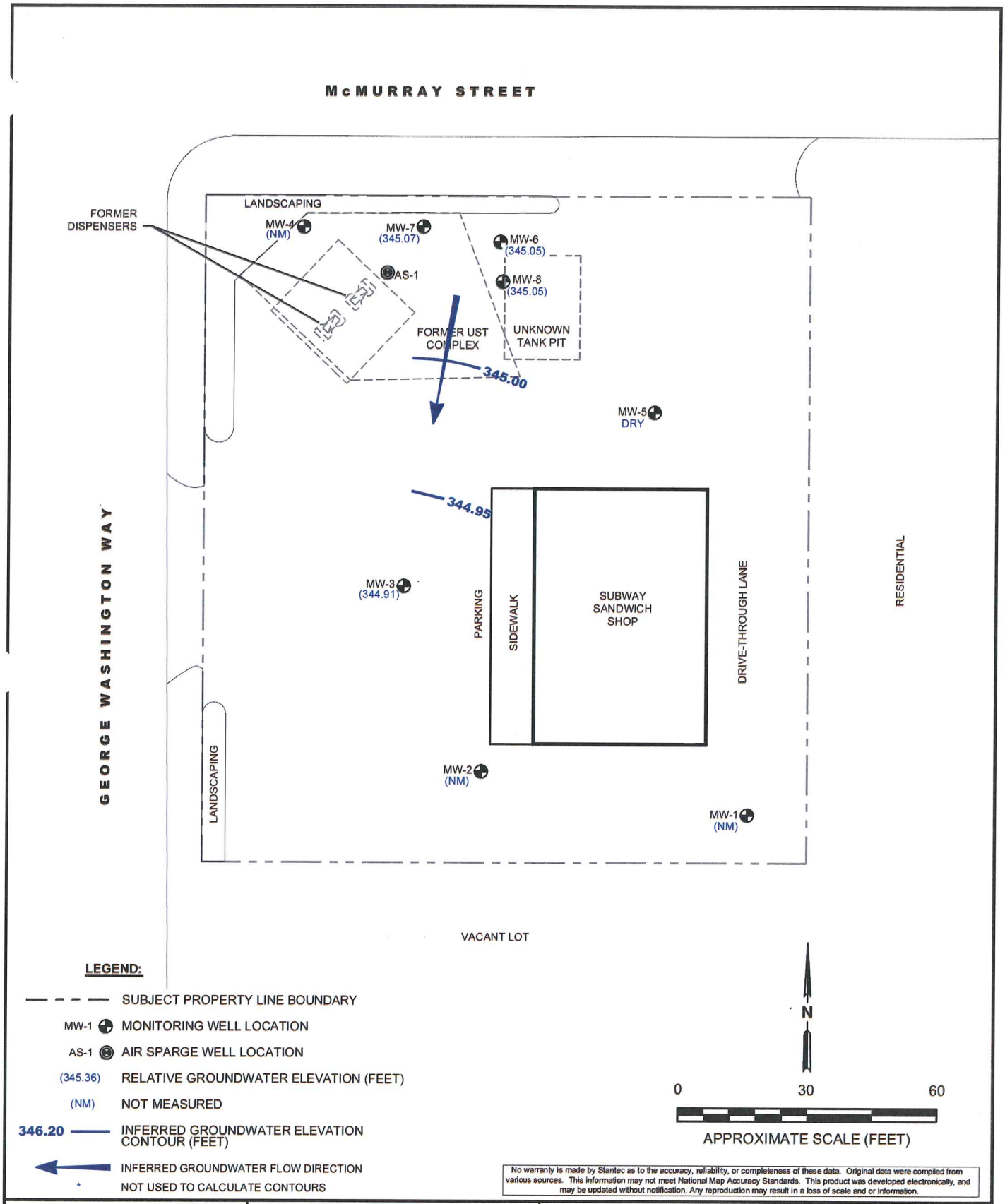

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FACILITY NO. 25821
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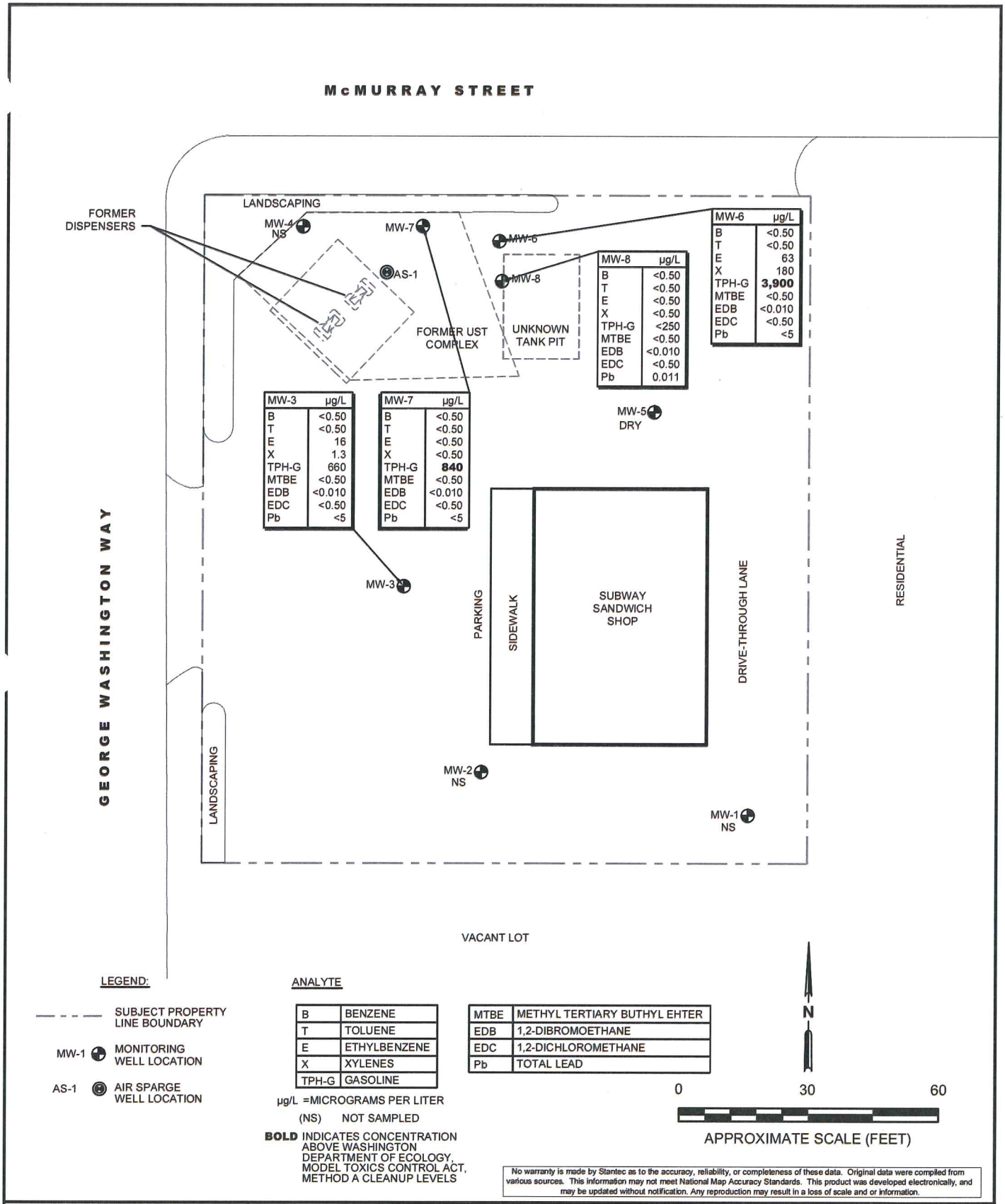
GROUNDWATER ELEVATION MAP MARCH 27, 2012

FIGURE: 3

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
212302332	JCR			MAY 2012



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FOR: 7-ELEVEN
FACILITY NO. 25821
1824 GEORGE WASHINGTON WAY
RICHLAND, WASHINGTON

GROUNDWATER ANALYICAL RESULTS MARCH 27, 2012

FIGURE: 4

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
212302332	JCR			MAY 2012

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TABLE 1
GROUNDWATER MONITORING AND ANALYTICAL RESULTS
7-Eleven Store No. 25821
1824 George Washington Way, Richland, Washington
All results in micrograms per liter (µg/L), except where noted

Well ID (TOC)	Sample Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-G	EDB	EDC	MTBE	Lead	Depth To Groundwater (feet from TOC)	Groundwater Elevation (feet)
MW-1[a]	06/30/89	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	15.56	346.82
362.38	06/24/97	--	--	--	--	--	--	--	--	--	13.47	348.91
	10/25/00	--	--	--	--	--	--	--	--	--	DRY	--
	11/22/00	--	--	--	--	--	--	--	--	--	DRY	--
	04/24/01	--	--	--	--	--	--	--	--	--	DRY	--
	11/02/01	--	--	--	--	--	--	--	--	--	DRY	--
	03/07/02	--	--	--	--	--	--	--	--	--	DRY	--
	09/13/02	--	--	--	--	--	--	--	--	--	DRY	--
	12/13/02	--	--	--	--	--	--	--	--	--	DRY	--
	03/20/03	--	--	--	--	--	--	--	--	--	DRY	--
	06/06/03	--	--	--	--	--	--	--	--	--	DRY	--
	09/18/03	--	--	--	--	--	--	--	--	--	DRY	--
	12/04/03	--	--	--	--	--	--	--	--	--	DRY	--
	04/02/04	--	--	--	--	--	--	--	--	--	DRY	--
	06/29/04	--	--	--	--	--	--	--	--	--	16.45	345.93
	10/06/04	--	--	--	--	--	--	--	--	--	16.50	345.88
	12/23/04	--	--	--	--	--	--	--	--	--	DRY	--
	04/07/05	--	--	--	--	--	--	--	--	--	15.99	346.39
	06/21/05	--	--	--	--	--	--	--	--	--	DRY	--
	09/21/05	--	--	--	--	--	--	--	--	--	DRY	--
	11/22/05	--	--	--	--	--	--	--	--	--	DRY	--
	02/06/06	--	--	--	--	--	--	--	--	--	DRY	--
	05/30/06	--	--	--	--	--	--	--	--	--	DRY	--
	08/14/06	--	--	--	--	--	--	--	--	--	DRY	--
	06/05/07	--	--	--	--	--	--	--	--	--	16.83	345.55
	09/27/07	--	--	--	--	--	--	--	--	--	16.95	345.43
	12/07/07	--	--	--	--	--	--	--	--	--	DRY	--
	04/07/10	<0.20	<1	0.2	1.52	<100	<0.0095	<0.20	<0.20	--	17.73	344.65
MTCA Method A Cleanup Level		**5**	**1,000**	**700**	**1,000**	**800/1,000[b]**	**0.01**	**5**	**20**	**15**		

TABLE 1
GROUNDWATER MONITORING AND ANALYTICAL RESULTS
7-Eleven Store No. 25821
1824 George Washington Way, Richland, Washington
All results in micrograms per liter (µg/L), except where noted

Well ID (TOC)	Sample Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-G	EDB	EDC	MTBE	Lead	Depth To Groundwater (feet from TOC)	Groundwater Elevation (feet)
MW-2	06/30/89	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	14.44	347.88
362.32	09/01/93	<0.3	<0.3	<0.3	<0.5	<10	--	--	--	--	15.29	347.03
	03/18/94	<0.3	<0.3	<0.3	<0.5	<10	--	--	--	--	16.11	346.21
	09/19/94	--	--	--	--	--	--	--	--	--	15.39	346.93
	03/02/95	--	--	--	--	--	--	--	--	--	17.18	345.14
	08/09/95	--	--	--	--	--	--	--	--	--	14.63	347.69
	06/13/96	--	--	--	--	--	--	--	--	--	13.92	348.40
	12/11/96	--	--	--	--	--	--	--	--	--	14.74	347.58
	06/24/97	--	--	--	--	--	--	--	--	--	13.40	348.92
	12/30/97	--	--	--	--	--	--	--	--	--	16.65	345.67
	04/01/98	--	--	--	--	--	--	--	--	--	16.75	345.57
	06/25/98	--	--	--	--	--	--	--	--	--	16.95	345.37
	09/24/98	--	--	--	--	--	--	--	--	--	16.25	346.07
	12/15/98	--	--	--	--	--	--	--	--	--	16.83	345.49
	03/31/00	--	--	--	--	--	--	--	--	--	16.95	345.37
	06/13/00	--	--	--	--	--	--	--	--	--	16.33	345.99
	09/13/00	--	--	--	--	--	--	--	--	--	DRY	--
	10/25/00	--	--	--	--	--	--	--	--	--	16.35	345.97
	11/22/00	--	--	--	--	--	--	--	--	--	DRY	--
	04/24/01	--	--	--	--	--	--	--	--	--	DRY	--
	11/02/01	--	--	--	--	--	--	--	--	--	DRY	--
	03/07/02	--	--	--	--	--	--	--	--	--	DRY	--
	09/13/02	--	--	--	--	--	--	--	--	--	DRY	--
	12/13/02	--	--	--	--	--	--	--	--	--	DRY	--
	03/20/03	--	--	--	--	--	--	--	--	--	17.42	344.90
	06/06/03	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	17.23	345.09
	09/18/03	--	--	--	--	--	--	--	--	--	17.50	344.82
	12/04/03	--	--	--	--	--	--	--	--	--	DRY	--
	04/02/04	--	--	--	--	--	--	--	--	--	18.21	344.11
	06/29/04	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	17.66	344.66
	10/06/04	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	17.84	344.48
	12/23/04	--	--	--	--	--	--	--	--	--	18.41	343.91
	04/07/05	--	--	--	--	--	--	--	--	--	18.96	343.36
	06/21/05	--	--	--	--	--	--	--	--	--	DRY	--
	09/21/05	--	--	--	--	--	--	--	--	--	DRY	--
	11/22/05	--	--	--	--	--	--	--	--	--	DRY	--
	02/06/06	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	18.20	344.12
	05/30/06	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	17.90	344.42
	08/14/06	--	--	--	--	--	--	--	--	--	DRY	--
	04/10/07	--	--	--	--	--	--	--	--	--	DRY	--
	06/05/07	--	--	--	--	--	--	--	--	--	16.00	346.32
	09/27/07	--	--	--	--	--	--	--	--	--	16.95	345.37
	12/07/07	--	--	--	--	--	--	--	--	--	DRY	--
	04/07/10	<0.2	<1	<0.2	<0.6	<100	<0.0095	<0.20	<0.20	--	17.74	344.58
MTCA Method A Cleanup Level		**5**	**1,000**	**700**	**1,000**	**800/1,000[b]**	**0.01**	**5**	**20**	**15**		

TABLE 1
GROUNDWATER MONITORING AND ANALYTICAL RESULTS
7-Eleven Store No. 25821
1824 George Washington Way, Richland, Washington
All results in micrograms per liter (µg/L), except where noted

Well ID (TOC)	Sample Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-G	EDB	EDC	MTBE	Lead	Depth To Groundwater (feet from TOC)	Groundwater Elevation (feet)
MW-3	06/30/89	<0.5	<0.5	<0.5	0.7	--	--	--	--	--	14.19	347.94
362.13	09/01/93	--	--	--	--	--	--	--	--	--	15.12	347.01
	03/18/94	<0.3	<0.3	<0.3	<0.5	<10	--	--	--	--	15.84	346.29
	09/19/94	--	--	--	--	--	--	--	--	--	15.12	347.01
	03/02/95	--	--	--	--	--	--	--	--	--	15.96	346.17
	08/09/95	--	--	--	--	--	--	--	--	--	14.37	347.76
	06/13/96	--	--	--	--	--	--	--	--	--	13.68	348.45
	12/11/96	--	--	--	--	--	--	--	--	--	14.41	347.72
	06/24/97	--	--	--	--	--	--	--	--	--	13.13	349.00
	12/30/97	--	--	--	--	--	--	--	--	--	16.47	345.66
	04/01/98	--	--	--	--	--	--	--	--	--	16.58	345.55
	06/25/98	--	--	--	--	--	--	--	--	--	16.15	345.98
	09/24/98	--	--	--	--	--	--	--	--	--	16.11	346.02
	12/15/98	--	--	--	--	--	--	--	--	--	16.66	345.47
	03/31/00	--	--	--	--	--	--	--	--	--	16.73	345.40
	06/13/00	--	--	--	--	--	--	--	--	--	16.21	345.92
	09/13/00	--	--	--	--	--	--	--	--	--	15.01	347.12
	10/25/00	--	--	--	--	--	--	--	--	--	16.26	345.87
	11/22/00	--	--	--	--	--	--	--	--	--	16.48	345.65
	04/24/01	--	--	--	--	--	--	--	--	--	17.11	345.02
	11/02/01	--	--	--	--	--	--	--	--	--	16.50	345.63
	03/07/02	--	--	--	--	--	--	--	--	--	17.26	344.87
	05/31/02	<0.5	<1.0	<1.0	<3.0	--	--	--	--	--	16.85	345.28
	09/13/02	<0.5	<1.0	<1.0	<2.0	<100	--	--	--	--	16.51	345.62
	12/13/02	<0.5	<1.0	<1.0	<3.0	<100	--	--	--	--	17.04	345.09
	03/20/03	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	17.36	344.77
	06/06/03	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	17.05	345.08
	09/18/03	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	17.34	344.79
	12/04/03	--	--	--	--	--	--	--	--	--	DRY	--
	04/02/04	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	16.00	346.13
	06/29/04	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	17.51	344.62
	10/06/04	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	17.69	344.44
	12/23/04	--	--	--	--	--	--	--	--	--	18.20	343.93
	04/07/05	--	--	--	--	--	--	--	--	--	19.68	342.45
	06/21/05	--	--	--	--	--	--	--	--	--	17.46	344.67
	09/21/05	--	--	--	--	--	--	--	--	--	DRY	--
	11/22/05	--	--	--	--	--	--	--	--	--	18.01	344.12
	02/06/06	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	18.00	344.13
	05/30/06	--	--	--	--	--	--	--	--	--	17.75	344.38
	08/14/06	--	--	--	--	--	--	--	--	--	DRY	--
	04/10/07	--	--	--	--	--	--	--	--	--	17.01	345.12
	06/05/07	--	--	--	--	--	--	--	--	--	16.14	345.99
	09/27/07	--	--	--	--	--	--	--	--	--	16.83	345.30
	12/07/07	--	--	--	--	--	--	--	--	--	DRY	
	06/11/08	<1.0	<1.0	<1.0	<2.0	230	--	--	--	--	16.54	345.59
	10/29/08	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	16.98	345.15
	04/13/09	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	17.15	344.98
	10/22/09	--	--	--	--	--	--	--	--	--	DRY	--
	04/07/10	<0.2	<1.0	<0.2	<0.6	<100	<0.0096	<0.20	<0.20	--	19.55	342.58
	12/16/10	<0.50	<0.50	<0.50	<0.50	<250	--	--	--	--	17.10	345.03
	03/08/11	<0.50	<0.50	<0.50	<0.50	<250	--	--	--	--	17.01	345.12
	08/03/11	<0.50	<0.50	<0.50	<0.50	<250	--	--	--	--	16.13	346.00
	03/27/12	<0.50	<0.50	16.0	1.3	660	<0.010	<0.50	<0.50	<5	17.22	344.91
MTCA Method A Cleanup Level		**5**	**1,000**	**700**	**1,000**	**800/1,000[b]**	**0.01**	**5**	**20**	**15**		

TABLE 1
GROUNDWATER MONITORING AND ANALYTICAL RESULTS
7-Eleven Store No. 25821
1824 George Washington Way, Richland, Washington
All results in micrograms per liter (µg/L), except where noted

Well ID (TOC)	Sample Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-G	EDB	EDC	MTBE	Lead	Depth To Groundwater (feet from TOC)	Groundwater Elevation (feet)
MW-4	06/30/89	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	13.74	348.09
361.83	09/01/93	0.4	<0.3	<0.3	<0.5	<10	--	--	--	--	14.66	347.17
	03/18/94	<0.3	<0.3	<0.3	<0.5	<10	--	--	--	--	15.45	346.38
	09/19/94	--	--	--	--	--	--	--	--	--	13.76	348.07
	03/02/95	--	--	--	--	--	--	--	--	--	15.62	346.21
	08/09/95	--	--	--	--	--	--	--	--	--	13.98	347.85
	06/13/96	--	--	--	--	--	--	--	--	--	13.23	348.60
	12/11/96	--	--	--	--	--	--	--	--	--	13.97	347.86
	06/24/97	--	--	--	--	--	--	--	--	--	12.75	349.08
	12/30/97	--	--	--	--	--	--	--	--	--	15.95	345.88
	04/01/98	--	--	--	--	--	--	--	--	--	16.25	345.58
	06/25/98	--	--	--	--	--	--	--	--	--	15.70	346.13
	09/24/98	--	--	--	--	--	--	--	--	--	15.64	346.19
	12/15/98	--	--	--	--	--	--	--	--	--	16.18	345.65
	03/31/00	--	--	--	--	--	--	--	--	--	16.29	345.54
	06/13/00	--	--	--	--	--	--	--	--	--	15.74	346.09
	09/13/00	--	--	--	--	--	--	--	--	--	15.55	346.28
	10/25/00	--	--	--	--	--	--	--	--	--	15.72	346.11
	11/22/00	--	--	--	--	--	--	--	--	--	16.08	345.75
	04/24/01	<0.5	<0.5	<0.5	<1.0	<100	--	--	--	--	16.66	345.17
	11/02/01	<0.5	<0.5	<0.5	<1.5	<100	--	--	--	--	16.02	345.81
	03/07/02	--	--	--	--	--	--	--	--	--	16.82	345.01
	05/31/02	<0.5	<1.0	<1.0	<1.0	<100	--	--	--	--	16.49	345.34
	09/13/02	<0.5	<1.0	<1.0	<2.0	<100	--	--	--	--	16.09	345.74
	12/13/02	<0.5	<1.0	<1.0	<3.0	<100	--	--	--	--	16.55	345.28
	03/20/03	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	16.92	344.91
	06/06/03	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	16.61	345.22
	09/18/03	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	16.82	345.01
	12/04/03	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	17.38	344.45
	04/02/04	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	17.53	344.30
	06/29/04	--	--	--	--	--	--	--	--	--	17.03	344.80
	10/06/04	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	17.21	344.62
	12/23/04	--	--	--	--	--	--	--	--	--	17.75	344.08
	04/07/05	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	17.89	343.94
	06/21/05	--	--	--	--	--	--	--	--	--	17.03	344.80
	09/21/05	--	--	--	--	--	--	--	--	--	DRY	--
	11/22/05	--	--	--	--	--	--	--	--	--	17.94	343.89
	02/06/06	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	17.55	344.28
	05/30/06	--	--	--	--	--	--	--	--	--	17.25	344.58
	08/14/06	--	--	--	--	--	--	--	--	--	DRY	--
	04/10/07	--	--	--	--	--	--	--	--	--	16.53	345.30
	06/05/07	--	--	--	--	--	--	--	--	--	16.25	345.58
	09/27/07	--	--	--	--	--	--	--	--	--	16.38	345.45
	12/07/07	--	--	--	--	--	--	--	--	--	DRY	--
	04/13/09	--	--	--	--	--	--	--	--	--	16.25	345.58
	10/22/09	--	--	--	--	--	--	--	--	--	16.47	345.36
	04/07/10	<0.20	<1	<0.20	<0.60	<100	<0.0097	<0.20	<0.20	--	17.11	344.72
MTCA Method A Cleanup Level		**5**	**1,000**	**700**	**1,000**	**800/1,000[b]**	**0.01**	**5**	**20**	**15**		

TABLE 1
GROUNDWATER MONITORING AND ANALYTICAL RESULTS
7-Eleven Store No. 25821
1824 George Washington Way, Richland, Washington
All results in micrograms per liter (µg/L), except where noted

Well ID (TOC)	Sample Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-G	EDB	EDC	MTBE	Lead	Depth To Groundwater (feet from TOC)	Groundwater Elevation (feet)
MW-5	07/01/89	<0.5	0.8	<0.5	4.2	--	--	--	--	--	14.05	347.96
362.01	09/01/93	2.0	0.5	5.0	1.0	290	--	--	--	--	14.98	347.03
	03/18/94	<0.3	1.0	7.0	6.0	37	--	--	--	--	15.76	346.25
	09/19/94	1.5	0.7	14.0	38.0	420	--	--	--	--	15.02	346.99
	03/02/95	**5.4**	8.0	13.0	63.0	**930**	--	--	--	--	15.90	346.11
	08/09/95	<0.3	<0.3	1.3	1.0	210	--	--	--	--	14.28	347.73
	06/13/96	<0.5	<0.5	12.7	30.1	424	--	--	--	<2.0	13.53	348.48
	12/11/96	<0.5	0.8	33.5	210.0	**1,860**	--	--	--	<2.0	14.30	347.71
	06/24/97	<0.5	<0.5	<0.5	1.5	<50	--	--	--	4.09	13.00	349.01
	12/30/97	<0.5	<0.5	<0.5	<1.0	<50	--	--	--	<2.0	16.27	345.74
	04/01/98	--	--	--	--	--	--	--	--	--	DRY	--
	06/25/98	<0.3	<0.3	<0.5	<0.6	<100	--	--	--	<5	15.96	346.05
	09/24/98	--	--	--	--	--	--	--	--	--	15.91	346.10
	12/15/98	--	--	--	--	--	--	--	--	--	DRY	--
	03/31/00	--	--	--	--	--	--	--	--	--	DRY	--
	06/13/00	--	--	--	--	--	--	--	--	--	DRY	--
	09/13/00	--	--	--	--	--	--	--	--	--	DRY	--
	10/25/00	--	--	--	--	--	--	--	--	--	DRY	--
	11/22/00	--	--	--	--	--	--	--	--	--	DRY	--
	04/24/01	--	--	--	--	--	--	--	--	--	DRY	--
	11/02/01	--	--	--	--	--	--	--	--	--	DRY	--
	03/07/02	--	--	--	--	--	--	--	--	--	DRY	--
	09/13/02	--	--	--	--	--	--	--	--	--	DRY	--
	12/13/02	--	--	--	--	--	--	--	--	--	DRY	--
	03/20/03	--	--	--	--	--	--	--	--	--	DRY	--
	06/06/03	--	--	--	--	--	--	--	--	--	DRY	--
	09/18/03	--	--	--	--	--	--	--	--	--	DRY	--
	12/04/03	--	--	--	--	--	--	--	--	--	DRY	--
	04/02/04	--	--	--	--	--	--	--	--	--	DRY	--
	06/29/04	--	--	--	--	--	--	--	--	--	17.25	344.76
	10/06/04	--	--	--	--	--	--	--	--	--	17.45	344.56
	12/23/04	--	--	--	--	--	--	--	--	--	DRY	--
	04/07/05	--	--	--	--	--	--	--	--	--	DRY	--
	06/21/05	--	--	--	--	--	--	--	--	--	17.47	344.54
	09/21/05	--	--	--	--	--	--	--	--	--	DRY	--
	05/30/06	--	--	--	--	--	--	--	--	--	DRY	--
	08/14/06	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	18.01	344.00
	04/10/07	--	--	--	--	--	--	--	--	--	DRY	--
	06/05/07	--	--	--	--	--	--	--	--	--	DRY	--
	09/27/07	--	--	--	--	--	--	--	--	--	DRY	--
	12/07/07	--	--	--	--	--	--	--	--	--	DRY	--
	06/11/08	<4.0	<4.0	<4.0	<8.0	<400	--	--	--	--	16.45	345.56
	10/29/08	--	--	--	--	--	--	--	--	--	DRY	--
	04/13/09	--	--	--	--	--	--	--	--	--	DRY	--
	10/22/09	--	--	--	--	--	--	--	--	--	DRY	--
												--
	04/07/10	--	--	--	--	--	--	--	--	--	DRY	--
	12/16/10	--	--	--	--	--	--	--	--	--	DRY	--
	03/08/11	--	--	--	--	--	--	--	--	--	DRY	--
	08/03/11	<0.50	<0.50	<0.50	<0.50	<250	--	--	--	--	15.82	346.19
	03/27/12	--	--	--	--	--	--	--	--	--	DRY	--
MTCA Method A Cleanup Level		**5**	**1,000**	**700**	**1,000**	**800/1,000[b]**	**0.01**	**5**	**20**	**15**		

TABLE 1
GROUNDWATER MONITORING AND ANALYTICAL RESULTS
7-Eleven Store No. 25821
1824 George Washington Way, Richland, Washington
All results in micrograms per liter (µg/L), except where noted

Well ID (TOC)	Sample Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-G	EDB	EDC	MTBE	Lead	Depth To Groundwater (feet from TOC)	Groundwater Elevation (feet)
MW-6	09/01/93	**65.0**	120.0	87.0	**3,000**	**15,000**	--	--	--	--	14.27	347.16
361.43	03/18/94	**14.0**	140.0	82.0	**3,800**	**8,500**	--	--	--	--	15.03	346.40
	09/19/94	<3.0	120.0	140.0	**4,700**	**43,000**	--	--	--	--	14.35	347.08
	03/02/95	**14.0**	38.0	33.0	**1,500**	**15,000**	--	--	--	--	15.21	346.22
	08/09/95	<1.5	32.0	23.0	**1,200**	**15,000**	--	--	--	--	13.59	347.84
	06/13/96	<0.5	1.2	3.2	155	**3,000**		--	--	6.63	12.82	348.61
	12/11/96	3.2	7.1	11.2	387	**4,000**	--	--	--	3.75	13.58	347.85
	06/24/97	<2.50	<2.50	6.4	211	**2,040**	--	--	--	2.58	12.32	349.11
	12/30/97	**17.1**	<2.50	49.7	695	**9,770**	--	--	--	2.47	15.54	345.89
	04/01/98	**28.0**	44.5	328.0	**5,370**	**29,700**	--	--	--	--	15.90	345.53
	06/25/98	1.9	19.0	120.0	**2,200**	**7,700**	--	--	--	8	15.25	346.18
	09/24/98	**54.5**	66.6	202.0	**2,150**	**8,680**	--	--	--	--	15.23	346.20
	12/15/98	<3	525.0	56	**6,500**	**25,000**	--	--	--	13	15.79	345.64
	03/31/00	**<5**	23.0	82	**2,900**	**24,000**	--	--	--	**25**	15.85	345.58
	06/13/00	<0.5	<0.5	88	**2,500**	**19,000**	--	--	--	--	15.26	346.17
	09/13/00	**<50**	<50	<50	**1,100**	**19,000**	--	--	--	--	15.78	345.65
	10/25/00	--	--	--	--	--	--	--	--	--	15.33	346.10
	11/22/00	--	--	--	--	--	--	--	--	--	15.54	345.89
	04/24/01	**<25**	<25	560	**4,900**	**22,000**	--	--	--	--	16.23	345.20
	11/02/01	**<12**	19.0	210	**1,200**	**10,000**	--	--	--	--	16.63	344.80
	03/07/02	<0.5	8.6	83.6	432	**11,900**	--	--	--	--	16.48	344.95
	05/31/02	3.5	3.3	155	889	**6,610**	--	--	--	--	16.09	345.34
	09/13/02	4.5	4.3	252	907	**10,600**	--	--	--	--	15.66	345.77
	12/13/02	<0.5	<1.0	227	889	**8,220**	--	--	--	--	16.16	345.27
	03/20/03	**23.0**	5.9	370	**1,940**	**26,000**	--	--	--	--	16.50	344.93
	06/06/03	4.0	4.0	10.0	10.0	**1,000**	--	--	--	--	16.19	345.24
	09/18/03	4.8	4.0	240	**1,020**	**9,300**[(0)]	--	--	--	--	16.43	345.00
	12/04/03	Sheen Observed									16.81	344.62
	04/02/04	<1.0	<1.0	150	**1,260**	**8,900**	--	--	--	--	17.12	344.31
	06/29/04	3.8	1.1	110	940	**8,300**	--	--	--	--	16.50	344.93
	10/06/04	3.1	1.3	300	**1,620**	**16,000**	--	--	--	--	16.80	344.63
	12/23/04	3.6	<1.0	210	**1,190**	**9,900**	--	--	--	--	17.34	344.09
	04/07/05	<1.0	<1.0	<1.0	<2.0	920	--	--	--	--	16.21	345.22
	06/21/05	<1.0	2.2	1	<2.0	330	--	--	--	--	17.91	343.52
	09/21/05	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	16.41	345.02
	11/22/05	--	--	--	--	--	--	--	--	--	18.04	343.39
	02/06/06	3.8	<1.0	110	400	**6,300**	--	--	--	--	17.11	344.32
	05/30/06	**7.9**	<1.0	130	770	**7,500**	--	--	--	--	16.85	344.58
	08/14/06	**5.4**	<1.0	<1.0	1.3	720	--	--	--	--	17.68	343.75
	11/07/06	**14**	290	**1,300**	**7,600**	**35,000**	--	--	--	--	14.26	347.17
	04/10/07	**12**	<4.0	260	**1,200**	**13,000**	--	--	--	--	16.11	345.32
	06/05/07	**11**	<4.0	140	540	**7,600**	--	--	--	--	15.84	345.59
	09/27/07	**9.0**	<10	620	**3,300**	**20,000**	--	--	--	--	15.93	345.50
	12/07/07	**5.5**	<4.0	280	**1,290**	**9,200**	--	--	--	--	16.42	345.01
	06/11/08	**12**	<10	250	940	**11,000**	--	--	--	--	16.03	345.40
	10/29/08	**7.3**	<4.0	240	**1,040**	**9,000**	--	--	--	--	16.01	345.42
	04/13/09	**9.0**	<4.0	75	198	**5,300**	--	--	--	--	16.15	345.28
	10/22/09	**5.5**	<4.0	90	206	**3,800**	--	--	--	--	16.07	345.36
	04/07/10	<0.4	<2.0	52	97	**2,600**	<0.0096[q]	<0.40	<0.40	--	16.67	344.76
	12/16/10	<0.50	<0.50	73	240	**5,300**	--	--	--	--	16.10	345.33
	03/08/11	<0.50	<0.50	42	140	**3,600**	--	--	--	--	16.15	345.28
	08/03/11	<0.50	<0.50	7.6	30	270	--	--	--	--	16.00	345.43
	03/27/12	<0.50	<0.50	63	180	**3,900**	<0.010	<0.50	<0.50	<5	16.38	345.05
MTCA Method A Cleanup Level		**5**	**1,000**	**700**	**1,000**	**800/1,000**[b]	**0.01**	**5**	**20**	**15**		

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7-Eleven Store No. 25821
1824 George Washington Way, Richland, Washington
All results in micrograms per liter (µg/L), except where noted

Well ID (TOC)	Sample Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-G	EDB	EDC	MTBE	Lead	Depth To Groundwater (feet from TOC)	Groundwater Elevation (feet)
MW-7	06/24/97	--	--	--	--	--	--	--	--	--	12.17	349.06
361.23	04/24/01	--	--	--	--	--	--	--	--	--	16.03	345.20
	11/02/01	<1	1.0	17.0	49.0	**6,100**	--	--	--	--	15.41	345.82
	03/07/02	<0.5	2.2	5.9	13.5	**6,900**	--	--	--	--	16.18	345.05
	05/31/02	1.5	1.6	6.7	28.6	**5,110**	--	--	--	--	15.88	345.35
	09/13/02	3.5	1.2	8.8	13.0	**5,240**	--	--	--	--	15.43	345.80
	12/13/02	<0.5	<1.0	9.0	<3.0	**7,600**	--	--	--	--	15.95	345.28
	03/20/03	**12.0**	<1.0	1.6	3.1	**2,400**	--	--	--	--	16.30	344.93
	06/06/03	**5.7**	<1.0	8.0	17.2	**7,800**	--	--	--	--	15.97	345.26
	09/18/03	**6.1**	<1.0	5.4	5.7	**3,600**[(0)]	--	--	--	--	16.22	345.01
	12/04/03	**7.4**	<5.0	<5.0	<10	**3,300**	--	--	--	--	16.75	344.48
	04/02/04	**6.3**	<1.0	2.0	2.2	**2,500**	--	--	--	--	16.91	344.32
	06/29/04	3.7	<1.0	1.0	<2.0	**1,800**	--	--	--	--	16.30	344.93
	10/06/04	4.6	<1.0	2.0	<2.0	**2,700**	--	--	--	--	16.60	344.63
	12/23/04	**7.8**	1.7	2.5	4.6	**5,100**	--	--	--	--	17.12	344.11
	04/07/05	**6.9**	<1.0	1.1	<2.0	**4,700**	--	--	--	--	17.2	344.03
	06/21/05	**5.7**	<1.0	1.6	1.7	**5,600**	--	--	--	--	15.97	345.26
	09/21/05	<4.0	<4.0	<4.0	<8.0	<400	--	--	--	--	16.91	344.32
	11/22/05	2.6	<1.0	<1.0	<2.0	**1,100**	--	--	--	--	16.82	344.41
	02/06/06	**5.8**	<1.0	1.3	<2.0	**3,300**	--	--	--	--	16.96	344.27
	05/30/06	<1.0	<1.0	<1.0	<2.0	190	--	--	--	--	16.60	344.63
	08/14/06	3.8	<1.0	<1.0	<2.0	250	--	--	--	--	17.29	343.94
	11/07/06	**11**	<1.0	17	18.5	710	--	--	--	--	13.11	348.12
	04/10/07	1.4	<1.0	<1.0	<2.0	750	--	--	--	--	15.91	345.32
	06/05/07	3.0	<1.0	<1.0	<2.0	**910**	--	--	--	--	15.62	345.61
	09/27/07	**5.1**	<4.0	<4.0	<8.0	800	--	--	--	--	15.71	345.52
	12/07/07	**11**	<1.0	<1.0	<2.0	**2,200**	--	--	--	--	16.24	344.99
	06/11/08	<1.0	<1.0	<1.0	<2.0	190	--	--	--	--	15.83	345.40
	10/29/08	<4.0	<4.0	<4.0	<8.0	480	--	--	--	--	15.93	345.30
	04/13/09	1.7	<1.0	<1.0	<2.0	240	--	--	--	--	15.95	345.28
	10/22/09	3.0	1.4	<1.0	4.5	**1,500**	--	--	--	--	15.87	345.36
	04/07/10	<0.2	<1	0.24	1.63	**910**	<0.0096[q]	<0.20	<0.20	--	16.46	344.77
	12/16/10	<0.50	<0.50	<0.50	<0.50	390	--	--	--	--	16.04	345.19
	03/08/11	<0.50	<0.50	<0.50	<0.50	290	--	--	--	--	15.93	345.30
	08/03/11	<0.50	<0.50	<0.50	<0.50	<250	--	--	--	--	15.00	346.23
	03/27/12	<0.50	<0.50	<0.50	<0.50	**840**	<0.010	<0.50	<0.50	<5	16.16	345.07
MTCA Method A Cleanup Level		**5**	**1,000**	**700**	**1,000**	**800/1,000**[b]	**0.01**	**5**	**20**	**15**		

TABLE 1
GROUNDWATER MONITORING AND ANALYTICAL RESULTS
7-Eleven Store No. 25821
1824 George Washington Way, Richland, Washington
All results in micrograms per liter (µg/L), except where noted

Well ID (TOC)	Sample Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-G	EDB	EDC	MTBE	Lead	Depth To Groundwater (feet from TOC)	Groundwater Elevation (feet)
MW-8	04/24/01	<5	40.0	49.0	840.0	**9,200**	--	--	--	--	16.18	345.16
361.34	11/02/01	**5.9**	43.0	32.0	240.0	**4,900**	--	--	--	--	15.56	345.78
	03/07/02	<0.5	<1.0	<1.0	<3.0	326	--	--	--	--	16.34	345.00
	05/31/02	<0.5	<1.0	<1.0	1.4	<100	--	--	--	--	16.04	345.30
	09/13/02	1.6	0.6	20.0	54.5	**1,240**	--	--	--	--	15.59	345.75
	12/13/02	<0.5	<1.0	<1.0	<3.0	<100	--	--	--	--	16.08	345.26
	03/20/03	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	16.43	344.91
	06/06/03	<1.0	<1.0	13.0	44	**1,100**	--	--	--	--	16.03	345.31
	09/18/03	<1.0	<1.0	97	187	**5,200**[o]	--	--	--	--	16.35	344.99
	12/04/03	4.5	1.9	100	57	**4,200**	--	--	--	--	16.75	344.59
	04/02/04	2.1	3.4	96	130	**2,500**	--	--	--	--	17.05	344.29
	06/29/04	2.7	2.2	83	241	**3,800**	--	--	--	--	16.54	344.80
	10/06/04	1.9	2.3	100	156	**4,000**	--	--	--	--	16.63	344.71
	12/23/04	2.5	4.1	67	11.8	**1,900**	--	--	--	--	17.26	344.08
	04/07/05	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	17.37	343.97
	06/21/05	<1.0	2.3	1.2	1.1	280	--	--	--	--	16.15	345.19
	09/21/05	**16.0**	<4.0	<4.0	<8.0	<400	--	--	--	--	17.01	344.33
	11/22/05	<1.0	<1.0	<1.0	<2.0	<100	--	--	--	--	16.95	344.39
	02/06/06	<1.0	<1.0	1.4	<2.2	190	--	--	--	--	17.09	344.25
	05/30/06	<1.0	<1.0	1.0	29.0	450	--	--	--	--	16.80	344.54
	08/14/06	--	--	--	--	--	--	--	--	--	17.47	343.87
	11/07/06	**12**	330	**1,600**	**9,500**	**36,000**	--	--	--	--	13.24	348.10
	04/10/07	<4.0	<4.0	<4.0	<8.0	<400	--	--	--	--	16.04	345.30
	06/05/07	<1.0	<1.0	<1.0	7.2	210	--	--	--	--	15.76	345.58
	09/27/07	<4.0	<4.0	8.7	4.9	<400	--	--	--	--	15.85	345.49
	12/07/07	<4.0	<4.0	<4.0	<8.0	<400	--	--	--	--	16.32	345.02
	06/11/08	<4.0	<4.0	<4.0	<8.0	<400	--	--	--	--	15.96	345.38
	10/29/08	<1.0	<1.0	11	<2.0	180	--	--	--	--	16.05	345.29
	04/13/09	4.3	9.6	3.4	10.1	230	--	--	--	--	16.10	345.24
	10/22/09	<1.0	<1.0	22	18.0	640	--	--	--	--	16.00	345.34
	04/07/10	<0.2	<1.0	0.75	0.31	130	<0.0096	<0.20	<0.20	--	16.61	344.73
	12/16/10	<0.50	<0.50	1.9	18	<250	--	--	--	--	16.20	345.14
	03/08/11	<0.50	<0.50	<0.50	<0.50	<250	--	--	--	--	16.05	345.29
	08/03/11	<0.50	<0.50	<0.50	<0.50	<250	--	--	--	--	15.12	346.22
	03/27/12	<0.50	<0.50	<0.50	<0.50	<250	<0.010	<0.50	<0.50	11	16.29	345.05
MTCA Method A Cleanup Level		**5**	**1,000**	**700**	**1,000**	**800/1,000**[b]	**0.01**	**5**	**20**	**15**		

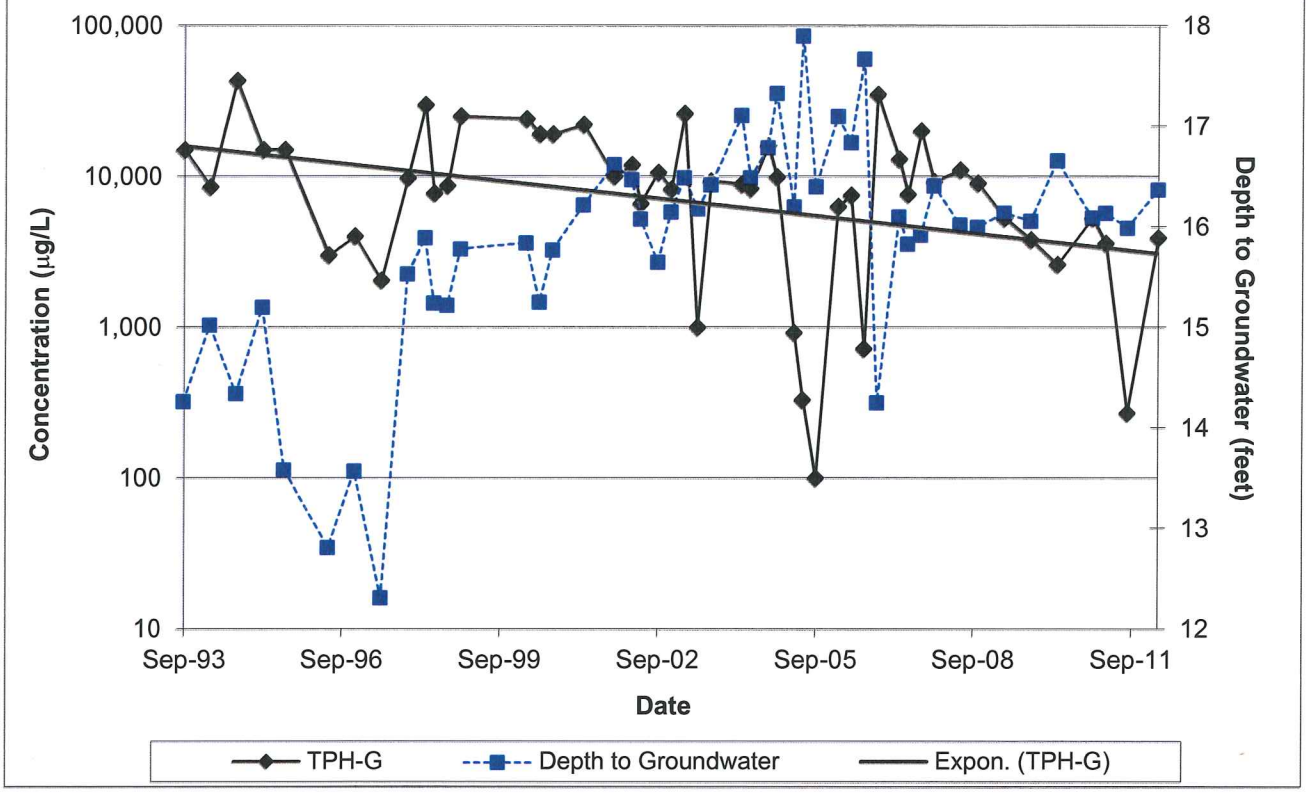
TOC = top of casing elevation. Elevations are based on a survey by Rogers Surveying, Inc. and are relative to mean sea level.
TPH-G = total petroleum hydrocarbons as gasoline
mg/L = milligrams per liter
< = less than the laboratory practical quantitation limits
-- = not measured, not available or not sampled
[o] = Hydrocarbons outside the defined gasoline range are present in the sample
[q] = surrogate recovery is outside of the control limits
MTCA = Model Toxics Control Act

Bold values exceed MTCA Method A Cleanup Levels

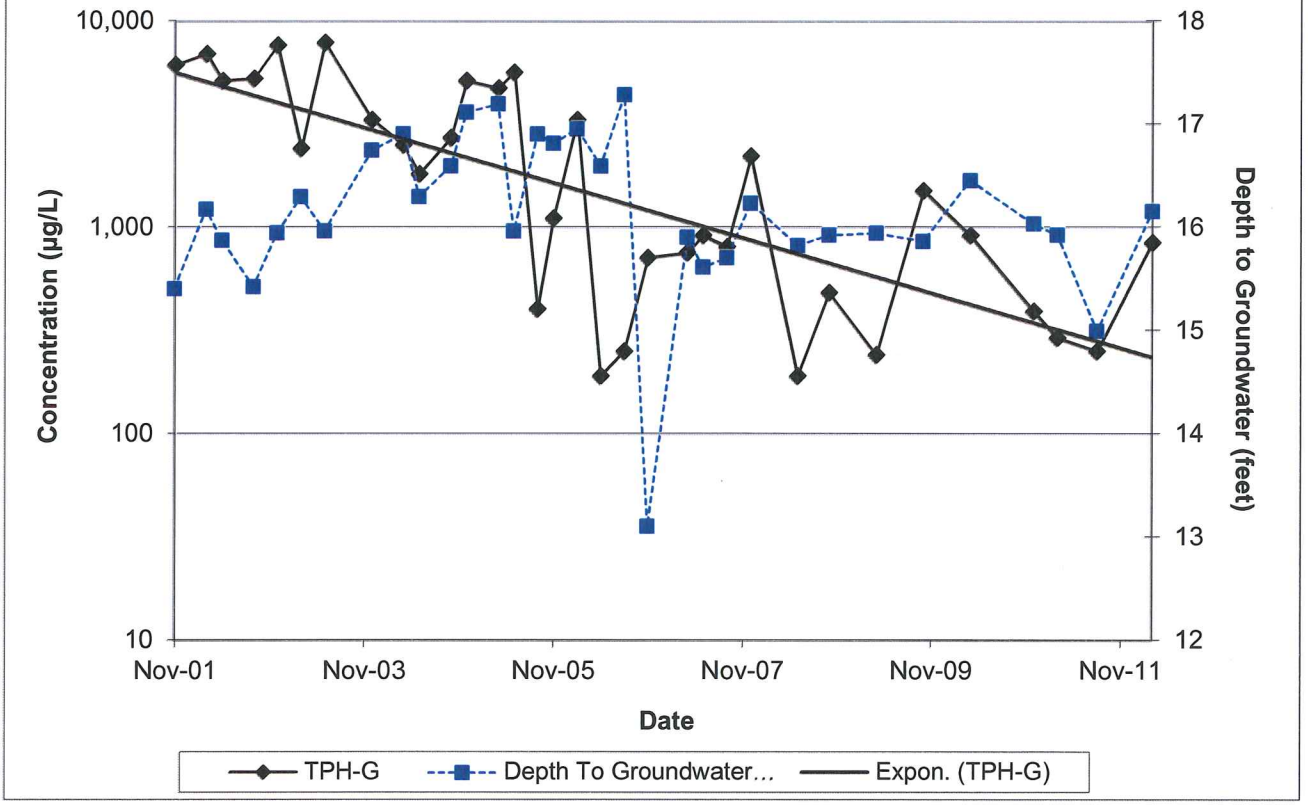
[a] MW-1 has been dry and not sampled since 09/01/93

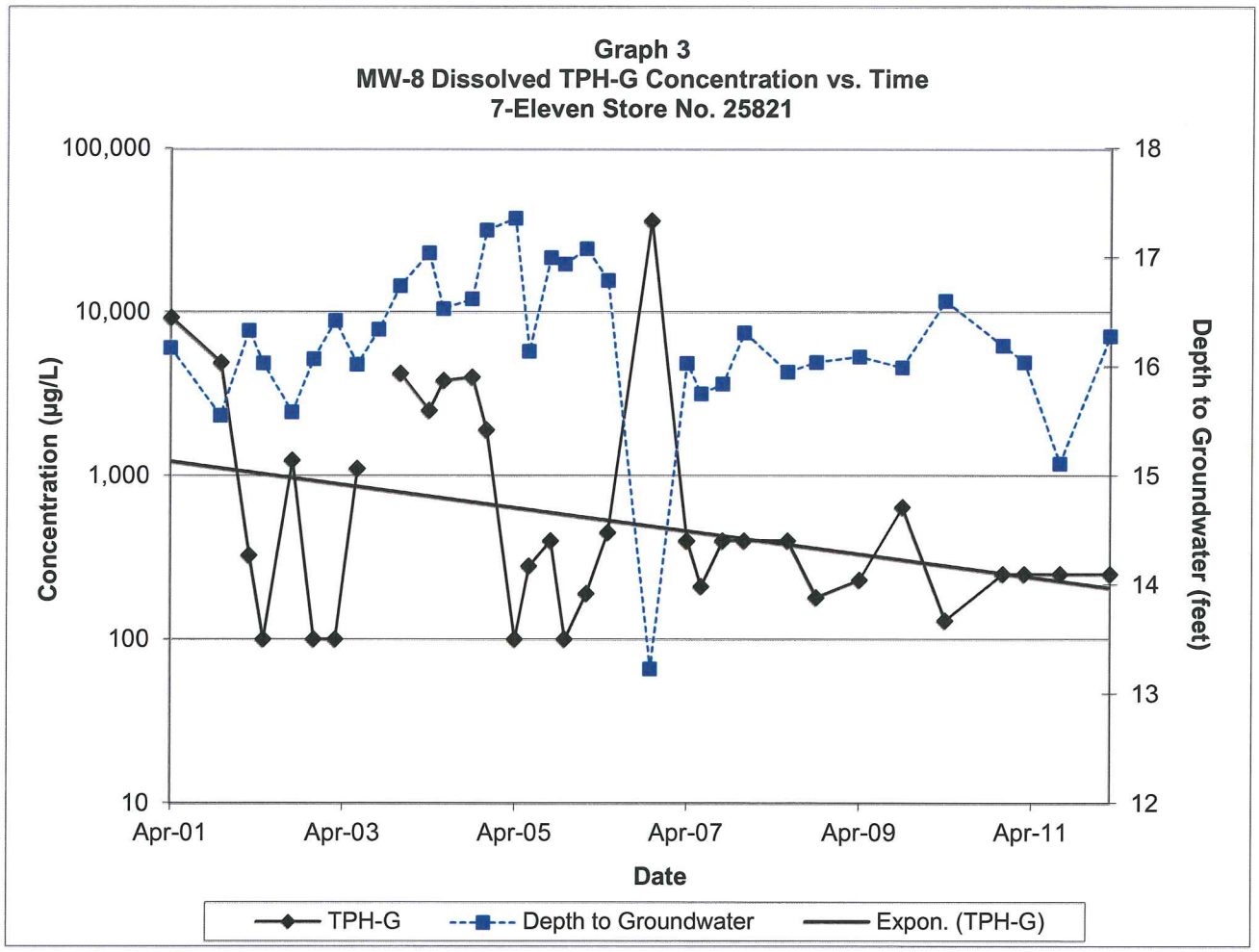
[b] The TPH-G cleanup level is reduced from 1,000 µg/L to 800 µg/L if benzene is present in the sample

Graph 1
MW-6 Dissolved TPH-G Concentration vs. Time
7-Eleven Store No. 25821

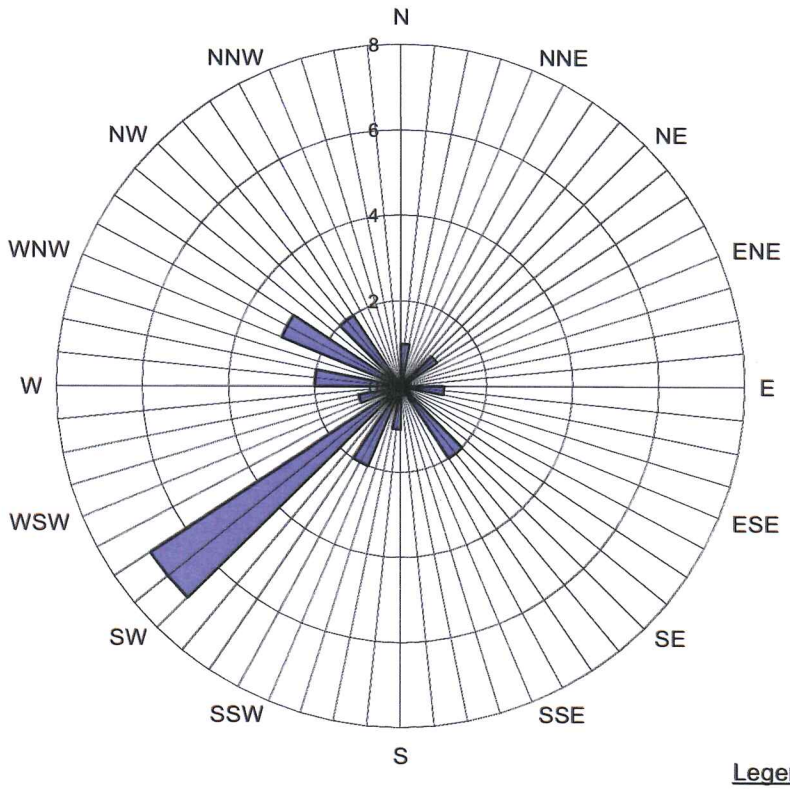


Graph 2
MW-7 Dissolved TPH-G Concentration vs. Time
7-Eleven Store No. 25821




Graph 3
MW-8 Dissolved TPH-G Concentration vs. Time
7-Eleven Store No. 25821
100,000
10,000
1,000
100
10
Concentration (µg/L)
18
17
16
15
14
13
12
Depth to Groundwater (feet)
Apr-01
Apr-03
Apr-05
Apr-07
Apr-09
Apr-11
Date
TPH-G
Depth to Groundwater
Expon. (TPH-G)

Graph 4
Groundwater Flow Direction Rose Diagram
7-Eleven Store No. 25821
1824 George Washington Way
Richland, Washington



Groundwater Flow Direction

Legend
Concentric Circles represent Quarterly Montoring Events
Fourth Quarter 2002 through First Quarter 2012
23 Data Points Shown

KIFF Analytical LLC

Report Number : 80828
Date : 04/05/2012

Laboratory Results

Paul Fairbairn
Stantec Consulting Corporation - Redmond, WA
12034 134th Court Northeast Suite 102
Redmond, WA 98052

Subject : 4 Water Samples
Project Name : 7-11#25821, Richland, WA
Project Number : 212302332.230.0400

Dear Mr. Fairbairn,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed. Testing procedures comply with the 2003 NELAC and TNI 2009 standards. Laboratory results relate only to the samples tested. This report may be freely reproduced in full, but may only be reproduced in part with the express permission of Kiff Analytical, LLC. Kiff Analytical, LLC is certified by the State of California under the National Environmental Laboratory Accreditation Program (NELAP), lab # 08263CA. If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Troy G. Turpen

Troy Turpen

KIFF Analytical LLC

Report Number : 80828
Date : 04/05/2012

Project Name : **7-11#25821, Richland, WA**
Project Number : **212302332.230.0400**

Sample : **MW-3** Matrix : Water Lab Number : 80828-01
Sample Date :03/27/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Lead	< 0.0050	0.0050	mg/L	EPA 200.7	04/05/12 13:16
Benzene	< 0.50	0.50	ug/L	EPA 8260B	04/03/12 23:13
Toluene	< 0.50	0.50	ug/L	EPA 8260B	04/03/12 23:13
Ethylbenzene	**16**	0.50	ug/L	EPA 8260B	04/03/12 23:13
Total Xylenes	**1.3**	0.50	ug/L	EPA 8260B	04/03/12 23:13
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	04/03/12 23:13
Gasoline Range Organics	**660**	250	ug/L	NWTPH-Gx	04/03/12 11:11
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	04/03/12 23:13
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	04/03/12 23:13
Toluene - d8 (Surr)	106		% Recovery	EPA 8260B	04/03/12 23:13
4-Bromofluorobenzene (Surr)	88.4		% Recovery	NWTPH-Gx	04/03/12 11:11

KIFF Analytical LLC

Report Number : 80828
Date : 04/05/2012

Project Name : **7-11#25821, Richland, WA**
Project Number : **212302332.230.0400**

Sample : **MW-6** Matrix : Water Lab Number : 80828-02
Sample Date :03/27/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Lead	< 0.0050	0.0050	mg/L	EPA 200.7	04/05/12 13:20
Benzene	< 0.50	0.50	ug/L	EPA 8260B	04/03/12 23:50
Toluene	< 0.50	0.50	ug/L	EPA 8260B	04/03/12 23:50
Ethylbenzene	**63**	0.50	ug/L	EPA 8260B	04/03/12 23:50
Total Xylenes	**180**	0.50	ug/L	EPA 8260B	04/03/12 23:50
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	04/03/12 23:50
Gasoline Range Organics	**3900**	250	ug/L	NWTPH-Gx	04/03/12 12:20
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	04/03/12 23:50
1,2-Dichloroethane-d4 (Surr)	99.7		% Recovery	EPA 8260B	04/03/12 23:50
Toluene - d8 (Surr)	106		% Recovery	EPA 8260B	04/03/12 23:50
4-Bromofluorobenzene (Surr)	93.2		% Recovery	NWTPH-Gx	04/03/12 12:20

KIFF Analytical LLC

Report Number : 80828
Date : 04/05/2012

Project Name : **7-11#25821, Richland, WA**
Project Number : **212302332.230.0400**

Sample : **MW-7** Matrix : Water Lab Number : 80828-03
Sample Date :03/27/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Lead	< 0.0050	0.0050	mg/L	EPA 200.7	04/05/12 13:24
Benzene	< 0.50	0.50	ug/L	EPA 8260B	04/04/12 00:21
Toluene	< 0.50	0.50	ug/L	EPA 8260B	04/04/12 00:21
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	04/04/12 00:21
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	04/04/12 00:21
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	04/04/12 00:21
Gasoline Range Organics	**840**	250	ug/L	NWTPH-Gx	04/03/12 12:55
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	04/04/12 00:21
1,2-Dichloroethane-d4 (Surr)	98.8		% Recovery	EPA 8260B	04/04/12 00:21
Toluene - d8 (Surr)	106		% Recovery	EPA 8260B	04/04/12 00:21
4-Bromofluorobenzene (Surr)	86.5		% Recovery	NWTPH-Gx	04/03/12 12:55

KIFF Analytical LLC

Report Number : 80828
Date : 04/05/2012

Project Name : **7-11#25821, Richland, WA**
Project Number : **212302332.230.0400**

Sample : **MW-8** Matrix : Water Lab Number : 80828-04
Sample Date :03/27/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Lead	**0.011**	0.0050	mg/L	EPA 200.7	04/05/12 13:28
Benzene	< 0.50	0.50	ug/L	EPA 8260B	04/04/12 00:53
Toluene	< 0.50	0.50	ug/L	EPA 8260B	04/04/12 00:53
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	04/04/12 00:53
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	04/04/12 00:53
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	04/04/12 00:53
Gasoline Range Organics	< 250	250	ug/L	NWTPH-Gx	04/03/12 13:29
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	04/04/12 00:53
1,2-Dichloroethane-d4 (Surr)	99.3		% Recovery	EPA 8260B	04/04/12 00:53
Toluene - d8 (Surr)	104		% Recovery	EPA 8260B	04/04/12 00:53
4-Bromofluorobenzene (Surr)	86.4		% Recovery	NWTPH-Gx	04/03/12 13:29

Report Number : 80828

Date : 04/05/2012

QC Report : Method Blank Data

Project Name : **7-11#25821, Richland, WA**

Project Number : **212302332.230.0400**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Lead	< 0.0050	0.0050	mg/L	EPA 200.7	04/05/2012
Gasoline Range Organics	< 250	250	ug/L	NWTPH-Gx	04/03/2012
4-Bromofluorobenzene (Surr)	85.4		%	NWTPH-Gx	04/03/2012
Benzene	< 0.50	0.50	ug/L	EPA 8260B	04/03/2012
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	04/03/2012
Toluene	< 0.50	0.50	ug/L	EPA 8260B	04/03/2012
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	04/03/2012
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	04/03/2012
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	04/03/2012
1,2-Dichloroethane-d4 (Surr)	99.6		%	EPA 8260B	04/03/2012
Toluene - d8 (Surr)	105		%	EPA 8260B	04/03/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 [illegible]s, CA 95618 530-297-4800

Report Number : 80828

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 04/05/2012

Project Name : **7-11#25821, Richland, WA**

Project Number : **212302332.230.0400**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
1,2-Dichloroethane														
	80842-10	<0.50	40.0	40.0	41.5	40.5	ug/L	EPA 8260B	4/3/12	104	101	2.37	75.7-122	25
Benzene														
	80842-10	<0.50	40.0	40.0	39.8	38.3	ug/L	EPA 8260B	4/3/12	99.4	95.9	3.65	80-120	25
Ethylbenzene														
	80842-10	<0.50	40.0	40.0	42.8	41.4	ug/L	EPA 8260B	4/3/12	107	103	3.35	80-120	25
Methyl-t-butyl ether														
	80842-10	<0.50	40.0	40.0	38.0	37.7	ug/L	EPA 8260B	4/3/12	94.9	94.2	0.802	69.7-121	25
P + M Xylene														
	80842-10	<0.50	40.0	40.0	41.1	40.2	ug/L	EPA 8260B	4/3/12	103	100	2.45	76.8-120	25
Toluene														
	80842-10	<0.50	40.0	40.0	43.2	41.4	ug/L	EPA 8260B	4/3/12	108	104	4.26	80-120	25
Lead														
	80827-01	< 0.0050	0.400	0.400	0.399	0.393	mg/L	EPA 200.7	4/5/12	99.8	98.2	1.56	75-125	20

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 80828

QC Report : Laboratory Control Sample (LCS)

Date : 04/05/2012

Project Name : **7-11#25821, Richland, WA**

Project Number : **212302332.230.0400**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Lead	0.400	mg/L	EPA 200.7	4/5/12	101	85-115
1,2-Dichloroethane	40.0	ug/L	EPA 8260B	4/3/12	102	75.7-122
Benzene	40.0	ug/L	EPA 8260B	4/3/12	97.6	80-120
Ethylbenzene	40.0	ug/L	EPA 8260B	4/3/12	104	80-120
Methyl-t-butyl ether	40.0	ug/L	EPA 8260B	4/3/12	93.0	69.7-121
P + M Xylene	40.0	ug/L	EPA 8260B	4/3/12	102	76.8-120
Toluene	40.0	ug/L	EPA 8260B	4/3/12	106	80-120

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2795 2nd Street, Suite 30[illegible]vis, CA 95618 530-297-4800

Report Number : 80828

Date : 04/05/2012

QC Report : Sample Duplicate

Project Name : **7-11#25821, Richland, WA**

Project Number : **212302332.230.0400**

Parameter	Sample ID	Units	Analysis Method	Date Analyzed	Sample Value	Duplicate Value	RPD	RPD Limit
Gasoline Range Organics	80828-01	ug/L	NWTPH-Gx	4/3/12	664	634	4.70	25

NC RPD not calculated. Both Sample and Duplicate < Lab PQL

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

KIFF Analytical LLC

2795 2nd Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. 80828

Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): Paul Fairbairn	Washington EIM Report? ☑ Yes ☐ No
Company / Address: Stantec-Redmond, WA 12034 134th Court NE, Suite 102, Redmond, WA 98052	User Location ID: 7-11#25821, Richland, WA
Phone Number: 425-298-1000	Global ID:
Fax Number: 425-298-1019	User Study ID: 7-11#25821, Richland, WA
Project #: 212302332.230.0400 P.O. #: 230.0400	Bill to:
Project Name: 7-11#25821, Richland, WA	Sampler Signature:
Project Address: 1824 George Washington Wy Richland, WA	

Sample Designation	Sampling Date	Sampling Time	Container: 40 ml VOA	Container: Sleeve	Container: Poly	Container: Glass	Container: Tedlar	Preservative: HCl	Preservative: HNO_3	Preservative: None	Matrix: Water	Matrix: Soil	Matrix: Air	MTBE @ 0.5 ppb (EPA 8260B)	BTEX (EPA 8260B)	NW-TPH Gx	5 Oxygenates (MTBE, DIPE, ETBE, TAME, TBA) (EPA 8260B)	7 Oxygenates (5 oxy + EtOH, MeOH) (EPA 8260B)	Lead Scav. (1,2-DCA) (EPA 8260B)	Volatile Halocarbons (EPA 8260B)	Volatile Organics Full List (EPA 8260B)	Volatile Organics (EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	CAM 17 Metals (EPA 200.7 / 6010)	5 Waste Oil Metals (Cd,Cr,Ni,Pb,Zn) (EPA 200.7 / 6010)	Mercury (EPA 245.1 / 7470 / 7471)	Total Lead (EPA 200.7 / 6010)	W.E.T. Lead (STLC)	NW-TPHDx	EDB (EPA 504.1)			For Lab Use Only
MW-3	03/27/12	0715	5		1			HCl	–	None	X			X	X	X			X									X			X			01
[redacted]																																		
MW-6	03/27/12	0900	8		1			6	1	2	X			X	X	X			X									X			X			02
MW-7	"	0825	8		1			6	1	2	X			X	X	X			X									X			X			03
MW-8	"	0750	8		1			6	1	2	X			X	X	X			X									X			X			04

TAT: ☐ 12 hr ☐ 24 hr ☐ 48hr ☐ 72hr ☑ 1 wk

Relinquished by:	Date 03/28/12	Time 1200	Received by: KIFF RCP	3/29/12 10:45 AM
Relinquished by: KIFF RCP	Date 3/29/12	Time 10:45 AM	Received by:	
Relinquished by:	Date 033012	Time 1550	Received by Laboratory: Kiff Analytical LLC	

Remarks:

For Lab Use Only: Sample Receipt

Temp °C	Initials	Date	Time	Therm. ID #	Coolant Present
					Yes / No

Distribution: White - Lab; Pink - Originator
Rev: 031308

KIFF Analytical LLC

SAMPLE RECEIPT CHECKLIST

RECEIVER: TJB (Initials)

SRG#: 80828 Date: 033012

Project ID: 7-11 #25821, Richland, WA

Method of Receipt: ☐ Courier ☐ Over-the-counter ☒ Shipper

COC Inspection

Is COC present?	☒ Yes	☐ No	
Custody seals on shipping container?	☒ Intact	☐ Broken ☐ Not present ☐ N/A	
Is COC Signed by Relinquisher? ☒ Yes ☐ No Dated?	☒ Yes	☐ No	
Is sampler name legibly indicated on COC?	☐ Yes	☒ No	
Is analysis or hold requested for all samples?	☒ Yes	☐ No	
Is the turnaround time indicated on COC?	☒ Yes	☐ No	write-overs
Is COC free of whiteout and uninitialed cross-outs?	☐ Yes	☐ No, Whiteout	☒ No, Cross-outs

Sample Inspection

Coolant Present: ☒ Yes ☐ No (includes water)

Temperature °C 2.7 Therm. ID# IR-4 Initial TJB Date/Time 033012/1518 ☐ N/A

Are there custody seals on sample containers?	☐ Intact	☐ Broken	☒ Not present	
Do containers match COC? ☐ Yes ☒ No ☐ No, COC lists absent sample(s)		☐ No, Extra sample(s) present		
Are there samples matrices other than soil, water, air or carbon?	☐ Yes	☒ No		
Are any sample containers broken, leaking or damaged?	☐ Yes	☒ No		
Are preservatives indicated? ☒ Yes, on sample containers	☒ Yes, on COC	☐ Not indicated	☐ N/A	
Are preservatives correct for analyses requested?	☒ Yes	☐ No	☐ N/A	
Are samples within holding time for analyses requested?	☒ Yes	☐ No		
Are the correct sample containers used for the analyses requested?	☒ Yes	☐ No		
Is there sufficient sample to perform testing?	☒ Yes	☐ No		

Does any sample contain product, have strong odor or are otherwise suspected to be hot? ☐ Yes ☒ No

Receipt Details

Matrix WA	Container type VOA	# of containers received 32
Matrix WA	Container type Poly	# of containers received 4
Matrix	Container type	# of containers received

Date and Time Sample Put into Temp Storage Date: 033012 Time: 1550

Quicklog

Are the Sample ID's indicated:	☐ On COC	☐ On sample container(s)	☒ On Both	☐ Not indicated
If Sample ID's are listed on both COC and containers, do they all match?	☒ Yes	☐ No	☐ N/A	
Is the Project ID indicated:	☐ On COC	☐ On sample container(s)	☒ On Both	☐ Not indicated
If project ID is listed on both COC and containers, do they all match?	☒ Yes	☐ No	☐ N/A	
Are the sample collection dates indicated:	☐ On COC	☐ On sample container(s)	☒ On Both	☐ Not indicated
If collection dates are listed on both COC and containers, do they all match?	☒ Yes	☐ No	☐ N/A	
Are the sample collection times indicated:	☐ On COC	☐ On sample container(s)	☒ On Both	☐ Not indicated
If collection times are listed on both COC and containers, do they all match?	☒ Yes	☐ No	☐ N/A	

COMMENTS: No method indicated for Total Lead. The COC lists 5 HCl VOAs and 0 unpreserved VOAs for sample -01, but 6 HCl VOAs and 2 unpreserved VOAs were received for this sample. TJB 033012 1559

Leaders in Analytical Science and Service

KIFF Analytical LLC

Subcontract Laboratory Report Attachments

2795 Second Street, Suite 300 Davis, CA 95618
tel 530.297.4800 fax 530.297.4808
www.kiffanalytical.com

Calscience Environmental Laboratories, Inc.

CALSCIENCE

WORK ORDER NUMBER: 12-03-2079

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Kiff Analytical

Client Project Name: 7-11# 25821, Richland, WA

Attention: Joel Kiff
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Amanda Porter

Approved for release on 04/6/2012 by:
Amanda Porter
Project Manager

ResultLink ▸

Email your PM ▸

Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Calscience Environmental Laboratories, Inc.

Contents

Client Project Name: 7-11# 25821, Richland, WA
Work Order Number: 12-03-2079

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 03/31/12
Work Order No: 12-03-2079
Preparation: EPA 504.1 Ext.
Method: EPA 504.1

Project: 7-11# 25821, Richland, WA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**12-03-2079-1-A**	**03/27/12 09:15**	**Aqueous**	**GC 40**	**04/02/12**	**04/03/12 05:04**	**120402L05**

Parameter	Result	RL	DF	Qual	Units
1,2-Dibromoethane	ND	0.010	1		ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**12-03-2079-2-A**	**03/27/12 09:00**	**Aqueous**	**GC 40**	**04/02/12**	**04/03/12 05:26**	**120402L05**

Parameter	Result	RL	DF	Qual	Units
1,2-Dibromoethane	ND	0.010	1		ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**12-03-2079-3-A**	**03/27/12 08:25**	**Aqueous**	**GC 40**	**04/02/12**	**04/03/12 05:48**	**120402L05**

Parameter	Result	RL	DF	Qual	Units
1,2-Dibromoethane	ND	0.010	1		ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-8	**12-03-2079-4-A**	**03/27/12 07:50**	**Aqueous**	**GC 40**	**04/02/12**	**04/03/12 06:10**	**120402L05**

Parameter	Result	RL	DF	Qual	Units
1,2-Dibromoethane	ND	0.010	1		ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-520-331**	**N/A**	**Aqueous**	**GC 40**	**04/02/12**	**04/03/12 00:45**	**120402L05**

Parameter	Result	RL	DF	Qual	Units
1,2-Dibromoethane	ND	0.010	1		ug/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

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Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: 03/31/12
Work Order No: 12-03-2079
Preparation: EPA 504.1 Ext.
Method: EPA 504.1

Project 7-11# 25821, Richland, WA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-03-1997-1	**Aqueous**	**GC 40**	**04/02/12**	**04/03/12**	**120402S05**

Parameter	SPIKE ADDED	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
1,2-Dibromoethane	0.2857	77	62	60-140	22	0-25	
1,2-Dibromo-3-Chloropropane	0.2857	76	63	60-140	19	0-25	

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RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95616-6593

Date Received: N/A
Work Order No: 12-03-2079
Preparation: EPA 504.1 Ext.
Method: EPA 504.1

Project: 7-11# 25821, Richland, WA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-520-331	**Aqueous**	**GC 40**	**04/02/12**	**04/03/12**	**120402L05**

Parameter	SPIKE ADDED	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
1,2-Dibromoethane	0.2857	110	97	60-140	12	0-25	
1,2-Dibromo-3-Chloropropane	0.2857	111	99	60-140	11	0-25	

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RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 12-03-2079

Qualifier	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS/LCSD Recovery Percentage is within Marginal Exceedance (ME) Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
MPN - Most Probable Number

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KIFF Analytical LLC

2795 Second Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4808

Calscience
7440 Lincoln Way
Garden Grove. CA 92841-1427
714-895-5494

12-03-2079

COC No. **80828** Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Jennifer Worsley

EDF Report? NO

Company/Address: Kiff Analytical

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Phone No.: 530-297-4800 | FAX No.: 530-297-4808

Global ID:

Project Number: 212302332.230.0400 | P.O. No.: 80828

Deliverables to (Email Address): inbox@kiffanalytical.com

Project Name: 7-11#25821, Richland, WA

Project Address:

Sample Designation	Sampling Date	Sampling Time	Container / Preservative: VOA 40 ml None	Matrix: Water	Analysis Request: EDB/DBCP by EPA 504 (1)	TAT: 4-Days	For Lab Use Only
MW-3	03/27/12	09:15	2	X	X	X	1
MW-6	03/27/12	09:00	2	X	X	X	2
MW-7	03/27/12	08:25	2	X	X	X	3
MW-8	03/27/12	07:50	2	X	X	X	4

Relinquished by:	Date	Time	Received by:
Kiff Analytical LLC	033012	1800	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date 03/31/12	Time 1055	Received by Laboratory:

Remarks: Please refer to attached Test Detail.
Please provide Washington EIM.

Bill to: Accounts Payable

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2079

Test Detail for Kiff Work Order: 80828

EDB/DBCP by EPA 504 (1)
Ethylene Dibromide

OnTrac
On Time Delivery For Less

800.334.5000
ontrac.com

D10010464190283

Date Printed 3/30/2012

Tracking#D10010464190283

Shipped From:
KIFF ANALYTICAL
2795 2ND STREET 300
DAVIS, CA 95616

Sent By: SAMPLE RECEIVING
Phone#: (530)297-4800
wgt(lbs): 1
Reference: SUBS
Reference 2: CLASS 600

Ship To Company:	*Service:* **S**
CALSCIENCE ENVIRONMENTAL LABS **7440 LINCOLN WAY** **GARDEN GROVE, CA 92841** **SAMPLE RECEIVING (714)895-5494**	*Sort Code:* **ORG** *Special Services:* **Saturday Delivery** **Signature Required**

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 12-03-2079

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: KIFF

DATE: 03/31/12

TEMPERATURE: Thermometer ID: SC3 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature 1.6 °C - 0.3 °C (CF) = 1.3 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: ☐ Air ☐ Filter Initial: YC

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A Initial: YC

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Initial: [illegible]

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☐	☐	☑
Sample container label(s) consistent with COC	☐	☑	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
pH / Res. Chlorine / Diss. Sulfide / Diss. Oxygen received within 24 hours	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☑ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☑	☐	☐
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Water: ☑VOA ☐VOAh ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** [illegible]

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** WK

Preservative: h: HCL n: HNO_3 na$_2$:$Na_2S_2O_3$ na: NaOH p: H_3PO_4 s: H_2SO_4 u: Ultra-pure znna: $ZnAc_2$+NaOH f: Filtered **Scanned by:**

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 12-03-20719

SAMPLE ANOMALY FORM

SAMPLES - CONTAINERS & LABELS:

Comments:

- ☐ **Sample(s) NOT RECEIVED but listed on COC**
- ☐ **Sample(s) received but NOT LISTED on COC**
- ☐ **Holding time expired** – list sample ID(s) and test
- ☐ **Insufficient quantities for analysis** – list test
- ☐ **Improper container(s) used** – list test
- ☐ **Improper preservative used** – list test
- ☐ **No preservative noted on COC or label** – list test & notify lab
- ☐ **Sample labels illegible** – note test/container type
- ☑ **Sample label(s) do not match COC** – Note in comments
  - ☐ **Sample ID**
  - ☑ **Date and/or Time Collected**
  - ☐ **Project Information**
  - ☐ **# of Container(s)**
  - ☐ **Analysis**
- ☐ **Sample container(s) compromised** – Note in comments
  - ☐ **Water present in sample container**
  - ☐ **Broken**
- ☐ **Sample container(s) not labeled**
- ☐ **Air sample container(s) compromised** – Note in comments
  - ☐ **Flat**
  - ☐ **Very low in volume**
  - ☐ **Leaking (Not transferred - duplicate bag submitted)**
  - ☐ **Leaking (transferred into Calscience Tedlar® Bag*)**
  - ☐ **Leaking (transferred into Client's Tedlar® Bag*)**
- ☐ **Other:** _____

Comments:
1) collection time per label is 0715

HEADSPACE – Containers with Bubble > 6mm or ¼ inch:

Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Cont. received	Analysis

Comments: _____

*Transferred at Client's request.

Initial / Date: WS 03/31/12

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SITE VISITATION REPORT

1Q12 - Former 7-Eleven Service Station No. 25821- Richland, WA

Stantec

Name(s) D. Reitz Date: 03/27/12 Time of Arrival Call-In: 0800

Arrival Time: 0530 Departure Time: 0920 Time of Departure Call-In 0920

Who did you call? Paul Fairbairn

DRUM INVENTORY

1	WATER		CARBON	TOTAL OPEN TOP	1
	SOIL		EMPTY	TOTAL BUNG TOP	

HEALTH AND SAFETY ASSESSMENT

Don P.P.E.
Set-up Decon. Station
Review HASP & J.S.A.

DESCRIPTION OF ACTIVITIES ONSITE AND NOTES

0530 Arrive on job site. Check in with site-contact. Purchase ice. Perform tailgate safety meeting. Don appropriate P.P.E. Set up decon station
0610 Initiate 1Q12 GWM sample procedures (gauge 5 and sample 4 gwm wells). Call in to office.
0900 Stop & complete 1Q12 GWM sample procedures. Decon. Equipment & release purge water/decon. rinsates into staged drums. Label drum.
0910 Pack sample coolers & load Equipment into truck.
0920 Check-out with site-contact & call-in to office. Depart job site.

03/27/12

Stantec

Stantec
HYDROLOGIC DATA SHEET

Gauge Date: 03 / 27 / 12 **Project Name:** Former 7-Eleven #25821

Field Technician: D. Reitz **Project Number:** 212302332

DTP = Depth to Free Product (FP or NAPH) Below TOC
DTW = Depth to Groundwater Below TOC
DTB = Depth to Bottom of Well Casing Below TOC

Flow through cell calibrated Y X N___

Wells checked for product and gauged prior to commencement of bailing or purging the wells Y X N___

WELL OR LOCATION			MEASUREMENTS				PURGE? (Y/N)	SHEEN? (Y/N)	SAMPLE? (Y/N)	COMMENTS / PROBE CALIBRATION
			TIME	DTP (feet)	DTW (feet)	DTB (feet)				
MW-3			0610	–	17.22	19.50	Y	N	Y	
MW-5			0620	–	Dry	16.50	N	N	N	
MW-6			0650	–	16.38	19.00	Y	N	Y	
MW-7			0640	–	16.16	18.00	Y	N	Y	
MW-8			0630	–	16.29	27.00	Y	N	Y	

Stantec

WATER SAMPLE FIELD DATA SHEET

Stantec

PROJECT #: 212302332 | **Purged & Sampled By:** D. Reitz | **Well & Sample ID:** MW-3

CLIENT NAME: 7-Eleven

LOCATION: 1824 George Washington Way; Richland, WA

Purged & Sampled Date: 03 / 27 / 12 | **START (2400hr):** 0700 | **Sample Time:** 0715 | **LOW-FLOW USED:** X

SAMPLE TYPE: Groundwater x | Surface Water ____ | Treatment Effluent ____ | Other ____

CASING DIAMETER: 2" X (0.16) | 4" ____ (0.6) | 6" ____ (1.46)
Casing Volume: (liters per foot)

DEPTH TO BOTTOM (feet) = 19.50
DEPTH TO WATER (feet) = 17.22
WATER COLUMN HEIGHT (feet) = 2.28

ACTUAL PURGE (~~GL~~) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (~~ML~~)	TEMP (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	O.R.P.
03/27/12	0705	800	13.2	0.078	6.41	Clear	229
↓	0709	500	13.5	0.077	6.49	Clr	222
	0711	500	13.4	0.077	6.52	Clr	217
	0714	500	13.3	0.077	6.54	Clr	213
					03 / 27 / 12		
Calculated Variance of Final Three Samples:			0.2	0	0.05		9.0
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1		≤ 10%

DEPTH TO PURGE INTAKE DURING PURGE: 18.50 | SAMPLE DTW: 17.28

QTY OF SAMPLE VESSELS & PRESERVATIVE:
3-HCL VOA'S PER WELL

ANALYSES:
NWTPH-g
BTEX-g (8260)
MTBE, EDB, EDC

PURGING EQUIPMENT:	SAMPLING EQUIPMENT:
Cole Parmer Environmental Sampler Model# 7175-00	Horiba

Flow Through Cell Disconnected Prior to Sample Collection?: YES X NO ____

WELL PAD CONDITION: Fair | WELL CASING CONDITION: Fair

WELL VAULT CONDITION: Fair | SEAL PRESENT?: YES | BOLTS PRESENT?: YES

WELL INTEGRITY: Fair | WELL TAG: YES | LOCK#: YES

REMARKS: ____

SIGNATURE: [signature]

Stantec

WATER SAMPLE FIELD DATA SHEET

Stantec

PROJECT #: 212302332

CLIENT NAME: 7-Eleven

LOCATION: 1824 George Washington Way; Richland, WA

Purged & Sampled By: D. Reitz

Well & Sample ID: MW-6

Purged & Sampled Date: 03 / 27 / 12

START (2400hr): 0845

Sample Time: 0900

LOW-FLOW USED: X

SAMPLE TYPE: Groundwater x Surface Water ____ Treatment Effluent ____ Other ____

CASING DIAMETER: 2" X (0.16) 4" ____ (0.6) 6" ____ (1.46)
Casing Volume: (liters per foot)

DEPTH TO BOTTOM (feet) = 19.00

DEPTH TO WATER (feet) = 16.38

WATER COLUMN HEIGHT (feet) = 2.62

ACTUAL PURGE (L) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (mL)	TEMP (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	O.R.P.
03/27/12	0850	800	13.5	2.13	6.57	Clr	-102
↓	0853	500	13.1	2.11	6.51	clr	-94
	0856	500	13.3	2.10	6.46	Clr	-86
	0859	500	13.6	2.10	6.48	Clr	-81

03/27/12

	TEMP	CONDUCTIVITY	pH	COLOR	O.R.P.
Calculated Variance of Final Three Samples:	0.5	0.01	0.05		13.0
Acceptable Variance Limits:	≤ 10%	≤ 3%	≤ 0.1		≤ 10%

DEPTH TO PURGE INTAKE DURING PURGE: 18.00 SAMPLE DTW: 16.42

QTY OF SAMPLE VESSELS & PRESERVATIVE:
3-HCL VOA'S PER WELL

ANALYSES:
NWTPH-g
BTEX-g (8260)
MTBE, EDB, EDC

PURGING EQUIPMENT: Cole Parmer Environmental Sampler Model# 7175-00

SAMPLING EQUIPMENT: Horiba

Flow Through Cell Disconnected Prior to Sample Collection?: YES X NO ____

WELL PAD CONDITION: Fair WELL CASING CONDITION: Fair

WELL VAULT CONDITION: Fair SEAL PRESENT?: yes BOLTS PRESENT?: yes

WELL INTEGRITY: Fair WELL TAG: yes LOCK#: yes

REMARKS:

SIGNATURE: [signature]

Stantec

WATER SAMPLE FIELD DATA SHEET

Stantec

PROJECT #: 212302332 | **Purged & Sampled By:** D. Raitz | **Well & Sample ID:** MW-7

CLIENT NAME: 7-Eleven

LOCATION: 1824 George Washington Way; Richland, WA

Purged & Sampled Date: 03 / 27 / 12 | **START (2400hr):** 0810 | **Sample Time:** 0825 | **LOW-FLOW USED:** X

SAMPLE TYPE: Groundwater x | Surface Water ____ | Treatment Effluent ____ | Other ____

CASING DIAMETER: 2" ____ (0.16) | 4" X (0.6) | 6" ____ (1.46)
Casing Volume: (liters per foot)

DEPTH TO BOTTOM (feet) = 18.00
DEPTH TO WATER (feet) = 16.16
WATER COLUMN HEIGHT (feet) = 1.84

ACTUAL PURGE (~~GL~~) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (~~GL~~)	TEMP (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	O.R.P.
03/27/12	0815	500	13.8	2.32	6.49	Clr	-64
	0818	500	13.6	2.31	6.53	Clr	-72
	0821	500	14.0	2.31	6.55	Clr	-78
	0824	500	13.7	2.31	6.56	Clr	-82
						03/27/12	
Calculated Variance of Final Three Samples:			0.4	0	0.03		10.0
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1		≤ 10%

DEPTH TO PURGE INTAKE DURING PURGE: 17.00 | SAMPLE DTW: 16.18

QTY OF SAMPLE VESSELS & PRESERVATIVE:	ANALYSES:
3-HCL VOA'S PER WELL	NWTPH-g
	BTEX-g (8260)
	MTBE, EDB, EDC

PURGING EQUIPMENT:	SAMPLING EQUIPMENT:
Cole Parmer Environmental Sampler Model# 7175-00	Horiba

Flow Through Cell Disconnected Prior to Sample Collection?: YES X | NO ____

WELL PAD CONDITION: Fair | WELL CASING CONDITION: Fair

WELL VAULT CONDITION: Fair | SEAL PRESENT?: YES | BOLTS PRESENT?: YES

WELL INTEGRITY: Fair | WELL TAG: YES | LOCK#: YES

REMARKS: ____

SIGNATURE: [signature]

Stantec

WATER SAMPLE FIELD DATA SHEET

Stantec

PROJECT #: 212302332 | **Purged & Sampled By:** D. Ritz | **Well & Sample ID:** MW-8

CLIENT NAME: 7-Eleven

LOCATION: 1824 George Washington Way; Richland, WA

Purged & Sampled Date: 03 / 27 / 12 | **START (2400hr):** 0735 | **Sample Time:** 0750 | **LOW-FLOW USED:** X

SAMPLE TYPE: Groundwater x | Surface Water ____ | Treatment Effluent ____ | Other ____

CASING DIAMETER: 2" X (0.16) | 4" ____ (0.6) | 6" ____ (1.46)
Casing Volume: (liters per foot)

DEPTH TO BOTTOM (feet) = 27.00
DEPTH TO WATER (feet) = 16.29
WATER COLUMN HEIGHT (feet) = 10.71

ACTUAL PURGE (GL) = 2.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (GL)	TEMP (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	O.R.P.
03/27/12	0740	500	13.6	1.13	6.39	Clr	-70
↓	0743	500	13.8	1.12	6.44	Clr	-61
↓	0746	500	13.9	1.12	6.47	Clr	-54
↓	0749	500	13.8	1.11	6.48	Clr	-48
					03/27/12		
Calculated Variance of Final Three Samples:			0.1	0.01	0.04		13.0
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1		≤ 10%

DEPTH TO PURGE INTAKE DURING PURGE: 25.00 | SAMPLE DTW: 16.30

QTY OF SAMPLE VESSELS & PRESERVATIVE:	ANALYSES:
3-HCL VOA'S PER WELL	NWTPH-g
	BTEX-g (8260)
	MTBE, EDB, EDC

PURGING EQUIPMENT:	SAMPLING EQUIPMENT:
Cole Parmer Environmental Sampler Model# 7175-00	Horiba

Flow Through Cell Disconnected Prior to Sample Collection?: YES X | NO ____

WELL PAD CONDITION: Fair | WELL CASING CONDITION: Fair

WELL VAULT CONDITION: Fair | SEAL PRESENT?: YES | BOLTS PRESENT?: YES

WELL INTEGRITY: Fair | WELL TAG: YES | LOCK#: YES

REMARKS: ____

SIGNATURE: ____

KIFF Analytical LLC

2795 2nd Street, Suite 300
Davis, CA 95618
Lab: 530.297.4800
Fax: 530.297.4802

SRG # / Lab No. _____

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): Paul Fairbairn	Washington EIM Report? ☑ Yes ☐ No
Company / Address: Stantec-Redmond, WA 12034 134th Court NE, Suite 102, Redmond, WA 98052	User Location ID: 7-11#25821, Richland, WA
Phone Number: 425-298-1000	Global ID:
Fax Number: 425-298-1019	User Study ID: 7-11#25821, Richland, WA
Project #: 212302332.230.0400 P.O. #: Z30. 0400	Bill to:
Project Name: 7-11#25821, Richland, WA	Sampler Signature:
Project Address: 1824 George Washington Wy Richland, WA	

Sample Designation	Sampling Date	Sampling Time	Container: 40 ml VOA	Container: Sleeve	Container: Poly	Container: Glass	Container: Tedlar	Preservative: HCl	Preservative: HNO_3	Preservative: None	Matrix: Water	Matrix: Soil	Matrix: Air	MTBE @ 0.5 ppb (EPA 8260B)	BTEX (EPA 8260B)	NW-TPH Gx	5 Oxygenates (MTBE, DIPE, ETBE, TAME, TBA) (EPA 8260B)	7 Oxygenates (5 oxy + EtOH, MeOH) (EPA 8260B)	Lead Scav. (1,2-DCA) (EPA 8260B)	Volatile Halocarbons (EPA 8260B)	Volatile Organics Full List (EPA 8260B)	Volatile Organics (EPA 524.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	CAM 17 Metals (EPA 200.7 / 6010)	5 Waste Oil Metals (Cd,Cr,Ni,Pb,Zn) (EPA 200.7 / 6010)	Mercury (EPA 245.1 / 7470 / 7471)	Total Lead (EPA 200.7 / 6010)	W.E.T. Lead (STLC)	NW-TPHDx	EDB (EPA 504.1)
														Analysis Request (circle method)																		
MW-3	03/27/12	0715	7		1			4	1	3	X			X	X	X			X									X			X
[redacted]																															
MW-6	03/27/12	0900	7		1			4	1	3	X			X	X	X			X									X			X
MW-7	"	0825	7		1			4	1	3	X			X	X	X			X									X			X
MW-8	"	0750	7		1			4	1	3	X			X	X	X			X									X			X

TAT: ☐ 12 hr ☐ 24 hr ☐ 48hr ☐ 72hr ☑ 1 wk

For Lab Use Only

Relinquished by:	Date	Time	Received by:
	03/28/12	1200	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:

Remarks:

For Lab Use Only: Sample Receipt

Temp °C	Initials	Date	Time	Therm. ID #	Coolant Present
					Yes / No

Distribution: White - Lab; Pink - Originator
Rev: 031308

STANTEC MONITORING WELL PURGING AND SAMPLING PROCEDURES

Monitoring well purging and sampling was conducted using U.S. Environmental Protection Agency (EPA) approved low-flow sampling techniques.

Purging Procedures

A. Using a decontaminated instrument (i.e., tape measure, continuity meter, or interface probe) measure the depth to groundwater in reference to the measuring point at the top of the casing. Measure the total depth of the well to calculate the height and volume of water in the borehole.

B. Based on previously obtained data, if a monitoring well is suspected of containing liquid-phase hydrocarbons (LPH) concentrations, lower a transparent bailer into the well to evaluate the presence of a hydrocarbon sheen on the water table.

C. Decontaminate the purge pump and/or PVC bailers by scrubbing in Alconox detergent solution, followed by a tap water rinse and then a deionized water rinse.

D. Purge, by low-flow pumping (less than 0.5 liters per minute) for approximately five minutes. If low-flow purging is not possible and bailing is used to purge the well, then a minimum of three well volumes will be removed. If the well goes dry, the procedure listed in step E2 (below) should be followed. Parameters should be measured after each ½-casing volume is removed.

E. Conduct field measurements (i.e., pH, specific conductivity, temperature, and oxidation-reduction potential) note clarity, color, turbidity, and odor of purge water, and measure depth to groundwater.

1. If the well has not been purged dry, continue to pump and conduct field measurements (including depth to water) again every five minutes during purging.

    a) If the first through third series of measurements vary by less than 10 percent, the well has been adequately purged. Allow the well to recover to 80 percent of its static condition and begin the sampling procedure.

    b) If the measurements vary by 10 percent or greater, repeat Step E1 above.

    c) If a minimum of three parameters cannot be measured during purging, remove three well volumes prior to sampling.

2. If the well has been purged dry, measure the water level and allow the well to recharge to 80 percent, or for two hours, whichever occurs first. Calculate the percent recovery, and begin the sampling procedure.

Sampling Procedures

- Use the pump to collect the groundwater sample.
- Transfer the groundwater sample into the appropriate container(s). Where applicable, some containers are completely filled to achieve zero headspace. Label the samples according to location and date of collection.
- Enter the samples into Chain-of-Custody and preserve on ice until delivery to the analytical laboratory. Complete the Well Development or Purging/Sampling Log to be stored in the project file.

When requested by the client, collect a bailer rinsate blank of deionized water to check decontamination procedure. In addition, trip blanks prepared by the laboratory and kept with the samples may be included to check for cross contamination of samples within the cooler. Additional and/or alternate QA/QC samples can be collected and analyzed upon client request.