



**Stantec**

**Stantec Consulting Services Inc.**  
3017 Kilgore Road Suite 100  
Rancho Cordova CA 95670  
Tel: (916) 861-0400  
Fax: (916) 861-0430

March 23, 2012

Mr. Jerry Wickham  
Alameda County Environmental Health Services  
Environmental Protection  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

**RECEIVED**

**8:32 am, May 17, 2012**

Alameda County  
Environmental Health

RE: **Enclosed Quarterly Groundwater Monitoring Report,  
First Quarter 2012**  
7-Eleven Store #32266  
1339 North Vasco Road  
Livermore, CA 94551  
Stantec Project #:211502037.230.0506

Dear Mr. Wickham:

Stantec Consulting Services Inc. has been designated as Limited Agent of 7-Eleven, Inc. (7-Eleven) for the purposes of executing and delivering instruments and documents on behalf of 7-Eleven (see attached Limited Authorization form).

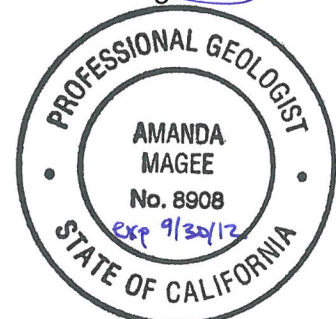
We declare, under penalty of perjury, that the information and/or recommendations contained in the attached assessment report are true and correct to best of our knowledge.

Should you have any questions regarding this site, please contact the undersigned at (916) 861-0400.

Sincerely,  
**Stantec Consulting Services Inc.**

Damon Brown  
Senior Geologic Consultant  
Project Manager

Amanda Magee, P.G.  
Associate Geologist



**LIMITED AUTHORIZATION**

KNOW ALL MEN BY THESE PRESENTS:

That 7-ELEVEN, INC. ("7-Eleven"), a Texas corporation, acting by and through Doug Rosencrans, Vice President, does hereby nominate, constitute and appoint STANTEC CONSULTING SERVICES INC. a Delaware corporation formerly known as Stantec Consulting Corporation, as Limited Agent ("Agent") of 7-Eleven, for purposes of executing and delivering instruments and documents as more particularly described below, and does hereby grant, delegate and invest said Agent with power and authority to execute and deliver for, in the name of, and on behalf of 7-Eleven, and in connection with that certain Amended and Restated Agreement by and between 7-Eleven and Agent dated as of January 1, 2010 (as amended, the "Agreement"), the instruments and documents listed in Attachment I hereto.

Agent may exercise the power and authority herein granted, delegated and invested, in any particular and appropriate transaction or matter, as an agent of 7-Eleven. Any instruments and documents executed and delivered by Agent under this Limited Authorization shall be acts of 7-Eleven and may be relied upon by third parties dealing with 7-Eleven, such acts being hereby ratified and confirmed by virtue hereof. Agent shall deliver all instruments and documents executed and delivered by Agent under this Limited Authorization to 7-Eleven promptly following such execution and delivery.

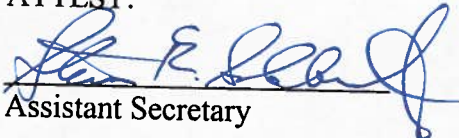
Any and all acts of Agent hereunder shall comply with all applicable federal, state and local laws, regulations, rules and ordinances and with all applicable orders of any courts of competent jurisdiction.

This Limited Authorization shall expire upon the expiration or earlier termination of the Agreement, except as otherwise provided therein, or may be terminated at any time for any reason by 7-Eleven.

APPROVED AND EXECUTED this 10th day of January, 2012, to be effective as of the date hereof.

7-ELEVEN, INC.

ATTEST:

  
Assistant Secretary

By:   
Name: Doug Rosencrans  
Title: Vice President

STATE OF TEXAS       §  
                                  §  
COUNTY OF DALLAS   §

BEFORE ME, the undersigned, a Notary Public in and for the County and State aforesaid, on this day personally appeared Doug Rosencrans and Steven R. Seldowitz, Vice President and Assistant Secretary, respectively, of 7-Eleven, Inc., known to me to be the persons whose names are subscribed to the foregoing instrument, and acknowledged to me that the same was the act of the said corporation, a Texas corporation, and that they executed the same as the act of such corporation for the purposes and consideration therein expressed and in the capacities therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this 10th day of January, 2012.

Karen Pennell  
NOTARY PUBLIC

My Commission Expires:  
5-1-2013



## ATTACHMENT I

Such permits, reports, applications and other documentation issued by any federal, state or local governmental authority and such other standard form documentation provided by 7-Eleven or third parties to be completed in connection with Agent's performance of environmental consulting services pursuant to the Agreement, including, without limitation, the following:

- a. Waste Manifests;
- b. Waste Characterization Forms;
- c. Bills of Lading;
- d. Waste Disposal Agreements;
- e. Registration and Notification Forms for underground storage tanks;
- f. Incident Reports;
- g. Discharge Notification Forms;
- h. Tank Closure Reports;
- i. Permit Applications, Notices and other documents relating to the investigation, monitoring or remediation work performed under the Agreement;
- j. Reports to state environmental agencies regarding investigation, monitoring or remediation work performed under the Agreement; and
- k. Applications to any state underground storage tank insurance or reimbursement fund;

Provided, however, that in each case, the foregoing authorization shall not extend to any permits, reports, applications or other documentation that contain: (i) any language, the effect of which is to require 7-Eleven to indemnify, defend and/or hold harmless any third party for any act or omission of any kind; or (ii) any statement of any kind, including, without limitation, any representation or warranty, which Agent does not personally know to be true and correct, including, without limitation, any representation concerning the legal existence or financial condition of 7-Eleven.



**Stantec**

**Stantec Consulting Services Inc.**  
3017 Kilgore Road Suite 100  
Rancho Cordova CA 95670  
Tel: (916) 861-0400  
Fax: (916) 861-0430

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## **Quarterly Groundwater Monitoring Report First Quarter 2012**

**7-Eleven Store #32266  
1339 North Vasco Road  
Livermore, California**

Stantec Project No.: 211502037.230.0506

**Submitted to:**

Mr. Jerry Wickham  
Alameda County Environmental Health Services  
Environmental Protection  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502

**Prepared on behalf of:**

7-Eleven, Inc.  
Mr. Jose Rios  
P.O. Box 711  
Dallas, TX 75221-0711

March 23, 2012



**Stantec**

**Stantec Consulting Services Inc.**  
3017 Kilgore Road Suite 100  
Rancho Cordova CA 95670  
Tel: (916) 861-0400  
Fax: (916) 861-0430

DATE: March 23, 2012

### **7-ELEVEN, INC. QUARTERLY REPORT**

Store Number:	<u>7-Eleven Store #32266</u>
Site Address:	<u>1339 North Vasco Road, Livermore, CA 94551</u>
7-Eleven Contact:	<u>Mr. Jose Rios</u>
Consulting Company:	<u>Stantec Consulting Services Inc. – Mr. Damon Brown</u>
Stantec Project No.:	<u>211502037.230.0506</u>
Primary Agency:	<u>Alameda County Environmental Health Services (ACEHS)</u>

#### **WORK PERFORMED THIS PERIOD [First Quarter 2012]**

1. Conducted quarterly groundwater monitoring and sampling on January 20, 2012, and generated the quarterly report.
2. Submitted revised work plan to ACEHS for additional assessment.

#### **WORK PROPOSED FOR NEXT PERIOD [Second Quarter 2012]**

1. Perform quarterly groundwater monitoring and sampling during second quarter 2012, and prepare the quarterly report.
2. Conduct additional offsite assessment per submitted work plan.

#### **DISCUSSION**

The site is an active 7-Eleven convenience store and retail gasoline fueling facility with one 15,000-gallon gasoline underground storage tank (UST) and one 10,000-gallon gasoline UST (Figures 1 and 2). Current groundwater monitoring and sampling data are summarized in Table 1, and presented on Figures 2 and 3. Historical groundwater monitoring and sampling results are summarized in Table 2. The well completion details are summarized in Table 3. A groundwater gradient and flow direction diagram is presented as Figure 4 and summarized in Table 4.

#### **Site Information**

Current Phase of Project:	<u>Groundwater Monitoring</u>
Frequency of Monitoring and Sampling:	<u>Quarterly, Three wells- MW-1, MW-2, and MW-3</u>
Are Liquid Phase Hydrocarbons Present On-site:	<u>No</u>
Water Supply Wells within a 2,000-foot radius and their Respective Direction:	<u>Three water supply wells (2,000 feet north, south, and southwest of site)</u>
Current Remediation Techniques:	<u>None</u>
Permits for Discharge:	<u>None</u>
Historic Range in Depth to Water, Q1-11 to Q1-12 (Measured Below Top of Casing)	<u>MW-1, 7.88 to 8.51 feet</u>

<b><u>Current Quarter Monitoring Data</u></b>	(See Figure 2 and Table 1)
Wells Monitored and Sampled:	Three wells- MW-1 through MW-3
Dissolved Oxygen Concentrations Measured In:	Three wells- MW-1 through MW-3
Depth to Groundwater (DTW) (Measured Below Top of Casing)	8.51 to 9.57 feet
Average Change in Groundwater Elevation Since Last Event:	0.22 foot increase
Groundwater Flow Direction and Gradient:	West @ 0.009 foot per foot (Figure 2)
<b><u>Current Quarter Analytical Data</u></b>	(See Figure 3 and Table 1)
Maximum TPHg Concentrations	Not Detected, <50 µg/L
Maximum Benzene Concentrations	Not Detected, <0.50 µg/L
Maximum MtBE Concentrations	MW-3, 1,100 µg/L
Maximum TBA Concentrations	MW-3, 58 µg/L

**BACKGROUND**

In January 2005, two single-walled steel, fiberglass-jacketed USTs (one 10,000-gallon and one 15,000-gallon) were replaced with new double-walled fiberglass USTs. A total of 26 soil samples were collected during the UST replacement activities as follows:

- Five soil samples from the UST excavation,
- Six soil samples from the beneath the product dispensers,
- Five soil samples from the product line trenches,
- Eleven samples (44 samples combined at laboratory for 11 four-part composite samples) from the stockpiled UST backfill material.

Total petroleum hydrocarbons as gasoline (TPHg) were not detected above laboratory reporting limits in any of the soil samples collected during the UST replacement activities. The maximum concentrations of tertiary butyl alcohol (TBA) and methyl tertiary butyl ether (MtBE) detected were 2.4 milligrams per kilogram (mg/kg) and 2.6 mg/kg, respectively, in UST excavation sample T1-2-12. Total lead was detected in each of the samples at concentrations ranging from 4.98 mg/kg to 28.4 mg/kg.

In addition, a total of three water samples were collected during the 2005 UST replacement activities as follows:

- One grab sample (W1) from water collected/pooled within the excavated UST basin,
- Two samples (BT-1 & BT-2) collected from 20,000-gallon Baker Tanks storing pumped UST excavation water.

MtBE was detected at 180 micrograms per liter (ug/L) and benzene was reported at 25 ug/L in UST excavation water sample W1 (Table 2). TPHg was detected at 3,400 ug/L. No TPHg was detected in either Baker Tank sample (BT-1 or BT-2). Total xylenes were reported in sample BT-1 at 0.70 ug/L. MtBE was detected in both samples at concentrations of 340 ug/L (BT-1) to 400 ug/L (BT-2). Based on the results of the water samples collected, a UST Unauthorized Release report was completed and submitted to the Livermore-Pleasanton Fire Department (LPPFD) and the California Regional Water Quality Control Board (CRWQCB).

On December 4, 2008, a Stantec Consulting Corporation (now Stantec Consulting Services Inc. [Stantec]) field scientist collected one soil sample in native soil from beneath four of the six dispensers (D1-5.0, D2-5.0, D3-5.0 and D4-5.0) during fuel system upgrade activities at the site. In addition, Stantec collected four soil samples from stockpiled excavated backfill material. The four stockpile samples were combined at the laboratory for one four-part composite sample SP1(ABCD). TPHg, benzene, toluene, ethyl-benzene and total xylenes (BTEX) were not detected above laboratory reporting limits in the dispenser soil samples collected, with the exception of dispenser sample D2-5. Soil sample D2-5 contained 0.21 mg/kg benzene, 0.59 mg/kg toluene, 0.26 mg/kg ethyl-benzene, 1.4 mg/kg xylenes, and 12 mg/kg TPHg. MtBE and TBA were detected exclusively in soil sample D1-5.5, at concentrations of 0.024 mg/kg and 0.0076 mg/kg, respectively. Di-isopropyl ether (DIPE), ethyl tertiary butyl ether (EtBE), and tertiary amyl methyl ether (TAME) were not detected above laboratory reporting limits in any dispenser soil samples collected. BTEX, TPHg, MtBE, TBA, DIPE, ETBE, and TAME were not detected at concentrations above laboratory reporting limits in the stockpiled soil sample collected during this investigation. Total lead was detected at concentration of 4.4 mg/kg.

In a letter dated November 20, 2009, the ACEHS requested the submittal of a work plan to investigate potential soil and groundwater contamination at the site based on ACEHS review of the historical site data. Stantec submitted a *Work Plan for Additional Soil and Groundwater Assessment* to the ACEHS on February 1, 2010. The work plan was subsequently approved by the ACEHS in a letter dated March 22, 2010.

On April 20, 2010, Stantec supervised WDC Exploration and Wells (WDC) of Richmond, California, during the advancement of three direct-push soil borings (GP-1 through GP-3) at the site. Eight soil samples were collected from soil borings GP-1 through GP-3 for laboratory analysis. MtBE was reported in soil boring GP-3 at 10 and 15 feet below ground surface (bgs) at concentrations of 0.023 mg/kg and 1.1 mg/kg, respectively. TBA was exclusively detected in soil boring GP-3 at 15 feet bgs at a concentration of 0.0076 mg/kg. TPHg, BTEX, DIPE, EtBE, and TAME were not detected at concentrations above the laboratory reporting limits in soil samples collected from soil borings GP-1 through GP-3. In addition, grab-groundwater samples were collected from each boring. Grab-groundwater samples GP-2W and GP-3W reported MtBE concentrations of 2.9 µg/L and 380 µg/L, respectively. TAME was exclusively detected in grab-groundwater sample GP-3W at a concentration of 0.71 µg/L. TPHg, BTEX, DIPE, EtBE and TBA were not detected at concentrations above the laboratory reporting limits in grab-groundwater samples GP-1 through GP-3.

On May 17, 2010, Stantec submitted the results of the assessment activities in a report titled *Additional Soil and Groundwater Assessment* to the ACEHS.

In a letter dated July 14, 2010, the ACEHS requested the submittal of a work plan to further assess the extent of soil and groundwater contamination, the hydraulic gradient, and to identify potential receptors within a radius of 2,000 feet of the subject site.

On September 29, 2010, Stantec submitted a *Work Plan for Additional Site Assessment and Results of Detailed Well Survey* to the ACEHS. The work plan was subsequently approved by the ACEHS in a letter dated October 25, 2010.

Between February 23 and 24, 2010, Stantec supervised the installation of three groundwater monitoring wells (MW-1, MW-2 and MW-3). On March 25, 2011, Stantec submitted an *Additional Site Assessment Report* to the ACEHS. Soil samples collected from MW-1 and MW-2 did not contain petroleum hydrocarbon concentrations above laboratory reporting limits. MtBE and TBA



were reported at concentrations ranging from 0.0082 mg/kg to 0.33 mg/kg in soil samples collected from MW-3.

In a letter dated August 29, 2011, the ACEHS requested the submittal of a work plan for plume delineation to assess whether the plume extends to the water supply of the two wells located approximately 300 feet west of the site. On October 25, 2011, Stantec submitted the *Work Plan for Additional Assessment*. In a letter dated November 21, 2012, the ACEHS requested a revised work plan to address their technical comments. The *Revised Work Plan for Additional Assessment* was submitted on March 5, 2012.

### **MONITORING AND SAMPLING PROCEDURES**

The depth to water was measured to within 0.01 foot bgs in monitoring wells MW-1, MW-2, and MW-3 from the top of casing (TOC) using a water level indicator. Dissolved oxygen concentrations were also measured in the wells using a YSI Model Pro20 dissolved oxygen meter equipped with a down hole sensor.

Well purging and sampling equipment was thoroughly cleaned prior to purging and sampling the well. The sampling procedure for the wells included measuring the water level and purging of approximately three casing volumes of water (or to dryness). The equipment and purging methods used for the current sampling event are noted on the field data sheets in Attachment A. During purging, temperature, pH, and electrical conductivity were monitored. After purging, the water level was allowed to recover to 80% of the original level prior to collection of the water sample. Groundwater samples were collected using a disposable Teflon<sup>®</sup> bailer, placed into appropriate Environmental Protection Agency (EPA) approved containers, labeled, logged onto chain-of-custody documents, and transported on ice to a California state-certified laboratory. Copies of the field notes are in Attachment A.

### **GROUNDWATER SAMPLE ANALYSES AND RESULTS**

The groundwater samples collected from MW-1, MW-2, and MW-3 were analyzed for the presence of BTEX, TPHg, MtBE, TBA, DIPE, EtBE, and TAME by EPA Method 8260B. The certified laboratory analytical report and chain-of-custody documentation are presented as Attachment B.

Groundwater analytical results are presented on Figure 3, and are summarized in Tables 1 and 2.

### **PURGE AND RINSATE WATER DISPOSAL**

Water generated during well sampling and equipment cleaning was pumped into a Stantec truck-mounted water tank. The water was transferred into properly labeled 55-gallon drums and stored on-site. The drummed non-hazardous petroleum hydrocarbon contaminated water is transported quarterly by Belshire Environmental to DeMenno Kerdoon in Compton, California, for disposal.

The results of this quarterly groundwater monitoring report will be uploaded to the ACEHS FTP site. In addition, the report will be uploaded to the State of California GeoTracker database in EDF format, per California code AB2886.

If you have any questions or comments regarding the contents of this report, please contact the undersigned at (916) 861-0400.

Sincerely,  
**Stantec Consulting Services Inc.**

Prepared by:



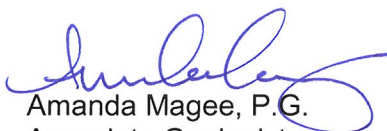
Colin Ryan  
Geologic Project Specialist

Reviewed by:

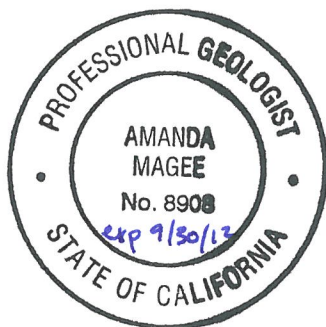


Damon Brown  
Senior Geologic Consultant  
Project Manager

Reviewed by:



Amanda Magee, P.G.  
Associate Geologist



**ATTACHMENTS**

Figures

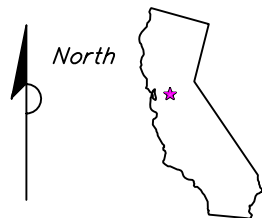
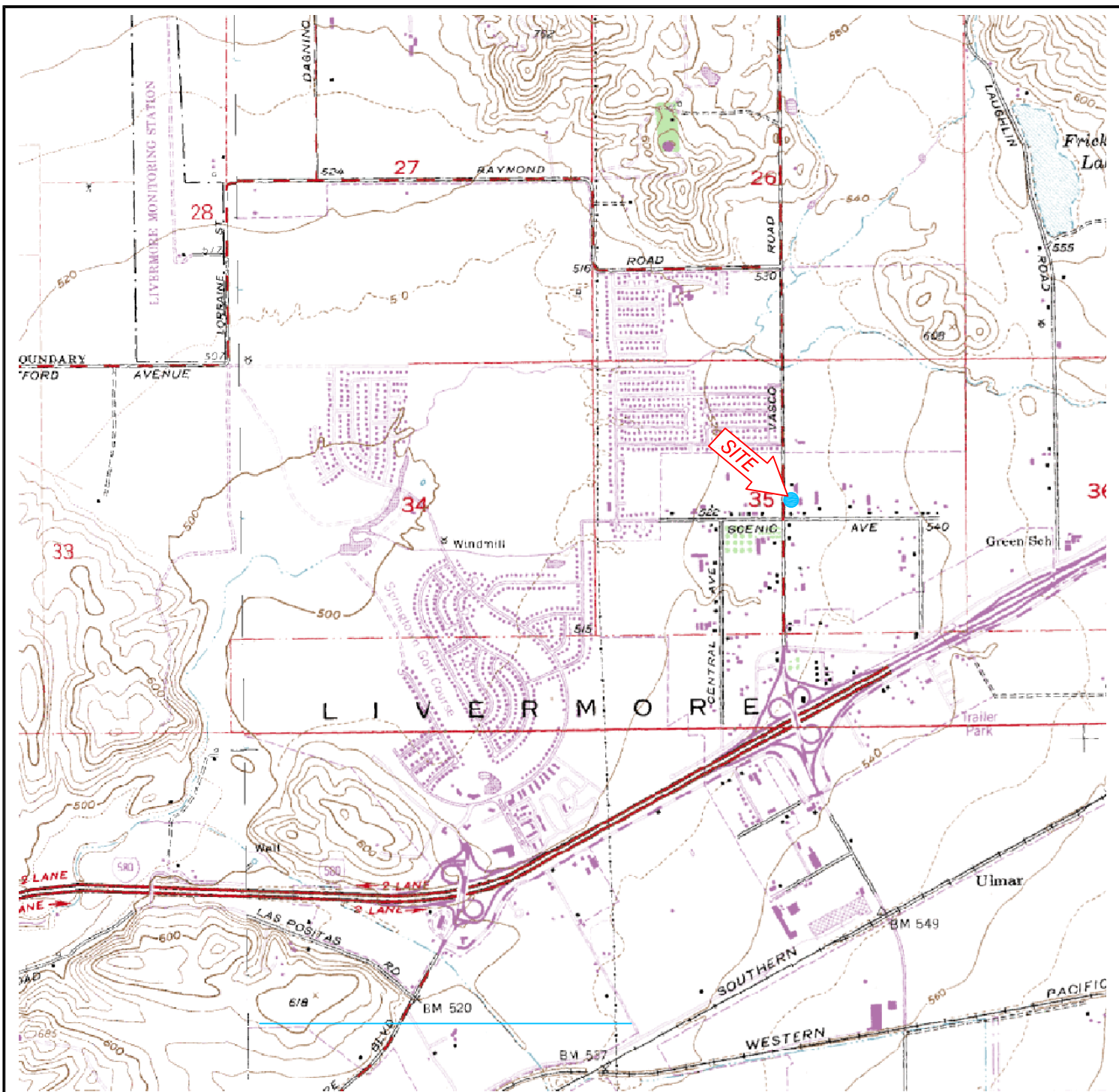
Tables

Attachment A – Field Notes

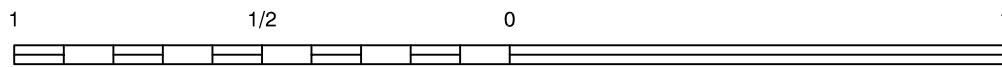
Attachment B – Certified Laboratory Analytical Reports and Chain-of-Custody Documentation

c: John Wainwright, Stantec, 308 East 4500 South, Suite 100, Murray, Utah 84107-3957

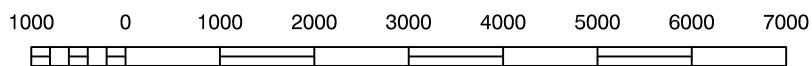
# Figures



CALIFORNIA



SCALE (MILES)



SCALE (FEET)

REFERENCE: USGS 7.5 MINUTE QUADRANGLE, LIVERMORE, CALIFORNIA



FOR:



STORE NO. 32266  
1339 NORTH VASCO ROAD  
LIVERMORE, CALIFORNIA

**SITE LOCATION MAP**

FIGURE:

**1**

JOB NUMBER:  
211502037

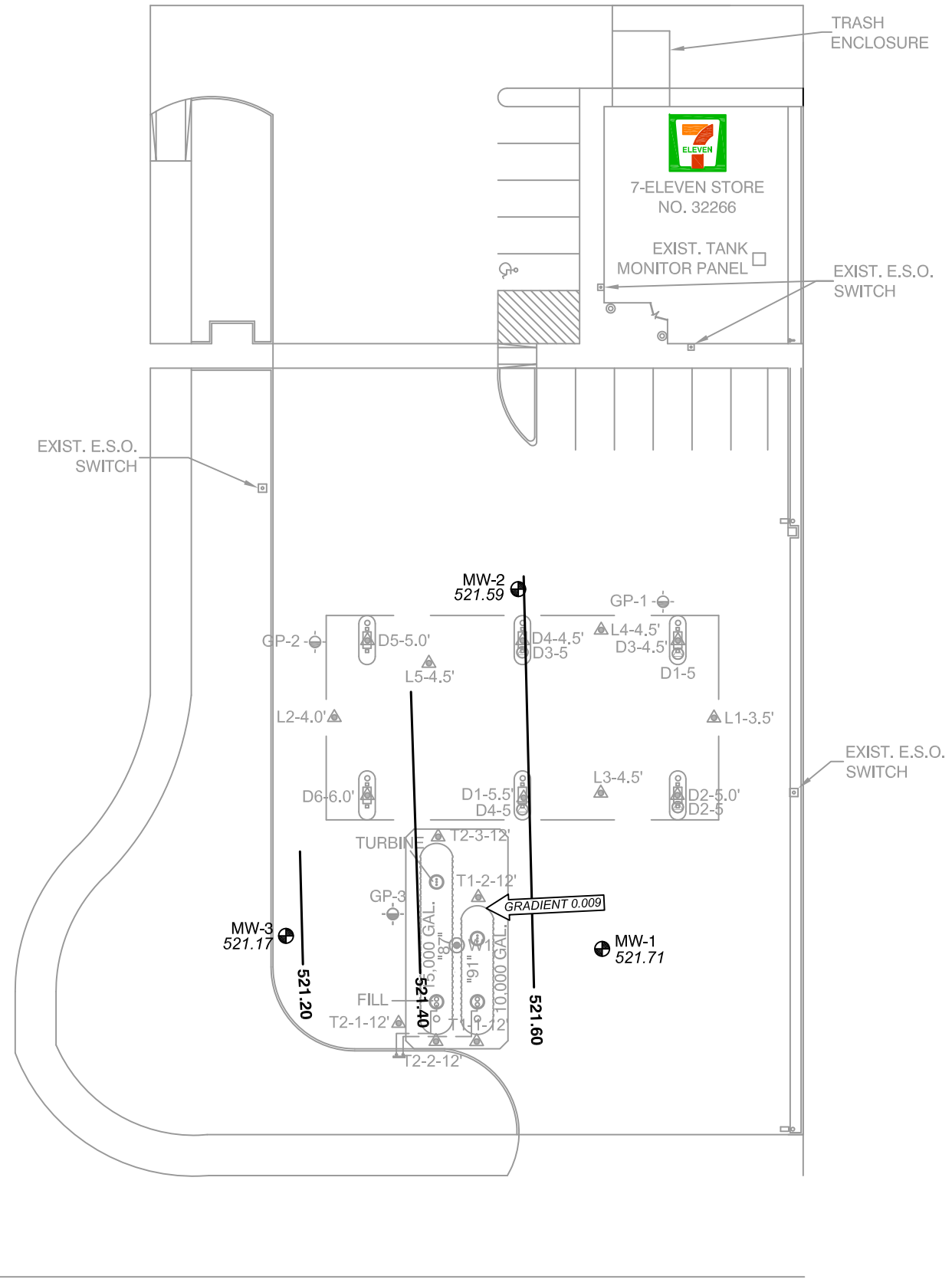
DRAWN BY:  
STA

CHECKED BY:  
PH

APPROVED BY:  
DB

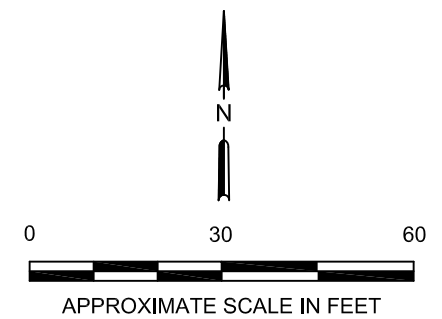
DATE:  
03/08/11

VASCO ROAD



**LEGEND:**

- MW-1 GROUNDWATER MONITORING WELL
- W1 UST EXCAVATION WATER SAMPLE LOCATION
- GP-1 GEOPROBE SAMPLE LOCATION
- L5-4.5' 2008 SOIL SAMPLE LOCATION
- D1-5 2005 SOIL SAMPLE LOCATION
- APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT (FT/FT)
- GROUNDWATER ELEVATION CONTOUR (FEET ABOVE MEAN SEA LEVEL)
- GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)

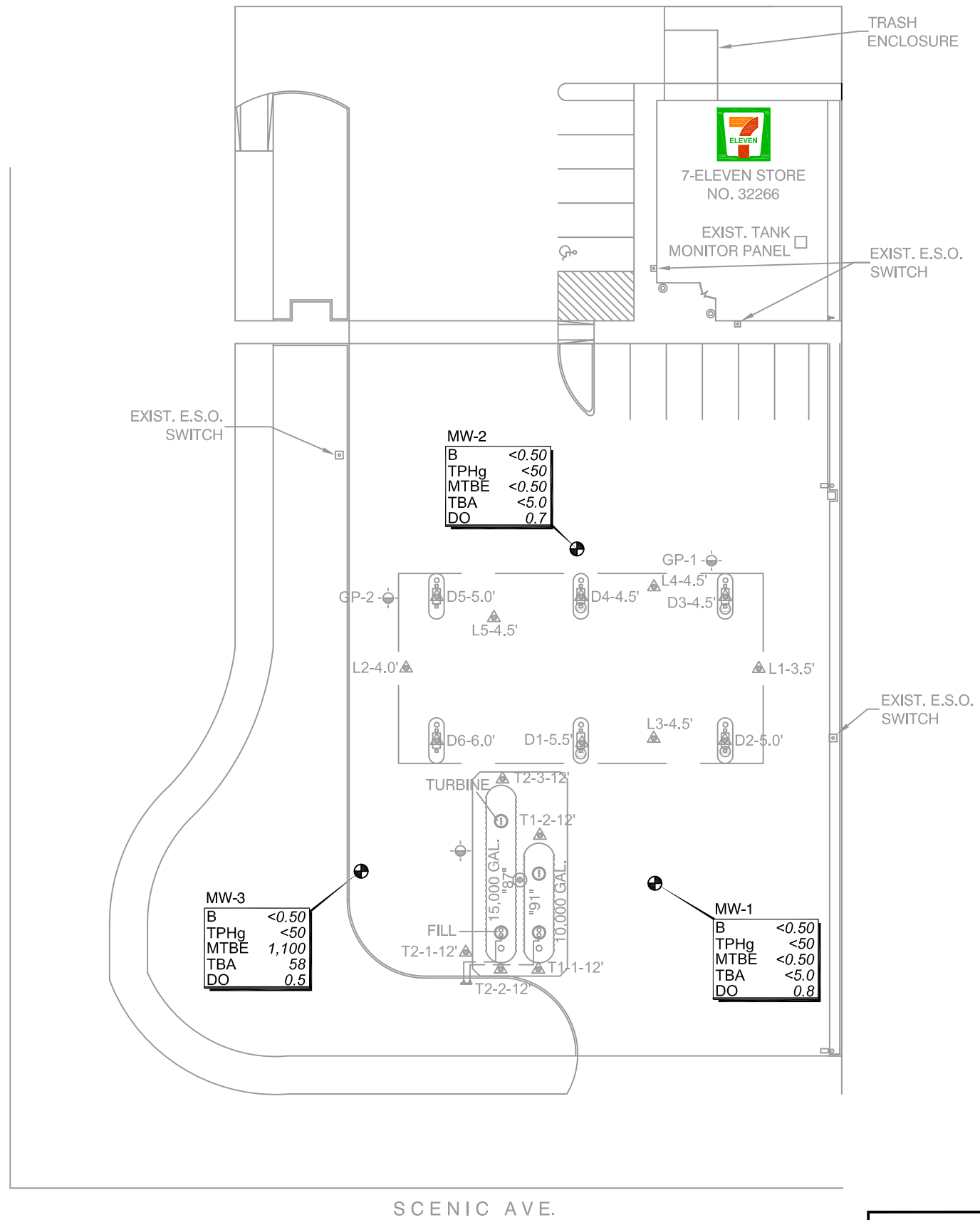


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SCENIC AVE.

	FOR: STORE NO. 32266 1339 NORTH VASCO ROAD LIVERMORE, CALIFORNIA	<b>GROUNDWATER ELEVATION CONTOUR MAP JANUARY 20, 2012</b>		FIGURE: <b>2</b>
	JOB NUMBER: 211502037	DRAWN BY: STA	CHECKED BY: PH	APPROVED BY: EKS

VASCO ROAD



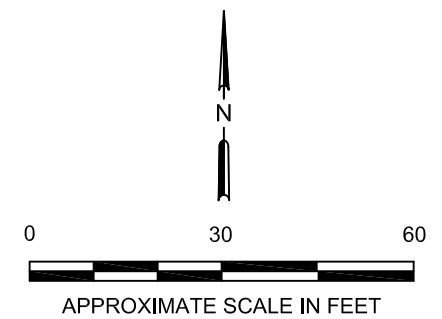
**LEGEND:**

- MW-1 GROUNDWATER MONITORING WELL
- W1 UST EXCAVATION WATER SAMPLE LOCATION
- GP-1 GEOPROBE SAMPLE LOCATION
- L5-4.5' 2008 SOIL SAMPLE LOCATION
- D1-5 2005 SOIL SAMPLE LOCATION
  
- B* BENZENE (µg/L)
- TPHg* TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (µg/L)
- MtBE* METHYL TERTIARY BUTYL ETHER (µg/L)
- TBA* TERTIARY BUTYL ALCOHOL (µg/L)
- µg/L MICROGRAMS PER LITER

<b>MW-2</b>
<i>B</i> <0.50
<i>TPHg</i> <50
<i>MtBE</i> <0.50
<i>TBA</i> <5.0
<i>DO</i> 0.7

<b>MW-3</b>
<i>B</i> <0.50
<i>TPHg</i> <50
<i>MtBE</i> 1,100
<i>TBA</i> 58
<i>DO</i> 0.5

<b>MW-1</b>
<i>B</i> <0.50
<i>TPHg</i> <50
<i>MtBE</i> <0.50
<i>TBA</i> <5.0
<i>DO</i> 0.8



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SCENIC AVE.



FOR: STORE NO. 32266  
1339 NORTH VASCO ROAD  
LIVERMORE, CALIFORNIA

**GROUNDWATER HYDROCARBON  
CONCENTRATION MAP  
JANUARY 20, 2012**

FIGURE:  
**3**

JOB NUMBER:  
211502037

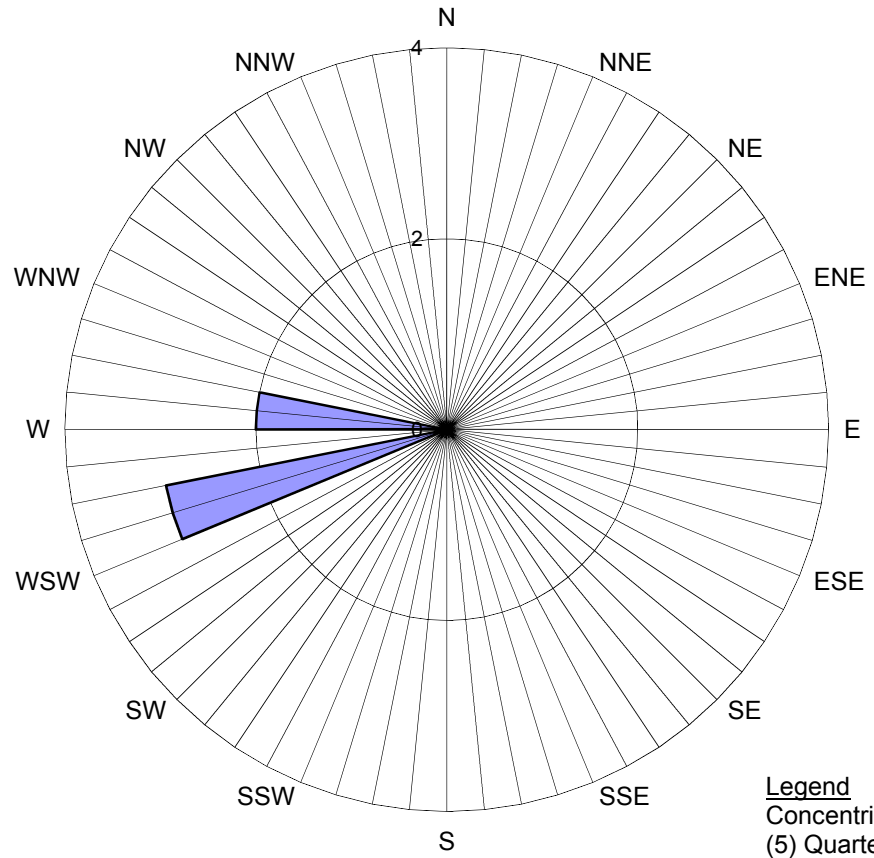
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STA

CHECKED BY:  
PH

APPROVED BY:  
EKS

DATE:  
02/27/12

**Figure 4**  
**Groundwater Flow Direction Rose Diagram**  
**7-Eleven #32266**  
**1339 North Vasco, Livermore, California**



■ Groundwater Flow Direction

Legend  
 Concentric Circles represent  
 (5) Quarterly Monitoring Event  
 1st Quarter 2011 through 1st Quarter 2012

# Tables



**TABLE 1**  
**First Quarter 2012 Groundwater Monitoring and Analytical Data**

7-Eleven Store #32266  
 1339 North Vasco Road  
 Livermore, California

Well ID/ Elevation (TOC)	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Total Xylenes (µg/L)	TPHg (µg/L)	MtBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	EtBE (µg/L)	TAME (µg/L)	Notes	Dissolved Oxygen (mg/L)	DTW (feet)	SPT (feet)	WTE (feet)
<b>MW-1</b> 530.22	01/20/12	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	a	0.8	8.51	0.00	521.71
<b>MW-2</b> 530.55	01/20/12	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	a	0.7	8.96	0.00	521.59
<b>MW-3</b> 530.74	01/20/12	<0.50	<0.50	<0.50	<0.50	<50	<b>1,100</b>	<b>58</b>	<0.50	<0.50	<b>2.2</b>		0.5	9.57	0.00	521.17

**Explanation:**

BTEX, TPHg, MtBE, DIPE, ETBE, TAME, and TBA by 8260B

TPHg = Total petroleum hydrocarbons-as-gasoline

MtBE = Methyl-tert-butyl ether

DIPE = Diisopropyl ether

EtBE = Ethyl-tert-butyl ether

TAME = Tert-amyl-methyl ether

TBA = Tert-butyl alcohol

TOC = Top of casing elevation in feet above mean sea level

ug/L = micrograms per Liter or parts-per-billion

mg/L = milligrams per liter

< = Not detected above laboratory reporting limit

**Notes**

a = Matrix Spike/Matrix Spike Duplicate for the analyte MtBE were affected by the analyte concentrations already present in the un-spike sample.

**TABLE 2**  
**Historical Water and/or Groundwater Sample Analytical Results**

7-Eleven Store #32266  
1339 Vasco Road  
Livermore, California

Sample I.D. (TOC)	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Total Xylenes (µg/L)	TPHg (µg/L)	MtBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	EtBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)	EtOH (µg/L)	Notes	Dissolved Oxygen (mg/L)	DTW (feet)	SPT (feet)	WTE (feet)
<b>UST Excavation Groundwater Sample</b>																			
W1	01/28/05	25	290	62	520	3,400	180	15	<1.5	<1.5	<1.5	<1.5	<1.5	2,600		--	--	--	--
<b>Baker Tank Samples</b>																			
BT-1	02/04/05	<0.50	<0.50	<0.50	0.70	<50	340	--	--	--	--	--	--	--		--	--	--	--
BT-2	02/04/05	<0.90	<0.90	<0.90	<0.90	<90	400	--	--	--	--	--	--	--		--	--	--	--
<b>Grab Groundwater Samples</b>																			
GP-1W	04/20/10	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	--	--		--	--	--	--
GP-2W	04/20/10	<0.50	<0.50		<0.50	<50	2.9	<5.0	<0.50	<0.50	<0.50	--	--	--		--	--	--	--
GP-3W	04/20/10	<0.50	<0.50	<0.50	<0.50	<50	380	<5.0	<0.50	<0.50	0.71	--	--	--		--	--	--	--
<b>Monitoring Well Samples</b>																			
<b>MW-1</b>																			
530.22	03/16/11	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	--	--		2.04	8.07	0.00	522.15
	05/26/11	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	--	--	a	0.35	7.88	0.00	522.34
	08/09/11	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	--	--	a	0.71	8.30	0.00	521.92
	10/17/11	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	--	--		0.5	8.27	0.00	521.95
	01/20/12	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	--	--	a	0.8	8.51	0.00	521.71
<b>MW-2</b>																			
530.55	03/16/11	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	--	--		1.63	8.31	0.00	522.24
	05/26/11	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	--	--		0.46	8.37	0.00	522.18
	08/09/11	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	--	--	a	0.60	8.82	0.00	521.73
	10/17/11	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	--	--		1.2	8.74	0.00	521.81
	01/20/12	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	--	--	a	0.7	8.96	0.00	521.59
<b>MW-3</b>																			
530.74	03/16/11	<0.50	<0.50	<0.50	<0.50	<50	5,600	170	<0.50	<0.50	10	--	--	--		2.54	9.11	0.00	521.63
	05/26/11	<0.50	<0.50	<0.50	<0.50	<50	3,200	180	<0.50	<0.50	5.4	--	--	--		0.32	9.15	0.00	521.59
	08/09/11	<0.50	<0.50	<0.50	<0.50	<50	1,700	78	<0.50	<0.50	2.8	--	--	--		0.42	9.36	0.00	521.38
	10/17/11	<0.50	<0.50	<0.50	<0.50	<50	1,900	85	<0.50	<0.50	2.9	--	--	--	b	0.6	9.37	0.00	521.37
	01/20/12	<0.50	<0.50	<0.50	<0.50	<50	1,100	58	<0.50	<0.50	2.2	--	--	--		0.5	9.57	0.00	521.17

**Explanation:**  
 BTEX, TPHg, MtBE, DIPE, EtBE, TAME, and TBA by 8260B      EtBE = Ethyl-tert-butyl ether      EDC = 1,2-Dichloroethane      ug/L = micrograms per Liter or parts-per-billion  
 TPHg = Total petroleum hydrocarbons-as-gasoline      TAME = Tert-amyl-methyl ether      EtOH = Ethanol      mg/L = milligrams per liter  
 MtBE = Methyl-tert-butyl ether      TBA = Tert-butyl alcohol      TOC = Top of casing elevation in feet above mean sea level      < = Not detected above laboratory reporting limit  
 DIPE = Diisopropyl ether      EDB = 1,2-Dibromoethane      UST = Underground Storage Tank      -- = Not sampled/not measured

**Notes**  
 a = Matrix Spike/Matrix Spike Duplicate for the analyte MtBE were affected by the analyte concentrations already present in the un-spike sample.  
 b = Tert-Butanol results may be biased slightly high. A fraction of MtBE (typically less than 1%) converts to Tert-Butanol during the analysis of water samples. Kiff considers this conversion effect to be mathematically significant in samples that contain MtBE/Tert-Butanol in ratios of over 20:1.

**Table 3  
Soil Boring Details**

7-Eleven Store #32266  
1339 North Vasco Road  
Livermore, CA

Well I.D.	Drill Date	Boring Depth (feet bgs)	Well Diameter (inches)	Screen		Screen Length (feet)	Comments
				Top (feet bgs)	Bottom (feet bgs)		
<b>Soil Borings</b>							
GP-1	04/20/10	20	--	--	--	--	
GP-2	04/20/10	25	--	--	--	--	
GP-3	04/20/10	30	--	--	--	--	
GP-4	<b>Proposed</b>	25	--	--	--	--	<b>Proposed off-site soil boring</b>
GP-5	<b>Proposed</b>	25	--	--	--	--	<b>Proposed off-site soil boring</b>
GP-6	<b>Proposed</b>	25	--	--	--	--	<b>Proposed off-site soil boring</b>
GP-7	<b>Proposed</b>	25	--	--	--	--	<b>Proposed off-site soil boring</b>
<b>Monitoring Wells</b>							
MW-1	02/23/11	20	2	5	20	15	
MW-2	02/24/11	20	2	5	20	15	
MW-3	02/23/11	25	2	5	20	15	
MW-4	<b>Proposed</b>	20	2	5	20	15	<b>Proposed off-site monitoring well</b>
MW-5	<b>Proposed</b>	20	2	5	20	15	<b>Proposed off-site monitoring well</b>
<b>Explanation</b>							
bgs = Below ground surface							
-- = Data Not Available/Not Applicable							

**Table 4**  
**Groundwater Gradient and Flow Direction**

7-Eleven Store # 32266  
 1339 North Vasco Road  
 Livermore, California

Well No.	Monitoring Date	DTW (ft bgs)	Groundwater Gradient (feet per foot)	Groundwater Flow Direction																
				N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
MW-1	03/16/11	8.07	0.008	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	05/26/11	7.88	0.010	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	08/09/11	8.30	0.008	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	10/17/11	8.27	0.008	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	01/20/12	8.51	0.009	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
<b>Average Values</b>		<b>8.21</b>	<b>0.009</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Minumum Values</b>		<b>7.88</b>	<b>0.008</b>																	
<b>Maximum Values</b>		<b>8.51</b>	<b>0.010</b>																	

**Explanation**  
 TOC = Top of Casing (elevation in feet above mean sea level)  
 DTW = Depth to water below grade surface as measured from TOC  
 Number of Events                      **5** Events

# **Attachment A Field Notes**

JOB NAME:	7-Eleven Store #32266	JOB NUMBER:	211502037.220.0700
SITE ADDRESS:	1339 North Vasco Road	START DATE:	1/20/12
	Livermore, California	DATE PREPARED:	1/12/2012
PREPARED FOR:	Brian Branscum	PREPARED BY:	Colin Ryan

### SITE VISITATION REPORT

Name(s) BRIAN BRANSCUM Date: 1/20/12 Did you call in?  Yes  No  
 Arrival Time: 0845 "Departure Time: 1130 Who did you call? Colin Ryan  
 Weather Notations: SUN CLOUDY RAIN SNOW Temperature 40-50's F

HAZ WASTE		DRUM INVENTORY	
<u>1</u>			
<u>1/2</u>			
<u>0</u>			
WATER	<u>0</u>	CARBON	<u>4</u>
SOIL	<u>2/2</u>	EMPTY	<u>0</u>
		TOTAL OPEN TOP	
		TOTAL BUNG TOP	

### HEALTH AND SAFETY ASSESSMENT

PPE, HAZP, Hospital Route, Vehicle/Foot Traffic, Delivery Trucks, Slips/Trips/Falls, Scope of Work

### DESCRIPTION OF ACTIVITIES ONSITE AND NOTES

- 0830 - 0845 - Truck inspection, drove to site.
- 0845 - 0915 - Tailgate meeting, started paperwork, decon. & cal. equipment.
- 0915 - 0940 - Opened, then gauged wells per gauging form.
- 0940 - 1100 - Purged, then sampled wells gauged.
- 1100 - 1115 - Released purge H<sub>2</sub>O from truck to onsite 55-gal drums.
- 1115 - 1130 - Packed up equipment, finished paperwork.
- 1130 - 1300 - Drove home.

JOB NAME:	7-Eleven Store #32266	JOB NUMBER:	211502037.220.0700
SITE ADDRESS:	1339 North Vasco Road	START DATE:	1/20/12
	Livermore, California	DATE PREPARED:	1/12/2012
PREPARED FOR:	Brian Branscum	PREPARED BY:	Colin Ryan

### GROUNDWATER GAUGING FORM

MEASURED TO TOC

WELL I.D.	CONST. DTB	WELL DIAM.	WELL ELEV. TOC	DTB	DTW	DTP/PT	D.O. (mg/L)	TIME	COMMENTS Please note if well needs locking cap or street box repair
MW-1	20	2"	/	18.89	8.51	,	0.8	0930	
MW-2	20	2"	/	19.08	8.96	,	0.7	0935	
MW-3	20	2"	/	20.05	9.57	,	0.5	0940	

# Stantec Consulting Corp.

## WATER SAMPLE FIELD DATA SHEET

PROJECT #: 7-Eleven Store #32266      PURGED BY: Brian Branscum      WELL I.D.: MW- 1  
 CLIENT NAME: 7-Eleven, Inc.      SAMPLED BY: Brian Branscum      SAMPLE I.D.: MW- 1  
 LOCATION: 1339 North Vasco Road, Livermore, Califor      QA SAMPLES: None

DATE PURGED 1/20/12      START (2400hr) 0950      END (2400hr) 1006  
 DATE SAMPLED 1/20/12      SAMPLE TIME (2400hr) 1010  
 SAMPLE TYPE:      Groundwater       Surface Water \_\_\_\_\_      Treatment Effluent \_\_\_\_\_      Other \_\_\_\_\_

CASING DIAMETER:      2"       3" \_\_\_\_\_      4" \_\_\_\_\_      5" \_\_\_\_\_      6" \_\_\_\_\_      8" \_\_\_\_\_      Other \_\_\_\_\_  
 Casing Volume: (gallons per foot)      (0.17)      (0.38)      (0.67)      (1.02)      (1.50)      (2.60)      ( )

DEPTH TO BOTTOM (feet) = 18.89      CASING VOLUME (gal) = 1.7  
 DEPTH TO WATER (feet) = 8.51      CALCULATED PURGE (gal) = 5.1  
 WATER COLUMN HEIGHT (feet) = 10.38      ACTUAL PURGE (gal) = 7.0

### FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>1/20/12</u>	<u>1000</u>	<u>1.7</u>	<u>15.3</u>	<u>1336</u>	<u>6.52</u>	<u>BRN</u>	<u>MED</u>
<u>↓</u>	<u>1003</u>	<u>3.4</u>	<u>18.3</u>	<u>1441</u>	<u>6.56</u>	<u>BRN</u>	<u>MED</u>
<u>↓</u>	<u>1006</u>	<u>5.1</u>	<u>19.5</u>	<u>1450</u>	<u>6.66</u>	<u>BRN</u>	<u>MED</u>

### SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 8.87      SAMPLE TURBIDITY: MED

80% RECHARGE:  YES       NO      ANALYSES: BTEX, TPHg, 5 Oxygenates (EPA 8260B)  
 ODOR: N/A      SAMPLE VESSEL / PRESERVATIVE: HCL

PURGING EQUIPMENT	SAMPLING EQUIPMENT
<input type="checkbox"/> Bladder Pump	<input type="checkbox"/> Bladder Pump
<input type="checkbox"/> Centrifugal Pump	<input type="checkbox"/> Centrifugal Pump
<input checked="" type="checkbox"/> Submersible Pump	<input checked="" type="checkbox"/> Bailer ( <input type="checkbox"/> PVC or <input checked="" type="checkbox"/> disposable)
<input type="checkbox"/> Peristaltic Pump	<input type="checkbox"/> Bailer (Stainless Steel)
<input type="checkbox"/> Bailer (Teflon)	<input type="checkbox"/> Peristaltic Pump
<input type="checkbox"/> Bailer (PVC)	<input type="checkbox"/> Dedicated _____
<input type="checkbox"/> Bailer (Stainless Steel)	Other: _____
<input type="checkbox"/> Dedicated _____	
Other: _____	
Pump Depth: _____	

WELL INTEGRITY: GOOD      LOCK#: YES

REMARKS: D.O. - 0.8

SIGNATURE: B. Branscum      Page 1 of 3



# Stantec Consulting Corp.

## WATER SAMPLE FIELD DATA SHEET

PROJECT #: 7-Eleven Store #32266      PURGED BY: Brian Branscum      WELL I.D.: MW- 2  
 CLIENT NAME: 7-Eleven, Inc.      SAMPLED BY: Brian Branscum      SAMPLE I.D.: MW- 2  
 LOCATION: 1339 North Vasco Road, Livermore, Califor      QA SAMPLES: None

DATE PURGED 1/20/12      START (2400hr) 1015      END (2400hr) 1031  
 DATE SAMPLED 1/20/12      SAMPLE TIME (2400hr) 1035  
 SAMPLE TYPE:      Groundwater       Surface Water \_\_\_\_\_      Treatment Effluent \_\_\_\_\_      Other \_\_\_\_\_

CASING DIAMETER:      2"       3" \_\_\_\_\_      4" \_\_\_\_\_      5" \_\_\_\_\_      6" \_\_\_\_\_      8" \_\_\_\_\_      Other \_\_\_\_\_  
 Casing Volume: (gallons per foot)      (0.17)      (0.38)      (0.67)      (1.02)      (1.50)      (2.60)      ( )

DEPTH TO BOTTOM (feet) = 19.08      CASING VOLUME (gal) = 1.7  
 DEPTH TO WATER (feet) = 8.96      CALCULATED PURGE (gal) = 5.1  
 WATER COLUMN HEIGHT (feet) = 10.12      ACTUAL PURGE (gal) = 7.0

### FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>1/20/12</u>	<u>1025</u>	<u>1.7</u>	<u>19.1</u>	<u>1778</u>	<u>6.77</u>	<u>BRN</u>	<u>MED</u>
<u>↓</u>	<u>1028</u>	<u>3.4</u>	<u>18.8</u>	<u>1782</u>	<u>6.74</u>	<u>BRN</u>	<u>MED</u>
<u>↓</u>	<u>1031</u>	<u>5.1</u>	<u>18.8</u>	<u>1807</u>	<u>6.77</u>	<u>BRN</u>	<u>MED</u>

### SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 9.48      SAMPLE TURBIDITY: MED  
 80% RECHARGE:  YES      NO      ANALYSES: BTEX, TPHg, 5 Oxygenates (EPA 8260B)  
 ODOR: N/A      SAMPLE VESSEL / PRESERVATIVE: HCL

#### PURGING EQUIPMENT

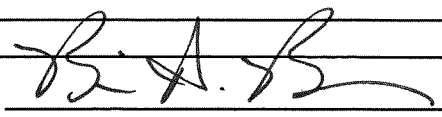
Bladder Pump       Bailer (Teflon)  
 Centrifugal Pump       Bailer (PVC)  
 Submersible Pump       Bailer (Stainless Steel)  
 Peristaltic Pump       Dedicated \_\_\_\_\_  
 Other: \_\_\_\_\_  
 Pump Depth: \_\_\_\_\_

#### SAMPLING EQUIPMENT

Bladder Pump       Bailer (Teflon)  
 Centrifugal Pump       Bailer (  PVC or  disposable)  
 Submersible Pump       Bailer (Stainless Steel)  
 Peristaltic Pump       Dedicated \_\_\_\_\_  
 Other: \_\_\_\_\_

WELL INTEGRITY: GOOD      LOCK#: YES

REMARKS: D.O. - 0.7

SIGNATURE: 

# Stantec Consulting Corp.

## WATER SAMPLE FIELD DATA SHEET

PROJECT #: 7-Eleven Store #32266      PURGED BY: Brian Branscum      WELL I.D.: MW- 3  
 CLIENT NAME: 7-Eleven, Inc.      SAMPLED BY: Brian Branscum      SAMPLE I.D.: MW- 3  
 LOCATION: 1339 North Vasco Road, Livermore, Califor      QA SAMPLES: None

DATE PURGED 1/20/12      START (2400hr) 1040      END (2400hr) 1056  
 DATE SAMPLED 1/20/12      SAMPLE TIME (2400hr) 1100  
 SAMPLE TYPE:      Groundwater       Surface Water \_\_\_\_\_      Treatment Effluent \_\_\_\_\_      Other \_\_\_\_\_

CASING DIAMETER:      2"       3" \_\_\_\_\_      4" \_\_\_\_\_      5" \_\_\_\_\_      6" \_\_\_\_\_      8" \_\_\_\_\_      Other \_\_\_\_\_  
 Casing Volume: (gallons per foot)      (0.17)      (0.38)      (0.67)      (1.02)      (1.50)      (2.60)      ( )

DEPTH TO BOTTOM (feet) = 20.05      CASING VOLUME (gal) = 1.7  
 DEPTH TO WATER (feet) = 9.57      CALCULATED PURGE (gal) = 5.1  
 WATER COLUMN HEIGHT (feet) = 10.48      ACTUAL PURGE (gal) = 7.0

### FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>1/20/12</u>	<u>1050</u>	<u>1.7</u>	<u>18.8</u>	<u>946</u>	<u>7.00</u>	<u>BRN</u>	<u>MED/LOW</u>
<u>↓</u>	<u>1053</u>	<u>3.4</u>	<u>19.5</u>	<u>856</u>	<u>6.96</u>	<u>BRN</u>	<u>MED/LOW</u>
<u>↓</u>	<u>1056</u>	<u>5.1</u>	<u>20.0</u>	<u>860</u>	<u>6.88</u>	<u>BRN</u>	<u>MED/LOW</u>

SAMPLE DEPTH TO WATER: 10.04      SAMPLE INFORMATION      SAMPLE TURBIDITY: MED/LOW

80% RECHARGE:  YES       NO      ANALYSES: BTEX, TPHg, 5 Oxygenates (EPA 8260B)  
 ODOR: N/A      SAMPLE VESSEL / PRESERVATIVE: HCL

#### PURGING EQUIPMENT

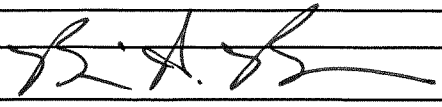
Bladder Pump       Bailer (Teflon)  
 Centrifugal Pump       Bailer (PVC)  
 Submersible Pump       Bailer (Stainless Steel)  
 Peristaltic Pump       Dedicated \_\_\_\_\_  
 Other: \_\_\_\_\_  
 Pump Depth: \_\_\_\_\_

#### SAMPLING EQUIPMENT

Bladder Pump       Bailer (Teflon)  
 Centrifugal Pump       Bailer (  PVC or  disposable)  
 Submersible Pump       Bailer (Stainless Steel)  
 Peristaltic Pump       Dedicated \_\_\_\_\_  
 Other: \_\_\_\_\_

WELL INTEGRITY: GOOD      LOCK#: YES

REMARKS: D.O. - 0.5

SIGNATURE: 

**Attachment B**  
**Certified Laboratory Analytical Reports**  
**and Chain-of-Custody Documentation**



## Laboratory Results

Damon Brown  
Stantec Consulting Corporation  
3017 Kilgore Road, Suite 100  
Rancho Cordova, CA 95670

Subject : 3 Water Samples  
Project Name : 7-Eleven Store #32266  
Project Number : 211502037.220.0410

Dear Mr. Brown,

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 standard. All soil samples are reported on a total weight (wet weight) basis unless noted otherwise in the case narrative. 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,



Joel Kiff

Subject : 3 Water Samples  
Project Name : 7-Eleven Store #32266  
Project Number : 211502037.220.0410

## Case Narrative

Matrix Spike/Matrix Spike Duplicate results associated with samples MW-1 and MW-2 for the analyte Methyl-t-butyl ether were affected by the analyte concentrations already present in the un-spiked sample.

Project Name : **7-Eleven Store #32266**

Project Number : **211502037.220.0410**

Sample : **MW-1**

Matrix : Water

Lab Number : 80132-01

Sample Date :01/20/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 14:03
Toluene	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 14:03
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 14:03
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 14:03
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 14:03
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 14:03
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 14:03
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 14:03
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	01/24/12 14:03
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	01/24/12 14:03
1,2-Dichloroethane-d4 (Surr)	103		% Recovery	EPA 8260B	01/24/12 14:03
Toluene - d8 (Surr)	98.1		% Recovery	EPA 8260B	01/24/12 14:03

Project Name : **7-Eleven Store #32266**

Project Number : **211502037.220.0410**

Sample : **MW-2**

Matrix : Water

Lab Number : 80132-02

Sample Date :01/20/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 14:36
Toluene	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 14:36
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 14:36
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 14:36
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 14:36
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 14:36
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 14:36
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 14:36
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	01/24/12 14:36
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	01/24/12 14:36
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	01/24/12 14:36
Toluene - d8 (Surr)	97.5		% Recovery	EPA 8260B	01/24/12 14:36

Project Name : **7-Eleven Store #32266**

Project Number : **211502037.220.0410**

Sample : **MW-3**

Matrix : Water

Lab Number : 80132-03

Sample Date :01/20/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 11:20
Toluene	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 11:20
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 11:20
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 11:20
<b>Methyl-t-butyl ether (MTBE)</b>	<b>1100</b>	2.5	ug/L	EPA 8260B	01/25/12 16:56
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 11:20
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	01/24/12 11:20
<b>Tert-amyl methyl ether (TAME)</b>	<b>2.2</b>	0.50	ug/L	EPA 8260B	01/24/12 11:20
<b>Tert-Butanol</b>	<b>58</b>	5.0	ug/L	EPA 8260B	01/24/12 11:20
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	01/24/12 11:20
1,2-Dichloroethane-d4 (Surr)	105		% Recovery	EPA 8260B	01/24/12 11:20
Toluene - d8 (Surr)	95.8		% Recovery	EPA 8260B	01/24/12 11:20



**QC Report : Method Blank Data**

Project Name : **7-Eleven Store #32266**

Project Number : **211502037.220.0410**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	01/24/2012
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	01/24/2012
Toluene	< 0.50	0.50	ug/L	EPA 8260B	01/24/2012
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	01/24/2012
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	01/24/2012
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	01/24/2012
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	01/24/2012
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	01/24/2012
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	01/24/2012
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	01/24/2012
1,2-Dichloroethane-d4 (Surr)	101		%	EPA 8260B	01/24/2012
Toluene - d8 (Surr)	97.5		%	EPA 8260B	01/24/2012
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	01/25/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
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## QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **7-Eleven Store #32266**Project Number : **211502037.220.0410**

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
Benzene	80132-03	<0.50	40.0	40.0	38.2	37.4	ug/L	EPA 8260B	1/24/12	95.5	93.6	1.98	80-120	25
Diisopropyl ether	80132-03	<0.50	39.5	39.5	42.4	42.0	ug/L	EPA 8260B	1/24/12	107	106	1.11	80-120	25
Ethyl-tert-butyl ether	80132-03	<0.50	40.0	40.0	44.3	43.7	ug/L	EPA 8260B	1/24/12	111	109	1.54	76.5-120	25
Ethylbenzene	80132-03	<0.50	40.0	40.0	40.8	40.0	ug/L	EPA 8260B	1/24/12	102	99.9	1.94	80-120	25
<b>Methyl-t-butyl ether</b>	80132-03	1100	40.4	40.4	986	975	ug/L	EPA 8260B	1/24/12	<b>0.00</b>	<b>0.00</b>	0.00	69.7-121	25
P + M Xylene	80132-03	<0.50	40.0	40.0	41.7	40.7	ug/L	EPA 8260B	1/24/12	104	102	2.27	76.8-120	25
Tert-Butanol	80132-03	58	201	201	264	262	ug/L	EPA 8260B	1/24/12	103	102	1.17	80-120	25
Tert-amyl-methyl ether	80132-03	2.2	39.4	39.4	44.5	44.8	ug/L	EPA 8260B	1/24/12	107	108	0.764	78.9-120	25
Toluene	80132-03	<0.50	40.0	40.0	38.4	37.8	ug/L	EPA 8260B	1/24/12	96.1	94.5	1.72	80-120	25

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Project Name : **7-Eleven Store #32266**

Project Number : **211502037.220.0410**

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
Methyl-t-butyl ether	80143-02	<0.50	40.4	40.4	44.7	44.2	ug/L	EPA 8260B	1/25/12	110	109	1.14	69.7-121	25

**QC Report : Laboratory Control Sample (LCS)**Project Name : **7-Eleven Store #32266**Project Number : **211502037.220.0410**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.2	ug/L	EPA 8260B	1/24/12	95.6	80-120
Diisopropyl ether	39.7	ug/L	EPA 8260B	1/24/12	107	80-120
Ethyl-tert-butyl ether	40.2	ug/L	EPA 8260B	1/24/12	113	76.5-120
Ethylbenzene	40.2	ug/L	EPA 8260B	1/24/12	102	80-120
Methyl-t-butyl ether	40.6	ug/L	EPA 8260B	1/24/12	101	69.7-121
P + M Xylene	40.2	ug/L	EPA 8260B	1/24/12	104	76.8-120
TPH as Gasoline	500	ug/L	EPA 8260B	1/24/12	107	70.0-130
Tert-Butanol	202	ug/L	EPA 8260B	1/24/12	99.9	80-120
Tert-amyl-methyl ether	39.6	ug/L	EPA 8260B	1/24/12	111	78.9-120
Toluene	40.2	ug/L	EPA 8260B	1/24/12	97.4	80-120
Methyl-t-butyl ether	40.5	ug/L	EPA 8260B	1/25/12	108	69.7-121

# Stantec Chain-of Custody Record

Field Office: 077 Sacramento  
Address: 3017 Kilgore Road, Suite 100  
Rancho Cordova, CA

Additional documents are attached, and are part of this Record.  
Job Name: 7-Eleven Store #32266  
Location: 1339 North Vasco Road  
Livermore, CA

Project # 211502037.220 Task # 220.0410  
Project Manager Damon Brown  
Laboratory Kiff Analytical  
Turnaround Time Standard

Sampler's Name Brian Branstum  
Sampler's Signature *B. Branstum*

Sample ID	Date	Time	Matrix	Analysis Request												Comments/Instructions	Number of Containers		
				HCl-preserved	TPH <sub>g</sub> /BTEX - EPA 8260	TPH <sub>d</sub> (Diesel Only) 8015 (modified)	TPH 418.1/WTPH 418.1	Aromatic Volatiles 602/8020	Volatile organics 624/8240 (g=GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	5 Oxygenates EPA 8260B	Chloroform, PCE - EPA 8260B						
MW-1	<u>1/20/12</u>	<u>1010</u>	<u>Water</u>	<u>3</u>	<u>X</u>													<u>3</u>	<u>01</u>
MW-2	<u>↓</u>	<u>1035</u>	<u>Water</u>	<u>3</u>	<u>X</u>													<u>3</u>	<u>02</u>
MW-3	<u>↓</u>	<u>1100</u>	<u>Water</u>	<u>3</u>	<u>X</u>													<u>3</u>	<u>03</u>

Special Instructions/Comments  
**5 Oxygenates - MtBE, EtBE, DIPE, TAME, TBA**  
Global ID #T10000001067  
email EDD to [danielle.manning@stantec.com](mailto:danielle.manning@stantec.com),  
[patrick.schiller@stantec.com](mailto:patrick.schiller@stantec.com)  
email lab report to [danielle.manning@stantec.com](mailto:danielle.manning@stantec.com) /  
[damon.brown@stantec.com](mailto:damon.brown@stantec.com) /  
[patrick.schiller@stantec.com](mailto:patrick.schiller@stantec.com)

Relinquished by: *B. Branstum*  
Sign *Brian Branstum*  
Print BRIAN BRANSTUM  
Company STANTEC  
Time 0700 Date 1/23/12

Relinquished by: \_\_\_\_\_  
Sign \_\_\_\_\_  
Print \_\_\_\_\_  
Company \_\_\_\_\_  
Time \_\_\_\_\_ Date \_\_\_\_\_

Received by: \_\_\_\_\_  
Sign \_\_\_\_\_  
Print \_\_\_\_\_  
Company \_\_\_\_\_  
Time \_\_\_\_\_ Date \_\_\_\_\_

Received by: *TJB*  
Sign *Timothy Baumer*  
Print Timothy Baumer  
Company Kiff Analytical  
Time 1421 Date 01/23/12

Sample Receipt  
Total no. of containers: \_\_\_\_\_  
Chain of custody seals: \_\_\_\_\_  
Rec'd in good condition/cold: \_\_\_\_\_  
Conforms to record: \_\_\_\_\_

Client: Stantec  
Client Contact: Damon  
Client Phone: (916) 861-0400  
ext. 230

Page 10 of 11

**SAMPLE RECEIPT CHECKLIST**

RECEIVER  
TJB  
Initials

SRG#: 80132 Date: 012312

Project ID: 7-Eleven Store #32266

Method of Receipt:  Courier  Over-the-counter  Shipper

**COC Inspection**

- Is COC present?  Yes  No
- Custody seals on shipping container?  Intact  Broken  Not present  N/A
- Is COC Signed by Relinquisher?  Yes  No Dated?  Yes  No
- Is sampler name legibly indicated on COC?  Yes  No
- Is analysis or hold requested for all samples  Yes  No
- Is the turnaround time indicated on COC?  Yes  No
- 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 3.3 Therm. ID# IR-4 Initial TJB Date/Time 012312 / 1701  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 9  
 Matrix \_\_\_\_\_ Container type \_\_\_\_\_ # of containers received \_\_\_\_\_  
 Matrix \_\_\_\_\_ Container type \_\_\_\_\_ # of containers received \_\_\_\_\_  
 Date and Time Sample Put into Temp Storage Date: 012312 Time: 1708

**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:**

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