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

April 1, 2014

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, First Quarter 2014**
7-Eleven Store #32266
1339 North Vasco Road
Livermore, CA 94551
Stantec Project #:185750084.300.0506

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).

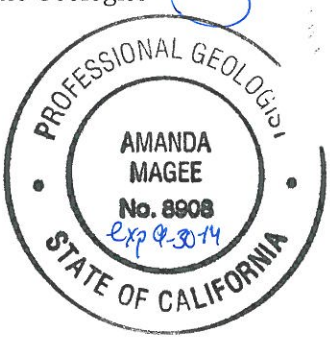
We declare, under penalty of perjury, that the information and/or recommendations contained in the attached assessment report are true and correct to best of our knowledge.

Should you have any questions regarding this site, please contact the undersigned at (916) 384-0706.

Sincerely,
Stantec Consulting Services Inc.

Danielle Manning
Associate Scientist
Project Manager

Amanda Magee, P.G.
Associate Geologist



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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 Consulting Services Inc.
3017 Kilgore Road, Suite 100
Rancho Cordova, CA 95670
(916) 861-0400
(916) 861-0430

Quarterly Groundwater Monitoring Report
First Quarter 2014

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

Stantec Project No.: 185750084.300.0506

Submitted to:
Mr. Jerry Wickham
Alameda County Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502
(via Alameda County Environmental Health Services ftp site)

Prepared on behalf of:
7-Eleven, Inc.
Mr. Jose Rios
P.O. Box 711
Dallas, TX 75221-0711

April 1, 2014

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

DATE: April 1, 2014

7-ELEVEN, INC. QUARTERLY REPORT

Store Number:	**7-Eleven Store #32266**
Site Address:	1339 North Vasco Road, Livermore, CA 94551
7-Eleven Contact:	Mr. Jose Rios
Consulting Company:	Stantec Consulting Services Inc. – Ms. Amanda Magee
Stantec Project No.:	185750084.300.0506
Primary Agency:	Alameda County Environmental Health Services (ACEHS)

WORK PERFORMED THIS PERIOD [First Quarter 2014]

1. Conducted quarterly groundwater monitoring and sampling on January 30, 2014, and generated the quarterly report.

WORK PROPOSED FOR NEXT PERIOD [Second Quarter 2014]

1. Perform quarterly groundwater monitoring and sampling during second quarter of 2014, and prepare the quarterly report.

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:	Groundwater Monitoring
Frequency of Monitoring and Sampling:	Quarterly, Five wells- MW-1 through MW-5
Are Liquid Phase Hydrocarbons Present On-site:	No
Water Supply Wells within a 2,000-foot radius and their Respective Direction:	Three municipal water supply wells (see Stantec work plan and results survey September, 2010)
Current Remediation Techniques:	None
Permits for Discharge:	None
Historic Range in Depth to Water (Measured Below Top of Casing):	MW-1, 7.88 to 8.51 feet

Reference: Quarterly Groundwater Monitoring Report, First Quarter 2014

Current Quarter Monitoring Data	(See Figure 2 and Table 1)
Wells Monitored and Sampled:	Five wells - MW-1 through MW-5
Dissolved Oxygen Concentrations Measured In:	Five wells - MW-1 through MW-5
Depth to Groundwater (DTW) (Measured Below Top of Casing):	8.46 to 9.42 feet
Average Change in Groundwater Elevation Since Last Event:	0.06 foot decrease
Groundwater Flow Direction and Gradient:	West-southwest @ 0.006 foot per foot (Figure 2)
Current Quarter Analytical Data	(See Figure 3 and Table 1)
Maximum TPHg Concentrations:	Not Detected, <50 to <90 µg/L
Maximum Benzene Concentrations:	Not Detected, <0.50 to <0.90 µg/L
Maximum MtBE Concentrations:	MW-3, 450 µg/L
Maximum TBA Concentrations:	MW-3, 15 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 2.6 milligrams per kilogram (mg/kg) and 2.4 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 and 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 in UST excavation water sample W1. TPHg was not detected in either Baker Tank sample (BT-1 or BT-2). Total xylenes were reported in sample

Reference: Quarterly Groundwater Monitoring Report, First Quarter 2014

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 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 D2-5.0. Soil sample D2-5.0 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 D1-5.0 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 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.

Reference: Quarterly Groundwater Monitoring Report, First Quarter 2014

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 a work plan for the installation of monitoring well MW-5 after the first quarter 2013 groundwater monitoring and sampling event. On April 4, 2013, Stantec submitted a *Work Plan for Monitoring Well Installation*, which was conditionally approved by the ACEHS on April 22, 2013.

On June 17 and 18, 2013, Stantec supervised as National Exploration Wells and Pumps of Richmond, California, installed groundwater monitoring well MW-5, and on July 18, 2013, Stantec submitted the *Additional Site Assessment Report* to the ACEHS. Soil samples collected during the advancement of MW-5 did not contain hydrocarbon concentration above laboratory reporting limits. In a letter dated August 19, 2013, the ACEHS requested that MW-5 be included in the quarterly groundwater monitoring schedule, and requested analysis of ethylene dibromide (EDB) and 1,2-dichloroethane (1,2 DCA) during the next sampling event. These analyses were conducted during the third quarter 2013 sampling event. EDB and 1,2 DCA were not detected at concentrations above laboratory reporting limits; as such, groundwater analyses for EDB and 1,2 DCA were discontinued, per the ACEHS August 19, 2013 letter.

MONITORING AND SAMPLING PROCEDURES

The depth to water was measured in monitoring wells MW-1 through MW-5 from the top of casing to within 0.01 foot bgs 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.

Reference: Quarterly Groundwater Monitoring Report, First Quarter 2014

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® 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-5 were analyzed for the presence of BTEX, TPHg, MtBE, TBA, DIPE, EtBE, TAME, and ethanol by EPA Method 8260B. The certified laboratory analytical report and COC documentation are presented as Attachment B.

MtBE concentrations were not reported above laboratory reporting limits in groundwater samples collected, with the exception of the samples collected from MW-3 and MW-4, which contained MtBE concentrations of 450 µg/L and 49 µg/L, respectively. All other constituents of concern were not reported above laboratory reporting limits, with the exception of TBA, which was reported at a concentration of 15 µg/L in the groundwater sample collected from MW-3.

Although the MtBE concentrations increased slightly in the sample collected from MW-3, MtBE concentrations in groundwater samples collected from monitoring wells MW-3 and MW-4 continue to show an overall decreasing trend. In addition, based on the absence of detected MtBE in groundwater samples collected from monitoring well MW-5, the downgradient extent of the dissolved MtBE plume appears to be defined. Based on the foregoing, the dissolved MtBE plume appears to be stable and declining.

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 purging, 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 removed from the site by Belshire Environmental (Belshire) within approximately three weeks after generation. Belshire then transports the water 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.

LIMITATIONS

This report was prepared in accordance with the scope of work outlined in Stantec's contract and with generally accepted professional engineering and environmental consulting practices existing at the time this report was prepared and applicable to the location of the site. It was prepared for the exclusive use of 7-Eleven, Inc., for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Stantec. To the extent that this report is based on information provided to Stantec by third parties, Stantec may have made efforts to verify

Reference: Quarterly Groundwater Monitoring Report, First Quarter 2014

this third party information, but Stantec cannot guarantee the completeness or accuracy of this information. The opinions expressed and data collected are based on the conditions of the site existing at the time of the field investigation. No other warranties, expressed or implied are made by Stantec.

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:

Debbie Lichtenberger
Environmental Technician

Reviewed by:

Danielle Manning
Associate Scientist
Project Manager

Reviewed by:

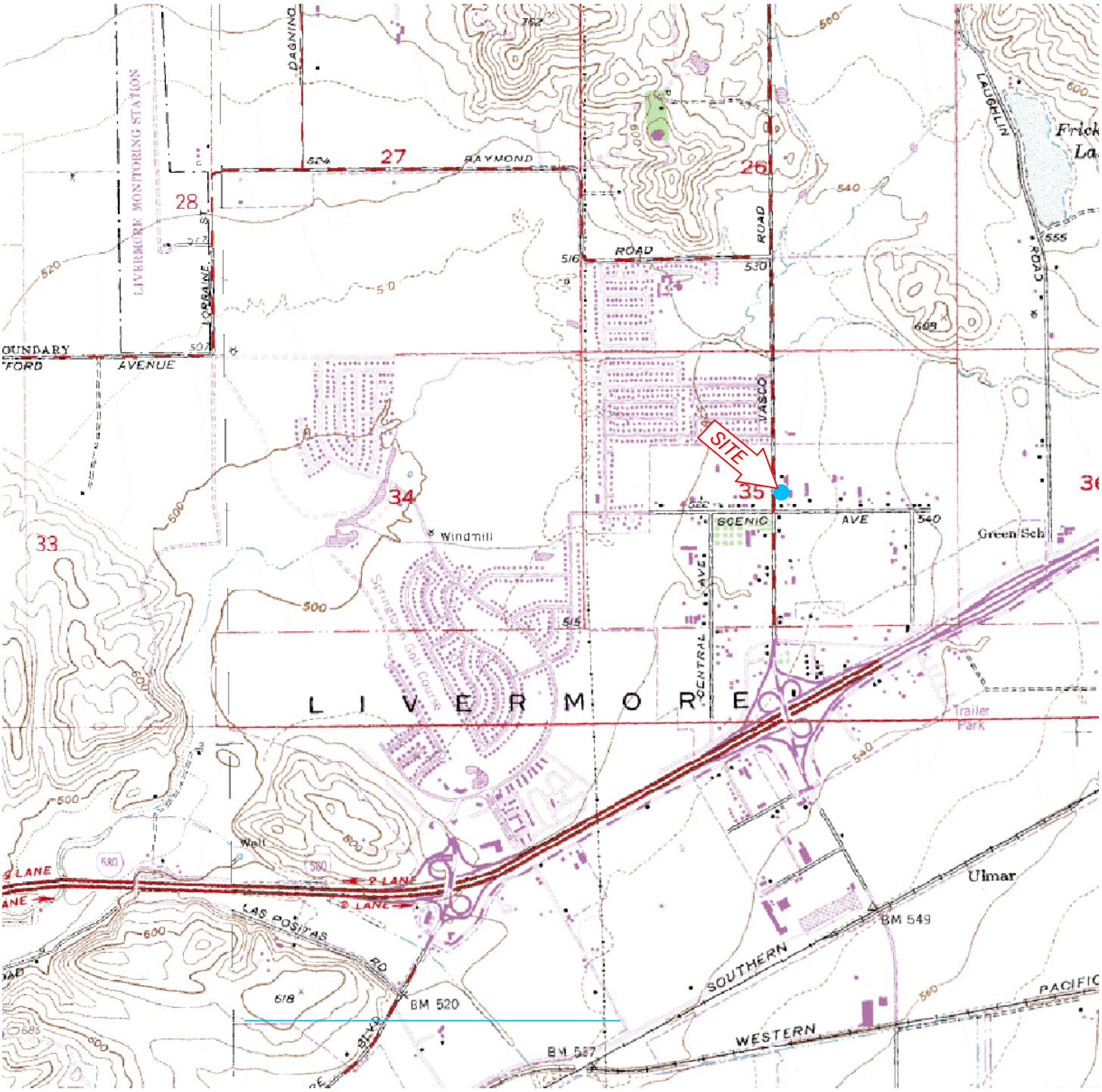
Amanda Magee, P.G.
Associate Geologist

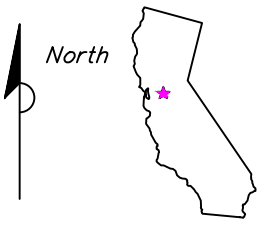
PROFESSIONAL GEOLOGIST
AMANDA MAGEE
No. 8908
exp 9-30-14
STATE OF CALIFORNIA

ATTACHMENTS
Figures
Tables
Attachment A – Field Notes
Attachment B – Certified Laboratory Analytical Reports and Chain-of-Custody Documentation

c: CRWQCB – San Francisco Bay Region (via Geotracker)
Mr. Jose Rios, 7-Eleven, Inc. c/o Mr. John Wainwright, Stantec

Figures





1 1/2 0 1

SCALE (MILES)

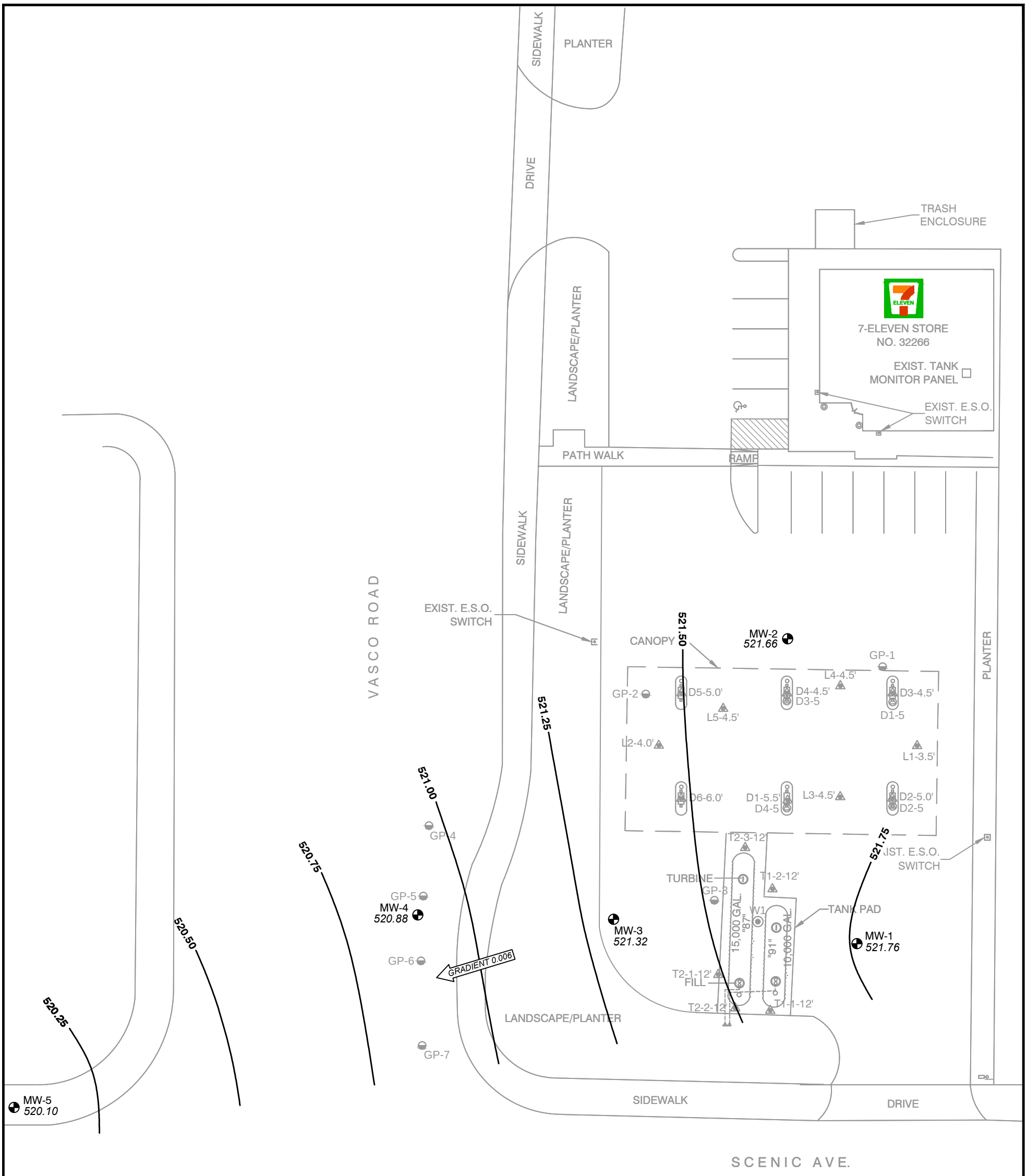
1000 0 1000 2000 3000 4000 5000 6000 7000

SCALE (FEET)

REFERENCE: USGS 7.5 MINUTE QUADRANGLE, LIVERMORE, CALIFORNIA

Stantec	FOR: 7-ELEVEN STORE NO. 32266 1339 NORTH VASCO ROAD LIVERMORE, CALIFORNIA	**SITE LOCATION MAP**		FIGURE: **1**
	JOB NUMBER: 185750084	DRAWN BY: STA	CHECKED BY: DL	APPROVED BY: ASM	DATE: 03/06/13

FILEPATH:M:\7-Eleven\32266\FIG 1-SITE LOCATION MAP.dwg | Layout Tab: Layout1 | Drafter: saguinaldo | Apr 11, 2013 at 10:42



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 0.006	APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT (FT/FT)
520.50	GROUNDWATER ELEVATION CONTOUR (FEET ABOVE MEAN SEA LEVEL)
520.10	GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)

N

0 30 60

APPROXIMATE SCALE IN FEET

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

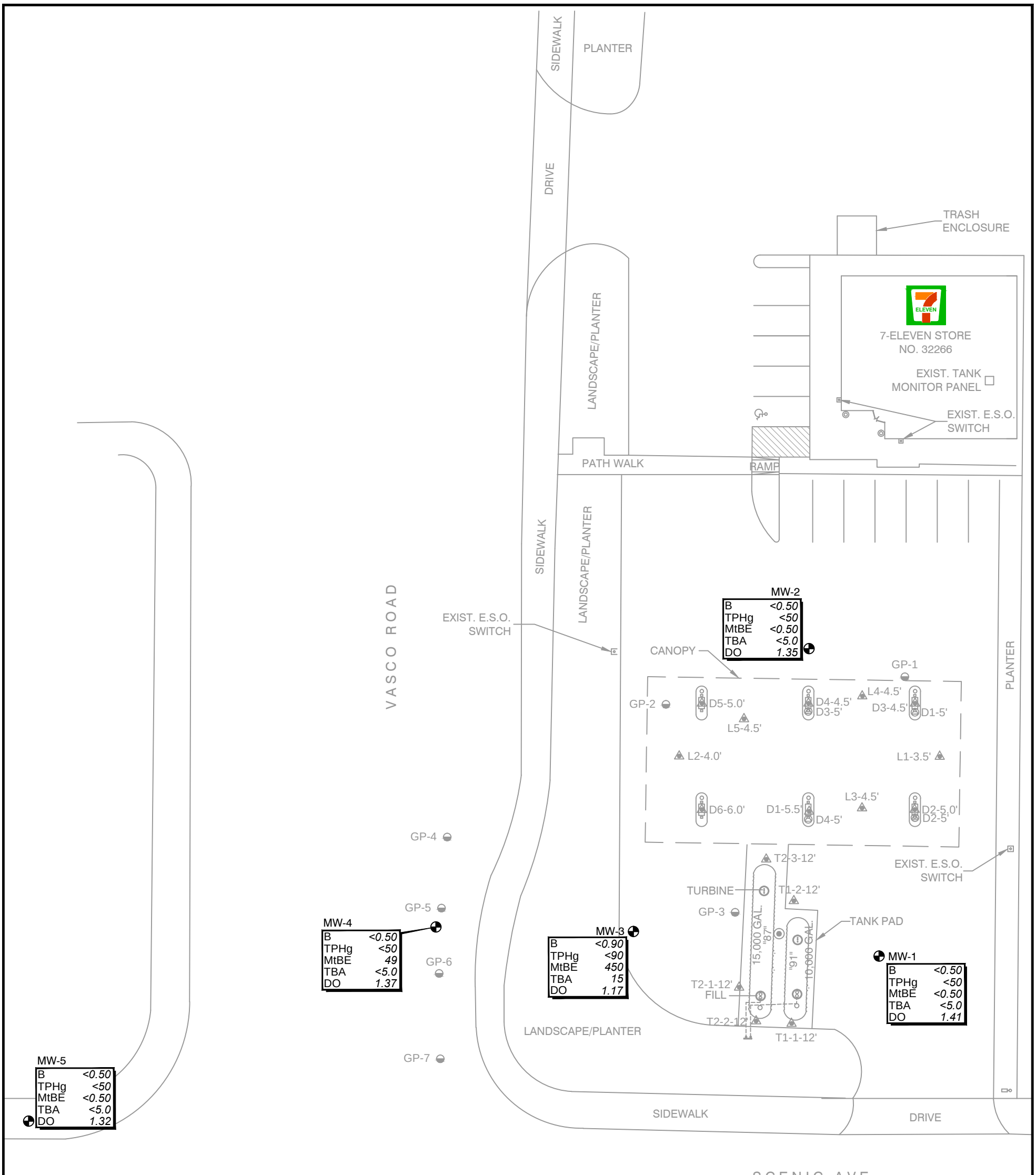
Stantec

FOR: 7-ELEVEN
STORE NO. 32266
1339 NORTH VASCO ROAD
LIVERMORE, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP JANUARY 30, 2014

FIGURE: **2**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185750084	STA	DL	ASM	03/02/14



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

N

0 30 60

APPROXIMATE SCALE IN FEET

Stantec

FOR: 7-ELEVEN
STORE NO. 32266
1339 NORTH VASCO ROAD
LIVERMORE, CALIFORNIA

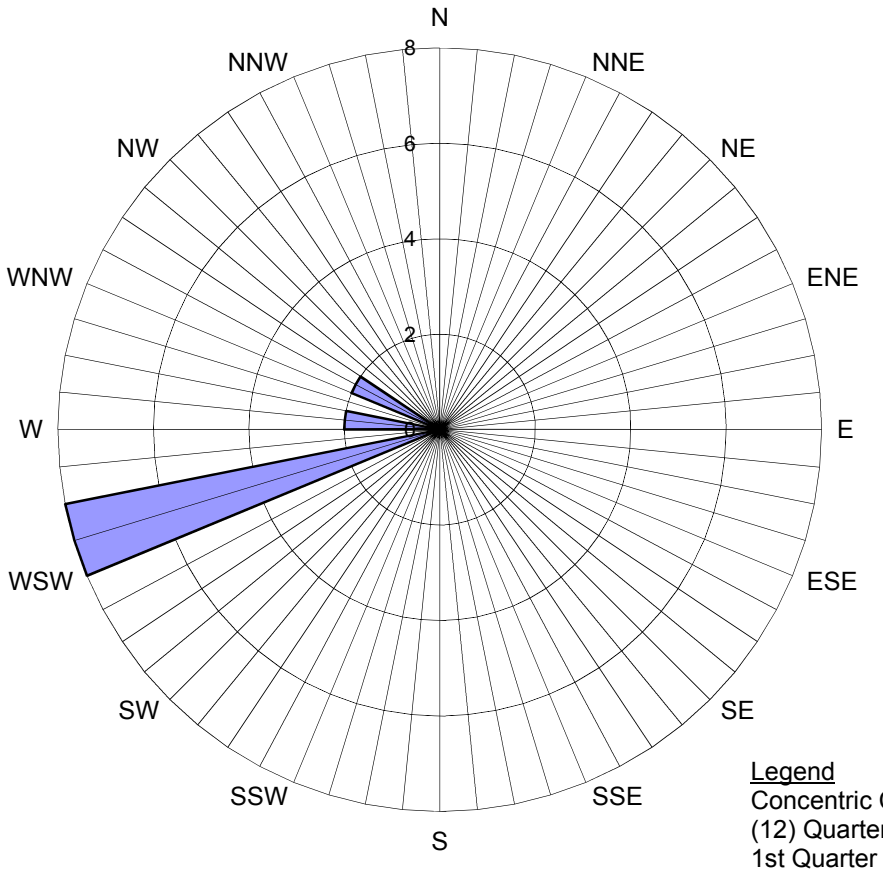
GROUNDWATER HYDROCARBON CONCENTRATION MAP JANUARY 30, 2014

FIGURE: **3**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
185750084	STA	DL	ASM	03/02/14

FILEPATH:M:\7-Eleven\32266\AUTOPOST 2014\1Q 2014\FIG 3_7-11_32266_CONC.dwg | Layout Tab: 11X17P | Drafter: saguinaldo | Mar 02, 2014 at 17:55

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



Legend
Concentric Circles represent
(12) Quarterly Montoring Events
1st Quarter 2011 through 1st Quarter 2014

V:\1857\active\7-Eleven\active\185750084_711_32266\05_report_deliv\tables\32266 Current GW Flow Direction.xls

Tables

Table 1
First Quarter 2014 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)	Ethanol (µg/L)	Notes	Dissolved Oxygen (mg/L)	DTW (feet)	SPT (feet)	WTE (feet)
MW-1 530.22	01/30/14	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<5.0		1.41	8.46	0.00	521.76
MW-2 530.55	01/30/14	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<5.0		1.35	8.89	0.00	521.66
MW-3 530.74	01/30/14	<0.90	<0.90	<0.90	<0.90	<90	**450**	**15**	<0.90	<0.90	<0.90	<9.0	b	1.17	9.42	0.00	521.32
MW-4 529.93	01/30/14	<0.50	<0.50	<0.50	<0.50	<50	**49**	<5.0	<0.50	<0.50	<0.50	<5.0		1.37	9.05	0.00	520.88
MW-5 529.27	01/30/14	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<5.0		1.32	9.17	0.00	520.10

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 rations of over 20:1.

Table 2
Historical Water and/or Groundwater Sample Analytical Results

7-Eleven Store #32266
1339 North 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)	Methanol (ug/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Notes	Dissolved Oxygen (mg/L)	DTW (feet)	SPT (feet)	WTE (feet)
UST Excavation Groundwater Sample																				
W1	01/28/05	**25**	**290**	**62**	**520**	**3,400**	**180**	**15**	<1.5	<1.5	<1.5	<1.5	<1.5	**2,600**	**2,600**		--	--	--	--
Baker Tank Samples																				
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**	--	--	--	--	--	--	--	--		--	--	--	--
Grab Groundwater Samples																				
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	--	--	--	--	--	--	--	--		--	--	--	--
Monitoring Well Samples																				
MW-1																				
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	--	--	--	--		0.28	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	--	--	--	--		0.73	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	--	--	--	--		0.92	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	--	--	--	--		1.08	8.28	0.00	521.94
	07/18/13	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	<5.0	<0.50	<0.50		0.76	8.46	0.00	521.76
	10/30/13	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	<5.0	--	--		1.26	8.36	0.00	521.86
	01/30/14	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	<5.0	--	--		1.41	8.46	0.00	521.76

Table 2
Historical Water and/or Groundwater Sample Analytical Results

7-Eleven Store #32266
1339 North 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)	Methanol (ug/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Notes	Dissolved Oxygen (mg/L)	DTW (feet)	SPT (feet)	WTE (feet)
MW-2																				
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	--	--	--	--		0.51	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	--	--	--	--		0.30	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	--	--	--	--		0.76	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	--	--	--	--		0.78	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	--	--	--	--		1.04	8.78	0.00	521.77
	07/18/13	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	<5.0	<0.50	<0.50		0.94	8.86	0.00	521.69
	10/30/13	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	<5.0	--	--		1.07	8.78	0.00	521.77
	01/30/14	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	<5.0	--	--		1.35	8.89	0.00	521.66
MW-3																				
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
	04/05/12	<2.5	<2.5	<2.5	<2.5	<250	**2,000**	**57**	<2.5	<2.5	**3.3**	--	--	--	--	b	0.47	9.44	0.00	521.30
	07/24/12	<0.50	<0.50	<0.50	<0.50	<50	**2,000**	**50**	<0.50	<0.50	**3.9**	--	--	--	--	b	0.36	9.65	0.00	521.09
	09/21/12	<1.5	<1.5	<1.5	<1.5	<150	**760**	**32**	<1.5	<1.5	**1.5**	--	--	--	--	b	--	9.55	0.00	521.19
	10/25/12	<1.5	<1.5	<1.5	<1.5	<150	**670**	**25**	<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	**1,200**	**30**	<1.5	<1.5	**2.4**	--	--	--	--	b	0.73	9.23	0.00	521.51
	04/11/13	<2.5	<2.5	<2.5	<2.5	<250	**1,700**	**27**	<2.5	<2.5	<2.5	--	--	--	--	b	0.81	9.44	0.00	521.30
	07/18/13	<1.5	<1.5	<1.5	<1.5	<150	**880**	**15**	<1.5	<1.5	**1.7**	--	<15	<1.5	<1.5	b	0.82	9.61	0.00	521.13
	10/30/13	<0.90	<0.90	<0.90	<0.90	<90	**410**	**12**	<0.90	<0.90	<0.90	--	<9.0	--	--	b	1.05	9.47	0.00	521.27
	01/30/14	<0.90	<0.90	<0.90	<0.90	<90	**450**	**15**	<0.90	<0.90	<0.90	--	<9.0	--	--	b	1.17	9.42	0.00	521.32
MW-4																				
529.93	09/21/12	<0.50	<0.50	<0.50	<0.50	<50	**400**	<5.0	<0.50	<0.50	**0.69**	--	--	--	--		--	9.01	0.00	520.92
	10/25/12	<0.50	<0.50	<0.50	<0.50	<50	**270**	<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	**47**	<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	**290**	<5.0	<0.50	<0.50	<0.50	--	--	--	--		1.07	8.80	0.00	521.13
	07/18/13	<0.50	<0.50	<0.50	<0.50	<50	**150**	<5.0	<0.50	<0.50	<0.50	--	<5.0	<0.50	<0.50		1.20	9.02	0.00	520.91
	10/30/13	<0.50	<0.50	<0.50	<0.50	<50	**58**	<5.0	<0.50	<0.50	<0.50	--	<5.0	--	--		0.98	8.99	0.00	520.94
	01/30/14	<0.50	<0.50	<0.50	<0.50	<50	**49**	<5.0	<0.50	<0.50	<0.50	--	<5.0	--	--		1.37	9.05	0.00	520.88

Table 2
Historical Water and/or Groundwater Sample Analytical Results

7-Eleven Store #32266
1339 North 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)	Methanol (ug/L)	Ethanol (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	Notes	Dissolved Oxygen (mg/L)	DTW (feet)	SPT (feet)	WTE (feet)
MW-5																				
529.27	07/18/13	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	<5.0	<0.50	<0.50		1.94	9.13	0.00	520.14
	10/30/13	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	<5.0	--	--		0.94	9.10	0.00	520.17
	01/30/14	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	<5.0	--	--		1.32	9.17	0.00	520.10

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
1,2-DCA = 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 MtBE/Tert-Butanol in rations 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, California

Well I.D.	Drill Date	Boring Depth (feet bgs)	Well Diameter (inches)	Screen		Screen Length (feet)	Comments
				Top (feet bgs)	Bottom (feet bgs)		
Soil Borings							
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
Monitoring Wells							
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	06/18/13	20.25	2	5	20	15	Off-site monitoring well

Explanation
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	**1**	0	0	0	0
	05/26/11	7.88	0.010	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
	10/17/11	8.27	0.008	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	**1**	0	0	0
	04/05/12	8.22	0.010	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	**1**	0	0
	10/25/12	8.46	0.007	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	0	0
	04/11/13	8.28	0.005	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	0	0
	07/18/13	8.46	0.006	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	0	0
	10/30/13	8.36	0.006	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	0	0
	01/30/14	8.46	0.006	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	0	0
Average Values		**8.30**	**0.008**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**2**	**2**	**0**	**0**
Minumum Values		**7.88**	**0.005**																
Maximum Values		**8.51**	**0.012**																

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 **12** Events

Attachment A
Field Notes

JOB NAME:	7-Eleven Store #32266	JOB NUMBER:	185750084.300.0700
SITE ADDRESS:	1339 North Vasco Road	START DATE:	1/30/14
	Livermore, California	DATE PREPARED:	1/23/2014
PREPARED FOR:	Brian Branscum	PREPARED BY:	Brian Branscum

SITE VISITATION REPORT

Name(s) Brian Branscum Date: 1/30/14 Did you call in? (Yes) No

Arrival Time: 0900 "Departure Time: 1315 Who did you call? Danielle Manning

Weather Notations: (SUN) (CLOUDY) (RAIN) SNOW Temperature 50-60's F

DRUM INVENTORY

STANTEC'S ENVIRONMENTAL:

Purge Water	1
Soil	0
Concrete/Debris	0
Other:	0
Empty	2

7-ELEVEN'S FACILITY:

Locked/Labeled HAZ	1
Other:	0
Other:	0

TOTALS:

Total Open Top	4
Total Bung Top	0

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, Wet Weather

DESCRIPTION OF ACTIVITIES ONSITE AND NOTES

0645-0900 - Truck inspection, drove to City of Livermore. Plu permit, drove to site.
0900-0930 - Met w/Bob (Cruz Bros.), reviewed HASP/Scope of Work. Bob setup TC for mw-4.
0930-0945 - Started Paperwork, deconed & calibrated equipment.
0945-1020 - Opened, then guaged onsite wells per guaging form.
1020-1050 - Opened, guaged, purged & sampled mw-4 w/traffic control.
1050-1230 - Purged, then sampled wells guaged.
1230-1300 - Released purge H_2O from truck to onsite 55-gal. drums.
1300-1315 - Packed up equipment, finished paperwork.
1315-1445 - Drove home.

JOB NAME:	7-Eleven Store #32266	JOB NUMBER:	185750084.300.0700
SITE ADDRESS:	1339 North Vasco Road	START DATE:	1/30/14
	Livermore, California	DATE PREPARED:	1/23/2014
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 Please note if well needs locking cap or street box repair
MW-1	20	2"		18.92	8.46	N/A	1.41	1000	
MW-2	20	2"		19.18	8.89	"	1.35	1005	
MW-5	20	2"		19.36	9.17	"	1.32	1015	
MW-4	20	2"		19.33	9.05	"	1.37	1030	Traffic Control
MW-3	20	2"		20.08	9.42	↓	1.17	1020	

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: 1/30/14 | START (2400hr): 1100 | END (2400hr): 1111

DATE SAMPLED: 1/30/14 | SAMPLE TIME (2400hr): 1115

SAMPLE TYPE: Groundwater X | Surface Water ___ | Treatment Effluent ___ | Other ___

CASING DIAMETER: 2" X (0.17) | 3" ___ (0.38) | 4" ___ (0.67) | 5" ___ (1.02) | 6" ___ (1.50) | 8" ___ (2.60) | Other ___ ( )

Casing Volume: (gallons per foot)

DEPTH TO BOTTOM (feet) = 18.92 | CASING VOLUME (gal) = 1.7

DEPTH TO WATER (feet) = 8.46 | CALCULATED PURGE (gal) = 5.1

WATER COLUMN HEIGHT (feet) = 10.46 | ACTUAL PURGE (gal) = 7.0

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
1/30/14	1105	1.7	20.8	2382	7.44	BRN	MED/LOW
↓	1108	3.4	21.5	2398	7.45	LT. BRN	LOW
↓	1111	5.1	21.8	2393	7.51	LT. BRN	LOW

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 8.53 | SAMPLE TURBIDITY: LOW

80% RECHARGE: X YES ___ NO | ANALYSES: **BTEX, TPHg, 5 Oxygenates (EPA 8260B)**

ODOR: N/A | SAMPLE VESSEL / PRESERVATIVE: **HCL**

PURGING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
X Submersible Pump
___ Peristalic Pump
___ Bailer (Teflon)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated ___

Other: ___

Pump Depth: ___

SAMPLING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristalic Pump
___ Bailer (Teflon)
X Bailer (___ PVC or X disposable)
___ Bailer (Stainless Steel)
___ Dedicated ___

Other: ___

WELL INTEGRITY: GOOD | LOCK#: YES

REMARKS: **D.O.** - 1.41

SIGNATURE: [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 1/30/14 | START (2400hr) 1125 | END (2400hr) 1136

DATE SAMPLED 1/30/14 | SAMPLE TIME (2400hr) 1140

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

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

DEPTH TO BOTTOM (feet) = 19.18 | CASING VOLUME (gal) = 1.7

DEPTH TO WATER (feet) = 8.89 | CALCULATED PURGE (gal) = 5.1

WATER COLUMN HEIGHT (feet) = 10.29 | ACTUAL PURGE (gal) = 7.0

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
1/30/14	1130	1.7	19.4	2754	7.36	BRN	MED
↓	1133	3.4	19.2	2770	7.52	BRN	MED/LOW
↓	1136	5.1	19.2	2790	7.55	LT. BRN	MED/LOW

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 8.99 | SAMPLE TURBIDITY: MED/LOW

80% RECHARGE: X YES ____ NO | ANALYSES: **BTEX, TPHg, 5 Oxygenates (EPA 8260B)**

ODOR: N/A | SAMPLE VESSEL / PRESERVATIVE: **HCL**

PURGING EQUIPMENT

____ Bladder Pump
____ Centrifugal Pump
X Submersible Pump
____ Peristalic Pump
____ Bailer (Teflon)
____ Bailer (PVC)
____ Bailer (Stainless Steel)
____ Dedicated ____
Other: ____
Pump Depth: ____

SAMPLING EQUIPMENT

____ Bladder Pump
____ Centrifugal Pump
____ Submersible Pump
____ Peristalic Pump
____ Bailer (Teflon) ____
X Bailer (____ PVC or X disposable)
____ Bailer (Stainless Steel)
____ Dedicated ____
Other: ____

WELL INTEGRITY: GOOD | LOCK#: YES

REMARKS: **D.O.** - 1.35

SIGNATURE: [signature]

Stantec Consulting Corp.

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 7-Eleven Store #32266 | PURGED BY: Brian Branscum | WELL I.D.: MW- 5

CLIENT NAME: 7-Eleven, Inc. | SAMPLED BY: Brian Branscum | SAMPLE I.D.: MW- 5

LOCATION: 1339 North Vasco Road, Livermore, Califor | QA SAMPLES: None

DATE PURGED 1/30/14 | START (2400hr) 1150 | END (2400hr) 1201

DATE SAMPLED 1/30/14 | SAMPLE TIME (2400hr) 1205

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

CASING DIAMETER: 2" X | 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) = 19.36 | CASING VOLUME (gal) = 1.7

DEPTH TO WATER (feet) = 9.17 | CALCULATED PURGE (gal) = 5.1

WATER COLUMN HEIGHT (feet) = 10.19 | ACTUAL PURGE (gal) = 7.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
1/30/14	1155	1.7	18.8	2118	7.51	BRN	MED
↓	1158	3.4	19.9	2122	7.42	BRN	MED
↓	1201	5.1	20.2	2139	7.45	BRN	MED

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 9.33 | SAMPLE TURBIDITY: MED/LOW

80% RECHARGE: X YES ___ NO | ANALYSES: **BTEX, TPHg, 5 Oxygenates (EPA 8260B)**

ODOR: N/A | SAMPLE VESSEL / PRESERVATIVE: **HCL**

PURGING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
X Submersible Pump
___ Peristalic Pump
___ Bailer (Teflon)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated ____

Other: ____

Pump Depth: ____

SAMPLING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristalic Pump
___ Bailer (Teflon)
X Bailer (___ PVC or X disposable)
___ Bailer (Stainless Steel)
___ Dedicated ____

Other: ____

WELL INTEGRITY: GOOD | LOCK#: YES

REMARKS: **D.O.** - 1.32

SIGNATURE: [signature]

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 1/30/14 | START (2400hr) 1030 | END (2400hr) 1041

DATE SAMPLED 1/30/14 | SAMPLE TIME (2400hr) 1045

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

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

DEPTH TO BOTTOM (feet) = 19.33 | CASING VOLUME (gal) = 1.7

DEPTH TO WATER (feet) = 9.05 | CALCULATED PURGE (gal) = 5.1

WATER COLUMN HEIGHT (feet) = 10.28 | ACTUAL PURGE (gal) = 8.0

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
1/30/14	1035	1.7	17.5	1781	7.47	BRN	LOW
↓	1038	3.4	18.6	1808	7.46	LT. BRN	LOW
↓	1041	5.1	19.0	1832	7.52	SEMI-CLR	LOW

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 9.14 | SAMPLE TURBIDITY: LOW

80% RECHARGE: X YES ___ NO | ANALYSES: **BTEX, TPHg, 5 Oxygenates (EPA 8260B)**

ODOR: N/A | SAMPLE VESSEL / PRESERVATIVE: **HCL**

PURGING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
X Submersible Pump
___ Peristalic Pump
___ Bailer (Teflon)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated ____

Other: ____

Pump Depth: ____

SAMPLING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristalic Pump
___ Bailer (Teflon) ___
X Bailer (___ PVC or X disposable)
___ Bailer (Stainless Steel)
___ Dedicated ____

Other: ____

WELL INTEGRITY: GOOD | LOCK#: YES

REMARKS: **D.O.** - 1.37

SIGNATURE: [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 1/30/14 | START (2400hr) 1215 | END (2400hr) 1226

DATE SAMPLED 1/30/14 | SAMPLE TIME (2400hr) 1230

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

CASING DIAMETER: 2" X | 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) = 20.08 | CASING VOLUME (gal) = 1.8

DEPTH TO WATER (feet) = 9.42 | CALCULATED PURGE (gal) = 5.4

WATER COLUMN HEIGHT (feet) = 10.66 | ACTUAL PURGE (gal) = 7.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
1/30/14	1220	1.8	19.4	1453	7.44	SEMI-CLR	LOW
↓	1223	3.6	20.1	1424	7.38	CLR	N/A
↓	1226	5.4	20.4	1446	7.41	CLR	N/A

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: 9.56 | SAMPLE TURBIDITY: LOW

80% RECHARGE: X YES ___ NO | ANALYSES: **BTEX, TPHg, 5 Oxygenates (EPA 8260B)**

ODOR: N/A | SAMPLE VESSEL / PRESERVATIVE: **HCL**

PURGING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
X Submersible Pump
___ Peristalic Pump
___ Bailer (Teflon)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated ____

Other: ____

Pump Depth: ____

SAMPLING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristalic Pump
___ Bailer (Teflon) ___
X Bailer (___ PVC or X disposable)
___ Bailer (Stainless Steel)
___ Dedicated ____

Other: ____

WELL INTEGRITY: GOOD | LOCK#: YES

REMARKS: **D.O.** - 1.17

SIGNATURE: B. A. B.

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

KIFF Analytical LLC

Report Number : 87283
Date : 02/06/2014

Laboratory Results

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

Subject : 5 Water Samples
Project Name : 7-Eleven Store #32266
Project Number : 185750084.300.0410

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 Environmental Laboratory Accreditation Program (ELAP), lab # 08263CA.
If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Troy G. Turpen

Troy Turpen

KIFF Analytical LLC

Report Number : 87283
Date : 02/06/2014

Subject : 5 Water Samples
Project Name : 7-Eleven Store #32266
Project Number : 185750084.300.0410

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.

KIFF Analytical LLC

Report Number : 87283
Date : 02/06/2014

Project Name : **7-Eleven Store #32266**
Project Number : **185750084.300.0410**

Sample : **MW-1** Matrix : Water Lab Number : 87283-01

Sample Date :01/30/2014

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 15:12
Toluene	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 15:12
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 15:12
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 15:12
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 15:12
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 15:12
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 15:12
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 15:12
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	02/04/14 15:12
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	02/04/14 15:12
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	02/04/14 15:12
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	02/04/14 15:12
Toluene - d8 (Surr)	99.1		% Recovery	EPA 8260B	02/04/14 15:12

KIFF Analytical LLC

Report Number : 87283
Date : 02/06/2014

Project Name : **7-Eleven Store #32266**
Project Number : **185750084.300.0410**

Sample : **MW-2** Matrix : Water Lab Number : 87283-02

Sample Date :01/30/2014

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 15:45
Toluene	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 15:45
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 15:45
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 15:45
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 15:45
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 15:45
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 15:45
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 15:45
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	02/04/14 15:45
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	02/04/14 15:45
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	02/04/14 15:45
1,2-Dichloroethane-d4 (Surr)	103		% Recovery	EPA 8260B	02/04/14 15:45
Toluene - d8 (Surr)	98.8		% Recovery	EPA 8260B	02/04/14 15:45

KIFF Analytical LLC

Report Number : 87283
Date : 02/06/2014

Project Name : **7-Eleven Store #32266**
Project Number : **185750084.300.0410**

Sample : **MW-3** Matrix : Water Lab Number : 87283-03
Sample Date :01/30/2014

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.90	0.90	ug/L	EPA 8260B	02/04/14 23:58
Toluene	< 0.90	0.90	ug/L	EPA 8260B	02/04/14 23:58
Ethylbenzene	< 0.90	0.90	ug/L	EPA 8260B	02/04/14 23:58
Total Xylenes	< 0.90	0.90	ug/L	EPA 8260B	02/04/14 23:58
Methyl-t-butyl ether (MTBE)	**450**	0.90	ug/L	EPA 8260B	02/04/14 23:58
Diisopropyl ether (DIPE)	< 0.90	0.90	ug/L	EPA 8260B	02/04/14 23:58
Ethyl-t-butyl ether (ETBE)	< 0.90	0.90	ug/L	EPA 8260B	02/04/14 23:58
Tert-amyl methyl ether (TAME)	< 0.90	0.90	ug/L	EPA 8260B	02/04/14 23:58
Tert-Butanol	**15 J**	5.0	ug/L	EPA 8260B	02/04/14 23:58
Ethanol	< 9.0	9.0	ug/L	EPA 8260B	02/04/14 23:58
TPH as Gasoline	< 90	90	ug/L	EPA 8260B	02/04/14 23:58
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	02/04/14 23:58
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	02/04/14 23:58

KIFF Analytical LLC

Report Number : 87283
Date : 02/06/2014

Project Name : **7-Eleven Store #32266**
Project Number : **185750084.300.0410**

Sample : **MW-4** Matrix : Water Lab Number : 87283-04

Sample Date :01/30/2014

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 21:16
Toluene	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 21:16
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 21:16
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 21:16
Methyl-t-butyl ether (MTBE)	**49**	0.50	ug/L	EPA 8260B	02/04/14 21:16
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 21:16
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 21:16
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 21:16
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	02/04/14 21:16
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	02/04/14 21:16
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	02/04/14 21:16
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	02/04/14 21:16
Toluene - d8 (Surr)	99.6		% Recovery	EPA 8260B	02/04/14 21:16

KIFF Analytical LLC

Report Number : 87283
Date : 02/06/2014

Project Name : **7-Eleven Store #32266**
Project Number : **185750084.300.0410**

Sample : **MW-5** Matrix : Water Lab Number : 87283-05

Sample Date :01/30/2014

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 14:07
Toluene	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 14:07
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 14:07
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 14:07
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 14:07
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 14:07
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 14:07
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	02/04/14 14:07
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	02/04/14 14:07
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	02/04/14 14:07
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	02/04/14 14:07
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	02/04/14 14:07
Toluene - d8 (Surr)	98.2		% Recovery	EPA 8260B	02/04/14 14:07

Report Number : 87283

Date : 02/06/2014

QC Report : Method Blank Data

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

Project Number : **185750084.300.0410**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	02/04/2014
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	02/04/2014
Toluene	< 0.50	0.50	ug/L	EPA 8260B	02/04/2014
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	02/04/2014
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	02/04/2014
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	02/04/2014
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	02/04/2014
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	02/04/2014
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	02/04/2014
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	02/04/2014
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	02/04/2014
1,2-Dichloroethane-d4 (Surr)	101		%	EPA 8260B	02/04/2014
Toluene - d8 (Surr)	99.3		%	EPA 8260B	02/04/2014
Benzene	< 0.50	0.50	ug/L	EPA 8260B	02/04/2014
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	02/04/2014
Toluene	< 0.50	0.50	ug/L	EPA 8260B	02/04/2014
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	02/04/2014
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	02/04/2014
Ethanol	< 5.0	5.0	ug/L	EPA 8260B	02/04/2014
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	02/04/2014
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	02/04/2014
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	02/04/2014
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	02/04/2014
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	02/04/2014
1,2-Dichloroethane-d4 (Surr)	103		%	EPA 8260B	02/04/2014
Toluene - d8 (Surr)	99.1		%	EPA 8260B	02/04/2014

KIFF ANALYTICAL, LLC

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

Report Number : 87283

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 02/06/2014

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

Project Number : **185750084.300.0410**

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														
	87282-05	<0.50	40.0	40.0	41.8	39.6	ug/L	EPA 8260B	2/4/14	104	98.9	5.60	70.0-130	25
Diisopropyl ether														
	87282-05	<0.50	40.0	40.0	43.2	41.9	ug/L	EPA 8260B	2/4/14	108	105	2.96	70.0-130	25
Ethanol														
	87282-05	<5.0	100	100	125	120	ug/L	EPA 8260B	2/4/14	125	120	3.90	55.0-150	25
Ethyl-tert-butyl ether														
	87282-05	<0.50	40.0	40.0	42.2	41.3	ug/L	EPA 8260B	2/4/14	106	103	2.22	70.0-130	25
Ethylbenzene														
	87282-05	<0.50	40.0	40.0	43.7	40.7	ug/L	EPA 8260B	2/4/14	109	102	7.03	70.0-130	25
Methyl-t-butyl ether														
	87282-05	<0.50	39.9	39.9	40.4	40.0	ug/L	EPA 8260B	2/4/14	101	100	0.880	70.0-130	25
P + M Xylene														
	87282-05	<0.50	40.0	40.0	43.5	41.0	ug/L	EPA 8260B	2/4/14	109	102	5.94	70.0-130	25
Tert-Butanol														
	87282-05	<5.0	200	200	208	203	ug/L	EPA 8260B	2/4/14	104	102	2.15	70.0-130	25
Tert-amyl-methyl ether														
	87282-05	<0.50	40.0	40.0	42.7	41.8	ug/L	EPA 8260B	2/4/14	107	104	2.11	70.0-130	25
Toluene														
	87282-05	<0.50	40.0	40.0	43.1	40.5	ug/L	EPA 8260B	2/4/14	108	101	6.24	70.0-130	25

KIFF ANALYTICAL, LLC

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

Report Number : 87283

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 02/06/2014

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

Project Number : **185750084.300.0410**

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														
	87282-10	<0.50	40.0	40.0	40.7	39.3	ug/L	EPA 8260B	2/4/14	102	98.2	3.51	70.0-130	25
Diisopropyl ether														
	87282-10	<0.50	40.0	40.0	41.9	41.6	ug/L	EPA 8260B	2/4/14	105	104	0.903	70.0-130	25
Ethanol														
	87282-10	<5.0	100	100	121	122	ug/L	EPA 8260B	2/4/14	121	122	0.973	55.0-150	25
Ethyl-tert-butyl ether														
	87282-10	<0.50	40.0	40.0	41.2	41.4	ug/L	EPA 8260B	2/4/14	103	104	0.640	70.0-130	25
Ethylbenzene														
	87282-10	<0.50	40.0	40.0	42.7	41.1	ug/L	EPA 8260B	2/4/14	107	103	4.00	70.0-130	25
Methyl-t-butyl ether														
	87282-10	<0.50	39.9	39.9	39.0	39.3	ug/L	EPA 8260B	2/4/14	97.8	98.6	0.782	70.0-130	25
P + M Xylene														
	87282-10	<0.50	40.0	40.0	42.8	41.2	ug/L	EPA 8260B	2/4/14	107	103	3.67	70.0-130	25
Tert-Butanol														
	87282-10	<5.0	200	200	203	204	ug/L	EPA 8260B	2/4/14	102	102	0.165	70.0-130	25
Tert-amyl-methyl ether														
	87282-10	<0.50	40.0	40.0	41.6	41.6	ug/L	EPA 8260B	2/4/14	104	104	0.00556	70.0-130	25

KIFF ANALYTICAL, LLC

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

Report Number : 87283

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 02/06/2014

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

Project Number : **185750084.300.0410**

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
Toluene														
	87282-10	<0.50	40.0	40.0	41.6	40.3	ug/L	EPA 8260B	2/4/14	104	101	3.15	70.0-130	25

KIFF ANALYTICAL, LLC

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

QC Report : Laboratory Control Sample (LCS)

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

Project Number : **185750084.300.0410**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	39.9	ug/L	EPA 8260B	2/4/14	101	70.0-130
Diisopropyl ether	39.9	ug/L	EPA 8260B	2/4/14	102	70.0-130
Ethanol	99.8	ug/L	EPA 8260B	2/4/14	121	55.0-150
Ethyl-tert-butyl ether	39.9	ug/L	EPA 8260B	2/4/14	102	70.0-130
Ethylbenzene	39.9	ug/L	EPA 8260B	2/4/14	106	70.0-130
Methyl-t-butyl ether	39.8	ug/L	EPA 8260B	2/4/14	96.8	70.0-130
P + M Xylene	39.9	ug/L	EPA 8260B	2/4/14	106	70.0-130
TPH as Gasoline	488	ug/L	EPA 8260B	2/4/14	108	70.0-130
Tert-Butanol	200	ug/L	EPA 8260B	2/4/14	101	70.0-130
Tert-amyl-methyl ether	39.9	ug/L	EPA 8260B	2/4/14	102	70.0-130
Toluene	39.9	ug/L	EPA 8260B	2/4/14	104	70.0-130
Benzene	39.9	ug/L	EPA 8260B	2/4/14	100	70.0-130
Diisopropyl ether	39.9	ug/L	EPA 8260B	2/4/14	103	70.0-130
Ethanol	99.8	ug/L	EPA 8260B	2/4/14	119	55.0-150
Ethyl-tert-butyl ether	39.9	ug/L	EPA 8260B	2/4/14	102	70.0-130
Ethylbenzene	39.9	ug/L	EPA 8260B	2/4/14	104	70.0-130
Methyl-t-butyl ether	39.8	ug/L	EPA 8260B	2/4/14	96.5	70.0-130
P + M Xylene	39.9	ug/L	EPA 8260B	2/4/14	104	70.0-130
TPH as Gasoline	488	ug/L	EPA 8260B	2/4/14	105	70.0-130
Tert-Butanol	200	ug/L	EPA 8260B	2/4/14	100	70.0-130
Tert-amyl-methyl ether	39.9	ug/L	EPA 8260B	2/4/14	102	70.0-130
Toluene	39.9	ug/L	EPA 8260B	2/4/14	102	70.0-130

Chain of Custody Number: 87283

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 # 185750084 Task # 300.0410
Project Manager Danielle Manning
Laboratory Kiff Analytical
Turnaround Time Standard

Sampler's Name Brian Branscum
Sampler's Signature

Sample ID	Date	Time	Matrix	HCl-preserved	TPHg/BTEX - EPA 8260	TPHd (Diesel Only) 8015 (modified)	TPH 418.1/WTPH 418.1	Aromatic Volatiles 602/8020	Volatile rganics 624/8240 (g=GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	5 Oxygenates EPA 8260B	Ethanol EPA 8260B					Comments/ Instructions	Number of Containers	
MW-1	1/30/14	1115	Water	3	X							X	X						3	01
MW-2	"	1140	Water	3	X							X	X						3	02
MW-3	"	1230	Water	3	X							X	X						3	03
MW-4	"	1045	Water	3	X							X	X						3	04
MW-5	"	1205	Water	3	X							X	X						3	05

Special Instructions/Comments
5 Oxygenates - MtBE, EtBE, DIPE, TAME, TBA
Global ID #T10000001067
email EDD to danielle.manning@stantec.com, deborah.lichtenberger@stantec.com
email lab report to: deborah.lichtenberger@stantec.com / danielle.manning@stantec.com

Relinquished by:
Sign
Print Brian Branscum
Company Stantec
Time 1430 Date 1/31/14

Received by:
Sign
Print
Company
Time Date

Relinquished by:
Sign
Print
Company
Time Date

Received by:
Sign
Print E Goddess
Company Kiff Analytical
Time 1430 Date 013114

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

Client: Stantec
Client Contact: Danielle Manni
Client Phone: (916) 861-0400 ext. 241

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SECOR CUSTREC Rev. 2/99

Date: 1/30/14 Page 1 of 1

KIFF Analytical LLC

SAMPLE RECEIPT CHECKLIST

SRG #: 87283

Sample Receipt	Initials/Date: EMJ 013114	Storage Time: 1430	Sample Login	Initials/Date: EMJ 020314

TAT: ☒ Standard ☐ Rush ☐ Split ☐ None

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

Temp °C 5.6 ☐ N/A | Therm ID IR3 | Time 1426 | Coolant present ☒ Yes ☐ No ☐ Water | ☐ Temp Excursion

For Shipments Only: Cooler Receipt Initials/Date/Time:

Custody Seals ☐ N/A ☐ Intact ☐ Broken

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

Documented on	COC	Labels	Discrepancies:
Sample ID	✓	✓	
Project ID	✓	✓	
Sample Date	✓	✓	
Sample Time	✓	✓	
Does COC match project history?	☐ N/A	☒ Yes	☐ No

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

Comments:

Receipt Details:

Matrix	Container Type	# of Containers
WA	Vor	15

CS Required: ☐

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

Client Communication: