Stantec Consulting Services Inc.
11130 NE 33rd Place, Suite 200
Bellevue, Washington 98004
425.869.9448

June 22, 2015
File: 185750037

Attention: Ms. Laura Klasner
Washington State Department of Ecology
Central Regional Office – Independent Cleanup Program
15 W. Yakima Ave., Ste 200
Yakima, WA 98902

Reference: 7-Eleven Store 25821 Annual 2013 Groundwater Monitoring and Sampling Report

- **Site Name:** Former 7-Eleven Store No. 25821
- **Site Address:** 1824 George Washington Way, Richland, WA
- **Facility Site ID:** 77113577
- **Cleanup Site ID:** 6650

Dear Ms. Klasner,

On behalf of 7-Eleven, Inc. (7-Eleven), this letter report presents the results of the groundwater monitoring events conducted during the first and fourth quarters 2013 at former 7-Eleven store number 25821 (the Site), by Stantec Consulting Services Inc. (Stantec). The property currently operates as a Subway Sandwich Shop in a mixed commercial and residential neighborhood in Richland (***Figures 1 and 2***).

SITE BACKGROUND

Based on aerial photographs, architectural drawings, and Richland property records, a retail gasoline station (Wascher Mobil Gas) was installed at the property in 1949 and operated through 1984. Subsequently, the property operated as a 7-Eleven convenience store with retail gasoline station from 1984 through 1989. The second generation gasoline station consisted of three 12,000 gallon fiberglass USTs used to store unleaded gasoline and associated distribution equipment. The location of previous configurations is presented on ***Figures 3a, 3b,*** and ***4***.

The initial release was reported to Ecology in 1989 during removal of the second generation 7-Eleven USTs and dispensing equipment. Approximately 82 cubic yards of petroleum impacted soil was excavated and transported offsite at that time. Monitoring wells were installed beginning in 1989 until 2013 (MW-1 through MW-12). In 1996, oxygen release compound was placed in MW-7 to promote biological degradation and quarterly nitrate injections were conducted from 1999 to 2001. Recent groundwater sampling indicates that dissolved TPH-G impacts above Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs) are limited to MW-6.

Reference: 7-Eleven Store 25821 Annual 2013 Groundwater Monitoring and Sampling Report

Stantec currently conducts groundwater monitoring at the Site on a semi-annual basis.

Environmental activities conducted at the Site are summarized in the following documents:

- Stantec, 2004. *Limited Phase II Environmental Site Assessment Report for 7-Eleven, Inc., 1824 George Washington Way, Richland, Washington. December 3.*
- State of Washington Department of Ecology, 2013. *Site Hazard Assessment*, February 15.

GROUNDWATER MONITORING AND SAMPLING RESULTS

Figures 3a and 3b illustrate the groundwater elevations and groundwater gradient for the events as well as the cumulative groundwater flow direction for the site over time. ***Figure 4*** presents the laboratory analytical results from the sampling events with data posted near each respective well. ***Table 1*** summarizes historical and current analytical results and groundwater elevation data. ***Graphs 1 through 3*** depict contaminant concentrations in a select well versus groundwater elevations over time. ***Graph 4*** depicts the cumulative groundwater flow direction for the site over time. Copies of the laboratory analytical reports and chain of custody documents are provided in ***Attachment A***. For each sampling event, all indicated wells were purged and sampled in accordance with the procedures detailed in ***Attachment B***.

First Quarter 2013 conducted on February 27th 2013:

- The average depth to groundwater was 16.63-feet below top of casing (TOC) and ranged from 16.02- to 17.25-feet bgs. Groundwater flowed in a southwesterly direction with an average hydraulic gradient of 0.002-vertical feet per horizontal foot (ft/ft).
- Groundwater samples were collected from monitoring wells MW-3, MW-6, MW-7, and MW-8; and,
- Groundwater samples were analyzed for total petroleum hydrocarbons characterized as gasoline (TPH-G) by method NWTPH-Gx; benzene, toluene, ethyl benzene, and total xylenes (BTEX); methyl tertiary butyl ether (MTBE) and 1, 2-dichromoethane (EDC) by EPA Method 8260B; 1,2-dibromoethane (EDB) by EPA Method 504.1; and total lead by Method EPA 200.7. During the subject sampling event, Ecology Model Toxics Control Act (MTCA) Method A Cleanup Levels (CULs)

for the following analytes were exceeded in groundwater samples collected from the following wells:

- TPH-G: MW-6 [2,000 micrograms per liter (µg/l)]

Fourth Quarter 2013 conducted on October 17th 2013:

- The average depth to groundwater was 16.10-feet below TOC and ranged from 14.96- to 16.80-feet bgs. Groundwater flowed in a southwesterly direction with an average hydraulic gradient of 0.0017-ft/ft.
- Groundwater samples were collected from monitoring wells MW-3, MW-6, MW-7, and MW-8, MW-9, MW-10, MW-11, and MW-12; and,
- Groundwater samples were analyzed for TPH-G by method NWTPH-Gx; BTEX by EPA Method 8260B; MTBE; EDB; EDC; and dissolved lead. During the subject sampling event, MTCA Method A CULs for the following analytes were exceeded in groundwater samples collected from the following wells:
  - TPH-G: MW-6

DISCUSSION

The concentrations of petroleum hydrocarbons for MW-6 continue to fluctuate above the MTCA Method A CULs.

Stantec recommends continued periodic groundwater monitoring and sampling of selected wells to further evaluate dissolved concentration trends and seasonal groundwater fluctuations.

LIMITATIONS AND CERTIFICATION

This document entitled Former 7-Eleven Store 25821 Annual 2013 Groundwater Monitoring and Sampling Report was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of 7-Eleven Inc. (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third

Reference: 7-Eleven Store 25821 Annual 2013 Groundwater Monitoring and Sampling Report

Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by _____
(signature)

Deitrie Hanson

Reviewed by _____
(signature)

Adam Valenti, PE

If you have any questions or require additional information, please contact Paul Fairbairn at (425) 289-7343.

Regards,

Stantec Consulting Services Inc.

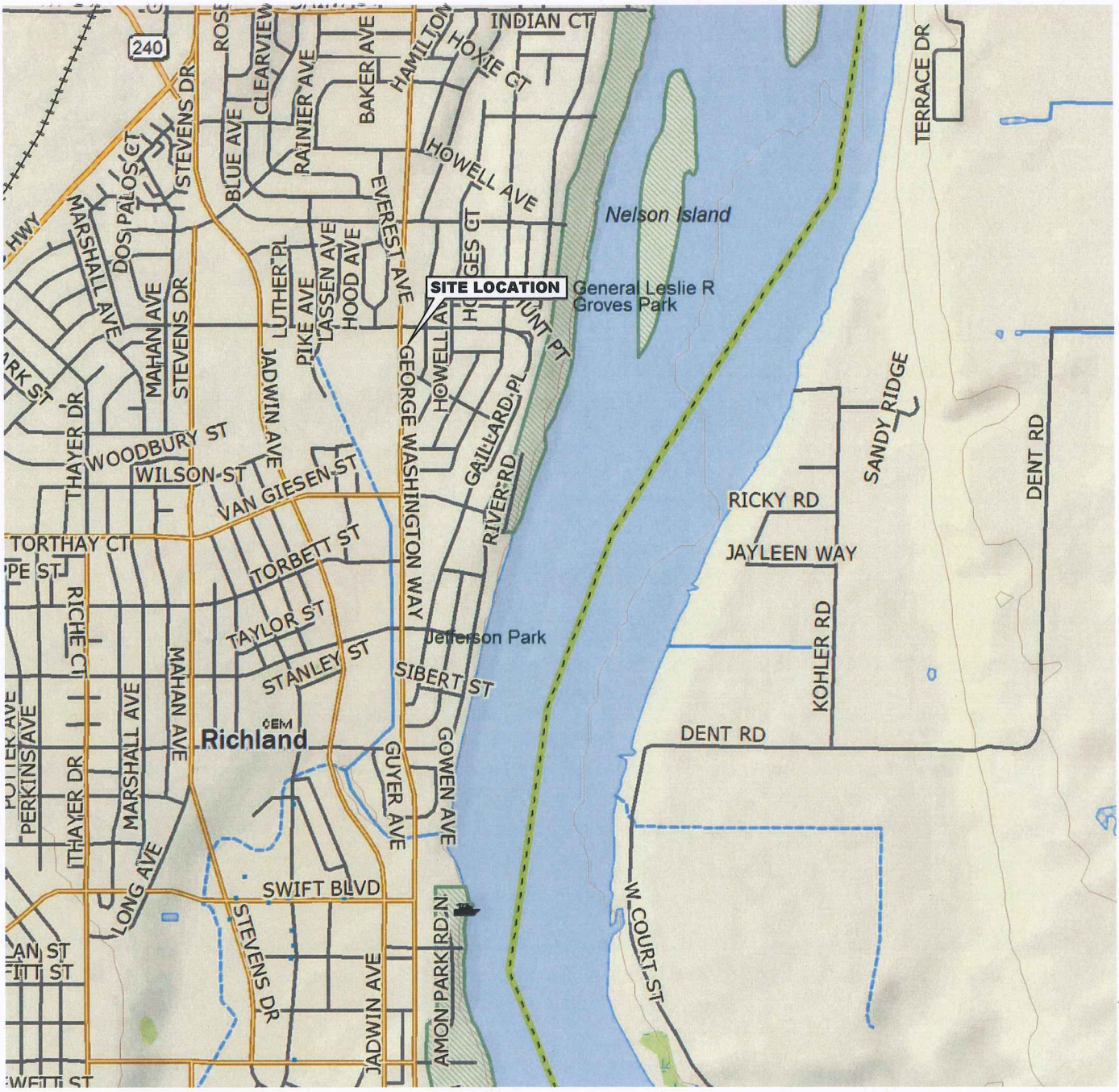
Paul Fairbairn
Project Manager
Phone: 425-289-7343

June 22, 2015
Ms. Laura Klasner

Reference: 7-Eleven Store 25821 Annual 2013 Groundwater Monitoring and Sampling Report

FIGURES, GRAPHS, and TABLES

7-Eleven Store 25821 Annual 2013 Groundwater Monitoring
and Sampling Report



North

WASHINGTON

1/2 0 1

SCALE (MILES)

1000 0 1000 2000 3000 4000 5000

SCALE (FEET)

REFERENCE: USGS 7.5 MINUTE QUADRANGLE, RICHLAND, WASHINGTON

Stantec

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FOR: 7-ELEVEN

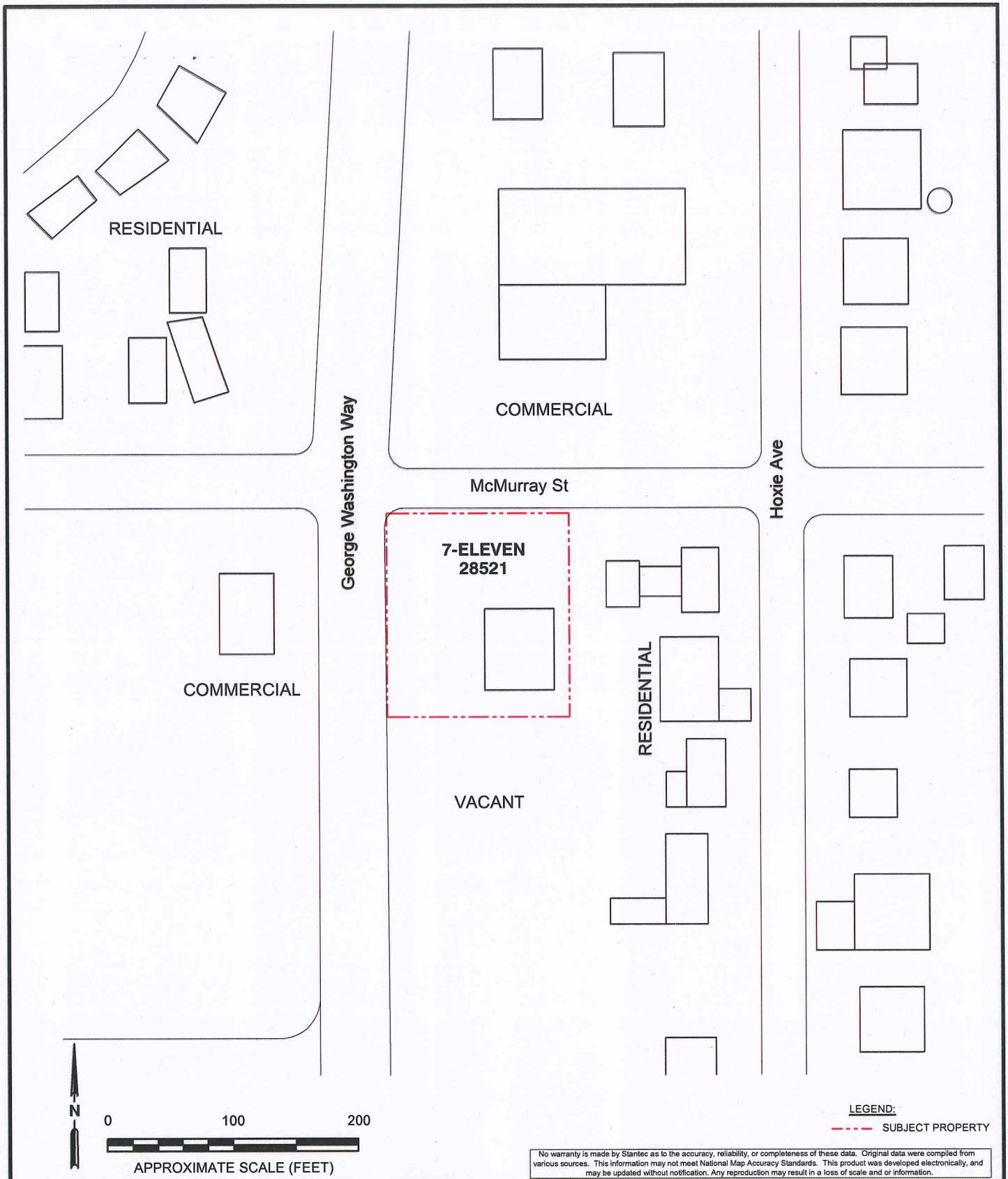
FORMER FACILITY NO. 25821
1824 GEORGE WASHINGTON WAY
RICHLAND, WASHINGTON

SITE LOCATION MAP

FIGURE: **1**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185750037	MDR	EM	PF	NOV 2013

FILEPATH:M:_00 OTHER OFFICES\01-REDMOND\7-11_CURRENT SITES\25821\FIG-1_SITE LOC.dwg | Layout Tab: Layout1 | Drafter: miramirez | Mar 13, 2014 at 14:21



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SITE VICINITY MAP

FIGURE: **2**

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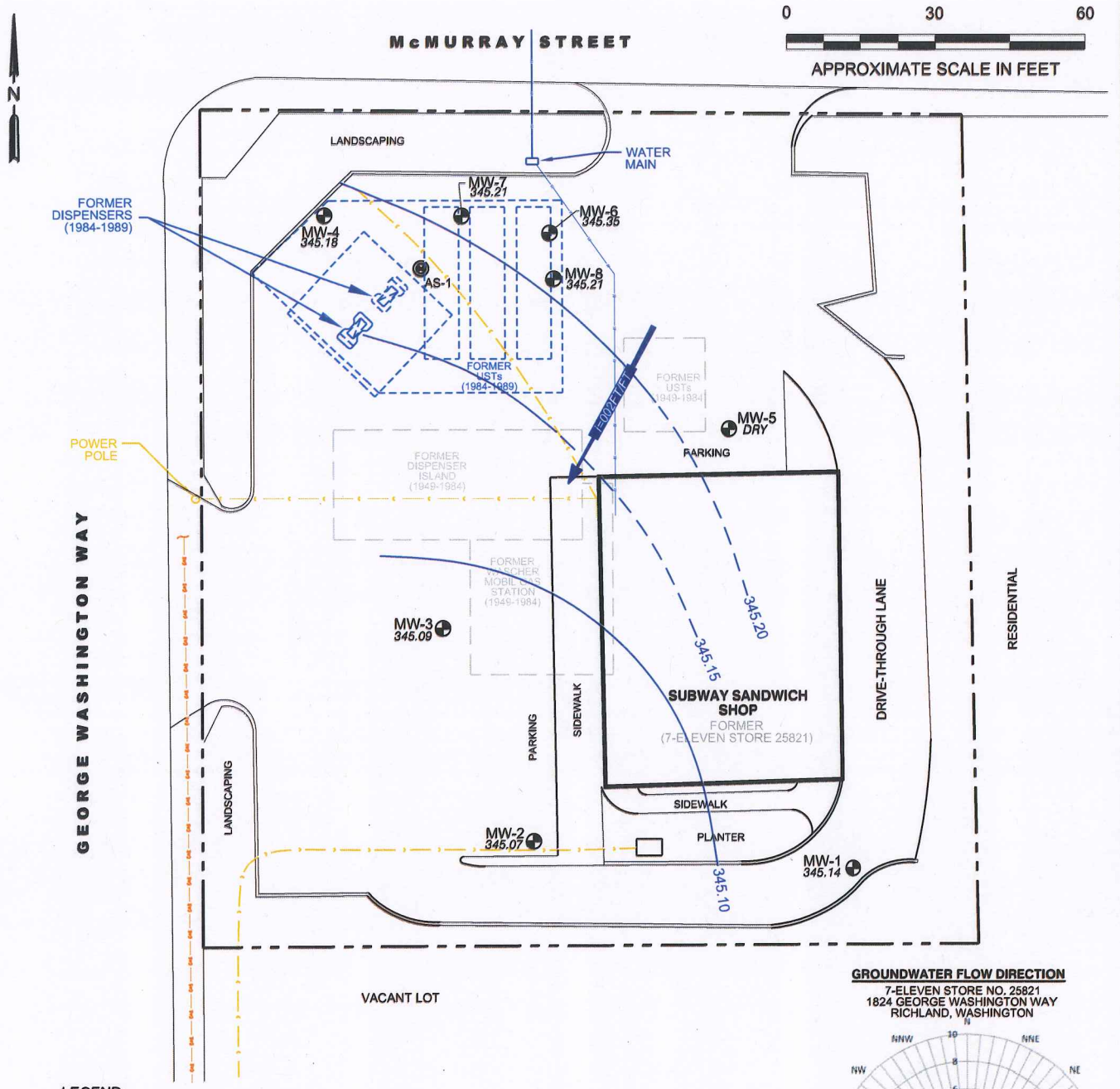
185750037	MDR	EH	PF	APRIL 2013

M:_00 OTHER OFFICES\01-REDMOND\7-11_CURRENT SITES\25821\7-11_25821_2013.dwg modified by miramirez on Jan 22, 2014 - 9:39

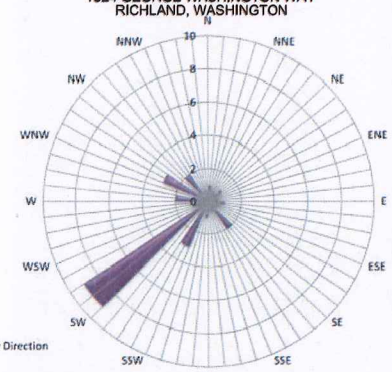


LEGEND:

- SUBJECT PROPERTY LINE BOUNDARY
- MW-1 — MONITORING WELL LOCATION
- AS-1 — AIR SPARGE WELL LOCATION
- 345.07 — RELATIVE GROUNDWATER ELEVATION (FEET)
- NM — NOT MEASURED
- 345.10 — INFERRED GROUNDWATER ELEVATION CONTOUR (FEET)
- INFERRED GROUNDWATER FLOW DIRECTION
- * NOT USED TO CALCULATE CONTOURS

GROUNDWATER FLOW DIRECTION

7-ELEVEN STORE NO. 25821
1824 GEORGE WASHINGTON WAY
RICHLAND, WASHINGTON



LEGEND:
CONCENTRIC CIRCLES REPRESENT QUARTERLY MONITORING EVENTS FORTH QUARTER 2002 THROUGH FOURTH QUARTER 2013
33 DATA POINTS SHOWN

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GROUNDWATER ELEVATION MAP
FEBRUARY 27, 2013

FIGURE: **3a**

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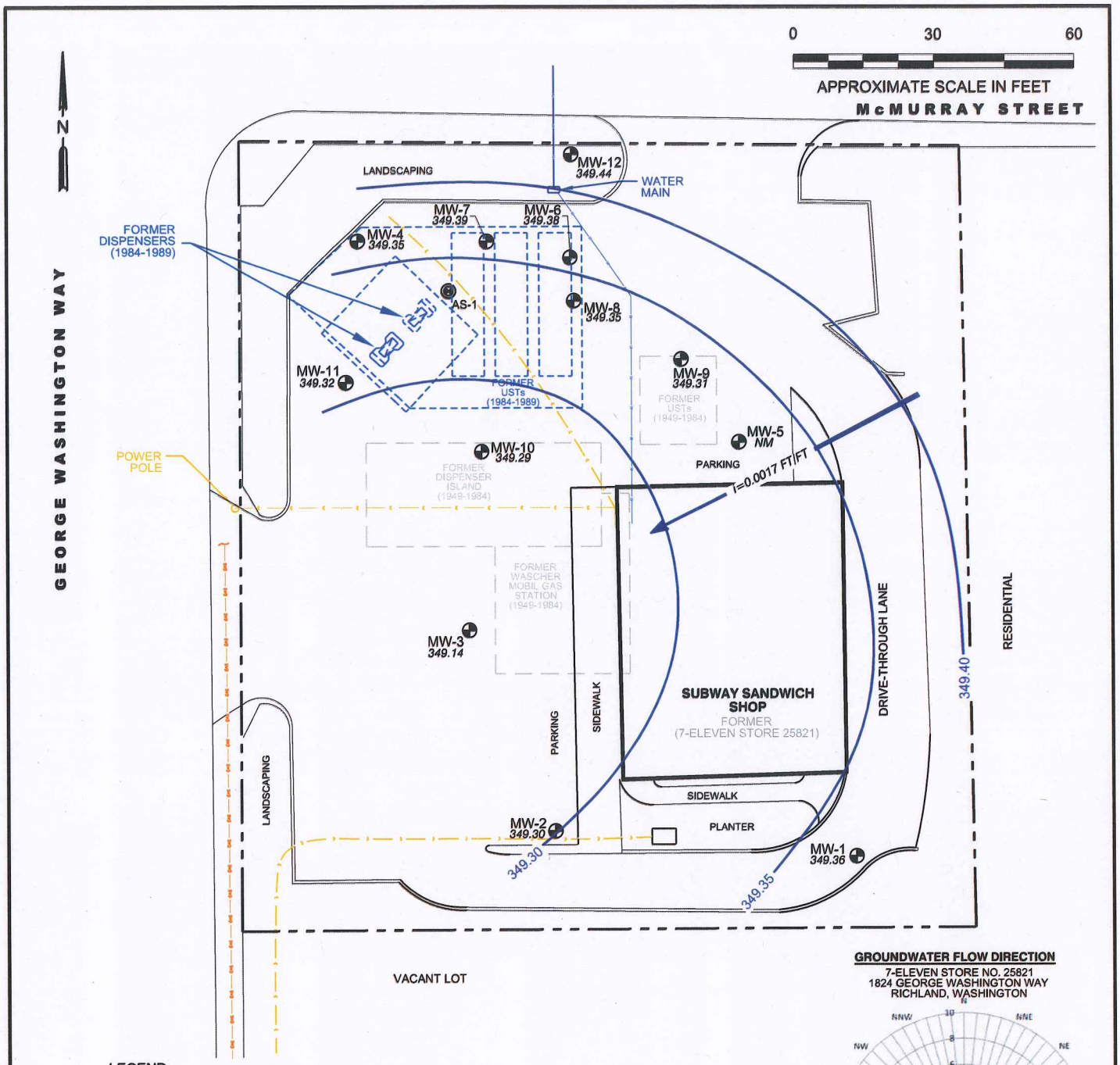
FILEPATH:M:_00 OTHER OFFICES\01-REDMOND\7-11\25821\FIG-3a 25821_2013.dwg | Layout Tab: FIG-3a GW | Drafter: miramirez | Jun 15, 2015 at 11:27



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- NM — NOT MEASURED
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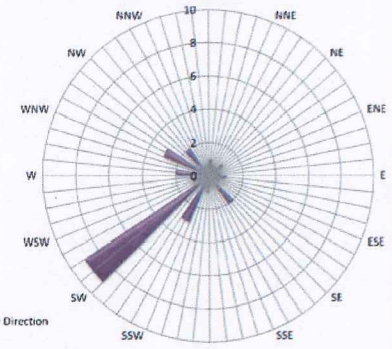
- INFERRED GROUNDWATER FLOW DIRECTION
- NOT USED TO CALCULATE CONTOURS

GROUNDWATER FLOW DIRECTION
7-ELEVEN STORE NO. 25821
1824 GEORGE WASHINGTON WAY
RICHLAND, WASHINGTON



LEGEND:
CONCENTRIC CIRCLES REPRESENT QUARTERLY MONITORING EVENTS FORTH QUARTER 2002 THROUGH FOURTH QUARTER 2013
33 DATA POINTS SHOWN

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GROUNDWATER ELEVATION CONTOUR MAP OCTOBER 17, 2013

FIGURE: **3b**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
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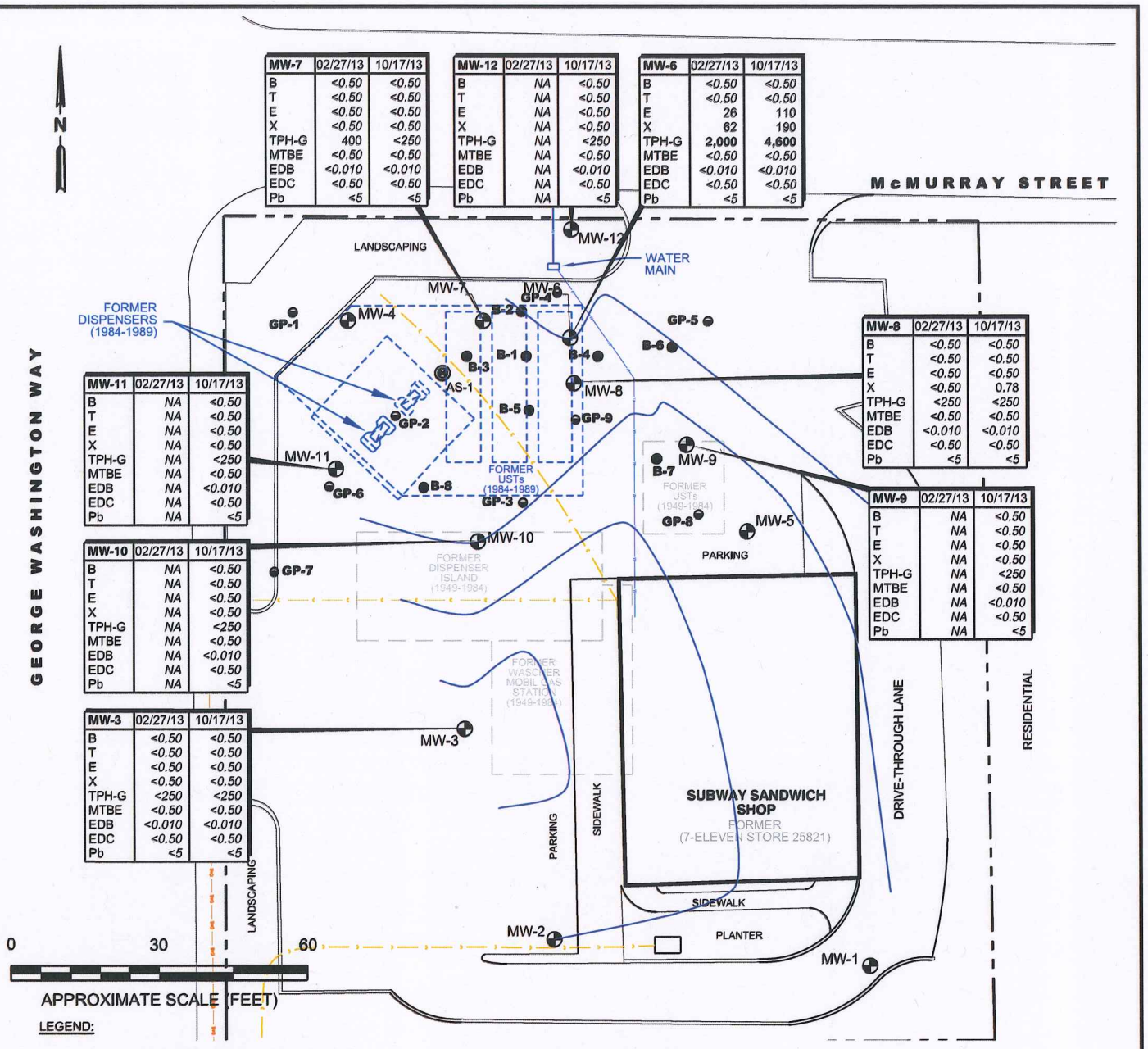
FILEPATH:M:_00 OTHER OFFICES\01-REDMOND\7-11\25821\FIG-3b_25821_GW 10-17-2013 (2).dwg | Layout Tab: FIG-4b GW | Drafter: miramirez | Jun 15, 2015 at 12:21



MW-7	02/27/13	10/17/13
B	<0.50	<0.50
T	<0.50	<0.50
E	<0.50	<0.50
X	<0.50	<0.50
TPH-G	400	<250
MTBE	<0.50	<0.50
EDB	<0.010	<0.010
EDC	<0.50	<0.50
Pb	<5	<5

MW-12	02/27/13	10/17/13
B	NA	<0.50
T	NA	<0.50
E	NA	<0.50
X	NA	<0.50
TPH-G	NA	<250
MTBE	NA	<0.50
EDB	NA	<0.010
EDC	NA	<0.50
Pb	NA	<5

MW-6	02/27/13	10/17/13
B	<0.50	<0.50
T	<0.50	<0.50
E	26	110
X	62	190
TPH-G	2,000	4,600
MTBE	<0.50	<0.50
EDB	<0.010	<0.010
EDC	<0.50	<0.50
Pb	<5	<5

MW-8	02/27/13	10/17/13
B	<0.50	<0.50
T	<0.50	<0.50
E	<0.50	<0.50
X	<0.50	0.78
TPH-G	<250	<250
MTBE	<0.50	<0.50
EDB	<0.010	<0.010
EDC	<0.50	<0.50
Pb	<5	<5

MW-11	02/27/13	10/17/13
B	NA	<0.50
T	NA	<0.50
E	NA	<0.50
X	NA	<0.50
TPH-G	NA	<250
MTBE	NA	<0.50
EDB	NA	<0.010
EDC	NA	<0.50
Pb	NA	<5

MW-9	02/27/13	10/17/13
B	NA	<0.50
T	NA	<0.50
E	NA	<0.50
X	NA	<0.50
TPH-G	NA	<250
MTBE	NA	<0.50
EDB	NA	<0.010
EDC	NA	<0.50
Pb	NA	<5

MW-10	02/27/13	10/17/13
B	NA	<0.50
T	NA	<0.50
E	NA	<0.50
X	NA	<0.50
TPH-G	NA	<250
MTBE	NA	<0.50
EDB	NA	<0.010
EDC	NA	<0.50
Pb	NA	<5

MW-3	02/27/13	10/17/13
B	<0.50	<0.50
T	<0.50	<0.50
E	<0.50	<0.50
X	<0.50	<0.50
TPH-G	<250	<250
MTBE	<0.50	<0.50
EDB	<0.010	<0.010
EDC	<0.50	<0.50
Pb	<5	<5

LEGEND:

- SUBJECT PROPERTY LINE BOUNDARY
- MW-1 — MONITORING WELL LOCATION
- AS-1 — AIR SPARGE WELL LOCATION
- B-1 — SOIL BORING (IT, DECEMBER 2000)
- GP-1 — SOIL BORING (SECOR, AUGUST 2004)
- ELECTRIC LINE
- WATER LINE
- GAS LINE
- WASCHER MOBIL SERVICE STATION (1949-1984)
- 7-ELEVEN DISPENSER ISLAND (1984-1989)
- CURRENT SITE FEATURES-SUBWAY SANDWICH SHOP

SAMPLE LOCATION
SAMPLE DATES

MW-8	02/27/13	10/17/13
B	<0.50	<0.50
T	<0.50	<0.50
E	<0.50	<0.50
X	<0.50	0.78
TPH-G	<250	<250
MTBE	<0.50	<0.50
EDB	<0.010	<0.010
EDC	<0.50	<0.50
Pb	<0.0050	<0.0050

CONCENTRATIONS

ANALYTES:

B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	TOTAL XYLENES
TPH-G	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
MTBE	METHYL TERTIARY BUTYL ETHER
EDB	1,2-DIBROMOETHANE
EDC	1,2-DICHLOROETHANE
Pb	LEAD
<	NOT DETECTED AT OR ABOVE THE LABORATORY REPORTING LIMIT
µg/L	MICROGRAMS PER LITER

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FOR: 7-ELEVEN

FACILITY NO. 25821
1824 GEORGE WASHINGTON WAY
RICHLAND, WASHINGTON

GROUNDWATER ANALYTICAL RESULTS FEBRUARY 27, 2013, AND OCTOBER 17, 2013,

FIGURE: **4**

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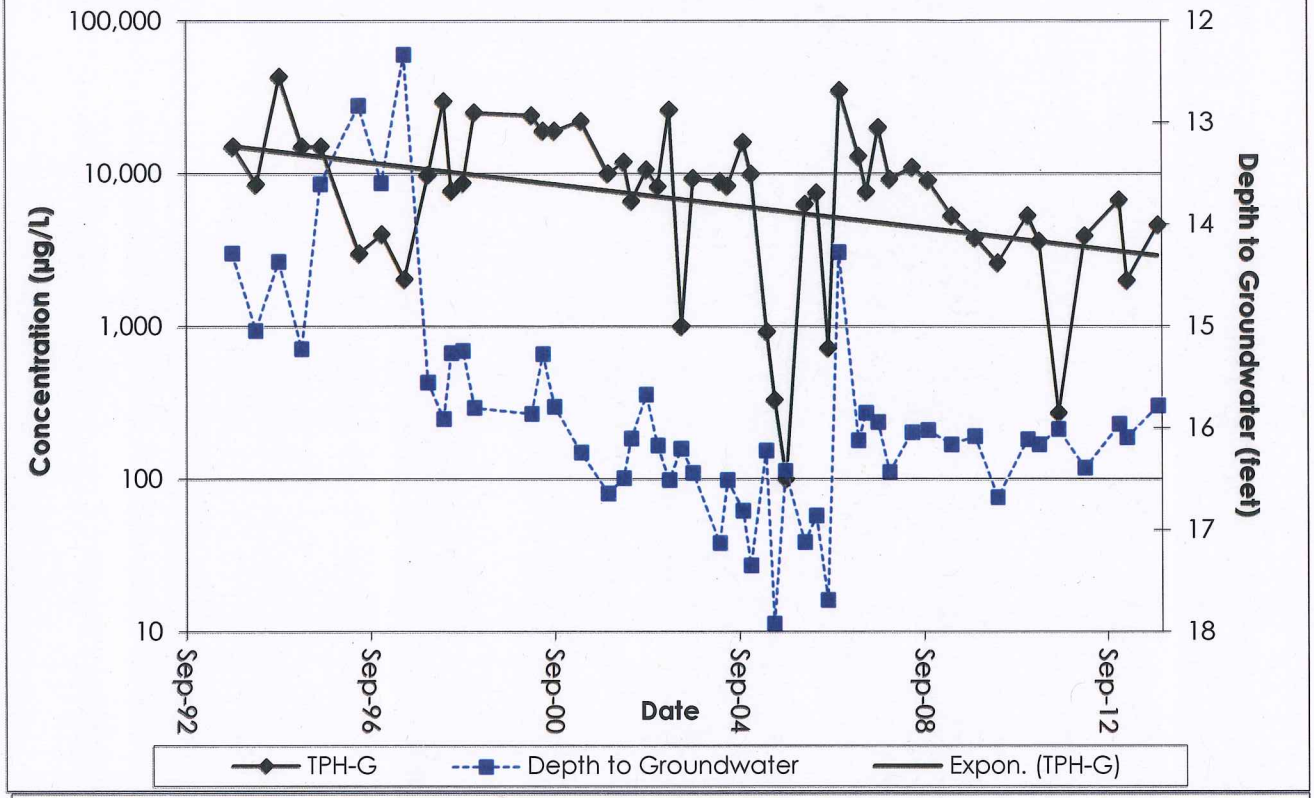
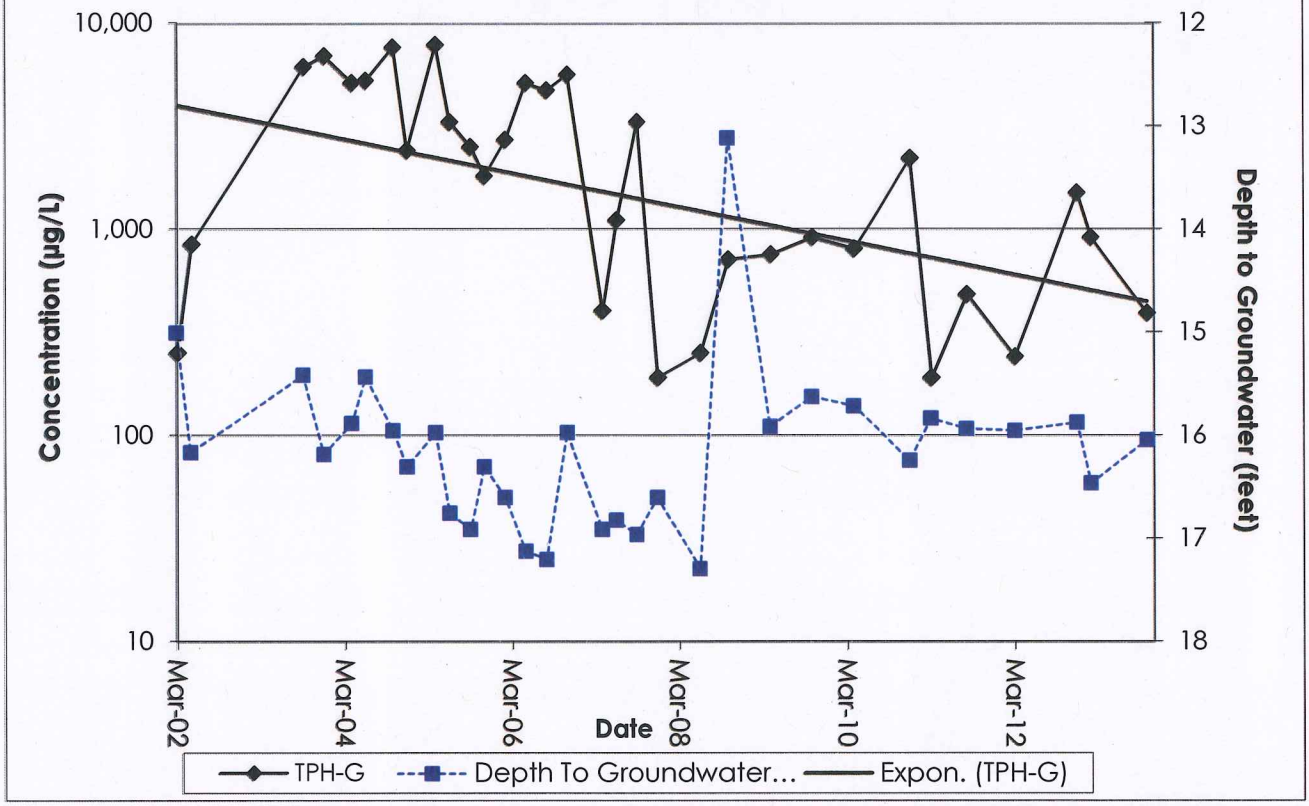
185750037	MDR	DH	PF	JUNE 2015

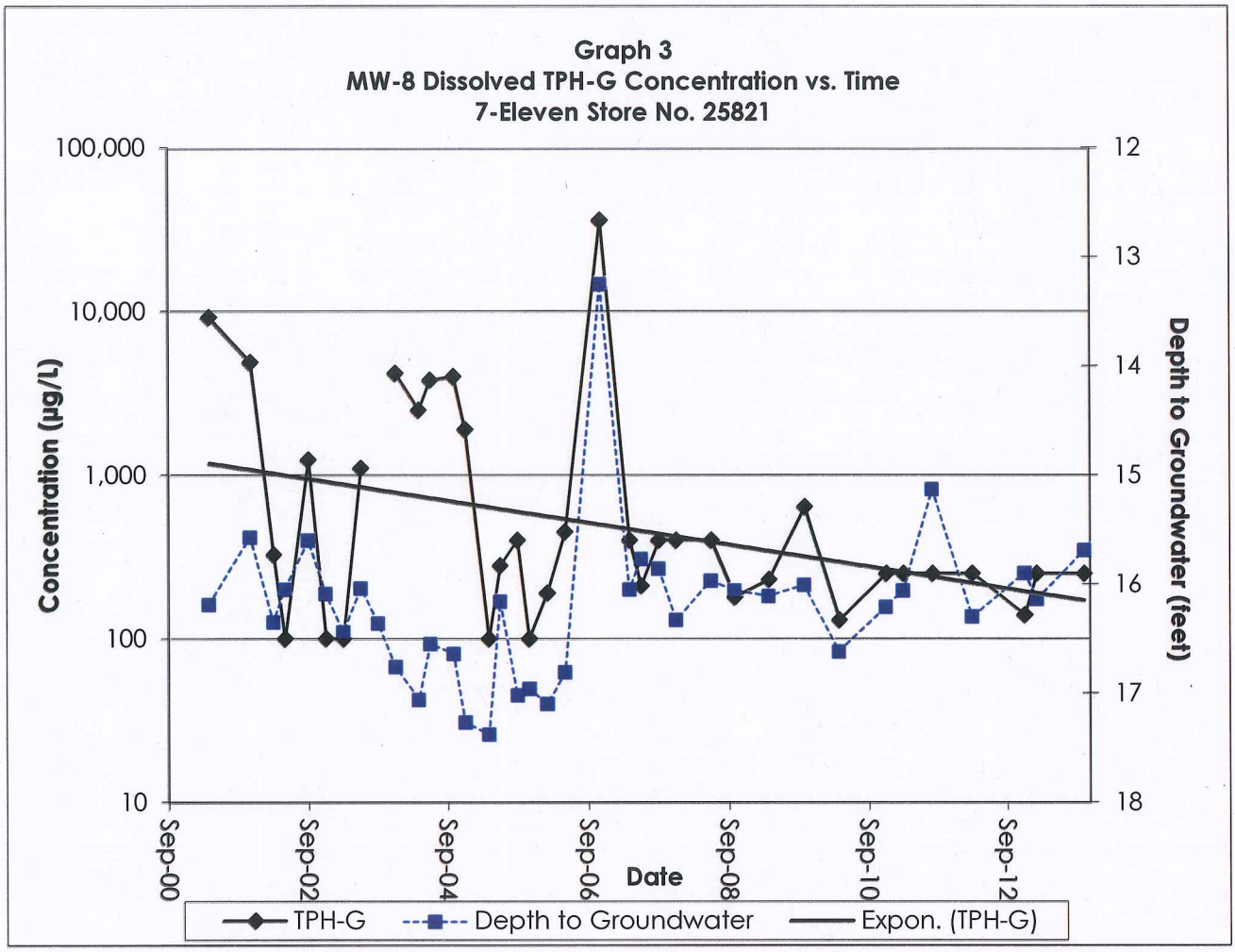
M:_00 OTHER OFFICES\01-REDMOND\7-11\25821\FIG-3b_25821_GW 10-17-2013 (2).dwg modified by miramirez on Jun 15, 2015 - 12:18

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

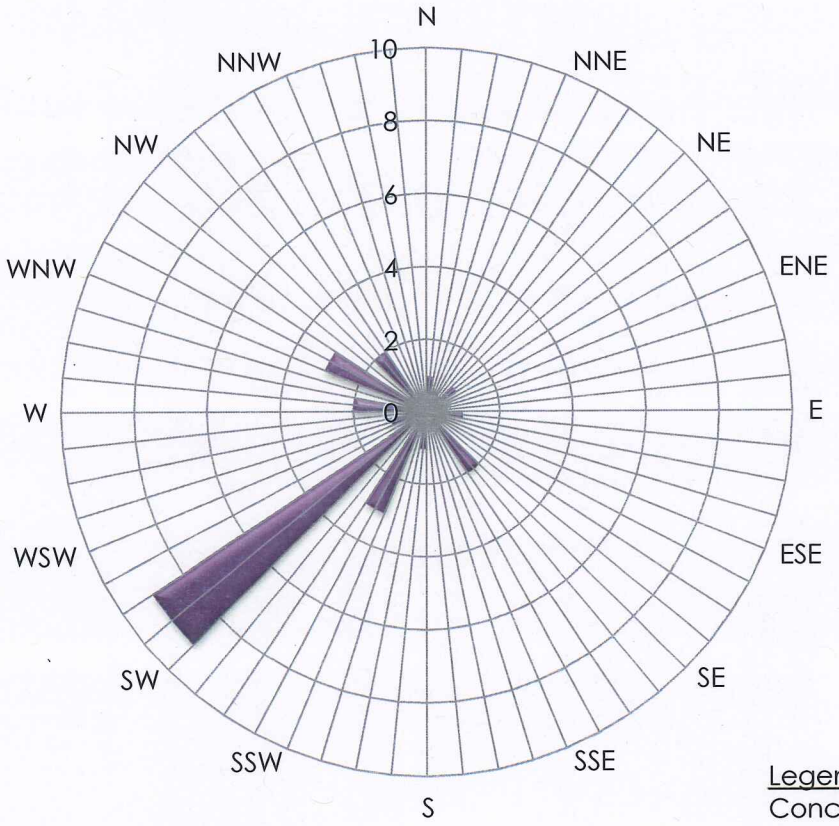


Graph 2
MW-7 Dissolved TPH-G Concentration vs. Time
7-Eleven Store No. 25821




Graph 3
MW-8 Dissolved TPH-G Concentration vs. Time
7-Eleven Store No. 25821
Concentration (µg/L)
100,000
10,000
1,000
100
10
Depth to Groundwater (feet)
12
13
14
15
16
17
18
Sep-00
Sep-02
Sep-04
Sep-06
Sep-08
Sep-10
Sep-12
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 Monitoring Events
Fourth Quarter 2002 through Fourth Quarter 2013
33 Data Points Shown

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
	12/12/12	--	--	--	--	--	--	--	--	--	17	345.38
	02/27/13	--	--	--	--	--	--	--	--	--	17.24	345.14
366.11	10/17/13	--	--	--	--	--	--	--	--	--	16.75	349.36
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
	12/12/12	--	--	--	--	--	--	--	--	--	17.02	345.30
	02/27/13	--	--	--	--	--	--	--	--	--	17.25	345.07
366.10	10/17/13	--	--	--	--	--	--	--	--	--	16.80	349.30
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
	12/12/12	<1	<1	<1	<3	<100	<0.01	<1	<1	<1	16.86	345.27
	02/27/13	<0.50	<0.50	<0.50	<0.50	<250	<0.010	<0.50	<0.50	<5	17.04	345.09
365.81	10/17/13	<0.50	<0.50	<0.50	<0.50	<250	<0.010	<0.50	<0.50	<5	16.67	349.14
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
	12/12/12	--	--	--	--	--	--	--	--	--	16.38	345.45
	02/27/13	--	--	--	--	--	--	--	--	--	16.65	345.18
365.54	10/17/13	--	--	--	--	--	--	--	--	--	16.19	349.35
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	--
												--
	12/12/12	Dry Well									DRY	--
	02/27/13	Dry Well									DRY	--
	10/17/13	Dry Well									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
	12/12/12	3.50	14	140	360	**6,700**	<0.01	<1	<1	1.14	15.95	345.48
	02/27/13	<0.50	<0.50	26	62	**2,000**	<0.010	<0.50	<0.50	<5	16.08	345.35
365.15	10/17/13	<0.50	<0.50	110	190	**4,600**	<0.010	<0.50	<0.50	<5	15.77	349.38
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-7	12/11/96	--	--	--	--	--	--	--	--	--	--	--
361.23	06/24/97	--	--	--	--	--	--	--	--	--	12.17	349.06
	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
	12/12/12	<1	1.4	<1	<3	340	<0.01	<1	<1	<1	15.77	345.46
	02/27/13	<0.50	<0.50	<0.50	<0.50	400	<0.010	<0.50	<0.50	<5	16.02	345.21
364.95	10/17/13	<0.50	<0.50	<0.50	<0.50	<250	<0.010	<0.50	<0.50	<5	15.56	349.39
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**[(D)]	--	--	--	--	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
	12/12/12	<1	<1	<1	4.2	140	<0.01	<1	<1	1.05	15.89	345.45
	02/27/13	<0.50	<0.50	<0.50	<0.50	<250	<0.010	<0.50	<0.50	<5	16.13	345.21
365.03	10/17/13	<0.50	<0.50	<0.50	0.78	<250	<0.010	<0.50	<0.50	<5	15.68	349.35
MTCA Method A Cleanup Level		**5**	**1,000**	**700**	**1,000**	**800/1,000**[b]	**0.01**	**5**	**20**	**15**		

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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-9 365.32	10/17/13	<0.50	<0.50	<0.50	<0.50	<250	<0.010	<0.50	<0.50	<5	16.01	349.31
MTCA Method A Cleanup Level		**5**	**1,000**	**700**	**1,000**	**800/1,000[b]**	**0.01**	**5**	**20**	**15**		
MW-10 365.77	10/17/13	<0.50	<0.50	<0.50	<0.50	<250	<0.010	<0.50	<0.50	<5	16.48	349.29
MTCA Method A Cleanup Level		**5**	**1,000**	**700**	**1,000**	**800/1,000[b]**	**0.01**	**5**	**20**	**15**		
MW-11 365.57	10/17/13	<0.50	<0.50	<0.50	<0.50	<250	<0.010	<0.50	<0.50	<5	16.25	349.32
MTCA Method A Cleanup Level		**5**	**1,000**	**700**	**1,000**	**800/1,000[b]**	**0.01**	**5**	**20**	**15**		
MW-12 364.40	10/17/13	<0.50	<0.50	<0.50	<0.50	<250	<0.010	<0.50	<0.50	<5	14.96	349.44
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

June 22, 2015
Ms. Laura Klasner

Reference: 7-Eleven Store 25821 Annual 2013 Groundwater Monitoring and Sampling Report

ATTACHMENT A

LABORATORY ANALYTICAL REPORT AND CHAIN OF CUSTODY DOCUMENTATION

7-Eleven Store 25821 Annual 2013 Groundwater Monitoring and Sampling Report

KIFF Analytical LLC

Report Number : 84203
Date : 03/08/2013

Laboratory Results

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

Subject : 4 Water Samples
Project Name : 1Q13 GWM EVENT
Project Number : 185750037.200.0400

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 : 84203
Date : 03/08/2013

Project Name : **1Q13 GWM EVENT**
Project Number : **185750037.200.0400**

Sample : **MW-3** Matrix : Water Lab Number : 84203-01
Sample Date :02/27/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Lead	< 0.0050	0.0050	mg/L	EPA 200.7	03/08/13 12:49
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 15:48
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 15:48
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 15:48
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 15:48
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 15:48
Gasoline Range Organics	< 250	250	ug/L	NWTPH-Gx	03/05/13 21:46
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 15:48
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	03/06/13 15:48
Toluene - d8 (Surr)	94.4		% Recovery	EPA 8260B	03/06/13 15:48
4-Bromofluorobenzene (Surr)	93.6		% Recovery	NWTPH-Gx	03/05/13 21:46

KIFF Analytical LLC

Report Number : 84203
Date : 03/08/2013

Project Name : **1Q13 GWM EVENT**
Project Number : **185750037.200.0400**

Sample : **MW-8** Matrix : Water Lab Number : 84203-02
Sample Date :02/27/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Lead	< 0.0050	0.0050	mg/L	EPA 200.7	03/08/13 12:53
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 15:12
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 15:12
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 15:12
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 15:12
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 15:12
Gasoline Range Organics	< 250	250	ug/L	NWTPH-Gx	03/05/13 22:56
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 15:12
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	03/06/13 15:12
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	03/06/13 15:12
4-Bromofluorobenzene (Surr)	93.0		% Recovery	NWTPH-Gx	03/05/13 22:56

KIFF Analytical LLC

Report Number : 84203
Date : 03/08/2013

Project Name : **1Q13 GWM EVENT**
Project Number : **185750037.200.0400**

Sample : **MW-7** Matrix : Water Lab Number : 84203-03
Sample Date :02/27/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Lead	< 0.0050	0.0050	mg/L	EPA 200.7	03/08/13 12:57
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 15:47
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 15:47
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 15:47
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 15:47
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 15:47
Gasoline Range Organics	**400**	250	ug/L	NWTPH-Gx	03/05/13 23:34
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 15:47
1,2-Dichloroethane-d4 (Surr)	99.4		% Recovery	EPA 8260B	03/06/13 15:47
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	03/06/13 15:47
4-Bromofluorobenzene (Surr)	95.6		% Recovery	NWTPH-Gx	03/05/13 23:34

KIFF Analytical LLC

Report Number : 84203
Date : 03/08/2013

Project Name : **1Q13 GWM EVENT**
Project Number : **185750037.200.0400**

Sample : **MW-6** Matrix : Water Lab Number : 84203-04

Sample Date :02/27/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Lead	< 0.0050	0.0050	mg/L	EPA 200.7	03/08/13 13:01
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 16:21
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 16:21
Ethylbenzene	**26**	0.50	ug/L	EPA 8260B	03/06/13 16:21
Total Xylenes	**62**	0.50	ug/L	EPA 8260B	03/06/13 16:21
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 16:21
Gasoline Range Organics	**2000**	250	ug/L	NWTPH-Gx	03/06/13 00:12
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/06/13 16:21
1,2-Dichloroethane-d4 (Surr)	98.8		% Recovery	EPA 8260B	03/06/13 16:21
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	03/06/13 16:21
4-Bromofluorobenzene (Surr)	94.5		% Recovery	NWTPH-Gx	03/06/13 00:12

Report Number : 84203

Date : 03/08/2013

QC Report : Method Blank Data

Project Name : **1Q13 GWM EVENT**

Project Number : **185750037.200.0400**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Lead	< 0.0050	0.0050	mg/L	EPA 200.7	03/07/2013
Gasoline Range Organics	< 250	250	ug/L	NWTPH-Gx	03/05/2013
4-Bromofluorobenzene (Surr)	91.2		%	NWTPH-Gx	03/05/2013
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/06/2013
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/06/2013
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/06/2013
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/06/2013
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/06/2013
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/06/2013
1,2-Dichloroethane-d4 (Surr)	100		%	EPA 8260B	03/06/2013
Toluene - d8 (Surr)	100		%	EPA 8260B	03/06/2013
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/06/2013
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/06/2013
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/06/2013
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/06/2013
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/06/2013
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	03/06/2013
1,2-Dichloroethane-d4 (Surr)	99.8		%	EPA 8260B	03/06/2013
Toluene - d8 (Surr)	101		%	EPA 8260B	03/06/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

KIFF ANALYTICAL, LLC

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

Report Number : 84203

Date : 03/08/2013

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **1Q13 GWM EVENT**

Project Number : **185750037.200.0400**

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
Lead														
	84192-01	< 0.0050	0.400	0.400	0.353	0.352	mg/L	EPA 200.7	3/7/13	88.2	88.1	0.0851	75-125	20
1,2-Dichloroethane														
	84205-01	<0.50	40.0	40.0	39.1	39.0	ug/L	EPA 8260B	3/6/13	97.8	97.4	0.404	75.7-122	25
Benzene														
	84205-01	<0.50	40.0	40.0	39.4	38.7	ug/L	EPA 8260B	3/6/13	98.4	96.8	1.64	80-120	25
Ethylbenzene														
	84205-01	<0.50	40.0	40.0	39.9	39.5	ug/L	EPA 8260B	3/6/13	99.7	98.8	0.941	80-120	25
Methyl-t-butyl ether														
	84205-01	1.8	40.1	40.1	40.4	40.2	ug/L	EPA 8260B	3/6/13	96.2	95.7	0.521	69.7-121	25
P + M Xylene														
	84205-01	<0.50	40.0	40.0	38.0	37.8	ug/L	EPA 8260B	3/6/13	94.9	94.5	0.444	76.8-120	25
Toluene														
	84205-01	<0.50	40.0	40.0	39.4	38.8	ug/L	EPA 8260B	3/6/13	98.4	96.9	1.57	80-120	25
1,2-Dichloroethane														
	84205-03	<0.50	40.0	40.0	38.6	38.0	ug/L	EPA 8260B	3/6/13	96.4	95.1	1.36	75.7-122	25
Benzene														
	84205-03	<0.50	40.0	40.0	39.8	39.0	ug/L	EPA 8260B	3/6/13	99.4	97.6	1.86	80-120	25

KIFF ANALYTICAL, LLC

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

Report Number : 84203

Date : 03/08/2013

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **1Q13 GWM EVENT**

Project Number : **185750037.200.0400**

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
Ethylbenzene														
	84205-03	<0.50	40.0	40.0	40.2	39.4	ug/L	EPA 8260B	3/6/13	100	98.6	1.76	80-120	25
Methyl-t-butyl ether														
	84205-03	3.7	40.1	40.1	43.6	43.5	ug/L	EPA 8260B	3/6/13	99.5	99.3	0.132	69.7-121	25
P + M Xylene														
	84205-03	<0.50	40.0	40.0	39.8	39.0	ug/L	EPA 8260B	3/6/13	99.5	97.4	2.05	76.8-120	25
Toluene														
	84205-03	<0.50	40.0	40.0	40.1	39.4	ug/L	EPA 8260B	3/6/13	100	98.4	1.76	80-120	25

KIFF ANALYTICAL, LLC

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

Report Number : 84203

Date : 03/08/2013

QC Report : Laboratory Control Sample (LCS)

Project Name : **1Q13 GWM EVENT**

Project Number : **185750037.200.0400**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Lead	0.400	mg/L	EPA 200.7	3/7/13	96.6	85-115
1,2-Dichloroethane	40.0	ug/L	EPA 8260B	3/6/13	98.7	75.7-122
Benzene	40.0	ug/L	EPA 8260B	3/6/13	99.8	80-120
Ethylbenzene	40.0	ug/L	EPA 8260B	3/6/13	103	80-120
Methyl-t-butyl ether	40.1	ug/L	EPA 8260B	3/6/13	97.5	69.7-121
P + M Xylene	40.0	ug/L	EPA 8260B	3/6/13	98.4	76.8-120
Toluene	40.0	ug/L	EPA 8260B	3/6/13	100	80-120
1,2-Dichloroethane	39.8	ug/L	EPA 8260B	3/6/13	98.9	75.7-122
Benzene	39.8	ug/L	EPA 8260B	3/6/13	99.2	80-120
Ethylbenzene	39.8	ug/L	EPA 8260B	3/6/13	101	80-120
Methyl-t-butyl ether	39.9	ug/L	EPA 8260B	3/6/13	100	69.7-121
P + M Xylene	39.8	ug/L	EPA 8260B	3/6/13	99.6	76.8-120
Toluene	39.8	ug/L	EPA 8260B	3/6/13	100	80-120

KIFF ANALYTICAL, LLC

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

Report Number : 84203

Date : 03/08/2013

QC Report : Sample Duplicate

Project Name : **1Q13 GWM EVENT**

Project Number : **185750037.200.0400**

Parameter	Sample ID	Units	Analysis Method	Date Analyzed	Sample Value	Duplicate Value	RPD	RPD Limit
Gasoline Range Organics	84203-01	ug/L	NWTPH-Gx	3/5/13	< 250	< 250	NC	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. 84203

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: 12034 134th CT NE STE 102 REDMOND, WA	User Location ID:
Phone Number: 425-298-1016	User Study ID:
Fax Number: 425-298-1019	Bill to:
Project #: 185750037 P.O. #:	Sampler Print Name: EMILY HARPER
Project Name: 1Q13 GWM EVENT	Sampler Signature:

Project Address:

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 & 1,2 EDB) (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, EDC			For Lab Use Only
			circle method																															
MW-3	2/27/13	8:47	X		X			X	X	X	X			X	X	X												X		X				01
MW-8	2/27/13	09:40	X		X			X	X	X	X			X	X	X												X		X				02
MW-7	2/27/13	10:29	X		X			X	X	X	X			X	X	X												X		X				03
MW-6	2/27/13	11:03	X		X			X	X	X	X			X	X	X												X		X				04

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

	Date	Time	Received by:
Relinquished by:	2/28/13	11:50	Received by: KIFF PRL 3/4/13 10:00
Relinquished by: KIFF IBEP	Date 3/4/13	Time 10:00	Received by:
Relinquished by:	Date 030513	Time 1157	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#: 84203 Date: 030513

Project ID: 1Q13 GWM Event

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

Shipping Only: ☐ FedEx * ☐ OnTrac * ☒ Greyhound ☐ Other *Service level if not Priority or Sunrise (M-F): _____

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	
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 3.8 Therm. ID# IR-1 Initial TJB Date/Time 030513/1151 ☐ 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 20
Matrix WA	Container type Poly	# of containers received 4
Matrix	Container type	# of containers received

Date and Time Sample Put into Temp Storage Date: 030513 Time: 1157

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: Metals method is not specified on COC. SR will log in the method as EPA 200.7 unless project history or CS dictate otherwise. TJB 030513 1159

Project ID on labels is 711 Loc 25821; SR will log in the project name and number as per the COC. TJB 030513 1307

Leaders in Analytical Science and Service

KIFF Analytical LLC

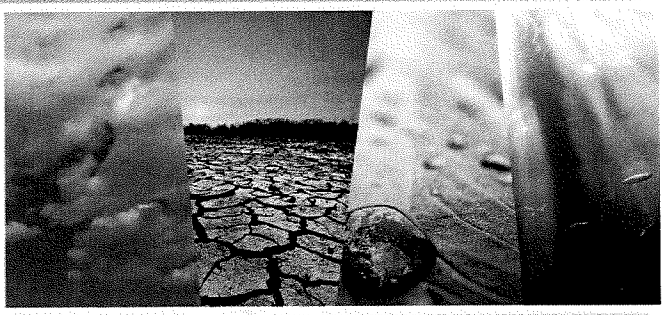
Subcontract Laboratory Report Attachments

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: 13-03-0294

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Kiff Analytical

Client Project Name: 1Q13 GWM EVENT

Attention: Joel Kiff
2795 2nd Street, Suite 300
Davis, CA 95618-6505

Amanda Porter

Approved for release on 03/11/2013 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: 1Q13 GWM EVENT
Work Order Number: 13-03-0294

Calscience Environmental Laboratories, Inc.

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95618-6505

Date Received: 03/06/13
Work Order No: 13-03-0294
Preparation: EPA 504.1 Ext.
Method: EPA 504.1
Units: ug/L

Project: 1Q13 GWM EVENT

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	13-03-0294-1-A	02/27/13 08:47	Aqueous	GC 40	03/06/13	03/07/13 01:02	130306L11

Parameter	Result	RL	DF	Qual
1,2-Dibromoethane	ND	0.010	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-8	13-03-0294-2-A	02/27/13 09:40	Aqueous	GC 40	03/06/13	03/07/13 01:25	130306L11

Parameter	Result	RL	DF	Qual
1,2-Dibromoethane	ND	0.010	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	13-03-0294-3-A	02/27/13 10:29	Aqueous	GC 40	03/06/13	03/07/13 01:49	130306L11

Parameter	Result	RL	DF	Qual
1,2-Dibromoethane	ND	0.010	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	13-03-0294-4-A	02/27/13 11:03	Aqueous	GC 40	03/06/13	03/07/13 02:12	130306L11

Parameter	Result	RL	DF	Qual
1,2-Dibromoethane	ND	0.010	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-520-381	N/A	Aqueous	GC 40	03/06/13	03/06/13 22:17	130306L11

Parameter	Result	RL	DF	Qual
1,2-Dibromoethane	ND	0.010	1	

Return to Contents

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

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical		Date Received:	03/06/13
2795 2nd Street, Suite 300		Work Order No:	13-03-0294
Davis, CA 95618-6505		Preparation:	EPA 504.1 Ext.
		Method:	EPA 504.1

Project 1Q13 GWM EVENT

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
13-03-0033-1	**Aqueous**	**GC 40**	**03/06/13**	**03/06/13**	**130306S11**

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
1,2-Dibromoethane	ND	0.2857	0.2640	92	0.2350	82	60-140	12	0-25	

Return to Contents

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

ACCREDITED IN ACCORDANCE WITH nelac

Kiff Analytical	Date Received:	N/A
2795 2nd Street, Suite 300	Work Order No:	13-03-0294
Davis, CA 95618-6505	Preparation:	EPA 504.1 Ext.
	Method:	EPA 504.1

Project: 1Q13 GWM EVENT

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-520-381	**Aqueous**	**GC 40**	**03/06/13**	**03/06/13**	**130306L11**

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
1,2-Dibromoethane	0.2857	0.2810	98	0.2750	96	60-140	2	0-25	
1,2-Dibromo-3-Chloropropane	0.2857	0.2710	95	0.2830	99	60-140	4	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: 13-03-0294

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.

For any analysis identified as a "field" test with a holding time (HT) </= 15 minutes where the sample is received outside of HT, Calscience will adhere to its internal HT of 24 hours. In cases where sample analysis does not meet Calscience's internal HT, results will be appropriately qualified.

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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

13-03-0294

COC No. **84203** Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Jennifer Worsley

Company/Address: Kiff Analytical

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

Project Number: 185750037 P.O. No.: 84203

Project Name: 1Q13 GWM EVENT

Project Address:

EDF Report? NO

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

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

Due Date: March 11, 2013

Sample Designation	Sampling Date	Sampling Time	Container / Preservative: VOA 40 ml None	Matrix: Water	Analysis Request: Ethylene Dibromide by EPA 504 (1)	For Lab Use Only
MW-3	02/27/13	08:47	2	X	X	1
MW-8	02/27/13	09:40	2	X	X	2
MW-7	02/27/13	10:29	2	X	X	3
MW-6	02/27/13	11:03	2	X	X	4

Relinquished by: Kiff Analytical	Date 03/5/13	Time 1700	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by: (CONTRACT)	Date 3/6/13	Time 10:00	Received by Laboratory:

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

Bill to: Accounts Payable

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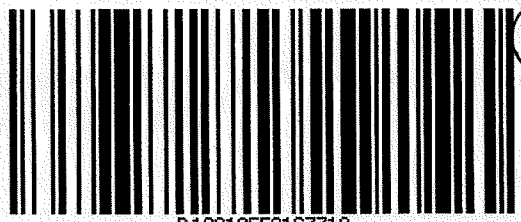
800.334.5000
ontrac.com



0294

Date Printed 3/5/2013

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Shipped From:
KIFF ANALYTICAL
2795 2ND STREET 300
DAVIS, CA 95618

Sent By: SAMPLE RECEIVINGX125
Phone#: (530)297-4800
wgt(lbs): 6
Reference: SUBS 84203
Reference 2: 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:* **Signature Required**

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 13-03-0294

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: KIFF

DATE: 03/06/13

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 2.4 °C - 0.2 °C (CF) = 2.2 °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: JPS

CUSTODY SEALS INTACT:

☒ Cooler ☐ _____ ☐ No (Not Intact) ☐ Not Present ☐ N/A Initial: JPS

☐ Sample ☐ _____ ☐ No (Not Intact) ☒ Not Present Initial: MC

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 ☐VOA**h** ☐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® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** MC

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

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:** YL

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 13-03-0294

SAMPLE ANOMALY FORM

SAMPLES - CONTAINERS & LABELS:

- ☐ **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) to (-4) received Ethylene Dibromide by EPA 504(1) unpreserved

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: b.L 03/06/13

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KIFF Analytical LLC

Report Number : 86345
Date : 11/01/2013

Laboratory Results

Paul Fairbairn
Stantec Consulting Corporation - Redmond, WA
11130 NE 33rd Place, Suite 200
Bellevue, WA 98004

Subject : 8 Water Samples
Project Name : 4Q13 GWM 25821
Project Number : 185750037

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 : 86345
Date : 11/01/2013

Subject : 8 Water Samples
Project Name : 4Q13 GWM 25821
Project Number : 185750037

Case Narrative

Samples MW-3, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11 and MW-12 were filtered in the laboratory for metals analysis.

Matrix Spike/Matrix Spike Duplicate results for some analytes were outside of control limits. This may indicate a bias for the samples that were spiked. Since the LCS recoveries were within control limits, no data are flagged.

KIFF Analytical LLC

Report Number : 86345
Date : 11/01/2013

Project Name : **4Q13 GWM 25821**
Project Number : **185750037**

Sample : **MW-3** Matrix : Water Lab Number : 86345-01
Sample Date :10/17/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Lead, Dissolved	< 0.0050	0.0050	mg/L	EPA 200.7	10/29/13 09:48
Benzene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 18:41
Toluene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 18:41
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 18:41
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 18:41
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 18:41
Gasoline Range Organics	< 250	250	ug/L	NWTPH-Gx	10/28/13 18:41
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 18:41
1,2-Dichloroethane-d4 (Surr)	96.1		% Recovery	EPA 8260B	10/28/13 18:41
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	10/28/13 18:41
4-Bromofluorobenzene (Surr)	101		% Recovery	NWTPH-Gx	10/28/13 18:41

KIFF Analytical LLC

Report Number : 86345
Date : 11/01/2013

Project Name : **4Q13 GWM 25821**
Project Number : **185750037**

Sample : **MW-6** Matrix : Water Lab Number : 86345-02
Sample Date :10/17/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Lead, Dissolved	< 0.0050	0.0050	mg/L	EPA 200.7	10/29/13 10:00
Benzene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 12:50
Toluene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 12:50
Ethylbenzene	**110**	0.50	ug/L	EPA 8260B	10/28/13 12:50
Total Xylenes	**190**	0.50	ug/L	EPA 8260B	10/28/13 12:50
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 12:50
Gasoline Range Organics	**4600**	250	ug/L	NWTPH-Gx	10/28/13 12:50
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 12:50
1,2-Dichloroethane-d4 (Surr)	98.9		% Recovery	EPA 8260B	10/28/13 12:50
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	10/28/13 12:50
4-Bromofluorobenzene (Surr)	99.7		% Recovery	NWTPH-Gx	10/28/13 12:50

KIFF Analytical LLC

Report Number : 86345
Date : 11/01/2013

Project Name : **4Q13 GWM 25821**
Project Number : **185750037**

Sample : **MW-7** Matrix : Water Lab Number : 86345-03
Sample Date :10/17/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Lead, Dissolved	< 0.0050	0.0050	mg/L	EPA 200.7	10/29/13 10:04
Benzene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 19:14
Toluene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 19:14
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 19:14
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 19:14
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 19:14
Gasoline Range Organics	< 250	250	ug/L	NWTPH-Gx	10/28/13 19:14
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 19:14
1,2-Dichloroethane-d4 (Surr)	95.2		% Recovery	EPA 8260B	10/28/13 19:14
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	10/28/13 19:14
4-Bromofluorobenzene (Surr)	101		% Recovery	NWTPH-Gx	10/28/13 19:14

KIFF Analytical LLC

Report Number : 86345
Date : 11/01/2013

Project Name : **4Q13 GWM 25821**
Project Number : **185750037**

Sample : **MW-8** Matrix : Water Lab Number : 86345-04
Sample Date :10/17/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Lead, Dissolved	< 0.0050	0.0050	mg/L	EPA 200.7	10/29/13 10:08
Benzene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 19:47
Toluene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 19:47
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 19:47
Total Xylenes	**0.78**	0.50	ug/L	EPA 8260B	10/28/13 19:47
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 19:47
Gasoline Range Organics	< 250	250	ug/L	NWTPH-Gx	10/28/13 19:47
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 19:47
1,2-Dichloroethane-d4 (Surr)	97.1		% Recovery	EPA 8260B	10/28/13 19:47
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	10/28/13 19:47
4-Bromofluorobenzene (Surr)	102		% Recovery	NWTPH-Gx	10/28/13 19:47

KIFF Analytical LLC

Report Number : 86345
Date : 11/01/2013

Project Name : **4Q13 GWM 25821**
Project Number : **185750037**

Sample : **MW-9** Matrix : Water Lab Number : 86345-05

Sample Date :10/17/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Lead, Dissolved	< 0.0050	0.0050	mg/L	EPA 200.7	10/29/13 10:12
Benzene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 20:23
Toluene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 20:23
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 20:23
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 20:23
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 20:23
Gasoline Range Organics	< 250	250	ug/L	NWTPH-Gx	10/28/13 20:23
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 20:23
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	10/28/13 20:23
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	10/28/13 20:23
4-Bromofluorobenzene (Surr)	99.6		% Recovery	NWTPH-Gx	10/28/13 20:23

KIFF Analytical LLC

Report Number : 86345
Date : 11/01/2013

Project Name : **4Q13 GWM 25821**
Project Number : **185750037**

Sample : **MW-10** Matrix : Water Lab Number : 86345-06

Sample Date :10/17/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Lead, Dissolved	< 0.0050	0.0050	mg/L	EPA 200.7	10/29/13 10:16
Benzene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 20:56
Toluene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 20:56
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 20:56
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 20:56
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 20:56
Gasoline Range Organics	< 250	250	ug/L	NWTPH-Gx	10/28/13 20:56
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 20:56
1,2-Dichloroethane-d4 (Surr)	98.3		% Recovery	EPA 8260B	10/28/13 20:56
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	10/28/13 20:56
4-Bromofluorobenzene (Surr)	102		% Recovery	NWTPH-Gx	10/28/13 20:56

KIFF Analytical LLC

Report Number : 86345
Date : 11/01/2013

Project Name : **4Q13 GWM 25821**
Project Number : **185750037**

Sample : **MW-11** Matrix : Water Lab Number : 86345-07
Sample Date :10/17/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Lead, Dissolved	< 0.0050	0.0050	mg/L	EPA 200.7	10/29/13 10:26
Benzene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 21:34
Toluene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 21:34
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 21:34
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 21:34
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 21:34
Gasoline Range Organics	< 250	250	ug/L	NWTPH-Gx	10/28/13 21:34
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 21:34
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	10/28/13 21:34
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	10/28/13 21:34
4-Bromofluorobenzene (Surr)	100		% Recovery	NWTPH-Gx	10/28/13 21:34

KIFF Analytical LLC

Report Number : 86345
Date : 11/01/2013

Project Name : **4Q13 GWM 25821**
Project Number : **185750037**

Sample : **MW-12** Matrix : Water Lab Number : 86345-08
Sample Date :10/17/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Lead, Dissolved	< 0.0050	0.0050	mg/L	EPA 200.7	10/29/13 10:30
Benzene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 22:07
Toluene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 22:07
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 22:07
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 22:07
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 22:07
Gasoline Range Organics	< 250	250	ug/L	NWTPH-Gx	10/28/13 22:07
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	10/28/13 22:07
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	10/28/13 22:07
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	10/28/13 22:07
4-Bromofluorobenzene (Surr)	101		% Recovery	NWTPH-Gx	10/28/13 22:07

Report Number : 86345

Date : 11/01/2013

QC Report : Method Blank Data

Project Name : **4Q13 GWM 25821**

Project Number : **185750037**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Lead, Dissolved	< 0.0050	0.0050	mg/L	EPA 200.7	10/29/2013
Benzene	< 0.50	0.50	ug/L	EPA 8260B	10/28/2013
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	10/28/2013
Toluene	< 0.50	0.50	ug/L	EPA 8260B	10/28/2013
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	10/28/2013
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	10/28/2013
Gasoline Range Organics	< 250	250	ug/L	NWTPH-Gx	10/28/2013
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	10/28/2013
1,2-Dichloroethane-d4 (Surr)	97.2		%	EPA 8260B	10/28/2013
4-Bromofluorobenzene (Surr)	102		%	NWTPH-Gx	10/28/2013
Toluene - d8 (Surr)	100		%	EPA 8260B	10/28/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

KIFF ANALYTICAL, LLC

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

Report Number : 86345

Date : 11/01/2013

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **4Q13 GWM 25821**

Project Number : **185750037**

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
Lead, (Dis)	86345-01	< 0.0050	0.400	0.400	0.384	0.388	mg/L	EPA 200.7	10/29/13	95.8	96.8	0.984	75-125	20
1,2-Dichloroethane	86345-02	<0.50	39.3	39.8	38.0	39.3	ug/L	EPA 8260B	10/28/13	96.7	98.8	2.10	70.0-130	25
Benzene	86345-02	<0.50	39.3	39.8	38.3	38.8	ug/L	EPA 8260B	10/28/13	97.5	97.5	0.0304	70.0-130	25
Ethylbenzene	86345-02	110	39.3	39.8	140	137	ug/L	EPA 8260B	10/28/13	77.0	**69.4**	10.3	70.0-130	25
Methyl-t-butyl ether	86345-02	<0.50	39.2	39.6	29.1	30.9	ug/L	EPA 8260B	10/28/13	74.2	78.1	5.02	70.0-130	25
P + M Xylene	86345-02	120	39.3	39.8	149	146	ug/L	EPA 8260B	10/28/13	77.3	**68.4**	12.2	70.0-130	25
Toluene	86345-02	<0.50	39.3	39.8	39.0	39.2	ug/L	EPA 8260B	10/28/13	99.3	98.5	0.824	70.0-130	25

KIFF ANALYTICAL, LLC

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

Report Number : 86345

Date : 11/01/2013

QC Report : Laboratory Control Sample (LCS)

Project Name : **4Q13 GWM 25821**

Project Number : **185750037**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Lead, (Dis)	0.400	mg/L	EPA 200.7	10/29/13	100	85-115
1,2-Dichloroethane	40.0	ug/L	EPA 8260B	10/28/13	96.4	70.0-130
Benzene	40.0	ug/L	EPA 8260B	10/28/13	98.6	70.0-130
Ethylbenzene	40.0	ug/L	EPA 8260B	10/28/13	99.9	70.0-130
Methyl-t-butyl ether	39.9	ug/L	EPA 8260B	10/28/13	71.3	70.0-130
P + M Xylene	40.0	ug/L	EPA 8260B	10/28/13	100	70.0-130
Toluene	40.0	ug/L	EPA 8260B	10/28/13	99.8	70.0-130

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. 86345

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: STE 200 11130 NE 33rd PLACE BELLEVUE, WA	User Location ID:
Phone Number: 425-869-9448	User Study ID:
Fax Number: 425-869-1190	Bill to:
Project #: 185750037 P.O. #:	Sampler Print Name: EMILY HARPER
Project Name: 4Q13 GWM 25821	Sampler Signature:
Project Address: 1824 GEORGE WASHINGTON WAY RICHLAND, WA	

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

Sample Designation	Date	Time	Sampling	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 & 1,2 EDB) (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	EDC, EDB	DISSOLVED LEAD	For Lab Use Only
MW-3	10/17/13	16:30		X		X			X		X	X			X	X	X															X	X	01
MW-6		12:00		X		X			X		X	X			X	X	X															X	X	02
MW-7		11:35		X		X			X		X	X			X	X	X															X	X	03
MW-8		12:30		X		X			X		X	X			X	X	X															X	X	04
MW-9		13:10		X		X			X		X	X			X	X	X															X	X	05
MW-10		15:55		X		X			X		X	X			X	X	X															X	X	06
MW-11		16:20		X		X			X		X	X			X	X	X															X	X	07
MW-12	↓	13:45		X		X			X		X	X			X	X	X															X	X	08

Relinquished by:	Date	Time	Received by:
	10/18/13	1350	P Holstein 10/24 11:30
P Holstein	10/24	11:30	
	10/25/13	11:34	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

KIFF Analytical LLC

SAMPLE RECEIPT CHECKLIST

SRG #: 86345

Sample Receipt	**Initials/Date:** EJ 102513	**Storage Time:** 1134	**Sample Login**	**Initials/Date:** EJ 102513	
TAT: ☑ Standard	☐ Rush	☐ Split	☐ None	**Method of Receipt:** ☐ Courier	☐ Over-the-counter ☑ Shipped
Temp °C 0.2 ☐ N/A	Therm ID IR-1	Time 0810	Coolant present ☑ Yes	☐ No ☐ Water	☐ Temp Excursion
For Shipments Only:	Cooler Receipt Initials/Date/Time: MAS 102513 0810		Custody Seals ☐ N/A	☑ Intact	☐ Broken

Chain-of-Custody:	**Yes**	**No**
Is COC present?	✓	
Is COC signed by relinquisher?	✓	
Is COC dated by relinquisher?	✓	
Is the sampler's name on the COC?	✓	
Are there analyses or hold for all samples?	✓	

Documented on	**COC**	**Labels**	**Discrepancies:**
Sample ID	✓	✓	
Project ID	✓	✓	
Sample Date	✓	✓	
Sample Time	✓	✓	Sample -08 has "1325" on all containers.
Does COC match project history?	☑ N/A	☐ Yes	☐ No

Samples:	**N/A**	**Yes**	**No**
Are sample custody seals intact?	✓		
Are sample containers intact?		✓	
Is preservation documented?		✓	
In-house Analysis:	**N/A**	**Yes**	**No**
Are preservatives acceptable?		✓	
Are samples within holding time?		✓	
Are sample container types correct?		✓	
Is there adequate sample volume?		✓	

Receipt Details:

Matrix	Container Type	# of Containers
WA	Voa	40
WA	Poly	08

Comments:

CS Required: ☐

Proceed With Analysis: ☐ YES ☐ NO Init/Date:
Client Communication:

Leaders in Analytical Science and Service

KIFF Analytical LLC

Subcontract Laboratory Report Attachments

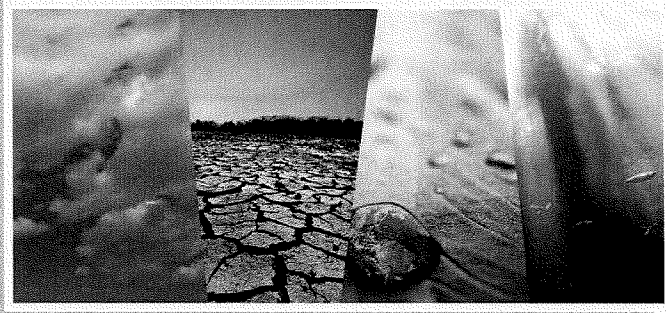
2795 Second Street, Suite 300 Davis, CA 95618
tel 530.297.4800 fax 530.297.4808
www.kiffanalytical.com

Calscience Environmental Laboratories, Inc.

CALSCIENCE

WORK ORDER NUMBER: 13-10-2006

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Kiff Analytical

Client Project Name: 4Q13 GWM 25821

Attention: Joel Kiff
2795 2nd Street, Suite 300
Davis, CA 95618-6505

Amanda Porter

Approved for release on 11/01/2013 by:
Amanda Porter
Project Manager

ResultLink ▸

Email your PM ▸

ACCREDITED IN ACCORDANCE WITH nelac

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: 4Q13 GWM 25821
Work Order Number: 13-10-2006

Calscience Environmental Laboratories, Inc.

Work Order Narrative

Work Order: 13-10-2006 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 10/26/13. They were assigned to Work Order 13-10-2006.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Additional Comments:

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

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

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Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95618-6505

Date Received: 10/26/13
Work Order: 13-10-2006
Preparation: EPA 504.1 Ext.
Method: EPA 504.1
Units: ug/L

Project: 4Q13 GWM 25821

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**13-10-2006-1-A**	**10/17/13 16:30**	**Aqueous**	**GC 40**	**10/30/13**	**10/30/13 16:17**	**131030L04**

Parameter	Result	RL	DF	Qualifiers
1,2-Dibromoethane	ND	0.010	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**13-10-2006-2-A**	**10/17/13 12:00**	**Aqueous**	**GC 40**	**10/30/13**	**10/30/13 16:40**	**131030L04**

Parameter	Result	RL	DF	Qualifiers
1,2-Dibromoethane	ND	0.010	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**13-10-2006-3-A**	**10/17/13 11:35**	**Aqueous**	**GC 40**	**10/30/13**	**10/30/13 17:03**	**131030L04**

Parameter	Result	RL	DF	Qualifiers
1,2-Dibromoethane	ND	0.010	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-8	**13-10-2006-4-A**	**10/17/13 12:30**	**Aqueous**	**GC 40**	**10/30/13**	**10/30/13 17:26**	**131030L04**

Parameter	Result	RL	DF	Qualifiers
1,2-Dibromoethane	ND	0.010	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-9	**13-10-2006-5-A**	**10/17/13 13:10**	**Aqueous**	**GC 40**	**10/30/13**	**10/30/13 17:49**	**131030L04**

Parameter	Result	RL	DF	Qualifiers
1,2-Dibromoethane	ND	0.010	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-10	**13-10-2006-6-A**	**10/17/13 15:55**	**Aqueous**	**GC 40**	**10/30/13**	**10/30/13 18:12**	**131030L04**

Parameter	Result	RL	DF	Qualifiers
1,2-Dibromoethane	ND	0.010	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95618-6505

Date Received: 10/26/13
Work Order: 13-10-2006
Preparation: EPA 504.1 Ext.
Method: EPA 504.1
Units: ug/L

Project: 4Q13 GWM 25821

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-11	**13-10-2006-7-A**	**10/17/13 15:20**	**Aqueous**	**GC 40**	**10/30/13**	**10/30/13 18:37**	**131030L04**

Parameter	Result	RL	DF	Qualifiers
1,2-Dibromoethane	ND	0.010	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-12	**13-10-2006-8-A**	**10/17/13 13:45**	**Aqueous**	**GC 40**	**10/30/13**	**10/30/13 19:01**	**131030L04**

Parameter	Result	RL	DF	Qualifiers
1,2-Dibromoethane	ND	0.010	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-520-408**	**N/A**	**Aqueous**	**GC 40**	**10/30/13**	**10/30/13 15:53**	**131030L04**

Parameter	Result	RL	DF	Qualifiers
1,2-Dibromoethane	ND	0.010	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

Kiff Analytical
2795 2nd Street, Suite 300
Davis, CA 95618-6505

Project: 4Q13 GWM 25821

Date Received: 10/26/13
Work Order: 13-10-2006
Preparation: EPA 504.1 Ext.
Method: EPA 504.1
Page 1 of 1

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-520-408	Aqueous	GC 40	10/30/13	10/30/13 15:07	131030L04

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,2-Dibromoethane	0.2857	0.2870	100	0.3410	119	60-140	17	0-25	
1,2-Dibromo-3-Chloropropane	0.2857	0.2780	97	0.3580	125	60-140	25	0-25	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Sample Analysis Summary Report

Work Order: 13-10-2006 Page 1 of 1

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA 504.1	EPA 504.1 Ext.	669	GC 40	1

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Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Qualifiers	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 suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
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.
BV	Sample received 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.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
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.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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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

13-10-2006

COC No. **86345** Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF to): Troy Turpen

EDF Report? NO

Company/Address: Kiff Analytical

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

Project Number: 185750037 P.O. No.: **86345**

Project Name: 4Q13 GWM 25821

Project Address:

Recommended but not mandatory to complete this section:

Sampling Company Log Code:

Global ID:

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

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	10/17/13	16:30	2	X	X	X	1
MW-6	10/17/13	12:00	2	X	X	X	2
MW-7	10/17/13	11:35	2	X	X	X	3
MW-8	10/17/13	12:30	2	X	X	X	4
MW-9	10/17/13	13:10	2	X	X	X	5
MW-10	10/17/13	15:55	2	X	X	X	6
MW-11	10/17/13	15:20	2	X	X	X	7
MW-12	10/17/13	13:45	2	X	X	X	8

	Date	Time	
Relinquished by: [signature] Kiff Analytical	10/25/13	1200	Received by:
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date 10/26/13	Time 1000	Received by Laboratory: [signature]

Remarks: Please refer to attached Test Detail.

Bill to: Accounts Payable

Return to Contents

Test Detail for Kiff Work Order: 86345

EDB/DBCP by EPA 504 (1)
Ethylene Dibromide

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3006

OnTrac
On Time Delivery For Less

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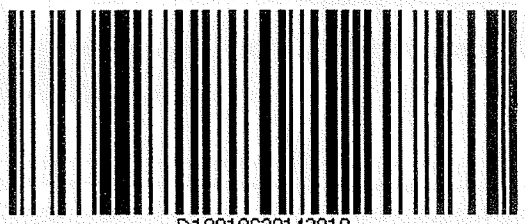

Date Printed 10/25/2013

Tracking#D10010628143010

Shipped From:
KIFF ANALYTICAL
2795 2ND STREET 300
DAVIS, CA 95618

Sent By: SAMPLE RECEIVINGX125
Phone#: (530)297-4800
wgt(lbs): 25
Reference: SUBS 86345
Reference 2: 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**

Return to Contents

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 13-10-2006

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: KIFF DATE: 10/26/13

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 2.2 °C - 0.2 °C (CF) = 2.0 °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 Checked by: 802

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A Checked by: 802

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Checked by: 681

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	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
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® ☐_____

Aqueous: ☑VOA ☐VOA**h** ☐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® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ Labeled/Checked by: 681

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope Reviewed by: 854

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: 854

Return to Contents

June 22, 2015
Ms. Laura Klasner

Reference: 7-Eleven Store 25821 Annual 2013 Groundwater Monitoring and Sampling Report

ATTACHMENT B

SITE VISITATION REPORT/FIELD NOTES

STANTEC MONITORING WELL PURGING AND SAMPLING PROCEDURES

7-Eleven Store 25821 Annual 2013 Groundwater Monitoring and Sampling Report

WORK REQUEST FORM

Stantec

JOB NAME:	Former 7-Eleven 25821	JOB NUMBER:	185750037
SITE ADDRESS:	1824 George Washington Richland, WA	START DATE:	2/27/13
PREPARED FOR:	Emily Harper	PREPARED BY:	Emily Harper
	NOTE:	REVIEWED BY:	Paul Fairbairn

WORK DESCRIPTION:

1. Review H&S Plan.
2. Arrive onsite and check in with Station Manager and contact Paul Fairbairn. .
3. Review HASP, conduct Health and Safety briefing and perform Site Walk to determine any traffic flow.
4. Gauge all site wells following gauging order on Sampling Request Form.
5. Low-flow purge and sample wells following the sampling order provided.
6. Take a drum for purge water. Store purge water in drums onsite, make sure they are labeled properly and secured.
7. Take an inventory of all waste drums generated by Stantec at the site, and mark locations on site plan.
8. Call Paul Fairbairn in the office prior to leaving the site.

Job Numbers:

Onsite and Travel Time

185750037.200.0700

Contacts Information:

Paul Fairbairn in Stantec Office: (425) 298-1016

Paul Fairbairn Stantec Cell: (206) 369-8383

ANALYTICAL REQUIREMENTS:	EQUIPMENT NEEDED:
NWTPH-Gx	H&S plan
BTEX (8260)	Safety Equipment
EDB, EDC, MTBE, Total Lead	Delineators
	Mini cooler for product sample
	Low-Flow Purging/Sampling Equipment
	Oil/Water Interface Probe
	Disposable bailers/ Rope
	Peristaltic Pump & Tubing
	Drum and labels

AUTHORIZATION : _____ COMPLETED: _____

Stantec

1st QUARTER 2013 SAMPLING REQUEST

7-Eleven Service Station No.25821- Located at 1824 George Washington; Richland, WA 99354

Project No.	Task		Project Manager	Date		Lab:		Client Contact:
185750037	200.0700		Paul Fairbairn	02/22/13		Kiff		Jose Rios

Well Number	Gaug. Freq.	Gaug. Order	Well Number	Samp. Order	Analyses	Well Depth	Top of Screen	Casing Dia.	Depth of Pump intake (ft bTOC)	Comments
MW-3		1		1	NWTPHG, BTEX (8260), EDB, EDC, MTBE, Total Lead					
MW-5		2		2	NWTPHG, BTEX (8260), EDB, EDC, MTBE, Total Lead					
MW-6		5		5	NWTPHG, BTEX (8260), EDB, EDC, MTBE, Total Lead					
MW-7		4		4	NWTPHG, BTEX (8260), EDB, EDC, MTBE, Total Lead					
MW-8		3		3	NWTPHG, BTEX (8260), EDB, EDC, MTBE, Total Lead					

Notes:

*Review and sign HASP prior to arriving on site. Check in with station manager and Stantec Project Manager Paul Fairbairn: Cell: 206 369 8383; Office: 425 298 1016

* Implement Stantec low flow purging and sampling procedures.

*NWTPH-Gx, BTEX (8260), MTBE, EDC, EDB

*The wells are now historically clean, if product or sheen is found, use Stop Work Authority and contact the 7-Eleven Project Manager Paul Fairbairn immediately.

*Please gauge all selected wells first and proceed to sample all wells unless otherwise noted.

*Store water in drum on-site. Label drum with contents with a Non Hazardous Waste Drum label and note in the field log

No. wells gauged without sampling: 3

Total wells sampled: 4

Gallons Purged:

SITE VISITATION REPORT

1Q13 - Former 7-Eleven Service Station No. 25821- Richland, WA

Stantec

Name(s): EMILY HARPER Date: 2/27/13 Time of Arrival Call-In: N/A

Arrival Time: 5:20 Departure Time: 11:45 Time of Departure Call-In: 12:04

Who did you call? Paul Fairbairn

DRUM INVENTORY

1	WATER	0	CARBON	TOTAL OPEN TOP	0
0	SOIL	0	EMPTY	TOTAL BUNG TOP	1

HEALTH AND SAFETY ASSESSMENT

VISIBILITY - DARK IN EARLY AM
DELINEATION (ESP. DRIVE THRU WELL)
COLD STRESS
PROPER PPE
PINCH POINTS, PROPER LIFTING

DESCRIPTION OF ACTIVITIES ONSITE AND NOTES

5:20 ARRIVE ONSITE, SAFETY LIST, DON PPE
5:30 SPEAK W/ MNGR ABOUT BEING ONSITE
5:34 SITE WALK, SET UP DECON
5:37 GAUGE WELLS (MW-1 & MW-2)
5:55 INTERFACE ACTING UP LEAVE SITE GO TO SAFEWAY (WALKED ACROSS ST) TO PURCHASE BATTERIES
6:15 RETURNED TO SITE, CARS PARKED & DELIVERY TRUCK PARKED ON REMAINING WELLS, WAIT FOR CLEARANCE
6:35 GAUGE WELLS REMAINING
7:30 BEGIN SAMPLING WELLS
11:14 BEGIN CLEANUP & DECON
11:45 DEPART SITE (TO SAFEWAY ACROSS ST) TO GET ICE FOR SAMPLES
12:04 DEPART SAFEWAY FINISHED W/ SITE

EH

Stantec

Stantec
HYDROLOGIC DATA SHEET

Gauge Date: 2/27/13 **Project Name:** Former 7-Eleven #25821

Field Technician: EMILY HARPER **Project Number:** 185750037

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-1			534		17.24	19.68	N	/	N	DRIVE THRU
MW-2			546		17.25	18.12	N	/	N	
MW-3		6:59	556		17.04	19.50	Y	N	Y	
MW-4			6:50		16.65	18.40	N	/	N	
MW-5			7:04		N/A	16.58	N	/	N	DRY WELL
MW-6			7:19		16.08	19.15	Y	N	Y	
MW-7			7:32		16.02	18.19	Y	N	Y	
MW-8			7:41		16.13	16.86	Y	N	Y	

Stantec

WATER SAMPLE FIELD DATA SHEET

Stantec

PROJECT #: 185750037 | **Purged & Sampled By:** EMILY HARPER | **Well & Sample ID:** MW-3

CLIENT NAME: 7-Eleven

LOCATION: 1824 George Washington Way; Richland, WA

Purged & Sampled Date: 2/27/13 | **START (2400hr):** 8:18 | **Sample Time:** 8:47 | **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) = 17.04
WATER COLUMN HEIGHT (feet) = 2.46

ACTUAL PURGE (GL) = 1.15 L

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (GL) L	TEMP (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	O.R.P.
2/27/13	8:26	.10 L	11.61	.810	5.11	CLEAR	238.0
	8:29	.25 L	12.36	.809	5.00	CLEAR	215.4
	8:32	.50 L	12.88	.821	6.12	CLEAR	185.4
	8:35	.75 L	12.89	.833	6.34	CLEAR	191.2
	8:38	.85 L	12.81	.835	6.54	CLEAR	157.2
	8:41	1.00 L	12.60	.834	6.59	CLEAR	151.4
	8:44	1.15 L	12.44	.837	6.59	CLEAR	148.0
							EH 2/27/13
Calculated Variance of Final Three Samples:							
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1		≤ 10%

DEPTH TO PURGE INTAKE DURING PURGE: 16.50 | SAMPLE DTW: X

QTY OF SAMPLE VESSELS & PRESERVATIVE:	ANALYSES:
3 HCL VOA'S PER WELL	NWTPH-g
1-HNO3 poly	BTEX-g (8260)
2 NON ARS - VOAS	MTBE, EDB, EDC
	total lead

PURGING EQUIPMENT:	SAMPLING EQUIPMENT:
Geotech Peristaltic pump	YSI

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

WELL PAD CONDITION: GOOD | WELL CASING CONDITION: CRACKED - TO NORTH

WELL VAULT CONDITION: GOOD | SEAL PRESENT?: YES | BOLTS PRESENT?: YES 3/2

WELL INTEGRITY: OK | WELL TAG: N/A | LOCK#: N/A

REMARKS: TOC @ 2" OFFSET FROM VAULT TILTED NORTHWARDS see photo

SIGNATURE:

Stantec

WATER SAMPLE FIELD DATA SHEET

Stantec
PROJECT #: 185750037
CLIENT NAME: 7-Eleven
Purged & Sampled By: E. HARPER
Well & Sample ID: MW-5
LOCATION: 1824 George Washington Way; Richland, WA

Purged & Sampled Date: 2/27/13
START (2400hr): X
Sample Time: X
LOW-FLOW USED: X

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

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

DEPTH TO BOTTOM (feet) = X DRY WELL
DEPTH TO WATER (feet) = X
WATER COLUMN HEIGHT (feet) = X
ACTUAL PURGE (GL) = ____

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (GL)	TEMP (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	O.R.P.
			DRY WELL				GA 2/27/13
Calculated Variance of Final Three Samples:							
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1		≤ 10%

DEPTH TO PURGE INTAKE DURING PURGE: ____ SAMPLE DTW: ____

QTY OF SAMPLE VESSELS & PRESERVATIVE:
3 HCL VOA'S PER WELL
1-HNO3 poly
2 NON PRES VOAS

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

PURGING EQUIPMENT:	SAMPLING EQUIPMENT:
Geotech Peristaltic pump	YSI

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

WELL PAD CONDITION: GOOD
WELL CASING CONDITION: GOOD
WELL VAULT CONDITION: GOOD
SEAL PRESENT?: YES
BOLTS PRESENT?: YES 2/2
WELL INTEGRITY: GOOD
WELL TAG: N/A
LOCK#: N/A

REMARKS: DRY WELL

SIGNATURE:

Stantec

WATER SAMPLE FIELD DATA SHEET

Stantec

PROJECT #: 185750037 | **Purged & Sampled By:** EMILY HARPER | **Well & Sample ID:** MW-8

CLIENT NAME: 7-Eleven

LOCATION: 1824 George Washington Way; Richland, WA

Purged & Sampled Date: 2/27/13 | **START (2400hr):** 09:10 | **Sample Time:** 09:40 | **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) = 26.86
DEPTH TO WATER (feet) = 16.13
WATER COLUMN HEIGHT (feet) = 10.73

ACTUAL PURGE (GL) = .95 L

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (GL) L	TEMP (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	O.R.P.
2/27/13	09:28	.25 L	11.95	.711	7.03	CLEAR	-39.6
	09:31	.50 L	12.55	.709	7.32	CLEAR	-46.3
	09:34	.75 L	13.35	.706	7.37	CLEAR	-45.7
↓	09:37	.95 L	13.67	.704	7.360	CLEAR	-37.6
Calculated Variance of Final Three Samples:							
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1		≤ 10%

EH 2/27/13

DEPTH TO PURGE INTAKE DURING PURGE: 26.36 | SAMPLE DTW: X

QTY OF SAMPLE VESSELS & PRESERVATIVE:	ANALYSES:
3 HCL VOA'S PER WELL	NWTPH-g
1-HNO3 poly	BTEX-g (8260)
2 NONPRES VOAS	MTBE, EDB, EDC
	total lead

PURGING EQUIPMENT:	SAMPLING EQUIPMENT:
Geotech Peristaltic pump	YSI

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

WELL PAD CONDITION: GOOD | WELL CASING CONDITION: GOOD

WELL VAULT CONDITION: GOOD | SEAL PRESENT?: YES | BOLTS PRESENT?: 3/3 YES

WELL INTEGRITY: GOOD | WELL TAG: N/A | LOCK#: N/A

REMARKS: 2 CRACKED BOLT SECURES, BUT BOLTS PRESENT

SIGNATURE:

Stantec

WATER SAMPLE FIELD DATA SHEET

Stantec

PROJECT #: 185750037 | **Purged & Sampled By:** EMILY HARPER | **Well & Sample ID:** MW-7

CLIENT NAME: 7-Eleven

LOCATION: 1824 George Washington Way; Richland, WA

Purged & Sampled Date: 2/27/13 | **START (2400hr):** 09:55 | **Sample Time:** 10:29 | **LOW-FLOW USED:** Y

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

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

DEPTH TO BOTTOM (feet) = 18.19
DEPTH TO WATER (feet) = 16.02
WATER COLUMN HEIGHT (feet) = 2.17

ACTUAL PURGE ~~(GAL)~~ L = 1.5 L

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME ~~(GAL)~~ L	TEMP (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	O.R.P.
2/27/13	1017	.25 L	12.52	.688	7.75	CLEAR	18.0
	1020	.50L	13.49	.689	7.69	CLEAR	-16.4
	1023	.75L	13.92	.689	7.64	CLEAR	-47.1
↓	1026	1.25	14.14	.691	7.61	CLEAR	-62.7
Calculated Variance of Final Three Samples:							
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1		≤ 10%

DUP 2/27/13

DEPTH TO PURGE INTAKE DURING PURGE: 17.19 | SAMPLE DTW: X

QTY OF SAMPLE VESSELS & PRESERVATIVE:
3 HCL VOA'S PER WELL
1-HNO3 poly
2 NON PRES VOAS

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

PURGING EQUIPMENT:	SAMPLING EQUIPMENT:
Geotech Peristaltic pump	YSI

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

WELL PAD CONDITION: FAIR | WELL CASING CONDITION: GOOD

WELL VAULT CONDITION: DAMAGED LID | SEAL PRESENT?: N/A | BOLTS PRESENT?: NO (1 SCREW)

WELL INTEGRITY: FAIR | WELL TAG: N/A | LOCK#: N/A

REMARKS: PERI PUMP DIED BEFORE 1ST READING - STOP TO REPLACE PUMP. DELAYED SAMPLE

SIGNATURE:

Stantec

WATER SAMPLE FIELD DATA SHEET

Stantec

PROJECT #: 185750037 | **Purged & Sampled By:** EMILY HARPER | **Well & Sample ID:** MW-6

CLIENT NAME: 7-Eleven

LOCATION: 1824 George Washington Way; Richland, WA

Purged & Sampled Date: 2/27/13 | **START (2400hr):** 10:46 | **Sample Time:** 11:03 | **LOW-FLOW USED:** Y

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

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

DEPTH TO BOTTOM (feet) = 19.15

DEPTH TO WATER (feet) = 16.08

WATER COLUMN HEIGHT (feet) = 3.07

ACTUAL PURGE (~~GL~~ L) = 1.35 L

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (~~GL~~ L)	TEMP (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	O.R.P.
2/27/13	10:51	.35 L	14.07	.643	7.44	CLEAR	-89.2
	10:54	.60 L	14.78	.650	7.34	CLEAR	-102.6
	10:57	.90 L	15.00	.657	7.31	CLEAR	-113.7
	11:00	1.20 L	15.15	.658	7.30	CLEAR	-122.2
Calculated Variance of Final Three Samples:							
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1		≤ 10%

EH 2/27/13

DEPTH TO PURGE INTAKE DURING PURGE: 19.00 | SAMPLE DTW: X

QTY OF SAMPLE VESSELS & PRESERVATIVE:	ANALYSES:
3-HCL VOA'S PER WELL	NWTPH-g
1-HNO3 poly	BTEX-g (8260)
2 NON PRES VOA'S	MTBE, EDB, EDC
	total lead

PURGING EQUIPMENT:	SAMPLING EQUIPMENT:
Geotech Peristaltic pump	YSI

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

WELL PAD CONDITION: GOOD | WELL CASING CONDITION: ~~GOOD~~ SMALL CRACK

WELL VAULT CONDITION: OK - BUILDUP | SEAL PRESENT?: YES | BOLTS PRESENT?: YES 3/3

WELL INTEGRITY: GOOD | WELL TAG: N/A | LOCK#: N/A

REMARKS: SMALL CRACK NEAR TOP OF CASING ON EAST SIDE (photo)

SIGNATURE:

KIFF Analytical LLC

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

SRG # / Lab No. _____

Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): DAVE FAIRBAIRN	Washington EIM Report? ☒ Yes ☐ No
Company / Address: 12034 134th CT NE STE 102 REDMOND, WA	User Location ID:
Phone Number: 425-298-1016	User Study ID:
Fax Number: 425-298-1019	Bill to:
Project #: 185750037 P.O. #:	Sampler Print Name: EMILY HARPER
Project Name: 1Q13 GWM EVENT	Sampler Signature:
Project Address:	

Sample Designation	Date	Time	Container: 40 ml VOA	Sleeve	Poly	Glass	Tedlar	Preservative: HCl	HNO_3	None	Matrix: Water	Soil	Air
MW-3	2/27/13	8:47	X		X			X	X	X	X		
MW-8	2/27/13	09:40	X		X			X	X	X	X		
MW-7	2/27/13	10:29	X		X			X	X	X	X		
MW-6	2/27/13	11:03	X		X			X	X	X	X		

Analysis Request

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 & 1,2 EDB) (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)	circle method: 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, EDC
X	X	X												X			
X	X	X												X			
X	X	X												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:
	2/28/13	11:50	
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

WORK REQUEST FORM

JOB NAME: Former 7-Eleven 25821 JOB NUMBER: 185750037

SITE ADDRESS: 1824 George Washington START DATE: 10/17/13
Richland, WA

PREPARED FOR: ~~Deitrie Hanson~~ FH PREPARED BY: ~~Deitrie Hansen~~ DH ✓

NOTE: REVIEWED BY: Paul Fairbairn

WORK DESCRIPTION:

1. Review H&S Plan.
2. Arrive onsite and check in with Station Manager and contact Paul Fairbairn. .
3. Review HASP, conduct Health and Safety briefing and perform Site Walk to determine any traffic flow.
4. Gauge all site wells following gauging order on Sampling Request Form.
5. Low-flow purge and sample wells following the sampling order provided.
6. Take a drum for purge water. Store purge water in drums onsite, make sure they are labeled properly and secured.
7. Take an inventory of all waste drums generated by Stantec at the site, and mark locations on site plan.
8. Call Paul Fairbairn in the office prior to leaving the site.

Job Numbers:

Onsite and Travel Time
185750037.200.0700

Contacts Information:

Paul Fairbairn in Stantec Office: (425) 298-1016
Paul Fairbairn Stantec Cell: (206) 369-8383

ANALYTICAL REQUIREMENTS:	EQUIPMENT NEEDED:
NWTPH-Gx	H&S plan
BTEX (8260)	Safety Equipment
EDB, EDC, MTBE, Dissolved Lead	Delineators
	Mini cooler for product sample
	Low-Flow Purging/Sampling Equipment
	Oil/Water Interface Probe
	Disposable bailers/ Rope
	Peristaltic Pump & Tubing
	Drum and labels

AUTHORIZATION : _____ COMPLETED: _____

SITE VISITATION REPORT

Stantec

3Q13 - Former 7-Eleven Service Station No. 25821- Richland, WA

Name(s): EH ~~Deitrie Hanson~~ Date: 10/17/13 Time of Arrival Call-In: 8:40

Arrival Time: 8:30 Departure Time: 17:10 Time of Departure Call-In: 17:00

Who did you call? Paul Fairbairn

DRUM INVENTORY

	WATER		CARBON	DRUMS FROM well install still onsite - no new drums	TOTAL OPEN TOP	
	SOIL		EMPTY		TOTAL BUNG TOP	

HEALTH AND SAFETY ASSESSMENT

- SEE HASP LOG - (WHITE SHIELD SUB ONSITE)

PPE + EQP	FIRST AID & FIRE EXT.
TRAFFIC	PROPER TOOLS
SLOPE	PUBLIC INFO.
STOP WORK	

DESCRIPTION OF ACTIVITIES ONSITE AND NOTES

8:30 ARRIVE ONSITE - BEN HODDE FROM WHITE SHIELD ALREADY HERE
8:40 CALLED PAUL
8:45 HEALTH & SAFETY BRIEF w/ BEN
8:50 TALK TO SUBWAY CASHIER & MANAGER
9:00 SET UP DECON & SAMPLING EQP.
9:15 BEGIN GAUGING
9:50 BEN HODDE OFFSITE - WILL COMPILE SURVEY DATA IN REPORT TODAY.
10:40 finished gauging, walk to safeway to buy ice
11:15 BEGIN SAMPLING (@ MW-7)
16:47 finished sampling begin cleanup & decon tools
17:00 CALL PAUL
17:05 CALL DEITRIE - WILL PICK UP SAMPLES @ her site
17:10 DEPART SITE

Stantec

Stantec
HYDROLOGIC DATA SHEET

Gauge Date: 10/17/13

Project Name: Former 7-Eleven #25821

Field Technician: ~~Daitrie Hanson~~ E. HARPER

Project Number: 185750037

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 ✓ N ___

Wells checked for product and gauged prior to commencement of bailing or purging the wells Y ✓ 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-1			9:14		16.75	19.73	N	N/A	N	
MW-2			9:30		16.80	18.10	N	N/A	N	
MW-3			9:37		16.67	19.53			Y	
MW-4			9:47		16.79	18.41	N	N/A	N	
MW-5			9:53		16.46	16.50	N	N/A	~~N~~	DRY
MW-6			10:05		15.77	19.06			Y	
MW-7			10:14		15.56	18.03	Y	NO	Y	
MW-8			10:20		15.68	16.75			Y	
MW-9			10:25		16.01	23.18			Y	
MW-10			10:28		16.48	23.10			Y	
MW-11			10:33		16.25	22.70			Y	
MW-12			10:40		14.96	21.60			Y	

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3rd QUARTER 2013 SAMPLING REQUEST

7-Eleven Service Station No.25821- Located at 1824 George Washington; Richland, WA 99354

Project No.	Task		Project Manager	Date		Lab:		Client Contact:
185750037	200.0700		Paul Fairbairn	10/03/13		Kiff		Jose Rios

Well Number	Gaug. Freq.	Gaug. Order	Well Number	Samp. Order	Analyses	Well Depth	Top of Screen	Casing Dia.	Depth of Pump intake (ft bTOC)	Comments
MW-3		1		1	NWTPHG, BTEX (8260), EDB, EDC, MTBE, Total Lead					
MW-5		2		2	NWTPHG, BTEX (8260), EDB, EDC, MTBE, Total Lead					
MW-6		5		5	NWTPHG, BTEX (8260), EDB, EDC, MTBE, Total Lead					
MW-7		4		4	NWTPHG, BTEX (8260), EDB, EDC, MTBE, Total Lead					
MW-8		3		3	NWTPHG, BTEX (8260), EDB, EDC, MTBE, Total Lead					
MW-9		6		6	NWTPHG, BTEX (8260), EDB, EDC, MTBE, Total Lead					
MW-10		7		7	NWTPHG, BTEX (8260), EDB, EDC, MTBE, Total Lead					
MW-11		8		8	NWTPHG, BTEX (8260), EDB, EDC, MTBE, Total Lead					
MW-12		9		9	NWTPHG, BTEX (8260), EDB, EDC, MTBE, Total Lead					

Notes:

*Review and sign HASP prior to arriving on site. Check in with station manager and Stantec Project Manager Paul Fairbairn: Cell: 206 369 8383; Office: 425 298 1016

* Implement Stantec low flow purging and sampling procedures.

*NWTPH-Gx, BTEX (8260), MTBE, EDC, EDB, Dissolved Lead

*The wells are now historically clean, if product or sheen is found, use Stop Work Authority and contact the 7-Eleven Project Manager Paul Fairbairn immediately.

*Please gauge all selected wells first and proceed to sample all wells unless otherwise noted.

*Store water in drum on-site. Label drum with contents with a Non Hazardous Waste Drum label and note in the field log

No. wells gauged without sampling: _____ Total wells sampled: _____

Gallons Purged:

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WATER SAMPLE FIELD DATA SHEET

PROJECT #: 185750037
CLIENT NAME: 7-Eleven, Inc.
Purged & Sampled By: E. HARPER
Well & Sample ID: MW-7
LOCATION: 1824 George Washington Way; Richland, WA

Purged & Sampled Date: 10/17/13
START (2400hr): 11:15
Sample Time: 11:35
LOW-FLOW USED: Y

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

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

DEPTH TO BOTTOM (feet) = 18.03
DEPTH TO WATER (feet) = 15.56
WATER COLUMN HEIGHT (feet) = 2.47
ACTUAL PURGE (GL) = 3.15 L

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (L)	TEMP (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	O.R.P.
10/17/13	11:15	0.25	20.19	2.223	7.06	CLEAR	94.5
	11:18	0.65	20.26	2.225	6.69	CLEAR	108.7
	11:21	1.00	20.32	2.232	6.41	CLEAR	119.1
	11:24	1.40	20.35	2.223	6.10	CLEAR	114.7
	11:27	1.75	20.31	2.222	5.87	CLEAR	131.2
	11:30	2.00	20.36	2.223	5.80	CLEAR	132.7
	11:33	2.40	20.33	2.222	5.84	CLEAR	120.6
Calculated Variance of Final Three Samples:							
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1		≤ 10%

DEPTH TO PURGE INTAKE DURING PURGE: 16.5 ft SAMPLE DTW: X

QTY OF SAMPLE VESSELS & PRESERVATIVE:	ANALYSES:
3-HCL VOA'S PER WELL	NWTPH-G, BTEX (8260), MTBE, EDC
2-Unpreserved VOAs	EDB
1-Unpreserved 250 mL Poly	Dissolved Lead

PURGING EQUIPMENT:	SAMPLING EQUIPMENT:
Geotech Peristaltic pump	YSI

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

WELL PAD CONDITION: OK WELL CASING CONDITION: Good

WELL VAULT CONDITION: OK SEAL PRESENT?: NO BOLTS PRESENT?: 1/3

WELL INTEGRITY: OK WELL TAG: N/A LOCK#: N/A

REMARKS: well LID DAMAGED

SIGNATURE:

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WATER SAMPLE FIELD DATA SHEET

PROJECT #: 185750037
CLIENT NAME: 7-Eleven, Inc.
LOCATION: 1824 George Washington Way; Richland, WA

Purged & Sampled By: E. HARPER

Well & Sample ID: MW-6

Purged & Sampled Date: 10/[illegible]/13

START (2400hr): 11:40
Sample Time: 12:00

LOW-FLOW USED: Y

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

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

DEPTH TO BOTTOM (feet) = 19.06
DEPTH TO WATER (feet) = 15.77
WATER COLUMN HEIGHT (feet) = 3.29

ACTUAL PURGE (L) = 2.25 L

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (L)	TEMP (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	O.R.P.
10/[illegible]/13	11:50	0.50	20.57	1.939	5.61	CLEAR	-78.3
	11:53	0.80	20.72	1.986	5.35	CLEAR	-108.5
	11:56	1.25	20.76	1.940	5.27	CLEAR	-112.7
	11:59	1.60	20.86	1.946	5.26	CLEAR	-118.6
Calculated Variance of Final Three Samples:							
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1		≤ 10%

DEPTH TO PURGE INTAKE DURING PURGE: 18.00 ft SAMPLE DTW: X

QTY OF SAMPLE VESSELS & PRESERVATIVE:
3-HCL VOA'S PER WELL
2-Unpreserved VOAs
1-Unpreserved 250 mL Poly

ANALYSES:
NWTPH-G, BTEX (8260), MTBE, EDC
EDB
Dissolved Lead

PURGING EQUIPMENT:	SAMPLING EQUIPMENT:
Geotech Peristaltic pump	YSI

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

WELL PAD CONDITION: Good WELL CASING CONDITION: Good

WELL VAULT CONDITION: OK SEAL PRESENT?: Yes BOLTS PRESENT?: 3/3

WELL INTEGRITY: Good WELL TAG: N/A LOCK#: N/A

REMARKS: ____

SIGNATURE: [signature]

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WATER SAMPLE FIELD DATA SHEET

PROJECT #: 185750037 | **Purged & Sampled By:** E. HARPER | **Well & Sample ID:** MW-8

CLIENT NAME: 7-Eleven, Inc.

LOCATION: 1824 George Washington Way; Richland, WA

Purged & Sampled Date: 10/17/13 | **START (2400hr):** 12:12 | **Sample Time:** 12:30 | **LOW-FLOW USED:** Y

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

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

DEPTH TO BOTTOM (feet) = 16.75
DEPTH TO WATER (feet) = 15.68
WATER COLUMN HEIGHT (feet) = 11.07

ACTUAL PURGE (~~X~~L) = 2.00 L

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (L)	TEMP (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	O.R.P.
10/17/13	12:21	0.50	21.22	2.771	5.24	CLEAR	13.2
↓	12:24	1.00	21.19	2.829	5.11	CLEAR	21.0
↓	12:27	1.40	21.22	2.853	5.05	CLEAR	27.0
Calculated Variance of Final Three Samples:							
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1		≤ 10%

DEPTH TO PURGE INTAKE DURING PURGE: 15 ft | SAMPLE DTW: Y

QTY OF SAMPLE VESSELS & PRESERVATIVE:	ANALYSES:
3-HCL VOA'S PER WELL	NWTPH-G, BTEX (8260), MTBE, EDC
2-Unpreserved VOAs	EDB
1-Unpreserved 250 mL Poly	Dissolved Lead

PURGING EQUIPMENT:	SAMPLING EQUIPMENT:
Geotech Peristaltic pump	YSI

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

WELL PAD CONDITION: GOOD | WELL CASING CONDITION: GOOD

WELL VAULT CONDITION: OK - RUSTY | SEAL PRESENT?: Y | BOLTS PRESENT?: 3/3

WELL INTEGRITY: GOOD | WELL TAG: N/A | LOCK#: N/A

REMARKS: ____

SIGNATURE: [signature]

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WATER SAMPLE FIELD DATA SHEET

PROJECT #: 185750037
CLIENT NAME: 7-Eleven, Inc.
LOCATION: 1824 George Washington Way; Richland, WA

Purged & Sampled By: E. HARPER

Well & Sample ID: MW-9

Purged & Sampled Date: 10/17/13

START (2400hr): 12:40
Sample Time: 13:10

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) = 23.18
DEPTH TO WATER (feet) = 16.01
WATER COLUMN HEIGHT (feet) = 7.17

ACTUAL PURGE (L) = 3.25

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (L)	TEMP (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	O.R.P.
10/17/13	12:48	0.45	20.22	2.272	6.63	GRAY	26.9
	12:51	0.75	20.13	2.268	6.70	GRAY	25.2
	12:54	1.15	20.20	2.262	6.87	GRAY/CL	24.7
	12:57	1.50	20.14	2.257	7.01	GRY/CL	21.8
	13:00	2.00	20.18	2.258	7.10	GRY/CL	26.9
	13:03	2.25	20.29	2.254	7.23	GRY/CL	22.9
	13:06	2.50	20.26	2.252	7.36	GRY/CL	18.8
	13:09	2.75	20.23	2.252	7.37	GRY/CL	19.1
Calculated Variance of Final Three Samples:							
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1		≤ 10%

DEPTH TO PURGE INTAKE DURING PURGE: 22.00 ft SAMPLE DTW: X

QTY OF SAMPLE VESSELS & PRESERVATIVE:	ANALYSES:
3-HCL VOA'S PER WELL	NWTPH-G, BTEX (8260), MTBE, EDC
2-Unpreserved VOAs	EDB
1-Unpreserved 250 mL Poly	Dissolved Lead

PURGING EQUIPMENT:	SAMPLING EQUIPMENT:
Geotech Peristaltic pump	YSI

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

WELL PAD CONDITION: GOOD - NEW
WELL CASING CONDITION: GOOD- NEW
WELL VAULT CONDITION: GOOD - NEW
SEAL PRESENT?: Yes
BOLTS PRESENT?: 2/2
WELL INTEGRITY: GOOD - NEW
WELL TAG: BHV 324
LOCK#: N/A

REMARKS: ____

SIGNATURE: [signature]

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WATER SAMPLE FIELD DATA SHEET

PROJECT #: 185750037 | **Purged & Sampled By:** E. HARPER | **Well & Sample ID:** MW-12

CLIENT NAME: 7-Eleven, Inc.

LOCATION: 1824 George Washington Way; Richland, WA

Purged & Sampled Date: 10/17/13 | **START (2400hr):** 13:20 | **Sample Time:** 13:45 | **LOW-FLOW USED:** Y

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) = 21.00
DEPTH TO WATER (feet) = 14.96
WATER COLUMN HEIGHT (feet) = 6.04

ACTUAL PURGE (L) = 3.00 L

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (L)	TEMP (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	O.R.P.
10/17/13	13:30	0.50	19.76	2.721	6.49	GRY/CL	48.6
	13:33	0.75	19.85	2.716	5.98	GRY/CL	56.9
	13:36	1.15	19.91	2.681	5.48	GRY/CL	68.5
	13:39	1.50	19.92	2.632	5.26	GRY/CL	76.7
	13:41	2.00	19.96	2.608	5.19	GRY/CL	80.6
	13:44	2.50	20.15	2.597	5.27	CLEAR	78.5
Calculated Variance of Final Three Samples:							
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1		≤ 10%

DEPTH TO PURGE INTAKE DURING PURGE: 20.60 ft | SAMPLE DTW: X

QTY OF SAMPLE VESSELS & PRESERVATIVE:	ANALYSES:
3-HCL VOA'S PER WELL	NWTPH-G, BTEX (8260), MTBE, EDC
2-Unpreserved VOAs	EDB
1-Unpreserved 250 mL Poly	Dissolved Lead

PURGING EQUIPMENT:	SAMPLING EQUIPMENT:
Geotech Peristaltic pump	YSI

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

WELL PAD CONDITION: Good - New | WELL CASING CONDITION: Good - New

WELL VAULT CONDITION: Good - New | SEAL PRESENT?: Yes | BOLTS PRESENT?: 2/2

WELL INTEGRITY: Good - New | WELL TAG: BHV 321 | LOCK#: N/A

REMARKS: ____

SIGNATURE: [signature]

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WATER SAMPLE FIELD DATA SHEET

PROJECT #: 185750037
CLIENT NAME: 7-Eleven, Inc.
Purged & Sampled By: E HARPER
Well & Sample ID: MW-11
LOCATION: 1824 George Washington Way; Richland, WA

Purged & Sampled Date: 10/17/13
START (2400hr): 14:40
Sample Time: 15:20
LOW-FLOW USED: Y

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

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

DEPTH TO BOTTOM (feet) = 22.70
DEPTH TO WATER (feet) = 16.25
WATER COLUMN HEIGHT (feet) = 6.45
ACTUAL PURGE (L) = 4.25 L

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (L)	TEMP (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	O.R.P.
10/17/13	15:05	0.50	19.69	2.259	6.47	BROWN	94.4
	15:08	0.75	19.69	2.263	6.70	BRN/CL	84.0
	15:11	1.05	19.69	2.253	6.83	CLEAR	78.0
	15:14	1.50	19.71	2.265	6.89	CLEAR	73.2
	15:17	2.00	19.72	2.264	6.93	CLEAR	72.3
Calculated Variance of Final Three Samples:							
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1		≤ 10%

DEPTH TO PURGE INTAKE DURING PURGE: 22 ft SAMPLE DTW: X

QTY OF SAMPLE VESSELS & PRESERVATIVE:	ANALYSES:
3-HCL VOA'S PER WELL	NWTPH-G, BTEX (8260), MTBE, EDC
2-Unpreserved VOAs	EDB
1-Unpreserved 250 mL Poly	Dissolved Lead

PURGING EQUIPMENT:	SAMPLING EQUIPMENT:
Geotech Peristaltic pump	YSI

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

WELL PAD CONDITION: GOOD- NEW
WELL CASING CONDITION: GOOD- NEW
WELL VAULT CONDITION: GOOD - NEW
SEAL PRESENT?: Yes
BOLTS PRESENT?: 2/2
WELL INTEGRITY: GOOD - NEW
WELL TAG: Yes
LOCK#: N/A

REMARKS: ____

SIGNATURE: ____

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Stantec
WATER SAMPLE FIELD DATA SHEET

PROJECT #: 185750037 | **Purged & Sampled By:** E HARPER | **Well & Sample ID:** MW-10

CLIENT NAME: 7-Eleven, Inc.

LOCATION: 1824 George Washington Way; Richland, WA

Purged & Sampled Date: 10/17/13 | **START (2400hr):** 15:29 | **Sample Time:** 15:55 | **LOW-FLOW USED:** Y

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

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

DEPTH TO BOTTOM (feet) = 23.10
DEPTH TO WATER (feet) = 16.48
WATER COLUMN HEIGHT (feet) = 6.62

ACTUAL PURGE (L) = 3.25 L

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (L)	TEMP (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	O.R.P.
10/17/13 2" PURGED	15:37	0.50	20.98	2.423	7.87	BROWN	32.2
	~~15:46~~ 15:46	2.25	21.03	2.430	7.48	CLEAR	29.4
	15:49	2.75	21.11	2.412	7.45	CLEAR	30.6
	15:52	3.00	21.17	2.432	7.39	CLEAR	33.0
Calculated Variance of Final Three Samples:							
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1		≤ 10%

DEPTH TO PURGE INTAKE DURING PURGE: 22.0 ft | SAMPLE DTW: Y

QTY OF SAMPLE VESSELS & PRESERVATIVE:	ANALYSES:
3-HCL VOA'S PER WELL	NWTPH-G, BTEX (8260), MTBE, EDC
2-Unpreserved VOAs	EDB
1-Unpreserved 250 mL Poly	Dissolved Lead

PURGING EQUIPMENT:	SAMPLING EQUIPMENT:
Geotech Peristaltic pump	YSI

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

WELL PAD CONDITION: Good-New | WELL CASING CONDITION: Good-New

WELL VAULT CONDITION: Good-New | SEAL PRESENT?: Yes | BOLTS PRESENT?: 2/2

WELL INTEGRITY: Good-New | WELL TAG: BHV 323 | LOCK#: N/A

REMARKS:

SIGNATURE:

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WATER SAMPLE FIELD DATA SHEET

PROJECT #: 185750037
CLIENT NAME: 7-Eleven, Inc.
Purged & Sampled By: E. HARDER
Well & Sample ID: MW-3
LOCATION: 1824 George Washington Way; Richland, WA

Purged & Sampled Date: 10/17/13
START (2400hr): ~~[illegible]~~ 4H 16:10
Sample Time: 16:30
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) = 19.53
DEPTH TO WATER (feet) = 16.67
WATER COLUMN HEIGHT (feet) = 2.86
ACTUAL PURGE (L) = 2.00 L

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (L)	TEMP (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	O.R.P.
10/17/13	16:16	0.50	21.13	2.527	7.68	CLEAR	40.3
	16:19	0.75	21.07	2.509	7.54	CLEAR	39.5
	16:22	1.00	21.04	2.494	7.45	CLEAR	39.4
	16:25	1.50	21.03	2.471	7.36	CLEAR	39.0
Calculated Variance of Final Three Samples:							
Acceptable Variance Limits:			≤ 10%	≤ 3%	≤ 0.1		≤ 10%

DEPTH TO PURGE INTAKE DURING PURGE: 19.00 ft SAMPLE DTW: X

QTY OF SAMPLE VESSELS & PRESERVATIVE:	ANALYSES:
3-HCL VOA'S PER WELL	NWTPH-G, BTEX (8260), MTBE, EDC
2-Unpreserved VOAs	EDB
1-Unpreserved 250 mL Poly	Dissolved Lead

PURGING EQUIPMENT:	SAMPLING EQUIPMENT:
Geotech Peristaltic pump	YSI

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

WELL PAD CONDITION: OK
WELL CASING CONDITION: BAD - APPEARS BENT
WELL VAULT CONDITION: OK
SEAL PRESENT?: [illegible]
BOLTS PRESENT?: 2/2
WELL INTEGRITY: Possibly compromised
WELL TAG: N/A
LOCK#: N/A

REMARKS: Took picture of MW-3 for damage reference

SIGNATURE:

KIFF Analytical LLC

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

SRG # / Lab No. _____ Page 1 of 1

Chain-of-Custody Record and Analysis Request

Project Contact (Hardcopy or PDF To): PAUL FAIRBAIRN
Company / Address: STE 200 11130 NE 33rd PLACE BELLEVUE, WA
Phone Number: 425-869-9448
Fax Number: 425-869-1190
Project #: 18575037 P.O. #:
Project Name: 4Q13 GWM 25821
Project Address: 1824 GEORGE WASHINGTON WAY RICHLAND, WA

Washington EIM Report? ☒ Yes ☐ No
User Location ID:
User Study ID:
Bill to:
Sampler Print Name: EMILY HARPER
Sampler Signature:

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

For Lab Use Only

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 & 1,2 EDB) (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	EDC, EDB	DISSOLVED LEAD
			circle method																													
MW-3	10/17/13	16:30	X		X			X		X	X			X	X	X														X	X
MW-6		12:00	X		X			X		X	X			X	X	X														X	X
MW-7		11:35	X		X			X		X	X			X	X	X														X	X
MW-8		12:30	X		X			X		X	X			X	X	X														X	X
MW-9		13:10	X		X			X		X	X			X	X	X														X	X
MW-10		15:55	X		X			X		X	X			X	X	X														X	X
MW-11		15:20	X		X			X		X	X			X	X	X														X	X
MW-12		13:45	X		X			X		X	X			X	X	X														X	X

Relinquished by:	Date	Time	Received by:
	10/18/13	1350	
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 hydrocarbon (LPH) concentrations, lower a transparent bailer into the well to evaluate the presence of a LPH 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.