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**Stantec**

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

July 2, 2013

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

RE: **Enclosed Quarterly Groundwater Monitoring Report,  
Second Quarter 2013**  
7-Eleven Store #32266  
1339 North Vasco Road  
Livermore, CA 94551  
Stantec Project #: 185750084.200.0506

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.

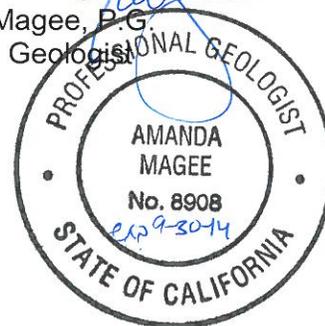
Sincerely,  
**Stantec Consulting Services Inc.**

A handwritten signature in blue ink that reads "Danielle Manning".

Danielle Manning  
Associate Scientist  
Project Manager

A handwritten signature in blue ink that reads "Amanda Magee".

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.

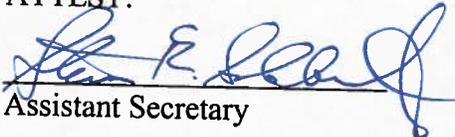
Any and all acts of Agent hereunder shall comply with all applicable federal, state and local laws, regulations, rules and ordinances and with all applicable orders of any courts of competent jurisdiction.

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 Second Quarter 2013**

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

Stantec Project No.: 185750084.200.0506

**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

July 2, 2013



**Stantec**

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

DATE: July 2, 2013

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

Store Number:	<u><b>7-Eleven Store #32266</b></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. – Ms. Amanda Magee</u>
Stantec Project No.:	<u>185750084.200.0506</u>
Primary Agency:	<u>Alameda County Environmental Health Services (ACEHS)</u>

#### **WORK PERFORMED THIS PERIOD [Second Quarter 2013]**

1. Conducted quarterly groundwater monitoring and sampling on April 11, 2013, and generated the quarterly report.
2. Generated a work plan for the installation of groundwater monitoring well MW-5 per the ACEHS letter request.
3. Installation of groundwater monitoring well MW-5 on June 17, 2013.

#### **WORK PROPOSED FOR NEXT PERIOD [Third Quarter 2013]**

1. Perform quarterly groundwater monitoring and sampling during third quarter of 2013, and prepare the quarterly report.
2. Prepare report documenting installation of offsite groundwater monitoring well MW-5.

#### **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, Four wells- MW-1 through MW-4</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 municipal water supply wells (see Stantec work plan and results survey September, 2010)</u>
Current Remediation Techniques:	<u>None</u>
Permits for Discharge:	<u>None</u>
Historic Range in Depth to Water (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:	Four wells - MW-1 through MW-4
Dissolved Oxygen Concentrations Measured In:	Four wells - MW-1 through MW-4
Depth to Groundwater (DTW) (Measured Below Top of Casing)	8.28 to 9.44 feet
Average Change in Groundwater Elevation Since Last Event:	0.04 foot decrease
Groundwater Flow Direction and Gradient:	West-southwest @ 0.005 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 to <250 µg/L
Maximum Benzene Concentrations	Not Detected, <0.50 to <2.5 µg/L
Maximum MtBE Concentrations	MW-3, 1,700 µg/L
Maximum TBA Concentrations	MW-3, 27 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 27 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 tert-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 (µg/L) and benzene was reported at 25 µg/L in UST excavation water sample W1 (Table 2). TPHg was detected at 3,400 µg/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 µg/L. MtBE was detected in both samples at concentrations of 340 µg/L (BT-1) and 400 µg/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 (LPFD) 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 soil samples 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 tert-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 a 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 to the ACEHS in a report titled *Additional Soil and Groundwater Assessment*.

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 borings 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 boring 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. The revised work plan was approved by the ACEHS on March 26, 2012.

Between July 10 and 12, 2012, Stantec supervised the advancement of four direct push soil borings (GP-4 through GP-7). On July 20, 2012, Stantec submitted an *Additional Site Assessment Report* to the ACEHS. BTEX and TPHg were not detected above laboratory reporting limits in any of the submitted soil samples; MtBE was detected solely in soil samples collected from soil boring GP-5 with a maximum concentration of 0.056 mg/kg. TPHg and MtBE were detected in grab groundwater samples collected from soil boring GP-4 and GP-5 at maximum concentrations of 95 µg/L and 350 µg/L, respectively.

In an email dated July 24, 2012, the ACEHS approved the locations of proposed monitoring wells MW-4 and MW-5 as proposed in Stantec's July 20, 2012 *Additional Site Assessment Report*. Between September 4 and 7, 2012, Stantec supervised the installation of one offsite groundwater monitoring well (MW-4). Proposed groundwater monitoring well MW-5 was not installed at that time due to the presence of marked and unmarked utilities in the permitted area of the City of Livermore right-of-way. On October 5, 2012, Stantec submitted an *Additional Site Assessment Report*.

In a letter dated November 6, 2012, the ACEHS requested the submittal of work plan for the installation of monitoring well MW-5 after the first quarter 2013 groundwater monitoring and sampling event.

#### **MONITORING AND SAMPLING PROCEDURES**

The depth to water was measured to within 0.01 foot bgs in monitoring wells MW-1 through MW-4 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 (COC) 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 through MW-4 were analyzed for the presence of BTEX, TPHg, MtBE, TBA, DIPE, EtBE, and TAME by EPA Method 8260B. The certified laboratory analytical report and COC 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:

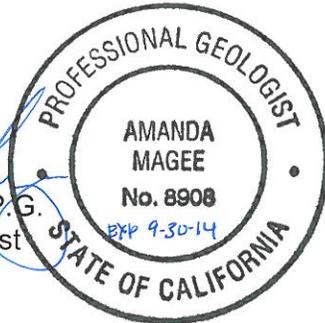


Danielle Manning  
Associate Scientist  
Project Manager

Reviewed by:



Amanda Magee, P.G.  
Associate Geologist



**ATTACHMENTS**

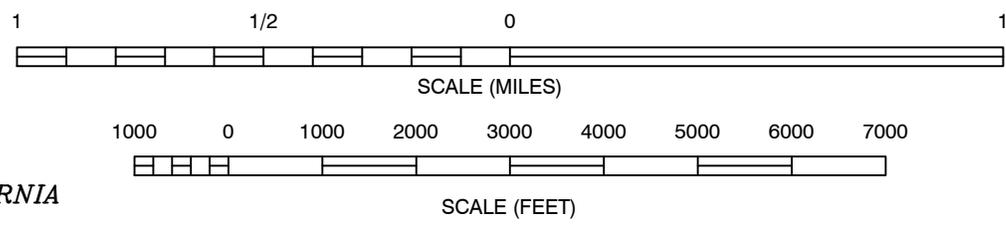
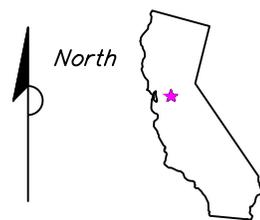
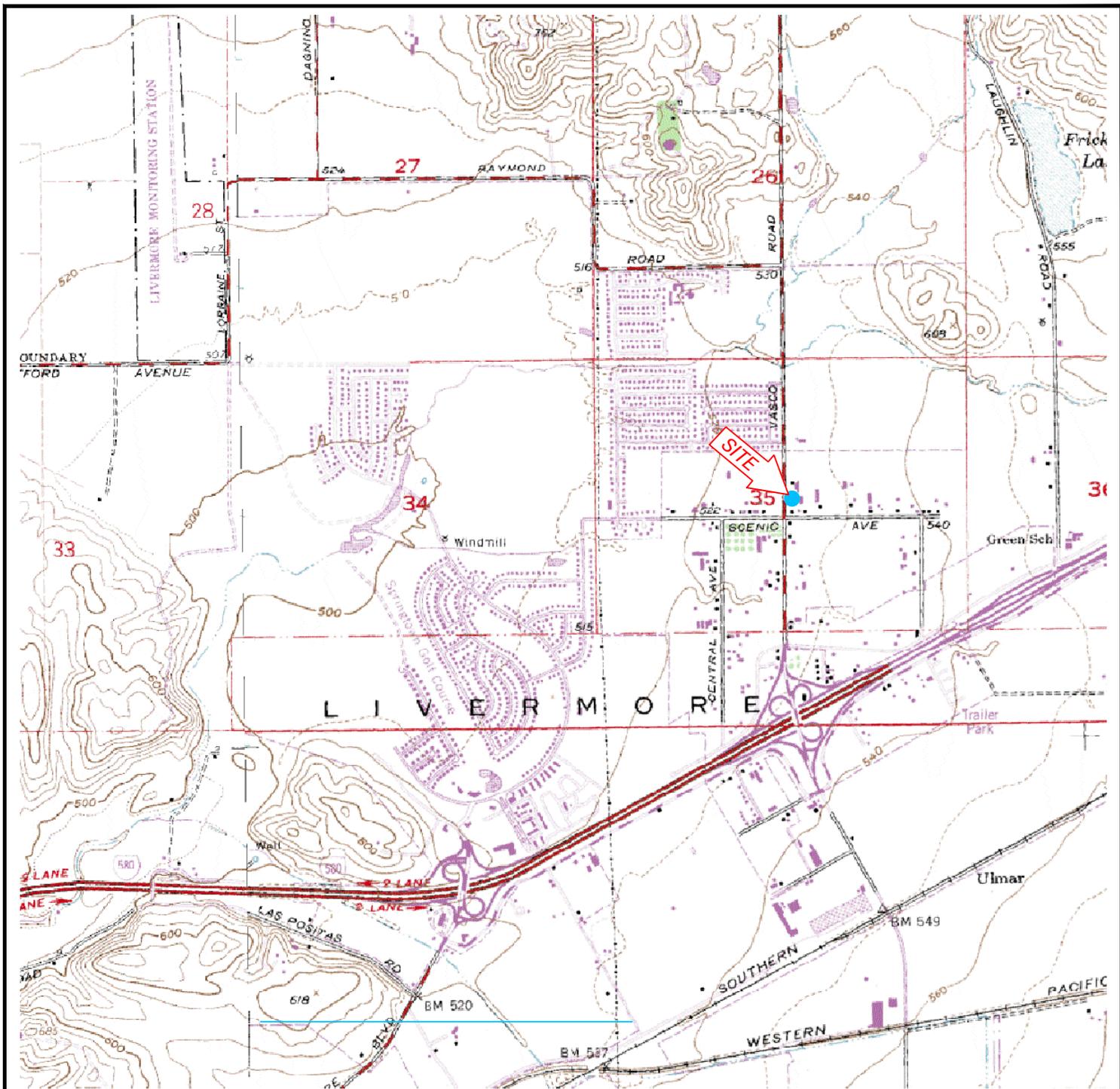
Figures  
Tables

Attachment A – Field Notes

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

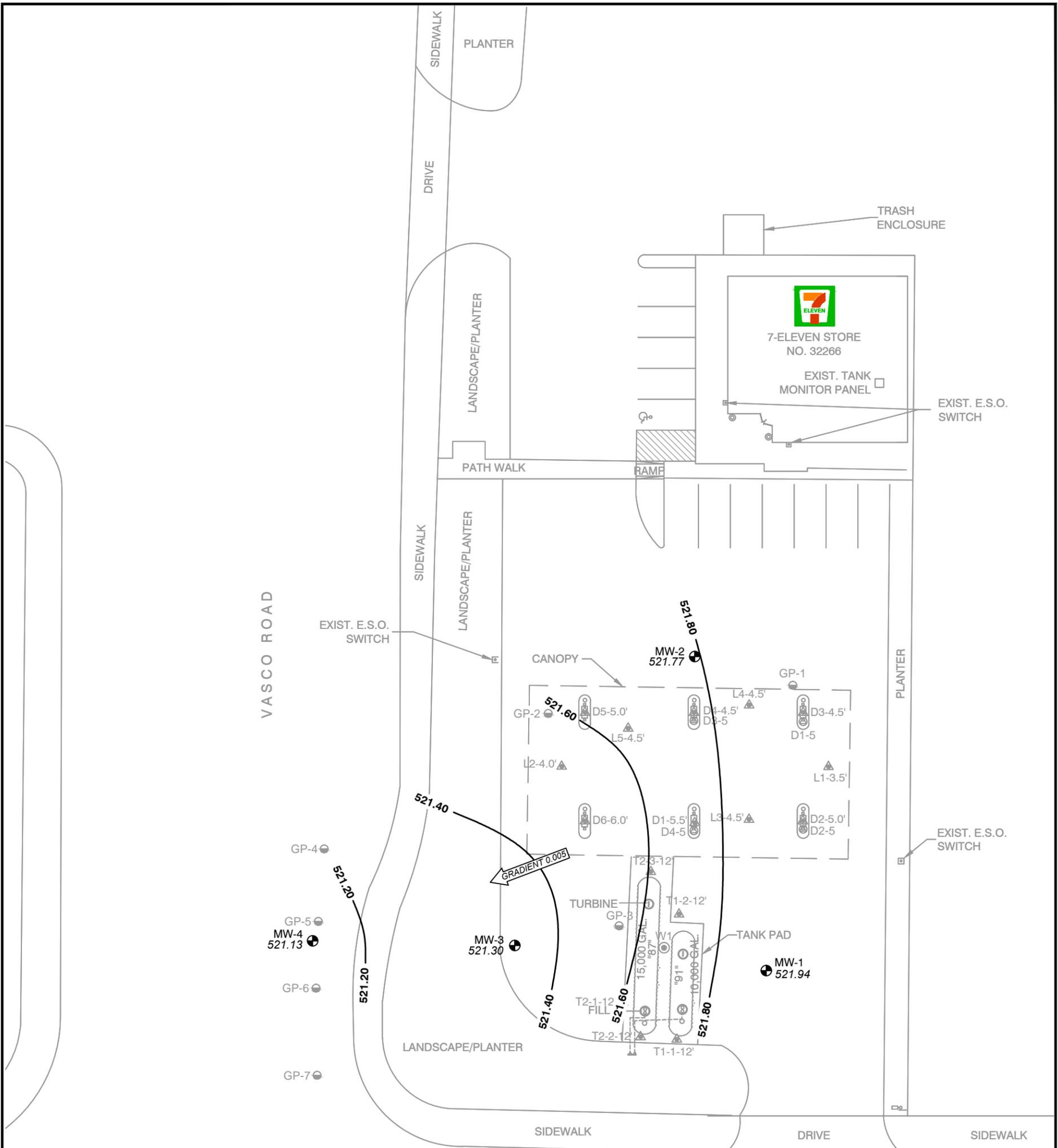
c: John Wainwright, Stantec, 308 East 4500 South, Suite 100, Murray, Utah 84107-3957

# Figures



REFERENCE: USGS 7.5 MINUTE QUADRANGLE, LIVERMORE, CALIFORNIA

	FOR:  STORE NO. 32266 1339 NORTH VASCO ROAD LIVERMORE, CALIFORNIA		<b>SITE LOCATION MAP</b>		<b>FIGURE: 1</b>
	JOB NUMBER: 185750084	DRAWN BY: STA			



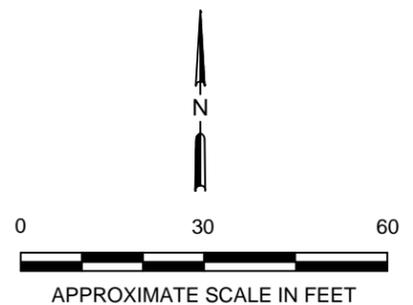
**LEGEND:**

- MW-1 ● GROUNDWATER MONITORING WELL
- W1 ● UST EXCAVATION WATER SAMPLE LOCATION
- GP-1 ● GEOPROBE SAMPLE LOCATION
- L5-4.5' ▲ 2005 SOIL SAMPLE LOCATION
- D1-5 ● 2008 SOIL SAMPLE LOCATION

← GRADIENT 0.005 APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT (FT/FT)

— 521.80 — GROUNDWATER ELEVATION CONTOUR (FEET ABOVE MEAN SEA LEVEL)

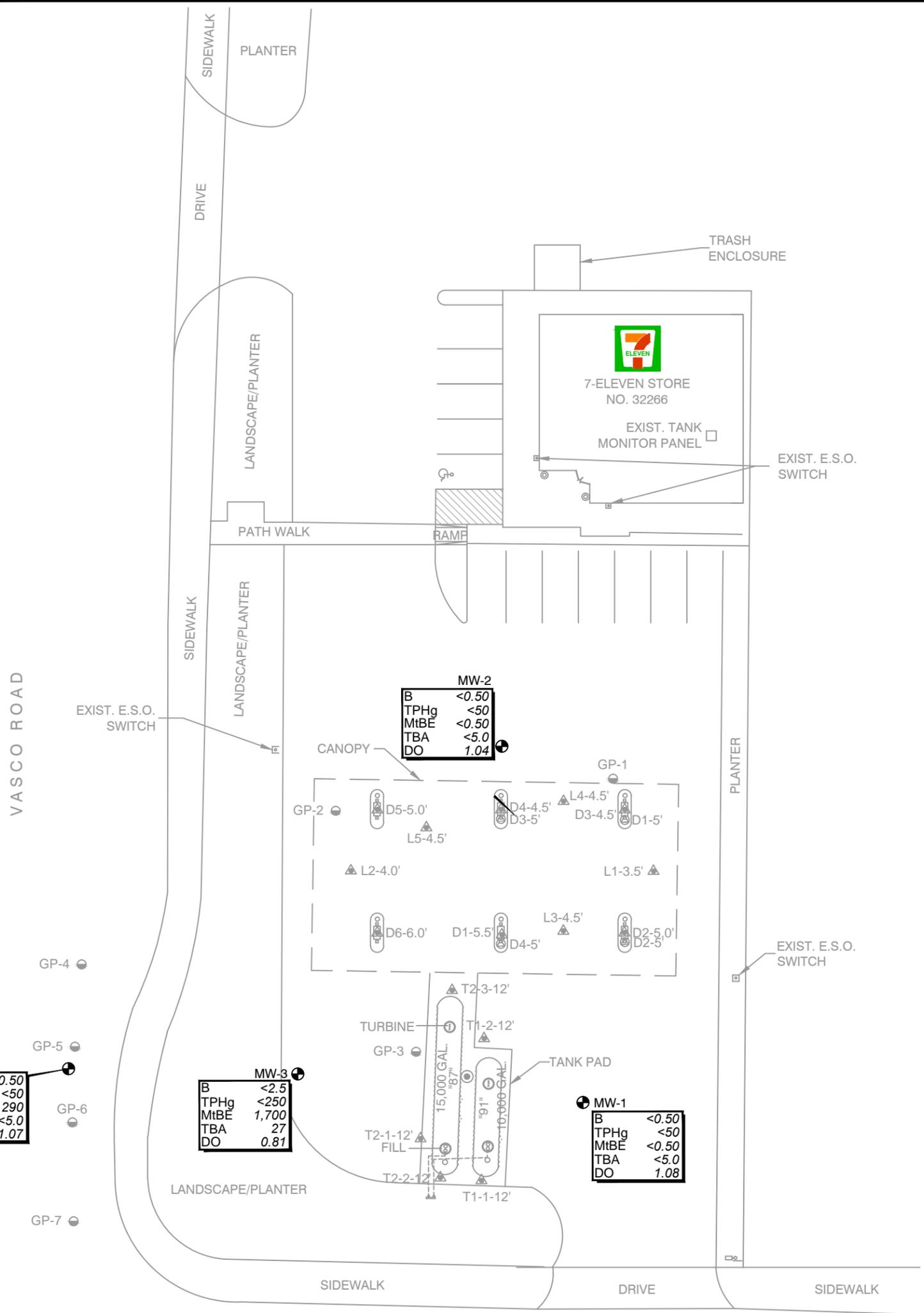
521.94 GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)



REFERENCE: THIS FIGURE IS BASED ON AN AERIAL SURVEY PROVIDED BY STANTEC CONSULTING SURVEYING GROUP

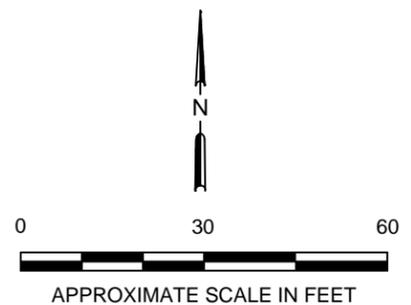
No warranty is made by Stantec Consulting Services Inc. as to the accuracy, reliability, or completeness of these data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed electronically, and may be updated without notification. Any reproduction may result in a loss of scale and/or information.

	FOR:  STORE NO. 32266 1339 NORTH VASCO ROAD LIVERMORE, CALIFORNIA	<b>GROUNDWATER ELEVATION CONTOUR MAP APRIL 11, 2013</b>		FIGURE: <b>2</b>
	JOB NUMBER: 185750084	DRAWN BY: STA	CHECKED BY: CR	APPROVED BY: ASM



**LEGEND:**

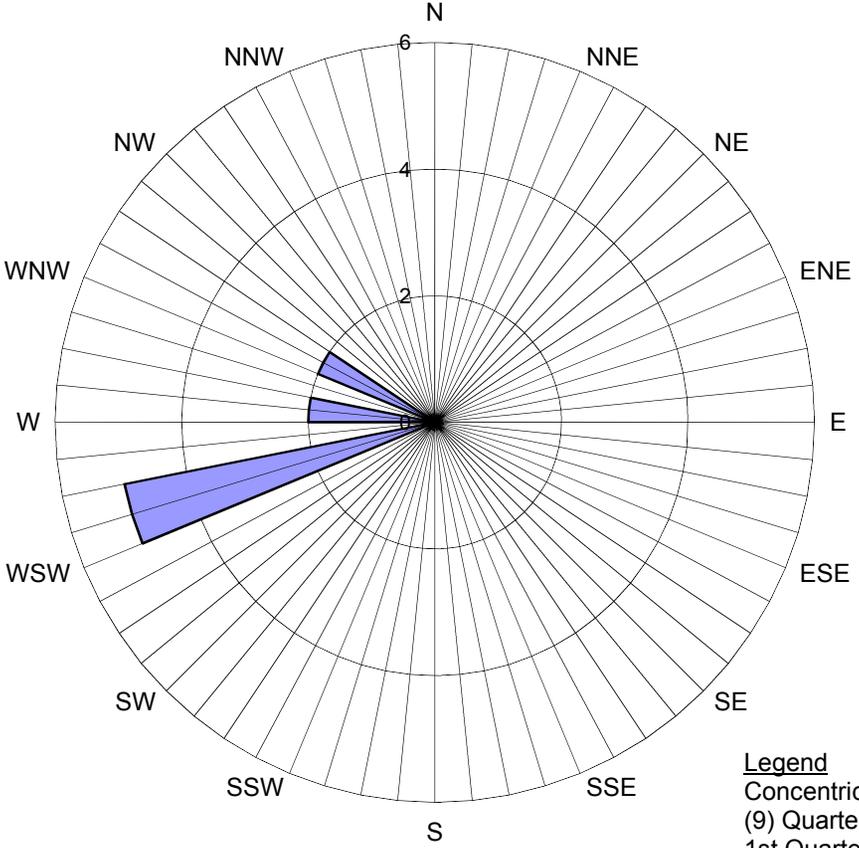
- MW-1 ● GROUNDWATER MONITORING WELL
- W1 ● UST EXCAVATION WATER SAMPLE LOCATION
- GP-1 ● GEOPROBE SAMPLE LOCATION
- L5-4.5' ▲ 2008 SOIL SAMPLE LOCATION
- D1-5 ● 2005 SOIL SAMPLE LOCATION
  
- B BENZENE (µg/L)
- TPHg TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (µg/L)
- MtBE METHYL TERTIARY BUTYL ETHER (µg/L)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



No warranty is made by Stantec Consulting Corp. as to the accuracy, reliability, or completeness of these data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed electronically, and may be updated without notification. Any reproduction may result in a loss of scale and/or information.

	FOR:  STORE NO. 32266 1339 NORTH VASCO ROAD LIVERMORE, CALIFORNIA	<b>GROUNDWATER HYDROCARBON CONCENTRATION MAP APRIL 11, 2013</b>		FIGURE: <b>3</b>
	JOB NUMBER: 185750084.200.0506	DRAWN BY: STA	CHECKED BY: CR	APPROVED BY: ASM

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



Legend  
 Concentric Circles represent  
 (9) Quarterly Monitoring Events  
 1st Quarter 2011 through 2nd Quarter 2013

■ Groundwater Flow Direction

# Tables

**TABLE 1**  
**Second Quarter 2013 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)
MW-1 530.22	04/11/13	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50		1.08	8.28	0.00	521.94
MW-2 530.55	04/11/13	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50		1.04	8.78	0.00	521.77
MW-3 530.74	04/11/13	<2.5	<2.5	<2.5	<2.5	<250	<b>1,700</b>	<b>27</b>	<2.5	<2.5	<2.5	b	0.81	9.44	0.00	521.30
MW-4 529.93	04/11/13	<0.50	<0.50	<0.50	<0.50	<50	<b>290</b>	<5.0	<0.50	<0.50	<0.50		1.07	8.80	0.00	521.13

**Explanation:**

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

TPHg = Total petroleum hydrocarbons as gasoline

MtBE = Methyl tertiary butyl ether

DIPE = Diisopropyl ether

EtBE = Ethyl tert-butyl ether

TAME = Tertiary-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**

b = Tert-Butanol (Tert-butyl alcohol) 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 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)	1-2 DCA (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	<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	--	--	--		--	--	--	--	
GP-4W	07/10/12	<0.50	<0.50	<0.50	<0.50	75	13	--	--	--	--	--	--	--	c	--	--	--	--	
GP-5W	07/11/12	<0.50	<0.50	<0.50	<0.50	95	350	--	--	--	--	--	--	--		--	--	--	--	
GP-7W	07/12/12	<0.50	<0.50	<0.50	<0.50	<50	<0.50	--	--	--	--	--	--	--		--	--	--	--	
<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	
	04/05/12	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	--	--		0.44	8.22	0.00	522.00	
	07/24/12	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	--	--	--		0.28	8.36	0.00	521.86
	09/21/12	--	--	--	--	--	--	--	--	--	--	--	--	--		--	8.40	0.00	521.82	
	10/25/12	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	--	--	--		0.73	8.46	0.00	521.76
	01/16/13	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	--	--	--		0.92	8.34	0.00	521.88
04/11/13	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	--	--	--		1.08	8.28	0.00	521.94	
<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	
	04/05/12	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	--	--	--		0.51	8.88	0.00	521.67
	07/24/12	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	--	--	--		0.30	9.04	0.00	521.51
	09/21/12	--	--	--	--	--	--	--	--	--	--	--	--	--		--	8.83	0.00	521.72	
	10/25/12	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	--	--	--		0.76	8.74	0.00	521.81
	01/16/13	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	--	--	--		0.78	8.71	0.00	521.84
04/11/13	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	--	--	--		1.04	8.78	0.00	521.77	

**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)	1-2 DCA (µg/L)	EtOH (µg/L)	Notes	Dissolved Oxygen (mg/L)	DTW (feet)	SPT (feet)	WTE (feet)
<b>MW-3</b> 530.74	03/16/11	<0.50	<0.50	<0.50	<0.50	<50	<b>5,600</b>	<b>170</b>	<0.50	<0.50	<b>10</b>	--	--	--		2.54	9.11	0.00	521.63
	05/26/11	<0.50	<0.50	<0.50	<0.50	<50	<b>3,200</b>	<b>180</b>	<0.50	<0.50	<b>5.4</b>	--	--	--		0.32	9.15	0.00	521.59
	08/09/11	<0.50	<0.50	<0.50	<0.50	<50	<b>1,700</b>	<b>78</b>	<0.50	<0.50	<b>2.8</b>	--	--	--		0.42	9.36	0.00	521.38
	10/17/11	<0.50	<0.50	<0.50	<0.50	<50	<b>1,900</b>	<b>85</b>	<0.50	<0.50	<b>2.9</b>	--	--	--	b	0.6	9.37	0.00	521.37
	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
	04/05/12	<2.5	<2.5	<2.5	<2.5	<250	<b>2,000</b>	<b>57</b>	<2.5	<2.5	<b>3.3</b>	--	--	--	b	0.47	9.44	0.00	521.30
	07/24/12	<0.50	<0.50	<0.50	<0.50	<50	<b>2,000</b>	<b>50</b>	<0.50	<0.50	<b>3.9</b>	--	--	--	b	0.36	9.65	0.00	521.09
	09/21/12	<1.5	<1.5	<1.5	<1.5	<150	<b>760</b>	<b>32</b>	<1.5	<1.5	<b>1.5</b>	--	--	--	b	--	9.55	0.00	521.19
	10/25/12	<1.5	<1.5	<1.5	<1.5	<150	<b>670</b>	<b>25</b>	<1.5	<1.5	<1.5	--	--	--	b	0.75	9.50	0.00	521.24
	01/16/13	<1.5	<1.5	<1.5	<1.5	<150	<b>1,200</b>	<b>30</b>	<1.5	<1.5	<b>2.4</b>	--	--	--	b	0.73	9.23	0.00	521.51
	04/11/13	<2.5	<2.5	<2.5	<2.5	<250	<b>1,700</b>	<b>27</b>	<2.5	<2.5	<2.5	--	--	--	b	0.81	9.44	0.00	521.30
<b>MW-4</b> 529.93	09/21/12	<0.50	<0.50	<0.50	<0.50	<50	<b>400</b>	<5.0	<0.50	<0.50	<b>0.69</b>	--	--	--		--	9.01	0.00	520.92
	10/25/12	<0.50	<0.50	<0.50	<0.50	<50	<b>270</b>	<5.0	<0.50	<0.50	<0.50	--	--	--		0.79	9.01	0.00	520.92
	01/16/13	<0.50	<0.50	<0.50	<0.50	<50	<b>47</b>	<5.0	<0.50	<0.50	<0.50	--	--	--		0.87	8.86	0.00	521.07
	04/11/13	<0.50	<0.50	<0.50	<0.50	<50	<b>290</b>	<5.0	<0.50	<0.50	<0.50	--	--	--		1.07	8.80	0.00	521.13

**Explanation:**

BTEX, TPHg, MtBE, DIPE, ETBE, TAME, and TBA by 8260B  
 TPHg = Total petroleum hydrocarbons as gasoline  
 MtBE = Methyl tertiary butyl ether  
 DIPE = Diisopropyl ether

EtBE = Ethyl tert-butyl ether  
 TAME = Tertiary-amyl methyl ether  
 TBA = Tert-butyl alcohol  
 EDB = 1,2 Dibromoethane

EDC = 1,2 Dichloroethane  
 EtOH = Ethanol  
 TOC = Top of casing elevation in feet above mean sea level  
 UST = Underground Storage Tank

ug/L = micrograms per Liter or parts-per-billion  
 mg/L = milligrams per liter  
 < = Not detected above laboratory reporting limit  
 -- = 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 (Tert-butyl alcohol) results may be biased slightly high. A fraction of MtBE (typically less than 1%) converts to Tert-Butanol during the analysis of water samples that contain MIBE/Tert-Butanol in ratios of over 20:1.
- c = Analyzed by EPA Method 8260B using bottles that contained headspace bubbles greater than 1/4 inch in diameter.

**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	07/10/12	25	--	--	--	--	Off-site soil boring
GP-5	07/10/12	25	--	--	--	--	Off-site soil boring
GP-6	07/11/12	25	--	--	--	--	Off-site soil boring
GP-7	07/12/12	25	--	--	--	--	Off-site soil boring
<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	09/07/12	20	2	5	20	15	Off-site monitoring well
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	0	1	0	0	0
	10/17/11	8.27	0.008	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	01/20/12	8.51	0.009	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	04/05/12	8.22	0.010	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	07/24/12	8.36	0.012	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	10/25/12	8.46	0.007	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	04/11/13	8.28	0.005	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
<b>Average Values</b>		<b>8.26</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>5</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>
<b>Minimum Values</b>		<b>7.88</b>	<b>0.005</b>																	
<b>Maximum Values</b>		<b>8.51</b>	<b>0.012</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                      **9** Events

# **Attachment A Field Notes**

JOB NAME:	7-Eleven Store #32266	JOB NUMBER:	185750084.200.0700
SITE ADDRESS:	1339 North Vasco Road	START DATE:	4/11/2013
	Livermore, California	DATE PREPARED:	4/8/2013
PREPARED FOR:	Brian Branscum	PREPARED BY:	Brian Branscum

### SITE VISITATION REPORT

Name(s) Brian Branscum Date: 4/11/2013 Did you call in?  Yes  No  
 Arrival Time: 0900 "Departure Time: 1230 Who did you call? Danielle Manning  
 Weather Notations:  SUN CLOUDY RAIN SNOW Temperature 50-60's F

### DRUM INVENTORY

<b>STANTEC'S ENVIRONMENTAL:</b>		<b>7-ELEVEN'S FACILITY:</b>		<b>TOTALS:</b>	
Purge Water	<u>1</u>	Locked/Labeled HAZ	<u>1</u>	Total Open Top	<u>4</u>
Soil	<u>0</u>	Other:	<u>0</u>	Total Bung Top	<u>0</u>
Concrete/Debris	<u>0</u>	Other:	<u>0</u>		
Other:	<u>0</u>				
Empty	<u>2</u>				

Please take a picture of anything not clearly labeled

### HEALTH AND SAFETY ASSESSMENT

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

### DESCRIPTION OF ACTIVITIES ONSITE AND NOTES

0700-0900 - Truck inspection, drove to site.  
0900-0930 - Tailgate meeting, started paperwork, decont. & cal. equipment.  
0930-1000 - Opened, then gauged wells mw-1, mw-2, mw-3.  
1000-1115 - met w/Taylor (Statewide), reviewed HASP/Scope of work. Taylor setup TC for well mw-4.  
1115-1130 - Opened, gauged, purged & sampled mw-4 w/TC.  
1130-1150 - Purged, then sampled wells mw-1, mw-2, mw-3. (Purged & sampled mw-1, mw-2 from 1020-1105)  
1150-1215 - Released purge H<sub>2</sub>O from truck to onsite 55-gal. drums.  
1215-1230 - Packed up equipment, finished paperwork.  
1230-1400 - Drove home.

JOB NAME:	7-Eleven Store #32266	JOB NUMBER:	185750084.200.0700
SITE ADDRESS:	1339 North Vasco Road	START DATE:	4/11/2013
	Livermore, California	DATE PREPARED:	4/8/2013
PREPARED FOR:	Brian Branscum	PREPARED BY:	Brian Branscum

### 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 <small>Please note if well needs locking cap or street box repair</small>
MW-1	20	2"	/	18.95	8.28	/	1.08	0945	
MW-2	20	2"	/	19.16	8.78	/	1.04	0950	
MW-4	20	2"	/	19.30	8.80	/	1.07	1115	Traffic Control
MW-3	20	2"	/	19.98	9.44	/	0.81	1000	

**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 4/11/13 START (2400hr) 1020 END (2400hr) 1036  
 DATE SAMPLED 4/11/13 SAMPLE TIME (2400hr) 1040  
 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) = 18.95 CASING VOLUME (gal) = 1.8  
 DEPTH TO WATER (feet) = 8.28 CALCULATED PURGE (gal) = 5.4  
 WATER COLUMN HEIGHT (feet) = 10.67 ACTUAL PURGE (gal) = 8.0

**FIELD MEASUREMENTS**

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
<u>4/11/13</u>	<u>1030</u>	<u>1.8</u>	<u>19.3</u>	<u>2269</u>	<u>6.72</u>	<u>BRN</u>	<u>MED</u>
<u>↓</u>	<u>1033</u>	<u>3.6</u>	<u>20.1</u>	<u>2296</u>	<u>6.80</u>	<u>BRN</u>	<u>MED</u>
<u>↓</u>	<u>1036</u>	<u>5.4</u>	<u>20.6</u>	<u>2321</u>	<u>6.96</u>	<u>SEMI-CR</u>	<u>LOW</u>

**SAMPLE INFORMATION**

SAMPLE DEPTH TO WATER: 8.50 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. - 1.08

SIGNATURE: 

**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 4/11/13 START (2400hr) 1045 END (2400hr) 1101  
 DATE SAMPLED 4/11/13 SAMPLE TIME (2400hr) 1105  
 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) = 19.16 CASING VOLUME (gal) = 1.7  
 DEPTH TO WATER (feet) = 8.78 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>4/11/13</u>	<u>1055</u>	<u>1.7</u>	<u>19.1</u>	<u>2759</u>	<u>6.97</u>	<u>BRN</u>	<u>MED</u>
<u>↓</u>	<u>1058</u>	<u>3.4</u>	<u>18.7</u>	<u>2755</u>	<u>7.00</u>	<u>BRN</u>	<u>MED/LOW</u>
<u>↓</u>	<u>1101</u>	<u>5.1</u>	<u>18.6</u>	<u>2758</u>	<u>7.00</u>	<u>BRN</u>	<u>MED/LOW</u>

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 9.06 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. - 1.04

SIGNATURE: Brian Branscum

**Stantec Consulting Corp.**

**WATER SAMPLE FIELD DATA SHEET**

PROJECT #: 7-Eleven Store #32266 PURGED BY: Brian Branscum WELL I.D.: MW-4  
 CLIENT NAME: 7-Eleven, Inc. SAMPLED BY: Brian Branscum SAMPLE I.D.: MW-4  
 LOCATION: 1339 North Vasco Road, Livermore, Califor QA SAMPLES: None

DATE PURGED 4/11/13 START (2400hr) 1115 END (2400hr) 1126  
 DATE SAMPLED 4/11/13 SAMPLE TIME (2400hr) 1130  
 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) = 19.30 CASING VOLUME (gal) = 1.7  
 DEPTH TO WATER (feet) = 8.80 CALCULATED PURGE (gal) = 5.1  
 WATER COLUMN HEIGHT (feet) = 10.50 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>4/11/13</u>	<u>1120</u>	<u>1.7</u>	<u>18.8</u>	<u>1643</u>	<u>7.07</u>	<u>REN</u>	<u>MED/LOW</u>
<u>↓</u>	<u>1123</u>	<u>3.4</u>	<u>19.1</u>	<u>1686</u>	<u>7.04</u>	<u>SEMICLR</u>	<u>LOW</u>
<u>↓</u>	<u>1126</u>	<u>5.1</u>	<u>19.2</u>	<u>1703</u>	<u>7.07</u>	<u>CLR</u>	<u>N/A</u>

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 8.96 SAMPLE TURBIDITY: LOW

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

PURGING EQUIPMENT

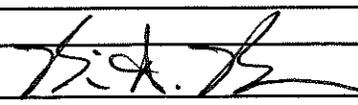
\_\_\_\_\_ Bladder Pump \_\_\_\_\_ Bailer (Teflon)  
 \_\_\_\_\_ Centrifugal Pump \_\_\_\_\_ Bailer (PVC)  
 Submersible Pump \_\_\_\_\_ Bailer (Stainless Steel)  
 \_\_\_\_\_ Peristaltic Pump \_\_\_\_\_ Dedicated \_\_\_\_\_  
 Other: \_\_\_\_\_  
 Pump Depth: \_\_\_\_\_

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. - 1.07

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 4/11/13 START (2400hr) 1135 END (2400hr) 1146  
 DATE SAMPLED 4/11/13 SAMPLE TIME (2400hr) 1150  
 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) = 19.98 CASING VOLUME (gal) = 1.7  
 DEPTH TO WATER (feet) = 9.44 CALCULATED PURGE (gal) = 5.1  
 WATER COLUMN HEIGHT (feet) = 10.54 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>4/11/13</u>	<u>1140</u>	<u>1.7</u>	<u>20.0</u>	<u>1332</u>	<u>6.89</u>	<u>SEMI-CLR</u>	<u>LOW</u>
<u>↓</u>	<u>1143</u>	<u>3.4</u>	<u>20.2</u>	<u>1358</u>	<u>6.91</u>	<u>CLR</u>	<u>N/A</u>
<u>↓</u>	<u>1146</u>	<u>5.1</u>	<u>20.4</u>	<u>1376</u>	<u>6.91</u>	<u>CLR</u>	<u>N/A</u>

**SAMPLE INFORMATION**

SAMPLE DEPTH TO WATER: 9.61 SAMPLE TURBIDITY: N/A

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. - 0.81

SIGNATURE: [Signature]

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

## Laboratory Results

Danielle Manning  
Stantec Consulting Services Inc.  
3017 Kilgore Road, Suite 100  
Rancho Cordova, CA 95670

Subject : 4 Water Samples  
Project Name : 7-Eleven Store #32266  
Project Number : 185750084.200.0410

Dear Ms. Manning,

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 Turpen

Subject : 4 Water Samples  
Project Name : 7-Eleven Store #32266  
Project Number : 185750084.200.0410

## Case Narrative

Tert-Butanol results for sample MW-3 may be biased slightly high and are flagged with a 'J'. A fraction of MtBE (typically less than 1%) converts to Tert-Butanol during the analysis of water samples. We consider this conversion effect to be mathematically significant in samples that contain MtBE/Tert-Butanol in ratios of over 20:1.

Matrix Spike/Matrix Spike Duplicate results associated with sample 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 : **185750084.200.0410**

Sample : **MW-1**

Matrix : Water

Lab Number : 84599-01

Sample Date :04/11/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	04/15/13 14:34
Toluene	< 0.50	0.50	ug/L	EPA 8260B	04/15/13 14:34
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	04/15/13 14:34
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	04/15/13 14:34
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	04/15/13 14:34
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	04/15/13 14:34
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	04/15/13 14:34
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	04/15/13 14:34
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	04/15/13 14:34
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	04/15/13 14:34
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	04/15/13 14:34
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	04/15/13 14:34

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

Project Number : **185750084.200.0410**

Sample : **MW-2**

Matrix : Water

Lab Number : 84599-02

Sample Date :04/11/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	04/13/13 00:54
Toluene	< 0.50	0.50	ug/L	EPA 8260B	04/13/13 00:54
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	04/13/13 00:54
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	04/13/13 00:54
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	04/13/13 00:54
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	04/13/13 00:54
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	04/13/13 00:54
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	04/13/13 00:54
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	04/13/13 00:54
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	04/13/13 00:54
1,2-Dichloroethane-d4 (Surr)	95.4		% Recovery	EPA 8260B	04/13/13 00:54
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	04/13/13 00:54

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

Project Number : **185750084.200.0410**

Sample : **MW-3**

Matrix : Water

Lab Number : 84599-03

Sample Date :04/11/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 2.5	2.5	ug/L	EPA 8260B	04/13/13 03:55
Toluene	< 2.5	2.5	ug/L	EPA 8260B	04/13/13 03:55
Ethylbenzene	< 2.5	2.5	ug/L	EPA 8260B	04/13/13 03:55
Total Xylenes	< 2.5	2.5	ug/L	EPA 8260B	04/13/13 03:55
<b>Methyl-t-butyl ether (MTBE)</b>	<b>1700</b>	2.5	ug/L	EPA 8260B	04/13/13 03:55
Diisopropyl ether (DIPE)	< 2.5	2.5	ug/L	EPA 8260B	04/13/13 03:55
Ethyl-t-butyl ether (ETBE)	< 2.5	2.5	ug/L	EPA 8260B	04/13/13 03:55
Tert-amyl methyl ether (TAME)	< 2.5	2.5	ug/L	EPA 8260B	04/13/13 03:55
<b>Tert-Butanol</b>	<b>27 J</b>	15	ug/L	EPA 8260B	04/13/13 03:55
TPH as Gasoline	< 250	250	ug/L	EPA 8260B	04/13/13 03:55
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	04/13/13 03:55
Toluene - d8 (Surr)	99.6		% Recovery	EPA 8260B	04/13/13 03:55

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

Project Number : **185750084.200.0410**

Sample : **MW-4**

Matrix : Water

Lab Number : 84599-04

Sample Date :04/11/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	04/13/13 03:24
Toluene	< 0.50	0.50	ug/L	EPA 8260B	04/13/13 03:24
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	04/13/13 03:24
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	04/13/13 03:24
<b>Methyl-t-butyl ether (MTBE)</b>	<b>290</b>	0.50	ug/L	EPA 8260B	04/13/13 03:24
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	04/13/13 03:24
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	04/13/13 03:24
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	04/13/13 03:24
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	04/13/13 03:24
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	04/13/13 03:24
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	04/13/13 03:24
Toluene - d8 (Surr)	98.5		% Recovery	EPA 8260B	04/13/13 03:24

**QC Report : Method Blank Data**Project Name : **7-Eleven Store #32266**Project Number : **185750084.200.0410**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	04/12/2013
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	04/12/2013
Toluene	< 0.50	0.50	ug/L	EPA 8260B	04/12/2013
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	04/12/2013
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	04/12/2013
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	04/12/2013
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	04/12/2013
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	04/12/2013
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	04/12/2013
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	04/12/2013
1,2-Dichloroethane-d4 (Surr)	101		%	EPA 8260B	04/12/2013
Toluene - d8 (Surr)	100		%	EPA 8260B	04/12/2013
Benzene	< 0.50	0.50	ug/L	EPA 8260B	04/12/2013
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	04/12/2013
Toluene	< 0.50	0.50	ug/L	EPA 8260B	04/12/2013
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	04/12/2013
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	04/12/2013
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	04/12/2013
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	04/12/2013
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	04/12/2013
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	04/12/2013
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	04/12/2013
1,2-Dichloroethane-d4 (Surr)	99.3		%	EPA 8260B	04/12/2013
Toluene - d8 (Surr)	99.9		%	EPA 8260B	04/12/2013

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	04/15/2013
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	04/15/2013
Toluene	< 0.50	0.50	ug/L	EPA 8260B	04/15/2013
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	04/15/2013
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	04/15/2013
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	04/15/2013
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	04/15/2013
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	04/15/2013
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	04/15/2013
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	04/15/2013
1,2-Dichloroethane-d4 (Surr)	101		%	EPA 8260B	04/15/2013
Toluene - d8 (Surr)	103		%	EPA 8260B	04/15/2013

## QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **7-Eleven Store #32266**Project Number : **185750084.200.0410**

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	84591-01	15	39.8	39.8	54.8	55.6	ug/L	EPA 8260B	4/12/13	99.1	101	2.24	80-120	25
Diisopropyl ether	84591-01	<0.50	39.8	39.7	46.7	43.4	ug/L	EPA 8260B	4/12/13	117	109	7.06	80-120	25
Ethyl-tert-butyl ether	84591-01	2.8	39.0	38.9	41.0	38.3	ug/L	EPA 8260B	4/12/13	98.2	91.4	7.20	76.5-120	25
Ethylbenzene	84591-01	<0.50	39.8	39.8	43.7	43.3	ug/L	EPA 8260B	4/12/13	110	109	0.645	80-120	25
<b>Methyl-t-butyl ether</b>	84591-01	76	39.3	39.2	120	104	ug/L	EPA 8260B	4/12/13	110	70.7	<b>43.4</b>	69.7-121	25
P + M Xylene	84591-01	1.1	39.8	39.8	42.7	42.1	ug/L	EPA 8260B	4/12/13	104	103	1.26	76.8-120	25
Tert-Butanol	84591-01	22	200	200	214	220	ug/L	EPA 8260B	4/12/13	96.2	99.6	3.45	80-120	25
Tert-amyl-methyl ether	84591-01	2.6	39.1	39.1	42.4	40.2	ug/L	EPA 8260B	4/12/13	102	96.4	5.40	78.9-120	25
Toluene	84591-01	0.53	39.8	39.8	41.6	41.7	ug/L	EPA 8260B	4/12/13	103	103	0.232	80-120	25

## QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : 7-Eleven Store #32266

Project Number : 185750084.200.0410

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	84597-01	<0.50	40.0	40.0	39.2	37.9	ug/L	EPA 8260B	4/12/13	98.0	94.9	3.25	80-120	25
Diisopropyl ether	84597-01	<0.50	40.0	40.0	41.8	41.6	ug/L	EPA 8260B	4/12/13	105	104	0.474	80-120	25
Ethyl-tert-butyl ether	84597-01	<0.50	39.1	39.1	41.1	40.5	ug/L	EPA 8260B	4/12/13	105	104	1.28	76.5-120	25
Ethylbenzene	84597-01	<0.50	40.0	40.0	40.2	39.8	ug/L	EPA 8260B	4/12/13	101	99.4	1.23	80-120	25
Methyl-t-butyl ether	84597-01	<0.50	39.4	39.4	43.6	43.8	ug/L	EPA 8260B	4/12/13	111	111	0.337	69.7-121	25
P + M Xylene	84597-01	<0.50	40.0	40.0	40.3	39.6	ug/L	EPA 8260B	4/12/13	101	99.0	1.86	76.8-120	25
Tert-Butanol	84597-01	<5.0	201	201	198	198	ug/L	EPA 8260B	4/12/13	98.9	98.7	0.198	80-120	25
Tert-amyl-methyl ether	84597-01	<0.50	39.3	39.3	40.3	41.0	ug/L	EPA 8260B	4/12/13	102	104	1.84	78.9-120	25
Toluene	84597-01	<0.50	40.0	40.0	40.0	38.4	ug/L	EPA 8260B	4/12/13	100	96.1	4.08	80-120	25

## QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **7-Eleven Store #32266**Project Number : **185750084.200.0410**

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	84599-04	<0.50	40.0	40.0	38.2	37.5	ug/L	EPA 8260B	4/15/13	95.6	93.7	1.98	80-120	25
Diisopropyl ether	84599-04	<0.50	40.0	40.0	39.0	38.5	ug/L	EPA 8260B	4/15/13	97.6	96.2	1.36	80-120	25
Ethyl-tert-butyl ether	84599-04	<0.50	39.1	39.1	38.6	37.7	ug/L	EPA 8260B	4/15/13	98.6	96.4	2.29	76.5-120	25
Ethylbenzene	84599-04	<0.50	40.0	40.0	40.1	39.3	ug/L	EPA 8260B	4/15/13	100	98.2	1.92	80-120	25
<b>Methyl-t-butyl ether</b>	84599-04	240	39.4	39.4	273	270	ug/L	EPA 8260B	4/15/13	70.2	<b>62.6</b>	11.5	69.7-121	25
P + M Xylene	84599-04	<0.50	40.0	40.0	39.6	38.8	ug/L	EPA 8260B	4/15/13	99.0	97.0	2.08	76.8-120	25
Tert-Butanol	84599-04	<5.0	201	201	190	189	ug/L	EPA 8260B	4/15/13	94.5	94.0	0.509	80-120	25
Tert-amyl-methyl ether	84599-04	<0.50	39.3	39.3	39.5	39.2	ug/L	EPA 8260B	4/15/13	100	99.8	0.734	78.9-120	25
Toluene	84599-04	<0.50	40.0	40.0	39.8	39.2	ug/L	EPA 8260B	4/15/13	99.6	97.9	1.68	80-120	25

**QC Report : Laboratory Control Sample (LCS)**Project Name : **7-Eleven Store #32266**Project Number : **185750084.200.0410**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	4/12/13	104	80-120
Diisopropyl ether	40.0	ug/L	EPA 8260B	4/12/13	111	80-120
Ethyl-tert-butyl ether	39.1	ug/L	EPA 8260B	4/12/13	92.1	76.5-120
Ethylbenzene	40.0	ug/L	EPA 8260B	4/12/13	108	80-120
Methyl-t-butyl ether	39.4	ug/L	EPA 8260B	4/12/13	83.3	69.7-121
P + M Xylene	40.0	ug/L	EPA 8260B	4/12/13	103	76.8-120
Tert-Butanol	201	ug/L	EPA 8260B	4/12/13	100	80-120
Tert-amyl-methyl ether	39.3	ug/L	EPA 8260B	4/12/13	97.3	78.9-120
Toluene	40.0	ug/L	EPA 8260B	4/12/13	103	80-120
Benzene	40.1	ug/L	EPA 8260B	4/12/13	96.8	80-120
Diisopropyl ether	40.1	ug/L	EPA 8260B	4/12/13	104	80-120
Ethyl-tert-butyl ether	39.2	ug/L	EPA 8260B	4/12/13	99.5	76.5-120
Ethylbenzene	40.1	ug/L	EPA 8260B	4/12/13	100	80-120
Methyl-t-butyl ether	39.5	ug/L	EPA 8260B	4/12/13	106	69.7-121
P + M Xylene	40.1	ug/L	EPA 8260B	4/12/13	100	76.8-120
TPH as Gasoline	506	ug/L	EPA 8260B	4/12/13	85.7	70.0-130
Tert-Butanol	201	ug/L	EPA 8260B	4/12/13	99.1	80-120
Tert-amyl-methyl ether	39.4	ug/L	EPA 8260B	4/12/13	99.6	78.9-120
Toluene	40.1	ug/L	EPA 8260B	4/12/13	100	80-120
Benzene	40.2	ug/L	EPA 8260B	4/15/13	93.9	80-120

**QC Report : Laboratory Control Sample (LCS)**Project Name : **7-Eleven Store #32266**Project Number : **185750084.200.0410**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Diisopropyl ether	40.1	ug/L	EPA 8260B	4/15/13	96.7	80-120
Ethyl-tert-butyl ether	39.3	ug/L	EPA 8260B	4/15/13	97.6	76.5-120
Ethylbenzene	40.2	ug/L	EPA 8260B	4/15/13	98.0	80-120
Methyl-t-butyl ether	39.6	ug/L	EPA 8260B	4/15/13	95.3	69.7-121
P + M Xylene	40.2	ug/L	EPA 8260B	4/15/13	96.6	76.8-120
TPH as Gasoline	508	ug/L	EPA 8260B	4/15/13	89.7	70.0-130
Tert-Butanol	202	ug/L	EPA 8260B	4/15/13	96.2	80-120
Tert-amyl-methyl ether	39.5	ug/L	EPA 8260B	4/15/13	99.8	78.9-120
Toluene	40.2	ug/L	EPA 8260B	4/15/13	99.4	80-120



