



**Stantec**

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

October 4, 2012

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

**RECEIVED**

**5:42 pm, Oct 08, 2012**

Alameda County  
Environmental Health

RE: **Enclosed Additional Site Assessment Report**  
7-Eleven Store #32266  
1339 North Vasco Road  
Livermore, CA 94551  
Stantec Project #:211502037.230.0502

Dear Mr. Wickham:

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

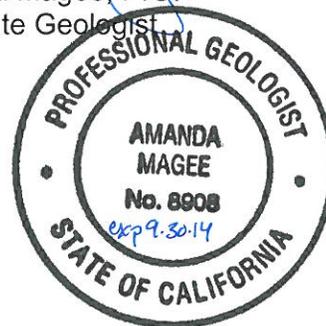
We declare, under penalty of perjury, that the information and/or recommendations contained in the attached assessment report are true and correct to best of our knowledge.

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

Sincerely,  
**Stantec Consulting Services Inc.**

Damon Brown  
Senior Geologic Consultant  
Project Manager

Amanda Magee, P.G.  
Associate Geologist



LIMITED AUTHORIZATION

KNOW ALL MEN BY THESE PRESENTS:

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

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

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

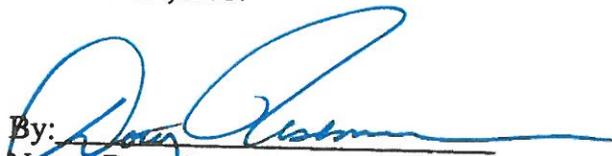
This Limited Authorization shall expire upon the expiration or earlier termination of the Agreement, except as otherwise provided therein, or may be terminated at any time for any reason by 7-Eleven.

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

7-ELEVEN, INC.

ATTEST:

  
Assistant Secretary

By:   
Name: Doug Rosencrans  
Title: Vice President

STATE OF TEXAS       §  
                                  §  
COUNTY OF DALLAS   §

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

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

Karen Pennell  
NOTARY PUBLIC

My Commission Expires:

6-1-2013



## 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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October 5, 2012

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

RE: **Additional Site Assessment Report**  
7-Eleven Store #32266  
1339 North Vasco Road  
Livermore, CA 94551  
Stantec Project #: 211502037.230.0502

Dear Mr. Wickham:

This report was prepared by Stantec Consulting Services Inc. (Stantec) on behalf of 7-Eleven Inc. (7-Eleven) to document the installation of one groundwater monitoring well (MW-4) at 7-Eleven store #32266, located at 1339 Vasco Road in Livermore, California (Figures 1 and 2). This work was performed in accordance with Stantec's March 5, 2012 *Revised Work Plan for Additional Site Assessment*, Stantec's July 20, 2102 *Additional Site Assessment Report*, the March 26, 2011 approval letter from the Alameda County Environmental Health Services (ACEHS), and email correspondence from the ACEHS dated July 24, 2012 (Attachment A).

## INTRODUCTION

The site is currently operating as a 7-Eleven convenience store and gasoline station with one 10,000-gallon and one 15,000-gallon underground storage tank (UST) (Figure 2). Stantec supervised the installation of one offsite groundwater monitoring well to further define the limits of MtBE impacts in soil and groundwater offsite, and to further define the site-specific hydraulic gradient.

The work summarized in this report includes:

1. Obtaining permits.
2. Preparing a site-specific *Health and Safety Plan*.
3. Clearing two boring locations using Underground Service Alert (USA) and a private utility locator.
4. Installation and development of one groundwater monitoring well.
5. Attempting to install a second offsite groundwater monitoring well.
6. Collecting groundwater samples from existing monitoring well MW-3 and new monitoring well MW-4.
7. Submitting soil and groundwater samples for laboratory analysis.

## SITE BACKGROUND

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

- Five soil samples from the UST excavation,
- Six soil samples from the beneath the product dispensers,
- Five soil samples from the product line trenches,
- Eleven samples (44 samples combined at laboratory for eleven 4-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 (Table 1). The maximum concentrations of tertiary butyl alcohol (TBA) and methyl tertiary butyl ether (MtBE) detected were 2.4 milligrams per kilogram (mg/kg) and 2.6 mg/kg, respectively, in UST excavation sample T1-2-12. Total lead was detected in each of the samples at concentrations ranging from 4.98 mg/kg to 28.4 mg/kg.

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

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

MtBE was detected at 180 micrograms per liter ( $\mu\text{g/L}$ ) and benzene was reported at 25  $\mu\text{g/L}$  in UST excavation water sample W1 (Table 2). TPHg was detected at 3,400  $\mu\text{g/L}$ . 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  $\mu\text{g/L}$ . MtBE was detected in both samples at concentrations of 340  $\mu\text{g/L}$  (BT-1) to 400  $\mu\text{g/L}$  (BT-2). Based on the results of the water samples collected, an UST Unauthorized Release report was completed and submitted to the Livermore-Pleasanton Fire Department (LPPD) and the California Regional Water Quality Control Board (CRWQCB).

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

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

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

Between February 23 and 24, 2010, Stantec supervised the installation of three groundwater monitoring wells (MW-1, MW-2, and MW-3). On March 25, 2011, Stantec submitted an *Additional Site Assessment Report* to the ACEHS. Soil samples collected from MW-1 and MW-2 did not contain petroleum hydrocarbon concentrations above laboratory reporting limits. MtBE and TBA were reported at concentrations ranging from 0.0082 mg/kg to 0.33 mg/kg in soil samples collected from MW-3.

In a letter dated August 29, 2011, the ACEHS requested the submittal of a work plan for plume delineation to assess whether the plume extends to the water supply of the two wells located approximately 300 feet west of the site. On October 25, 2011, Stantec submitted the *Work Plan for Additional Assessment*. In a letter dated November 21, 2011, 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 soil borings (GP-4 through GP-7). On July 20, 2012, Stantec submitted an *Additional Site Assessment Report* to the ACEHS. Soil samples collected from soil borings GP-4 through GP-7 did not contain petroleum hydrocarbon concentrations above laboratory reporting limits, with the exception of MtBE in the samples collected from GP-5, which was detected at a maximum concentration of 0.056 mg/kg. TPHg and MtBE were detected in grab groundwater samples GP-4W and GP-5W at maximum concentrations of 95 µg/L and 350 µg/L, respectively. The report also summarized Stantec's research regarding the two wells identified 300 feet west of the site; it was concluded that the two wells identified in the well survey are not currently used for water supply.

On July 25, 2012, the ACEHS concurred with Stantec's recommendation to install two additional monitoring wells at the locations indicated in the July 20, 2012 *Additional Site Assessment Report*.

A summary of historic soil and groundwater analytical data is presented in Tables 1 and 2, respectively.

## **SOIL BORING, SAMPLING, AND WELL INSTALLATION**

### ***Permitting/Site-Specific Health and Safety Plan/Utility Clearance***

Groundwater monitoring well installation permits were obtained from Zone 7 Water Agency prior to conducting subsurface work at the site. In addition, Stantec obtained an encroachment permit from the City of Livermore Community Development Department to advance the soil borings in the Vasco Road right-of-way. Copies of permits are included in Attachment B.

Stantec prepared site-specific *Health and Safety Plan* (HASP) for the well installation and sampling activities at the site, as required by the Occupational Health and Safety Administration (OSHA) Standard "Hazardous Waste Operations and Emergency Response" guidelines (29 CFR 1910.120). The document was reviewed and signed by all Stantec personnel and subcontractors prior to performing work at the site.

Prior to conducting subsurface work at the site, USA was contacted to delineate subsurface piping and/or utilities at the site with surface markings. In addition, a private utility locator service was contracted to clear the area surrounding each of the proposed monitoring well locations. Due to numerous underground utilities identified in the sidewalk, the location of proposed monitoring well MW-5 was moved east into Vasco Road.

### ***Soil Borings***

From September 4 through 7, 2012, Stantec supervised as Gregg Drilling and Testing, Inc, of Martinez, California (Gregg) installed one groundwater monitoring well (MW-4) at the location shown on Figure 2. Prior to drilling, an air knife and vacuum truck was used to clear the location to five feet bgs. Two locations were cleared for MW-4 due to inaccurate marking of an underground water line by the City of Livermore. On September 12, 2012, Stantec supervised Gregg's attempt to clear an additional location for proposed monitoring well MW-5 with a hand auger; however an unmarked utility was discovered at approximately 6.5 feet bgs in two locations. Stantec was unable to move the location of proposed well MW-5 to a suitable location within the existing encroachment permit based on the multiple marked and unmarked utilities along the west side of Vasco Road and under the sidewalk west of Vasco Road.

Below five feet bgs, well MW-4 was drilled to a depth of 25 feet bgs, using a M5T track rig equipped with direct push drive rods to allow for soil sampling. Subsequently, MW-4 was overdrilled with eight-inch diameter hollow-stem augers (HSA) to a depth of 20 feet bgs for the well installation. Downhole drilling equipment was properly cleaned before drilling each borehole. The soil boring and well construction details are summarized in Table 3. Field notes are included in Attachment C.

### ***Soil Sampling***

Soil samples were collected from MW-4 using a direct push 1.5-inch diameter macro-core sampler, which collects four-foot cores. Sampling equipment was properly cleaned between each sampling interval. Each soil sample was screened for hydrocarbon vapors using a portable photoionization detector (PID). Soils encountered during drilling were logged using the Unified Soil Classification System by a Stantec field geologist, working under the supervision of a California Professional Geologist.

Soil samples collected for analysis (from the four-foot cores) were sealed with Teflon<sup>®</sup> sheets and plastic caps, labeled, and placed on ice in an insulated container for delivery to Kiff Analytical LLC (Kiff), a California State certified laboratory located in Davis, California. The soil samples were analyzed for TPHg, BTEX, and MtBE by Environmental Protection Agency (EPA) Method 8260B.

### ***Soil Stratigraphy and Geology***

Based on the description of the soil samples collected from the new well MW-4, the soil stratigraphy encountered consists mainly of clay from ground surface to 25 feet bgs, the total depth of exploration. A copy of the soil boring log is included in Attachment D.

### ***Well Installation***

Groundwater monitoring well MW-4 was constructed using two-inch diameter polyvinyl chloride (PVC) blank casing and 0.020-inch-slot well screen. The well was installed to 20 feet bgs and was screened from 5 to 20 feet bgs (Table 3). A number three sand filter pack was placed within the annulus of each well, from 20 feet bgs to approximately one foot above the top of the well screen. The annulus of the well was sealed with one foot of bentonite on top of the sand, and a portland cement/bentonite slurry to the surface. An eight-inch-diameter, traffic-rated, water-tight street box was installed to protect the well from surface traffic. Well construction details are summarized in Table 3. Field notes are included in Attachment C.

### ***Well Development***

On September 14, 2012, Stantec supervised Gregg during the development of monitoring well MW-4 by surging and bailing groundwater from the wells using a surge block and bailer to remove fine-grained sediments from the well and sand pack. Approximately 10 well casing volumes of groundwater was purged from the well until potential hydrogen (pH), conductivity, and temperature measurements stabilized. Purge water from the well development and sampling was stored in Department of Transportation (DOT) approved, properly labeled, 55-gallon drums on site, pending offsite disposal. Field notes are included in Attachment C.

***Well Location Survey***

On September 21, 2012, Stantec, a certified surveyor in California, surveyed the locations of the newly installed well. The top of casing of the newly installed well was surveyed to 0.01 foot relative to mean sea level. A copy of the well survey map is included in Attachment E.

***Groundwater Monitoring and Sampling***

On September 21, 2012, the depth to water was measured to within 0.01 foot bgs in monitoring wells MW-1, MW-2, MW-3, and MW-4 from the top of casing (TOC) using a water level indicator. The depth to groundwater measured on September 21, 2012 ranged between 8.40 feet below TOC in well MW-1 to 9.55 feet below TOC in well MW-3. Based on the groundwater elevations for this monitoring event, shallow groundwater beneath the site flows to the southwest at an average hydraulic gradient of approximately 0.006 vertical feet per horizontal foot (ft/ft). Groundwater contours are depicted on Figure 2.

Groundwater sampling activities of monitoring wells MW-3 and MW-4 were performed on September 21, 2012. Well purging and sampling equipment was thoroughly cleaned prior to purging and sampling each well. The sampling procedure for each well 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 C. After purging, water levels were allowed to recover to at least 80% of the original levels prior to collection of the water sample. Groundwater samples were collected using a disposable Teflon<sup>®</sup> bailer, placed into appropriate EPA approved containers, labeled, logged onto chain-of-custody documents, and transported on ice to Kiff for analysis of TPHg, BTEX, and MtBE by EPA Method 8260B. Copies of the field notes are presented in Attachment C.

***Waste Disposal***

Soil generated during drilling was temporarily stored on site in DOT approved, properly labeled, 55-gallon drums, pending profiling and disposal. A four-point composite soil sample, SP1(ABCD), was collected from the soil bins and analyzed for TPHg, BTEX, and MtBE by EPA Method 8260B, and total lead by EPA Method 6010B (Table 1). A copy of the certified laboratory analytical reports and chain-of-custody documentation are included in Attachment F. Copies of the waste disposal documentation will be provided under a separate cover.

**RESULTS OF SAMPLING ANALYSIS*****Soil Sample Analytical Results***

A total of four soil samples were collected from soil borings MW-4 and MW-5 for laboratory analysis. MtBE was reported solely in the soil samples collected from MW-4 at depths of 15 and 19.5 feet bgs, with concentrations of 0.010 mg/kg and 0.016 mg/kg, respectively. The analytes BTEX and TPHg were not detected at concentrations above the laboratory reporting limits in any of the soil samples collected during this investigation. A copy of the certified laboratory analytical reports and chain-of-custody documentation are included in Attachment F.

***Groundwater Sample Analytical Results***

On September 21, 2012, a total of two groundwater samples were collected from wells MW-3 and MW-4 and submitted for laboratory analysis. The analytes BTEX, TPHg, DIPE, and EtBE were not detected at concentrations above the laboratory reporting limits in any of the

groundwater samples collected during this investigation. MtBE was detected in both samples at concentrations of 760 µg/L (MW-3) and 400 µg/L (MW-4). TBA was detected in the sample collected from MW-3 at a concentration of 32 µg/L. TAME was detected in both groundwater samples at concentrations of 1.5 µg/L (MW-3) and 0.69 µg/L (MW-4). A copy of the certified laboratory analytical reports and chain-of-custody documentation are included in Attachment F.

### **EVALUATION OF GROUNDWATER ANALYTICAL RESULTS**

Based on the analytical results of the groundwater samples collected as part of this investigation, it appears that the dissolved MtBE plume has migrated offsite. In addition, the depth to groundwater data collected during this investigation (which includes newly installed well MW-4) indicates the groundwater gradient may be more southwesterly than what was originally observed using only data from monitoring wells MW-1 through MW-3. This may indicate that MW-4 may not be directly downgradient of MW-3 (the most impacted onsite monitoring well), however the grab groundwater sample from GP-7 (located approximately 40 feet south of MW-4) did not contain detectable concentrations of MtBE (Figure 2 and Table 2). Based on this information, it is likely that the concentrations in samples collected from MW-4 are representative of downgradient conditions.

Stantec will commence quarterly groundwater monitoring and sampling of the newly installed well during the fourth quarter of 2012. To determine accurate placement of proposed downgradient well MW-5, Stantec recommends conducting two quarters of groundwater monitoring and sampling (Fourth Quarter 2012 and First Quarter 2013) to more accurately identify the site-specific hydraulic groundwater gradient. After the First Quarter 2013 monitoring and sampling event, Stantec proposes to conduct a thorough survey of utility locations in the vicinity of the northwest corner of the intersection of North Vasco Road and Scenic Avenue to identify a feasible location for proposed downgradient well MW-5 in relation to the confirmed hydraulic groundwater gradient.

### **SUMMARY AND CONCLUSIONS**

One groundwater monitoring well MW-4 was installed between September 4 and 7, 2012. Proposed monitoring well MW-5 was not installed at this time due to the presence of marked and unmarked underground utilities in close proximity to the proposed well location.

MtBE was reported solely in the soil samples collected from MW-4 at depths of 15 and 19.5 feet bgs, with concentrations of 0.010 mg/kg and 0.016 mg/kg, respectively. The analytes BTEX and TPHg were not detected at concentrations above the laboratory reporting limits in any of the samples collected during this investigation.

Groundwater monitoring wells MW-3 and MW-4 were sampled on September 21, 2012. Benzene and TPHg were not detected at concentrations above the laboratory reporting limits in any of the groundwater samples collected during this investigation. MtBE was detected in both samples at concentrations ranging from 400 µg/L to 760 µg/L.

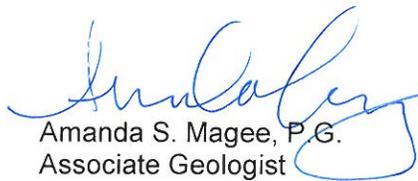
Stantec will commence quarterly groundwater monitoring and sampling of the newly installed well during the fourth quarter of 2012. Following the First Quarter 2013 monitoring and sampling

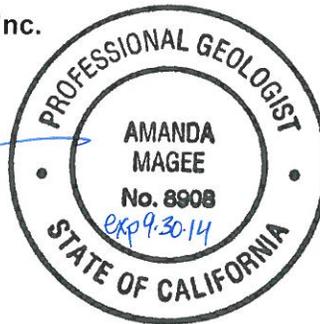
event, Stantec proposes to identify a feasible downgradient location for proposed monitoring well MW-5, and will submit a workplan to the ACEHS at that time.

The results of the assessment work 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.

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

Sincerely,  
**Stantec Consulting Services Inc.**

  
Amanda S. Magee, P.G.  
Associate Geologist



  
for:  
Danielle Manning  
Associate Scientist

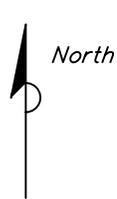
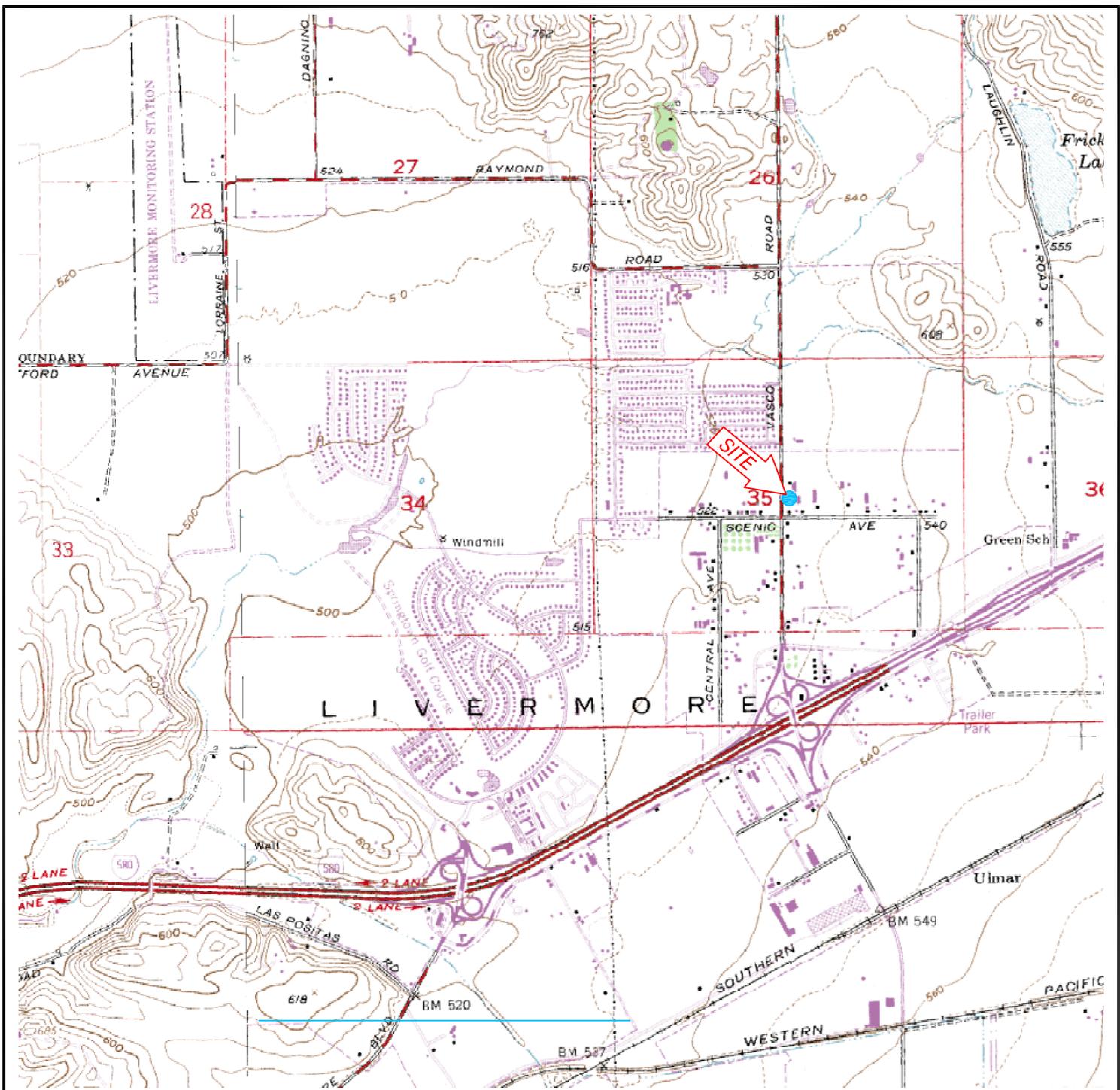
  
Damon Brown  
Senior Geologic Consultant

**ATTACHMENTS**

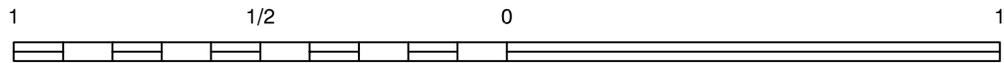
- Figures
- Tables
- Attachment A – Regulatory Correspondence
- Attachment B – Well Installation Permits
- Attachment C – Field Notes
- Attachment D – Soil Boring Log
- Attachment E – Survey Map
- Attachment F – Certified Laboratory Analytical Reports and Chain-of-Custody Documentation

cc: Mr. John Wainwright, Stantec, 308 East 4500 South, Suite 100, Murray, Utah 84101  
Mr. Michael Blau, Michael M. Blau Trust, P.O. Box 2768, Danville, California 94526

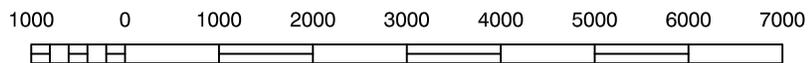
# Figures



CALIFORNIA



SCALE (MILES)



SCALE (FEET)

REFERENCE: USGS 7.5 MINUTE QUADRANGLE, LIVERMORE, CALIFORNIA



FOR:



STORE NO. 32266  
1339 NORTH VASCO ROAD  
LIVERMORE, CALIFORNIA

**SITE LOCATION MAP**

FIGURE:

**1**

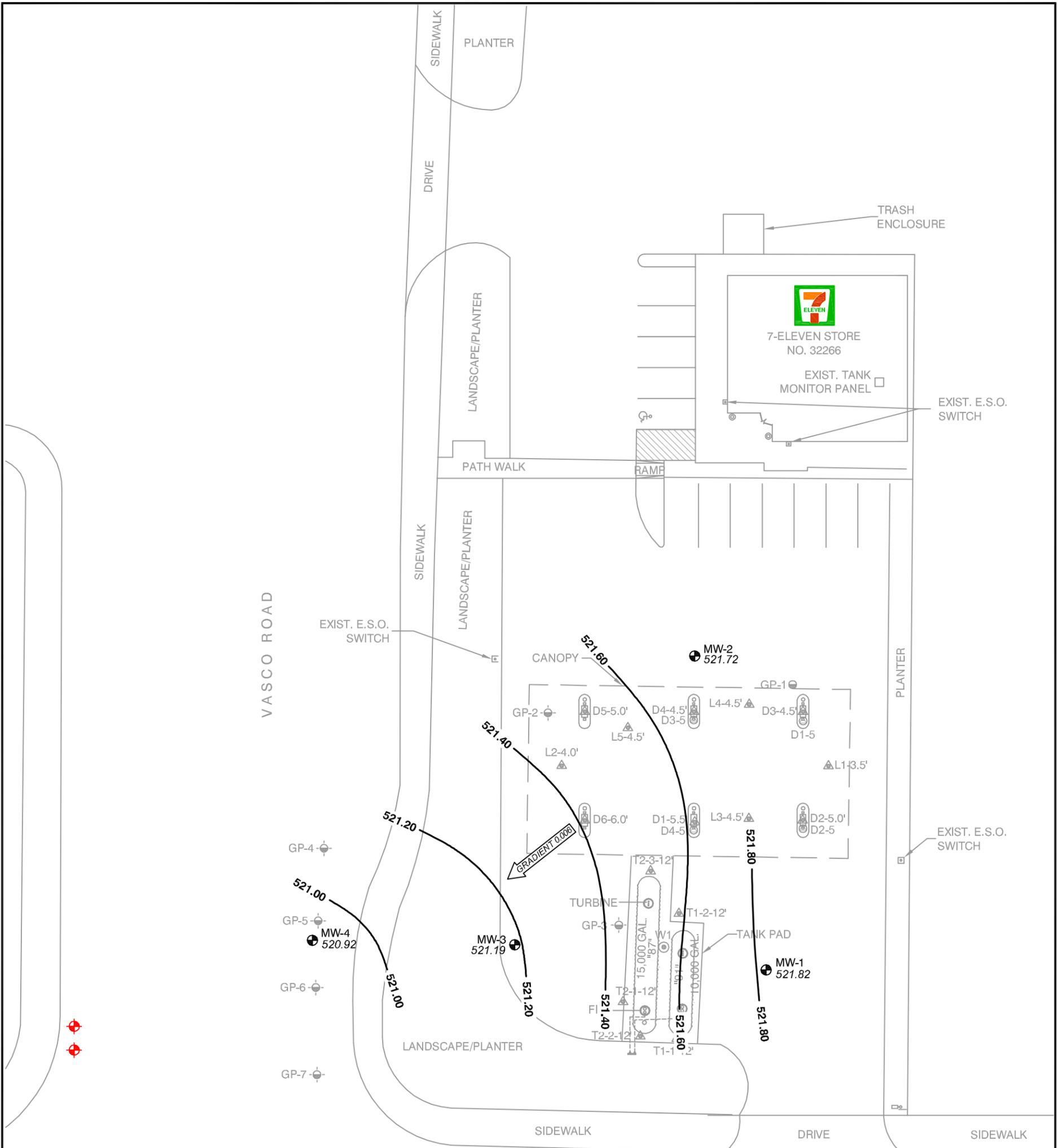
JOB NUMBER:  
211502037

DRAWN BY:  
STA

CHECKED BY:  
PH

APPROVED BY:  
DB

DATE:  
03/08/11



**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
- ATTEMPTED MONITORING WELL LOCATION (UNABLE TO INSTALL)
- APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT (FT/FT)
- GROUNDWATER ELEVATION CONTOUR (FEET ABOVE MEAN SEA LEVEL)
- 521.82 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>SITE PLAN WITH GROUNDWATER ELEVATION CONTOURS SEPTEMBER 21, 2012</b>		FIGURE: <b>2</b>
	JOB NUMBER: 211502037	DRAWN BY: STA	CHECKED BY: ASM	APPROVED BY: DB

# Tables

**TABLE 1**  
**Historical Soil Sample Analytical Results**

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

Sample I.D.	Date Sampled	Sample Depth (ft bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl Benzene (mg/kg)	Xylenes (mg/kg)	TPHg (mg/kg)	MtBE (mg/kg)	DIPE (mg/kg)	EtBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	EDB (mg/kg)	EDC (mg/kg)	EtOH (mg/kg)	Total Lead (mg/kg)	Notes
<b>Dispenser Samples</b>																	
D1-5.5	01/28/05	5.5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<b>6.71</b>	
D2-5.0	01/28/05	5.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<b>0.039</b>	<0.0050	<0.0050	<0.0050	<b>0.016</b>	<0.0050	<0.0050	<b>0.010</b>	<b>6.57</b>	
D3-4.5	01/28/05	4.5	<b>0.026</b>	<b>0.086</b>	<b>0.010</b>	<b>0.055</b>	<1.0	<b>0.14</b>	<0.0050	<0.0050	<0.0050	<b>0.0064</b>	<0.0050	<0.0050	<b>0.27</b>	<b>28.4</b>	<b>J</b>
D4-4.5	01/28/05	4.5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<b>0.012</b>	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<b>6.01</b>	
D5-5.0	01/28/05	5.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<b>5.53</b>	
D6-6.0	01/28/05	6.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<b>0.018</b>	<0.0050	<0.0050	<0.0050	<b>0.049</b>	<0.0050	<0.0050	<0.010	<b>4.98</b>	
D1-5.5	12/04/08	5.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<b>0.024</b>	<0.0050	<0.0050	<0.0050	<b>0.0076</b>	--	--	--	--	a, c
D2-5.0	12/04/08	5.0	<b>0.21</b>	<b>0.59</b>	<b>0.26</b>	<b>1.4</b>	<b>12</b>	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	b, c
D3-4.5	12/04/08	5.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	a, c
D4-4.5	12/04/08	5.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	b, c
<b>Line Samples</b>																	
L1-3.5	01/28/05	3.5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<b>5.51</b>	
L2-4.0	01/28/05	4.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<b>11.2</b>	
L3-4.5	01/28/05	4.5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<b>7.14</b>	
L4-4.5	02/09/05	4.5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<b>6.61</b>	
L5-4.5	02/09/05	4.5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<b>6.49</b>	
<b>UST Excavation Samples</b>																	
T1-1-12	01/28/05	12	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<b>0.034</b>	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<b>5.82</b>	
T1-2-12	01/28/05	12	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<b>2.4</b>	<0.0050	<0.0050	<b>0.0068</b>	<b>2.6</b>	<0.0050	<0.0050	<0.025	<b>6.49</b>	
T2-1-12	01/28/05	12	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<b>0.016</b>	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<b>6.65</b>	
T2-2-12	01/28/05	12	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<b>0.010</b>	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<b>7.50</b>	
T2-3-12	01/28/05	12	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<b>0.18</b>	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<b>5.66</b>	
<b>Soil Boring Soil Samples</b>																	
GP-1-5	04/20/10	5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	
GP-1-10	04/20/10	10	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	
GP-1-15	04/20/10	15	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	
GP-2-10	04/20/10	10	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	
GP-2-15	04/20/10	15	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	
GP-3-5	04/20/10	5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	
GP-3-10	04/20/10	10	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<b>0.023</b>	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	--	
GP-3-15	04/20/10	15	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<b>1.1</b>	<0.0050	<0.0050	<0.0050	<b>0.0076</b>	--	--	--	--	<b>J</b>

**TABLE 1**  
**Historical Soil Sample Analytical Results**

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

Sample I.D.	Date Sampled	Sample Depth (ft bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl Benzene (mg/kg)	Xylenes (mg/kg)	TPHg (mg/kg)	MtBE (mg/kg)	DIPE (mg/kg)	EtBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	EDB (mg/kg)	EDC (mg/kg)	EtOH (mg/kg)	Total Lead (mg/kg)	Notes
GP-4-5	07/10/12	5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	--	
GP-4-10	07/10/12	10	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	--	
GP-4-15	07/10/12	15	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	--	
GP-4-20	07/10/12	20	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	--	
GP-4-25	07/10/12	25	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	--	
GP-5-5	07/10/12	5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	--	
GP-5-10	07/10/12	10	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	--	
GP-5-15	07/10/12	15	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<b>0.024</b>	--	--	--	--	--	--	--	--	
GP-5-20	07/10/12	20	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<b>0.056</b>	--	--	--	--	--	--	--	--	
GP-5-25	07/10/12	25	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<b>0.024</b>	--	--	--	--	--	--	--	--	
GP-6-5	07/11/12	5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	--	
GP-6-10	07/11/12	10	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	--	
GP-6-15	07/11/12	15	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	--	
GP-6-20	07/11/12	20	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	--	
GP-6-25	07/11/12	25	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	--	
GP-7-5	07/12/12	5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	--	
GP-7-10	07/12/12	10	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	--	
GP-7-15	07/12/12	15	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	--	
GP-7-20	07/12/12	20	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	--	
<b>Monitoring Wells</b>																	
MW-1-10	02/23/11	10	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	
MW-1-20	02/23/11	20	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	
MW-2-10	02/24/11	10	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	
MW-2-20	02/24/11	20	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	
MW-3-10	02/23/11	10	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<b>0.33</b>	<0.0050	<0.0050	<0.0050	<0.0050	<b>0.0082</b>	--	--	--	<b>J</b>
MW-3-20	02/23/11	20	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<b>0.22</b>	<0.0050	<0.0050	<0.0050	<0.0050	<b>0.053</b>	--	--	--	<b>J</b>
MW-3-25	02/23/11	25	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<b>0.084</b>	<0.0050	<0.0050	<0.0050	<0.0050	<b>0.010</b>	--	--	--	<b>J</b>
MW-4@10'	09/07/12	10	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	--	
MW-4@15'	09/07/12	15	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<b>0.010</b>	--	--	--	--	--	--	--	--	
MW-4@19.5	09/07/12	19.5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<b>0.016</b>	--	--	--	--	--	--	--	--	
MW-5-5	09/12/12	5.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	--	g

**TABLE 1  
Historical Soil Sample Analytical Results**

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

Sample I.D.	Date Sampled	Sample Depth (ft bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl Benzene (mg/kg)	Xylenes (mg/kg)	TPHg (mg/kg)	MtBE (mg/kg)	DIPE (mg/kg)	EtBE (mg/kg)	TAME (mg/kg)	TBA (mg/kg)	EDB (mg/kg)	EDC (mg/kg)	EtOH (mg/kg)	Total Lead (mg/kg)	Notes
<b>Stockpile Soil Samples</b>																	
SP1 (ABCD)	01/28/05	--	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	3.75	
SP1 (EFGH)	01/28/05	--	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	2.66	
SP1 (IJKL)	01/28/05	--	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	3.30	
SP1 (MNOP)	01/28/05	--	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	4.40	
SP2 (ABCD)	01/28/05	--	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	3.80	
SP2 (EFGH)	01/28/05	--	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	3.01	
SP2 (IJKL)	01/28/05	--	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	3.24	
SP2 (MNOP)	01/28/05	--	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	5.15	
SP2 (QRST)	01/28/05	--	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	2.75	
SP2 (UVWX)	01/28/05	--	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	3.17	
SP3 (ABCD)	01/28/05	--	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	3.14	
SP1(ABCD)	12/04/08	---	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	--	--	4.4	b,c
SP1(ABCD)	04/20/10	---	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	6.8	e
SP1(ABCD)	02/24/11	---	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	7.6	
SP1(ABCD)	09/07/12	---	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.0050	--	--	--	--	--	--	--	6.1	f

**Explanation:**

TPHg, BTEX, MtBE, DIPE, EtBE, TAME, TBA, EDB, EDC, EtOH by 8260  
ft bgs = Feet Below Ground Surface  
mg/kg = milligrams per kilogram or parts-per-million  
< = Not detected above laboratory reporting limit  
UST = Underground Storage Tank

TPHg = Total petroleum hydrocarbons-as-gasoline  
MtBE = Methyl-tert-butyl ether  
DIPE = Diisopropyl ether  
EtBE = Ethyl-tert-butyl ether  
TAME = Tert-amyl-methyl ether  
-- = not analyzed

TBA = Tert-butyl alcohol  
EDB = 1,2-Dibromoethane  
EDC = 1,2-Dichloroethane  
EtOH = Ethanol  
Total Lead analysis by 6010B

**Notes:**

- a = Matrix Spike/Matrix Spike Duplicate results for the analytes tert-butanol and toluene were outside of control limits. This may indicate a bias for the sample that was spiked.  
Since the LCS recoveries were within control limits, no data are flagged.
- b = Matrix Spike/Matrix Spike Duplicate results for the analyte methyl-t-butyl ether were affected by the analyte concentrations already present in the un-spiked sample.
- c = composite soil profile samples
- d = Note that dispenser sample names/designations differ in location from dispenser samples collected in 2005.
- J = TBA results may be biased slightly high and is flagged with a 'J'. A fraction of MtBE (up to 5%) converts to TBA during the analysis of soil samples.  
This conversion effect is considered to be mathematically significant in samples that contain MtBE/TBA in ratios of over 3:1.
- e = Matrix Spike/Matrix Spike Duplicate results for the analytes Ethylbenzene, P + M Xylene, O-Xylene, and Toluene were outside of control limits. This may indicate a bias for the sample that was spiked.  
Since the LCS recoveries were within control limits, no data are flagged.
- f = Matrix Spike/Matrix Spike Duplicate results for the analyte ethylbenzene were affected by the analyte concentrations already present in the un-spiked sample.
- g = proposed well not installed at that time

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

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

Sample I.D. (TOC)	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Total Xylenes (µg/L)	TPHg (µg/L)	MtBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	EtBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)	EtOH (µg/L)	Notes	Dissolved Oxygen (mg/L)	DTW (feet)	SPT (feet)	WTE (feet)
<b>UST Excavation Groundwater Sample</b>																			
W1	01/28/05	25	290	62	520	3,400	180	15	<1.5	<1.5	<1.5	<1.5	<1.5	2,600		--	--	--	--
<b>Baker Tank Samples</b>																			
BT-1	02/04/05	<0.50	<0.50	<0.50	0.70	<50	340	--	--	--	--	--	--	--		--	--	--	--
BT-2	02/04/05	<0.90	<0.90	<0.90	<0.90	<90	400	--	--	--	--	--	--	--		--	--	--	--
<b>Grab Groundwater Samples</b>																			
GP-1W	04/20/10	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	<0.50	<0.50	<0.50	--	--	--		--	--	--	--
GP-2W	04/20/10	<0.50	<0.50		<0.50	<50	2.9	<5.0	<0.50	<0.50	<0.50	--	--	--		--	--	--	--
GP-3W	04/20/10	<0.50	<0.50	<0.50	<0.50	<50	380	<5.0	<0.50	<0.50	0.71	--	--	--		--	--	--	--
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	--	--	--		0.28	8.36	0.00	521.86
	09/21/12	--	--	--	--	--	--	--	--	--	--	--	--	--		--	8.40	0.00	521.82
<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	--	--	--		0.51	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

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

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

Sample I.D. (TOC)	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Total Xylenes (µg/L)	TPHg (µg/L)	MtBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	EtBE (µg/L)	TAME (µg/L)	EDB (µg/L)	EDC (µg/L)	EtOH (µg/L)	Notes	Dissolved Oxygen (mg/L)	DTW (feet)	SPT (feet)	WTE (feet)
<b>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
<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

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

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

# **Attachment A**

## **Regulatory Correspondence**



ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
FAX (510) 337-9335

March 26, 2012

Mr. Jose Rios  
7-Eleven, Inc.  
One Arts Plaza  
1722 Routh Street, Suite 1000  
Dallas, TX 75201  
(Sent via E-mail to: [jose.rios@7-11.com](mailto:jose.rios@7-11.com))

Mr. Michael Blau  
Michael H. Blau Trust  
PO Box 2768  
Danville, CA 94526

Subject: Conditional Work Plan Approval for Fuel Leak Case No. RO0002999 and GeoTracker Global ID T10000001067, 7 Eleven #32266, 1339 Vasco Road, Livermore, CA 94551

Dear Mr. Hilliard and Mr. Blau:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above referenced site including the most recent documents entitled, "*Revised Work Plan for Additional Site Assessment*," dated March 5, 2012 (Work Plan) and "*Quarterly Groundwater Monitoring Report – Fourth Quarter 2011*," dated October 3, 2011 (Monitoring Report). In correspondence dated November 21, 2011, ACEH requested that you submit a Revised Work Plan to delineate the plume and to assess whether groundwater contamination from the site potentially could affect water supply wells in the area.

The proposed scope of work is conditionally approved and may be implemented provided that the technical comments below are addressed and incorporated during the proposed investigation. Submittal of a revised Work Plan is not required unless an alternate scope of work outside that described in the Work Plan and technical comments below is proposed. We request that you address the following technical comments, perform the proposed work, and send us the reports described below.

### **TECHNICAL COMMENTS**

1. **Phased Approach.** We have no objection to a phased approach to investigation. However, we request that you submit the results from the first phase of investigation and the results from the well survey requested in technical comment 2 prior to implementing the proposed monitoring well installation.
2. **Locations of Water Supply Wells.** Figure 3 of the September 29, 2010, "*Work Plan for Additional Site Assessment and Detailed Well Survey*," shows two water supply wells located approximately 300 feet west of the site. It is necessary to inspect these locations and conduct a door to door well survey to assess the accuracy of these water supply well locations and to determine whether these water supply wells remain active or may have been destroyed. This information is necessary to assess whether the plume could impact water supply wells. Please include this information in the Site Investigation Report requested below.
3. **Groundwater Monitoring.** The existing monitoring wells have been sampled during four consecutive monitoring events. Please consider implementing semi-annual groundwater monitoring for these existing wells in the future unless the groundwater monitoring data is needed in association with ongoing site investigation activities.

Responsible Parties  
RO0002999  
March 26, 2012  
Page 2

### **TECHNICAL REPORT REQUEST**

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **April 30, 2012** – Quarterly Groundwater Monitoring Report – Fourth Quarter 2011
- **July 26, 2012** – Site Investigation Report

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at [jerry.wickham@acgov.org](mailto:jerry.wickham@acgov.org). Online case files are available for review at the following website: <http://www.acgov.org/aceh/index.htm>. As your email address does not appear on the cover page of this notification ACEH is requesting you provide your email address so that we can correspond with you quickly and efficiently regarding your case.

Sincerely,

Jerry Wickham, California PG 3766, CEG 1177, and CHG 297  
Senior Hazardous Materials Specialist

Attachment: Responsible Party(ies) Legal Requirements/Obligations

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Danielle Stefani, Livermore Pleasanton Fire Department, 3560 Nevada St, Pleasanton, CA 94566  
(Sent via E-mail to: [dstefani@lpfire.org](mailto:dstefani@lpfire.org))

Colleen Winey (QIC 8021), Zone 7 Water Agency, 100 North Canyons Pkwy, Livermore, CA 94551  
(Sent via E-mail to: [cwiney@zone7water.com](mailto:cwiney@zone7water.com))

Damon Brown, Stantec Consulting Corporation, 3017 Kilgore Road, Suite 100, Rancho Cordova, CA 95670 (Sent via E-mail to: [damon.brown@stantec.com](mailto:damon.brown@stantec.com))

Donna Drogos, ACEH (Sent via E-mail to: [donna.drogos@acgov.org](mailto:donna.drogos@acgov.org))  
Jerry Wickham, ACEH (Sent via E-mail to: [jerry.wickham@acgov.org](mailto:jerry.wickham@acgov.org))

GeoTracker, eFile

## Magee, Amanda

---

**From:** Wickham, Jerry, Env. Health <jerry.wickham@acgov.org>  
**Sent:** Tuesday, July 24, 2012 1:42 PM  
**To:** Magee, Amanda  
**Cc:** Brown, Damon; Lichtenberger, Deborah  
**Subject:** RE: 7-11 #32266, 1339 Vasco Road, Livermore, Fuel Leak Case Number RO0002999

Ms. Magee,

The locations of the two monitoring wells as proposed in the Additional Site Assessment Report dated July 20, 2012 are acceptable. The wells may be installed as proposed.

Regards,  
Jerry Wickham  
Alameda County Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577  
phone: 510-567-6791  
[jerry.wickham@acgov.org](mailto:jerry.wickham@acgov.org)

---

**From:** Magee, Amanda [<mailto:Amanda.Magee@stantec.com>]  
**Sent:** Tuesday, July 24, 2012 9:21 AM  
**To:** Wickham, Jerry, Env. Health  
**Cc:** Brown, Damon; Lichtenberger, Deborah  
**Subject:** 7-11 #32266, 1339 Vasco Road, Livermore, Fuel Leak Case Number RO0002999

Mr. Wickham,

I hope you have had a chance to look at the Site Assessment Report submitted for 7-Eleven #32266. We are awaiting your response and approval to move forward with the second phase of investigation (installation of two monitoring wells). Please let me know if you have any questions or comments.

Thank you,

**Amanda Magee, PG**  
Associate Geologist  
Stantec  
3017 Kilgore Road Suite 100  
Rancho Cordova CA 95670  
Ph: (916) 384-0743  
Fx: (916) 861-0430  
Cell: (916) 747-3181  
[Amanda.Magee@stantec.com](mailto:Amanda.Magee@stantec.com)  
**stantec.com**

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# **Attachment B**

## **Well Installation Permits**



# ZONE 7 WATER AGENCY

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 245-9306  
E-MAIL [whong@zone7water.com](mailto:whong@zone7water.com)

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT Continued Environmental Investigation for 7-Eleven Store #32266 at 1339 North Vasco Road, Livermore, CA

PERMIT NUMBER 2012058  
WELL NUMBER 2S/2E-35G12 (MW-4), 2S/2E-35G13  
APN 099B-8122-001-00 (MW-5)

Coordinates Source \_\_\_\_\_ ft. Accuracy \_\_\_\_\_ ft.  
LAT \_\_\_\_\_ ft LONG \_\_\_\_\_ ft.  
APN \_\_\_\_\_

PERMIT CONDITIONS  
(Circled Permit Requirements Apply)

CLIENT  
Name 7-Eleven, Inc. Jose Rios, Manager, Environmental Services  
Address P.O. Box 741 Phone (925) 828-6592  
City Dallas, TX Zip 75231-0741

- A. GENERAL**
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to your proposed starting date.
  2. Submit to Zone 7 within 60 days after completion of permitted work the original **Department of Water Resources Water Well Drillers Report (DWR Form 188), signed by the driller**.
  3. Permit is void if project not begun within 90 days of approval date.
  4. **Notify Zone 7 at least 24 hours before the start of work.**

APPLICANT  
Name Debbie Lichtenberger for Startec Consulting Services, Inc  
Email deborah.lichtenberger@startec.com Fax 916-281-0330  
Address 3017 Kilgore Road, Suite 100 Phone 916-364-0724  
City Rancho Cordova, CA Zip 95670

- B. WATER SUPPLY WELLS**
1. Minimum surface seal diameter is four inches greater than the well casing diameter.
  2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.
  3. Grout placed by tremie.
  4. An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements.
  5. A sample port is required on the discharge pipe near the wellhead.

TYPE OF PROJECT:  
Well Construction  Geotechnical Investigation   
Well Destruction  Contamination Investigation   
Cathodic Protection  Other

- C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS**
1. Minimum surface seal diameter is four inches greater than the well or piezometer casing diameter.
  2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
  3. Grout placed by tremie.

PROPOSED WELL USE:  
Domestic  Irrigation   
Municipal  Remediation   
Industrial  Groundwater Monitoring   
Dewatering  Other

- D. GEOTECHNICAL** Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremie cement grout shall be used in place of compacted cuttings.

DRILLING METHOD:  
Mud Rotary  Air Rotary  Hollow Stern Auger   
Cable Tool  Direct Push  Other

- E. CATHODIC** Fill hole above anode zone with concrete placed by tremie.

DRILLING COMPANY WDC Exploration and Wells

- F. WELL DESTRUCTION** See attached.

DRILLER'S LICENSE NO 293326

- G. SPECIAL CONDITIONS** Submit to Zone 7 within 60 days after completion of permitted work the well installation report including all soil and water laboratory analysis results.

WELL SPECIFICATIONS:  
Drill Hole Diameter 8 in Maximum \_\_\_\_\_  
Casing Diameter 2 in Depth 20 ft.  
Surface Seal Depth 9 ft. Number MW-4 and MW-5

SOIL BORINGS  
Number of Borings 4 Maximum \_\_\_\_\_  
Hole Diameter 2 in Depth 25 ft.

ESTIMATED STARTING DATE after June 1, 2012  
ESTIMATED COMPLETION DATE before June 30, 2012

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

Approved Wynan Hong Date 6/6/12  
Wynan Hong

APPLICANT'S SIGNATURE Debbie Lichtenberger Date 05/02/12

ATTACH SITE PLAN OR SKETCH

**07/10/12 WDC Advance the 4 Soil Borings  
07/26/12 Change of Driller to Gregg Drilling &  
Testing C57-485165 to install the Wells.**

# City of Livermore

Community Development Department  
1052 S. Livermore Avenue  
Livermore, CA 94550  
(925) 960-4500

Encroachment  
Permit No. EN120195  
Type: Other

PERMIT TO DO WORK IN ACCORDANCE WITH CHAPTER 12.08 OF THE LIVERMORE MUNICIPAL CODE AND SPECIFICATIONS AS ADOPTED BY THE CITY OF LIVERMORE AND ANY SPECIAL REQUIREMENTS SHOWN OR LISTED HEREIN.

Permit Fee: \$90.00  
Inspection Fee: \$1,000.00  
Bond: \$0.00

**Applicant/Permittee:**

Name: Stantec Consulting Services  
Address: 3017 Kilgore Rd., Suite 100  
Rancho Cordova, Ca., 95670  
Phone: 916-861-0400

**Total: \$1,090.00**

*Paid  
4/18/12*

**Contractor:**

Name: Wdc Exploration & Wells  
Address: 1961 Meeker Ave.  
Richmond, Ca. 94804  
Phone: 510-236-6282

PLEASE READ THIS PERMIT CAREFULLY. KEEP IT AT THE WORK SITE. TO ARRANGE FOR AN INSPECTION, PHONE (925) 960-4500 AT LEAST 24 HOURS BEFORE YOU START WORK.

**JOB LOCATION: 1339 Vasco Road, North \*\*\*\***

**DESCRIPTION OF WORK: Installation of two (2) Monitoring wells to 20 to 25 FBG along with four soil borings. In the locations adjacent to above referenced site. Well lid to be flush with existing sidewalk/pavement and lid to be locking type. See attached plan with proposed well location.**

Length of Excavation: \_ L.F.                      Width: \_ L.F.                      Depth: \_ L.F.

Attention is directed to the General Provisions printed on the reverse side of this permit and to the attached special requirements (to be determined as needed by the Engineering Division).

Prosecution of Work: All work authorized by the permit shall be performed in a workmanlike, diligent, and expeditious manner, and must be completed to the satisfaction of the City Engineer.

Liability and Damages: The permittee shall be responsible for all liability imposed by law for personal injury or property damage which may arise out of the work permitted and done by permittee under this permit, or which may arise out of the failure on the part of the permittee to perform his obligations under said permit in respect to maintenance and encroachment. The permittee shall protect and indemnify the City of Livermore, its officers and employees, and save them harmless in every way from all action at law for damage or injury to persons or property that may arise out of or be occasioned in any way because of his operations as provided in this permit.

Hold Harmless and Indemnification Agreement: Stantec Consulting Services agrees to defend, indemnify and hold the City of Livermore, elected officials, officers, directors, employees, agents and volunteers harmless from and against any and all loss, liability, damage, including reasonable attorney and expert fees and/or court costs, arising out of or in connection with this agreement, except for the gross negligence and willful misconduct of the City of Livermore, its elected officials, officers, directors, employees, agents and volunteers.

**Stantec Consulting Services**

Signature of Permittee:

By: *[Signature]*

Title: Geologist

Date: 7/3/12

Date Work Completed: \_\_\_\_\_

City Engineer

By: *[Signature]*

Date of Issue: 6-11-12

Inspector: \_\_\_\_\_

## CITY OF LIVERMORE GENERAL PROVISIONS

1. The permittee shall begin work as authorized under this permit within 45 days from the date of issuance, unless a different date is stated in the permit. If the work is not begun within 45 days or the time stated in the permit, the permit shall become void. The permit shall be valid for a term of 6 months from the date of issuance, or as otherwise stated on the permit, unless discontinued by the use or removal of the encroachment for which the permit was issued.
2. This permit is issued only for that portion of work in the City of Livermore public right-of-way.
3. All construction shall be in accordance with City Standard Details and Specifications.
4. Permittee shall notify Underground Service Alert (U.S.A.) at 800-227-2600 prior to excavation. All underground contractors must have U.S.A. inquiry identification number.
5. Permittee is hereby cautioned that unless otherwise noted herein, traffic signal detector loops, wiring, etc., shall not be disturbed. Request marking from the City of Livermore Street Maintenance Dept. at 960-8020.
6. All excavations shall conform to the requirement of the State of California Division of Occupational Safety and Health.
7. Permittee shall furnish all safeguards and post warning signs in advance of work area for vehicular traffic and shall clear the roadway of any obstructions or debris at the end of each work day. All safety devices shall conform to the latest edition of the State of California "Manual of Warning Signs, Lights, and Devices for Use in Performance of Work Upon Highways".
8. No public road under the jurisdiction of the City Engineer shall be closed to travel by the general public without special permission, in writing, from the City Engineer (Sec. 12.08.180 Livermore Municipal Code). No lane closures will be allowed between 6:00 a.m. and 9:00 a.m. or between 3:30 p.m. and 6:30 p.m. At other times, at least one lane of traffic shall be kept open to the general public.
9. No more than 300 linear feet of continuous excavation shall be opened at one time. Excavate only that length of trench which can be backfilled and compacted to specified requirements the same day. Temporary pavement must be placed the same day.
10. Backfill shall be placed in accordance with the current City Standard Detail G-1.
11. Metal plates of sufficient thickness for legal load traffic or temporary paving, 1½" minimum thickness and coated with a "non-skid" material, shall be placed over any unpaved areas at the end of each work day. Temporary pavement must be placed around all edges of said plates. Sidewalk construction areas shall be left in a safe condition.
12. Material excavated from within the City road right-of-way under this permit shall be removed from within the right-of-way and disposed of in a legal manner. (Sec. 12.08.170 Livermore Municipal Code)
13. The right-of-way shall be left clean and orderly daily to the satisfaction of the City Engineer or his representative. The permittee shall give particular attention to maintaining the project in a dust-free condition while performing the various items of work and during non-working periods, including weekends.
14. Job sites left in an unsafe condition will be secured by City personnel and the permittee will be billed for all expenses incurred by the City.
15. Final asphalt concrete surfacing shall be placed within 14 days of completion of each 300 linear feet of excavation. If the edges of the trench have been ravelled prior to final surfacing, the edges shall be re-sawn.
16. Where concrete is placed in a planter strip, score lines, construction joints and expansion joints shall be continued across entire sidewalk area. Where curb, gutter and sidewalk are placed monolithically, the "back edge" of the curb shall be scored.
17. No culverts or storm drains are to be cut or disturbed. Direction of flow and capacity of existing surface water drainage facilities shall not be materially changed.
18. Access to public and private properties adjacent to the public road in which work is authorized shall not be denied by reason of such work. Special measures shall be taken to insure passage for emergency vehicles over and at the site of work at all times.
19. In the event that any future improvement of the road right-of-way necessitates the relocation of the encroachment for which this permit is issued, the permittee shall relocate same at his sole expense.
20. Priority shall be given to operations performed under this contract let by the City of Livermore for certain work at this location. Coordination shall be effected through said Contractor and the Project Representative for the City.
21. Any existing facilities damaged or removed in the course of the work shall be replaced in kind or better, including ground and pavement surfaces, signs, striping, markers, curb, gutter, survey monuments, trees and other vegetation, etc., to the satisfaction of the owner of said facility.
22. In accordance with the Livermore Municipal Code, a cash deposit or surety bond may be required. The deposit placed for this work will be held for 90 days after the final inspection.

**PERMITTEE SHALL NOTIFY CITY INSPECTOR AT 960-4500  
WITHIN THREE (3) DAYS AFTER WORK IS COMPLETED.**

**FAILURE TO COMPLY WITH THESE PROVISIONS WILL RESULT IN  
THE CITY'S TAKING WHATEVER MEASURES NECESSARY  
TO CONFORM TO PERMIT CONDITIONS AND  
THE PERMITTEE WILL BE BILLED FOR ALL EXPENSES INCURRED.**

# **City of Livermore**

Encroachment Permit No. EN120195

Community Development Department  
1052 S. Livermore Avenue  
Livermore, CA 94550  
(925) 960-4500

## ***SPECIAL REQUIREMENTS APPLICABLE TO WORK ASSOCIATED WITH***

### ***JOB LOCATION:***

1339 Vasco Road, North \*\*\*\*

***DESCRIPTION OF WORK:*** Installation of two (2) Monitoring wells to 20 to 25 FBG along with four soil borings. In the locations adjacent to above referenced site. Well lid to be flush with existing sidewalk/pavement and lid to be locking type. See attached plan with proposed well location.

1: See Attached Drawing/Plans

2: Traffic control shall be completed per Cal Trans Standards and any additional requirements deemed necessary by the City Engineer.

3: All work shall be completed between the hours of 9 a.m. and 3 p.m.

4: All lane closures/ traffic control shall be done per Cal Trans Standards.

5: Contractor shall repair/replace all damaged curb, gutter and sidewalk damaged as a result of current work being completed per the City Livermore Standard Details.

6: Pedestrian access must be maintained at all times, including if necessary, escorting pedestrians through the work area.

7: All trenchwork and small excavations in the street shall be completed per City Std Detail G-1.

# **Attachment C**

## **Field Notes**

JOB NAME:	7-Eleven Store #32266	JOB NUMBER:	211502037.230.0600
SITE ADDRESS:	1339 North Vasco Road	START DATE:	8/27/2012
	Livermore, CA	DATE PREPARED:	8/24/2012
PREPARED FOR:	Alex Hernandez	PREPARED BY:	Amanda Magee

### SITE VISITATION REPORT

Name(s) Alejandra Hernandez Date: 8/27/12 Did you call in?  Yes  No  
 Arrival Time: 1320 "Departure Time: \_\_\_\_\_ Who did you call? Amanda  
 Weather Notations:  SUN CLOUDY RAIN SNOW Temperature: ~80's

### DRUM INVENTORY

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

Please take a picture of anything not clearly labeled

### HEALTH AND SAFETY ASSESSMENT

Traffic Hazards, Hospital Route

### DESCRIPTION OF ACTIVITIES ONSITE AND NOTES

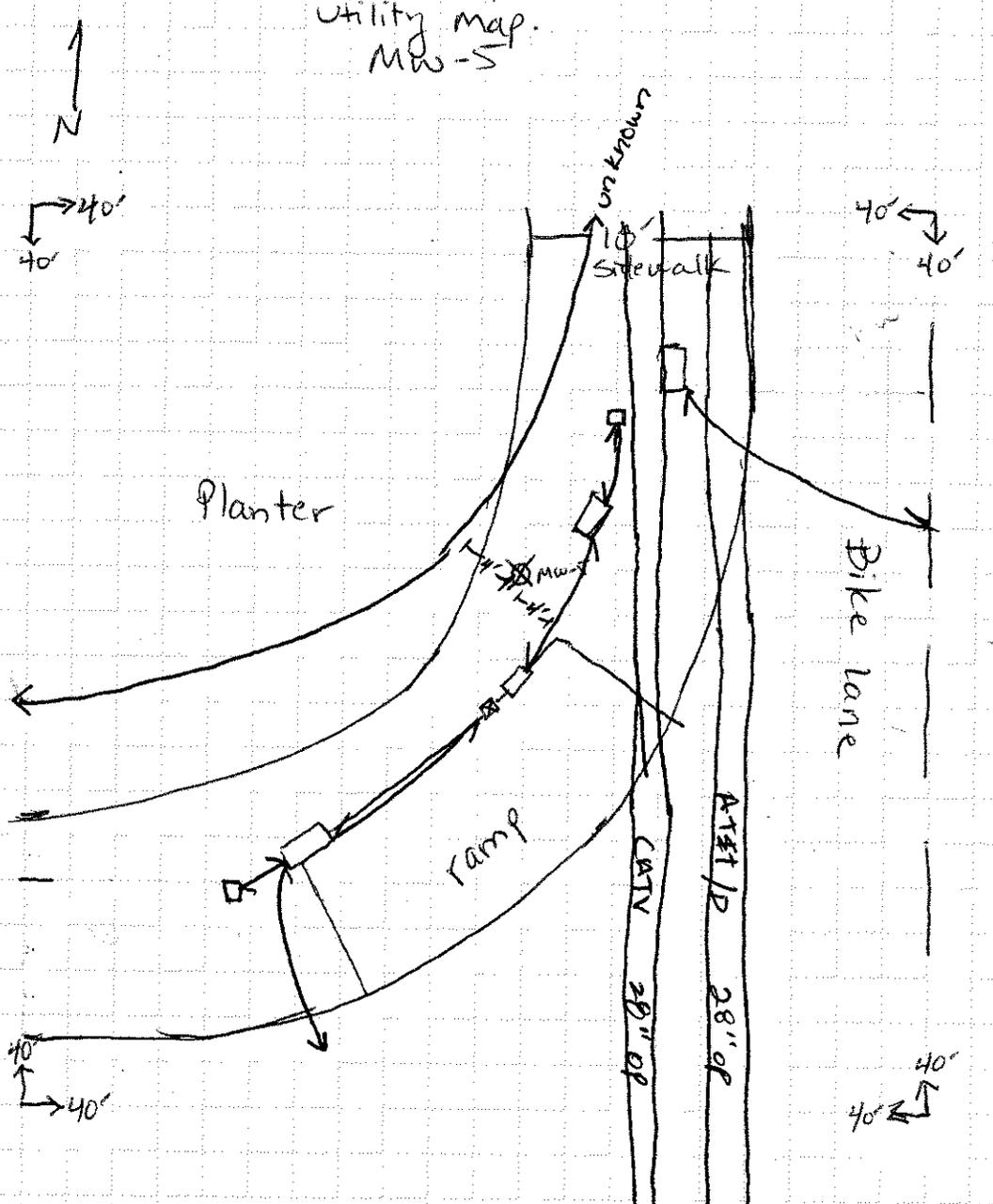
1320 AH arrives on site. AH lets store manager know of upcoming activities.  
 1330 AH calls Amanda to update her of current activities. Mobilize to MW-5 to mark for USA.  
 1400 Cruz Brothers on site: Chris Culver, Begin H&S meeting.  
 1430 Finish H&S meeting. Set up on proposed MW-5 and begin utility locating.  
 1500 Finish utility locating activities at MW-5. Cruz ~~mob~~ off site. AH continues to mark for USA.  
 1620 AH finish USA marking. Call USA-North.  
 USA Ticket # 315788 until 24<sup>th</sup> Sept (well MW-4)  
 USA Ticket # 315802 until 24<sup>th</sup> Sept (well MW-5)  
 1645 AH mob off site.



Stantec

7-Eleven Store No. 32266

Cruz Brothers  
Utility map.  
MAY-5



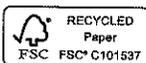
- = light signal
- ⊠ = x-walk button
- ▭ = Traffic signal boxes.

⊠ = proposed well location.

Not 100% to scale.

Designed by:

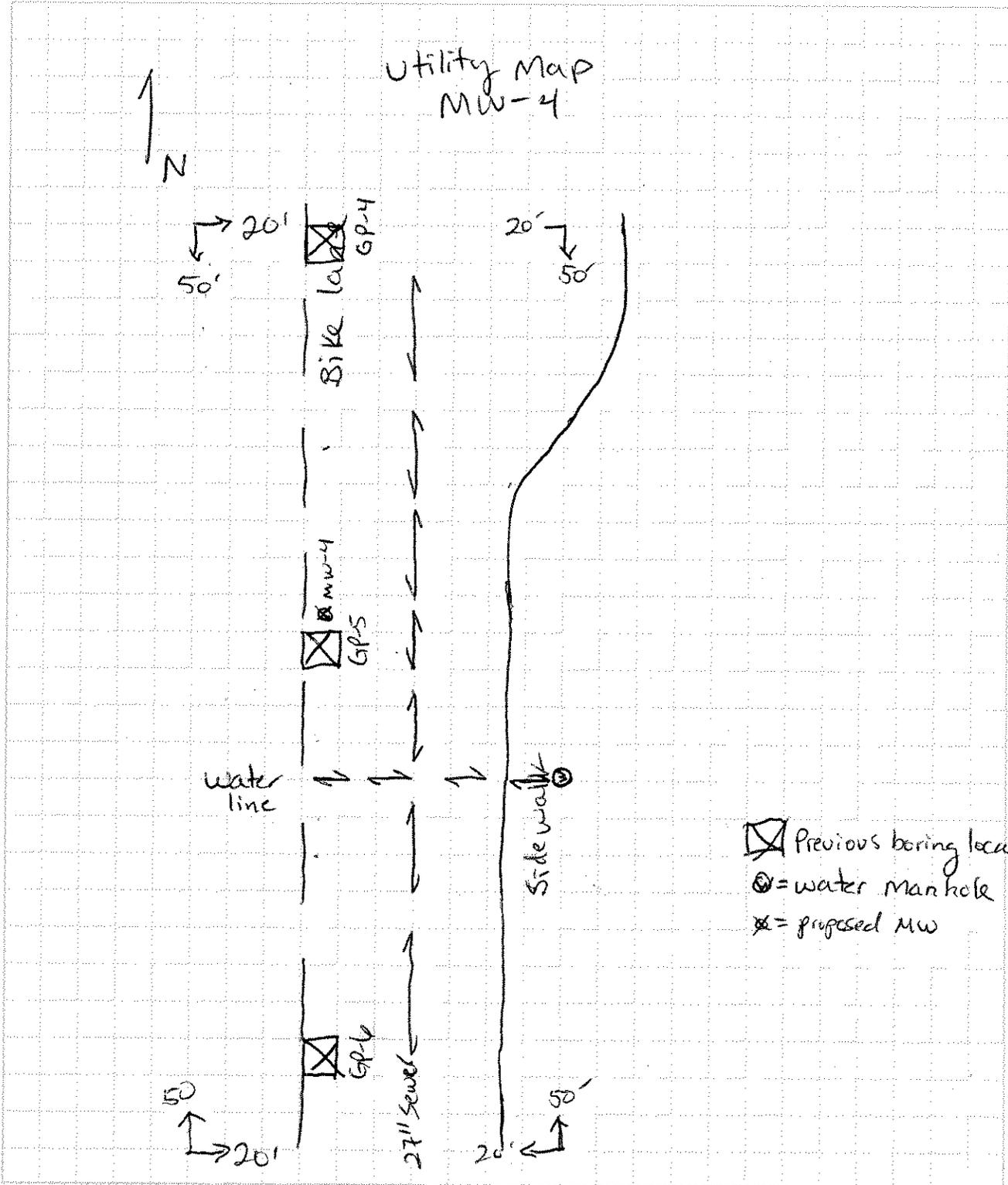
Checked by:





Stantec

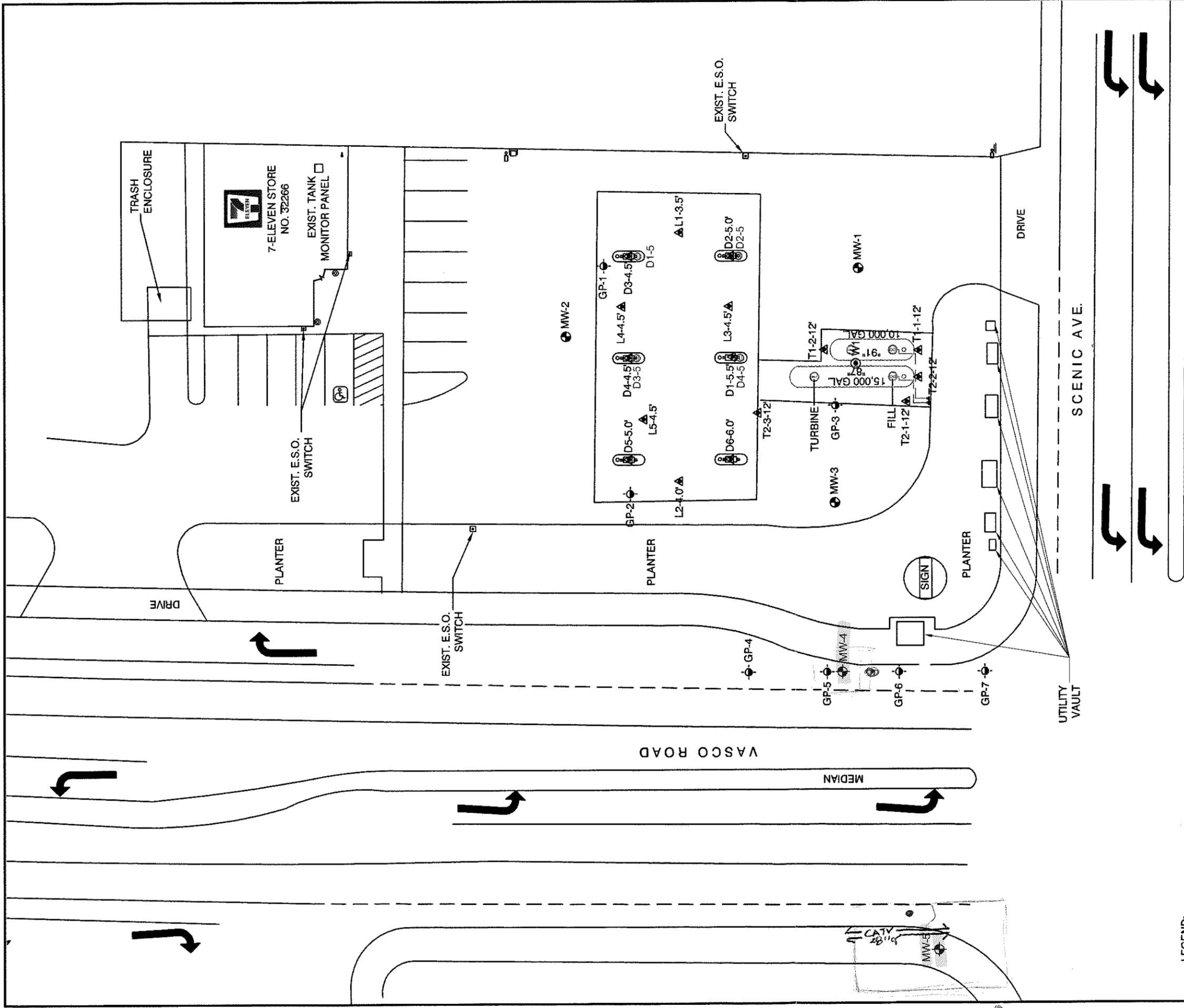
7-Eleven Store No. 32266



Designed by:

Checked by:





**LEGEND:**

- MW-4
- MW-1
- W1
- GP-1
- L5-4.5'
- D1-5
- PROPOSED GROUNDWATER MONITORING WELL
- GROUNDWATER MONITORING WELL
- UST EXCAVATION WATER SAMPLE LOCATION
- GEOPROBE SAMPLE LOCATION
- 2005 SOIL SAMPLE LOCATION
- 2008 SOIL SAMPLE LOCATION

No warranty is made by Stantec Consulting Services Inc. as to the accuracy, reliability, or completeness of these data. Original data were obtained from the City of Livermore, California. The data were not independently verified by Stantec Consulting Services Inc. The data were prepared 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

**SITE PLAN WITH PROPOSED MONITORING WELL LOCATIONS**

FIGURE: **2**

CHECKED BY: ASM  
APPROVED BY: DB

DATE: 07/17/12

JOB NAME:	7-Eleven Store #32266	JOB NUMBER:	211502037.230.0600
SITE ADDRESS:	1339 North Vasco Road Livermore, California	START DATE:	9/4/2012
PREPARED FOR:	Alejandra Hernandez	DATE PREPARED:	8/30/2012
		PREPARED BY:	Amanda Magee

### SITE VISITATION REPORT

Name(s) Alejandra Hernandez Date: 9/4/12 Did you call in? (Yes) No  
 Arrival Time: 0800 "Departure Time: \_\_\_\_\_ Who did you call? Damon Brown  
 Weather Notations: (SUN) CLOUDY RAIN SNOW Temperature: ~80's F

### DRUM INVENTORY

<b>STANTEC'S ENVIRONMENTAL:</b>		<b>7-ELEVEN'S FACILITY:</b>		<b>TOTALS:</b>	
Purge Water	<u>0</u>	Locked/Labeled HAZ	<u>1</u>	Total Open Top	<u>7</u>
Soil	<u>3</u>	Other: <u>Empty</u>	<u>3</u>	Total Bung Top	<u>7</u>
Concrete/Debris	<u>0</u>	Other:			
Other:	<u>0</u>				
Empty	<u>0</u>				

Please take a picture of anything not clearly labeled

### HEALTH AND SAFETY ASSESSMENT

H&S, Traffic, pedestrians, busy street, JMP, JSA's.

### DESCRIPTION OF ACTIVITIES ONSITE AND NOTES

0800 AH on site. Gregg Drilling on site: Nicholas A. Lackey and Richard Ryan. Waiting for Statewide.  
0900 Statewide on site: Beau Majewski, Begin H&S tailgate meeting.  
0930 Finish H&S with Statewide. Begin Traffic control set up.  
0945 Finish H&S meeting with Gregg. Wait for traffic control to be set.  
1025 Finish setting up traffic control. Begin setting up equipment & exclusion zone on MW-4.  
Note: Modifications were done to traffic control. A left turning lane will be closed and a NO-Uturn sign will be placed. See modifications in traffic control plan for more details.  
1035 Begin air knife activities.  
1310 Finish air knife activities on MW-4. Begin demob activities.  
1330 Begin picking up traffic control.  
1400 Gregg off site.  
1415 Statewide and AH off site.

Day 2 9/5/12

0800 AH on site.  
0810 Gregg Drilling: Nicholas A. Lackey and Sean Rakow, and

JOB NAME:	7-Eleven Store #32266	JOB NUMBER:	211502037.230.0600
SITE ADDRESS:	1339 North Vasco Road Livermore, California	START DATE:	9/4/2012
PREPARED FOR:	Alejandra Hernandez	DATE PREPARED:	8/30/2012
		PREPARED BY:	Amanda Magee

### DESCRIPTION OF ACTIVITIES ON SITE AND NOTES (cont)

Field Work Conducted By: Alejandra Hernandez Date: 9/5/12

Statewide & Beau Majewski, on site  
 0820 Begin H&S meeting.  
 0850 Finish H&S meeting. Begin Traffic control set up  
 AH noticed a Livermore representative marking utilities again.  
~~Water line~~ ~~marks~~ moved water markings were moved to new location, Old markings were deleted. New water markings are 1ft away from ~~the~~ MW-4. AH called PM to notify of change, and called city of Livermore water district to come out and ~~verify~~ verify new markings. City of Livermore water: ~~916~~ (925) 960-8100.  
 0930 Finish Traffic control set up. All on Standby due to new markings.  
 1000 City of Livermore water representative on site. He confirms that the new markings are correct. Old markings were from an older map/asbuilt. All work will stop for today. Tomorrow a new location will be air knifed.  
 Gregg drilling Mob off site. Begin picking up traffic control.  
 1050 Finish picking up traffic control. Statewide and AH off site.

Day 3 9/6/12

0800 AH and Statewide on site. Begin H&S meeting with Statewide.  
 0840 Gregg Drilling on site. Begin H&S meeting with Gregg.  
 0850 Begin traffic control/set up.  
 0900 Finish H&S meeting with Gregg. Wait for traffic control to finish setup.  
 0935 Finish setting up traffic control. Begin setting up equipment and exclusion zone.  
 0945 City of Livermore water representative on site for air knife activities: Jim Leberg, Water Resources Coordinator. Begin air knife activities.  
 1025 City of Livermore Engineering Div. on site: Robert Tingky. RT observed traffic control and left after a few minutes.  
 1145 All break for lunch. Jim Leberg is no longer on site.  
 1215 All break from lunch. Conduct 2<sup>nd</sup> tailgate meeting.  
 1225 Finish tailgate meeting. Begin air knife activities.  
 1400 Finish air knife activities. Air knife Truck mob off site. Begin demobilization activities.

JOB NAME:	7-Eleven Store #32266	JOB NUMBER:	211502037.230.0600
SITE ADDRESS:	1339 North Vasco Road Livermore, California	START DATE:	9/4/2012
PREPARED FOR:	Alejandra Hernandez	DATE PREPARED:	8/30/2012
		PREPARED BY:	Amanda Magee

**DESCRIPTION OF ACTIVITIES ON SITE AND NOTES (cont)**

Field Work Conducted By: Alejandra Hernandez Date: 9/6/12

1440 Gregg off site. Begin picking up traffic control.

1530 AH and Statewide off site

Day 4 9/7/12

0800 AH and statewide on site.

0810 Gregg on site. Begin H&S meeting.

0840 Finish H&S meeting. Begin setting up traffic control. AH called Inspector to let him know of today's activities. Inspector will be on site as his schedule permits. He gave us an ok to begin working without him.

0910 Begin setting up equipment.

0920 Begin drilling activities.

1145 Inspector on site. Observes activities and hands leaves site.

Inspector is ok with work.

1205 Finish installing monitoring well MW-4. Begin demob activities.

1235 As Gregg Drilling was about to leave site, a 7-up delivery truck parked next to the Gregg Drilling truck finished merchandise delivery to the 7-Eleven store. The 7-up delivery truck (Splash Transport Inc.) proceeded to mobilize off site and did not realize that the Gregg Drilling driver side door was open. As the 7-up delivery truck moved forward, he damaged the driver side door to the Gregg Drilling Support truck. No additional damage and no body injuries occurred. 7-up driver and Gregg Drilling exchanged information and documented incident.

1250 Gregg Drilling off site. Begin traffic control pick up.

1335 AH and Statewide off site.

JOB NAME:	7-Eleven Store #32266	JOB NUMBER:	211502037.230.0600
SITE ADDRESS:	1339 North Vasco Road	START DATE:	9/4/2012
	Livermore, California	DATE PREPARED:	8/30/2012
PREPARED FOR:	Alejandra Hernandez	PREPARED BY:	Amanda Magee

### SITE VISITATION REPORT

Name(s) Colin Ryan Date: 9/12/12 Did you call in? (Yes) No  
 Arrival Time: 7:40 "Departure Time: \_\_\_\_\_ Who did you call? Amanda Magee  
 Weather Notations: (SUN) CLOUDY RAIN SNOW Temperature: \_\_\_\_\_ F

### DRUM INVENTORY

**STANTEC'S ENVIRONMENTAL:**  
 Purge Water \_\_\_\_\_  
 Soil \_\_\_\_\_  
 Concrete/Debris \_\_\_\_\_  
 Other: \_\_\_\_\_  
 Empty \_\_\_\_\_

**7-ELEVEN'S FACILITY:**  
 Locked/Labeled HAZ \_\_\_\_\_  
 Other: \_\_\_\_\_  
 Other: \_\_\_\_\_

**TOTALS:**  
 Total Open Top \_\_\_\_\_  
 Total Bung Top \_\_\_\_\_

Please take a picture of anything not clearly labeled

### HEALTH AND SAFETY ASSESSMENT

PPE  
Foot/Car Traffic  
Road Hazards

### DESCRIPTION OF ACTIVITIES ONSITE AND NOTES

7:40 - Arrived onsite, reviewed HAZP, called in to Amanda Magee  
- Gregg Drilling is already onsite.  
8:15 - Statewide arrives onsite  
- Held H+S meeting  
8:30 - Held H+S meeting w/ Gregg Drilling  
9:15 - Traffic control setup, begin setup on borehole  
9:40 - Begin hand clearing MW-5 to 7' bgs  
11:00 - Obstruction found @ 6.5' bgs  
- PVC piping, unmarked, surrounded by clean sand  
- Called in + informed Damon Brown that we will be  
moving locations and that we will not have time to drill today.  
11:15 - Begin hand clearing second location  
- Second obstruction located, no more available locations  
11:30 - Called in to Amanda Magee + Damon Brown  
- Directed to abandon locations + mob back to office to come up  
with another drilling location  
12:40 - Both boreholes capped with concrete  
- Take lunch break while concrete sets



JOB NAME:	7-Eleven Store #32266	JOB NUMBER:	211502037.230.0600
SITE ADDRESS:	1339 North Vasco Road Livermore, California	START DATE:	9/14/2012
PREPARED FOR:	Colin Ryan	DATE PREPARED:	9/13/2012
		PREPARED BY:	Amanda Magee

### SITE VISITATION REPORT

Name(s) Colin Ryan Date: 9/14/12 Did you call in?  Yes  No  
 Arrival Time: 7:40 "Departure Time: \_\_\_\_\_ Who did you call? Amanda Magee  
 Weather Notations: (SUN) CLOUDY RAIN SNOW Temperature \_\_\_\_\_ F

### DRUM INVENTORY

<u>STANTEC'S ENVIRONMENTAL:</u>		<u>7-ELEVEN'S FACILITY:</u>		<u>TOTALS:</u>	
Purge Water	<u>1</u>	Locked/Labeled HAZ	<u>1</u>	Total Open Top	<u>9</u>
Soil	<u>4</u>	Other:	_____	Total Bung Top	_____
Concrete/Debris	_____	Other:	_____		
Other:	_____				
Empty	<u>3</u>				

Please take a picture of anything not clearly labeled

### HEALTH AND SAFETY ASSESSMENT

PPE  
Foot/Car Traffic

### DESCRIPTION OF ACTIVITIES ONSITE AND NOTES

7:40 - Arrived onsite, reviewed HAZP, called in to Amanda Magee  
8:15 - Statewide arrives onsite  
- Held H&S meeting  
8:30 - Begin traffic control setup  
- Gregg Drilling arrives onsite  
- Held H&S meeting  
9:20 - Traffic control setup  
- Mob into street to develop MW-4 (Approx 10' of water in well)  
9:40 - Begin surging well  
- Bailing + surging complete, begin pumping 10 casing volumes.  
11:30 - Site clean, wait for Traffic Control to be removed  
12:00 - Traffic control removed, leave site for Sacramento

JOB NAME:	7-Eleven Store #32266	JOB NUMBER:	211502037.230.0600
SITE ADDRESS:	1339 North Vasco Road	START DATE:	9/14/2012
	Livermore, California	DATE PREPARED:	9/13/2012
PREPARED FOR:	Colin Ryan	PREPARED BY:	Amanda Magee

**GROUNDWATER GAUGING FORM**

MEASURED TO TOC

WELL I.D.	CONST. DTB	WELL DIAM.	WELL ELEV. TOC	DTB	DTW	DTP/PT	D.O. (mg/L)	COMMENTS Please note if well needs locking cap or street box repair
MW-4		2"	/	19.45	9.10 9:40	start post bailing		

See attached gauging sheet





JOB NAME:	7-Eleven Store #32266	JOB NUMBER:	211502037.230.0700
SITE ADDRESS:	1339 North Vasco Road Livermore, California	START DATE:	9/20/2012
PREPARED FOR:	Alejandra Hernandez	DATE PREPARED:	9/21/2012
		PREPARED BY:	Amanda Magee

### SITE VISITATION REPORT

Name(s) Alejandra Hernandez Date: 9-21-12 Did you call in?  Yes  No  
 Arrival Time: 0810 "Departure Time: 1345 Who did you call? Amanda  
 Weather Notations:  SUN  CLOUDY  RAIN  SNOW Temperature ~80s 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>9</u>
Soil	<u>4</u>	Other: <u>Empty</u>	<u>23</u>	Total Bung Top	
Concrete/Debris	<u>-</u>	Other:			
Other:	<u>-</u>				
Empty	<u>-</u>				

Please take a picture of anything not clearly labeled

### HEALTH AND SAFETY ASSESSMENT

HASP, JMP, Traffic control, pedestrians, weather, active station.  
 Attended:  
Beau Majewski Statewide P-MA  
 Conducted by:  
Alejandra Hernandez

### DESCRIPTION OF ACTIVITIES ONSITE AND NOTES

0810 AH arrives on site. Statewide on site: Beau Majewski. Two Stantec staff on site to conduct GPS locating. AH gives H&S tailgate meeting.  
 0840 AH finish tailgate meeting. Traffic control begins setup. AH sets up on MW-1 and MW-2 to begin gauging activities.  
 0930 Finish gauging MW-1 and MW-2. Mobilize to MW-4. Traffic control finish set up and Stantec staff begin GPS activities.  
 0935 Stantec staff finish GPS activities and mob off site. AH begins gauging and sampling activities on MW-4.  
 1115 Finish gauging and sampling MW-4. AH mobilizes to MW-3. Traffic control begins de-constructing Traffic control.  
 1130 Set up exclusion zone at MW-3 and begin gauging and sampling activities.  
 1150 Statewide finishes with traffic control. Statewide mobilize off site.  
 1250 Finish gauging and sampling activities. Purge ground water into 55-gallon drums.  
 1340 Finish activities. AH mob off site.

JOB NAME:	7-Eleven Store #32266	JOB NUMBER:	211502037.230.0700
SITE ADDRESS:	1339 North Vasco Road	START DATE:	9/20/2012
	Livermore, California	DATE PREPARED:	9/21/2012
PREPARED FOR:	Alejandra Hernandez	PREPARED BY:	Amanda Magee

**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"		19.00	8.40	- 1 -	-	08:50	
MW-2	20	2"		19.21	8.83	- 1 -	-	09:10	
MW-4	20	2"		19.33	9.01	- 1 -	-	09:36	needs well lock.
MW-3	20	2"		20.08	9.55	- 1 -	-	11:36	



# Stantec Consulting Corp.

## WATER SAMPLE FIELD DATA SHEET

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

DATE PURGED 9/21/12      START (2400hr) 1150      END (2400hr) 1237  
 DATE SAMPLED 9/21/12      SAMPLE TIME (2400hr) 1245  
 SAMPLE TYPE:      Groundwater       Surface Water \_\_\_\_\_      Treatment Effluent \_\_\_\_\_      Other \_\_\_\_\_

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

DEPTH TO BOTTOM (feet) = 20.08      CASING VOLUME (gal) = 1.79  
 DEPTH TO WATER (feet) = 9.55      CALCULATED PURGE (gal) = 5.37  
 WATER COLUMN HEIGHT (feet) = 10.53      ACTUAL PURGE (gal) = 5.5

### FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees C)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)

SAMPLE DEPTH TO WATER: 9.55      SAMPLE INFORMATION      SAMPLE TURBIDITY: —

80% RECHARGE:  YES     NO      ANALYSES: BTEX, TPHg, 5 Oxygenates (EPA 8260B)  
 ODOR: NONE      SAMPLE VESSEL / PRESERVATIVE: HCL

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

WELL INTEGRITY: Excellent      LOCK#: \_\_\_\_\_

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SIGNATURE: [Signature]      Page 1 of 1

# **Attachment D Soil Boring Log**

PROJECT: **7-Eleven Store # 32266**  
 LOCATION: **1339 Vasco Rd., Livermore, CA**  
 PROJECT NUMBER:

WELL/PROBEHOLE/BOREHOLE NO:  
**MW-4**



DRILLING / INSTALLATION:  
 STARTED: **9/6/12** COMPLETED: **9/7/12**  
 DRILLING COMPANY: **Gregg Drilling**  
 DRILLING EQUIPMENT: **Hollow Stem**  
 DRILLING METHOD: **Auger**  
 SAMPLING EQUIPMENT: **Direct Push**

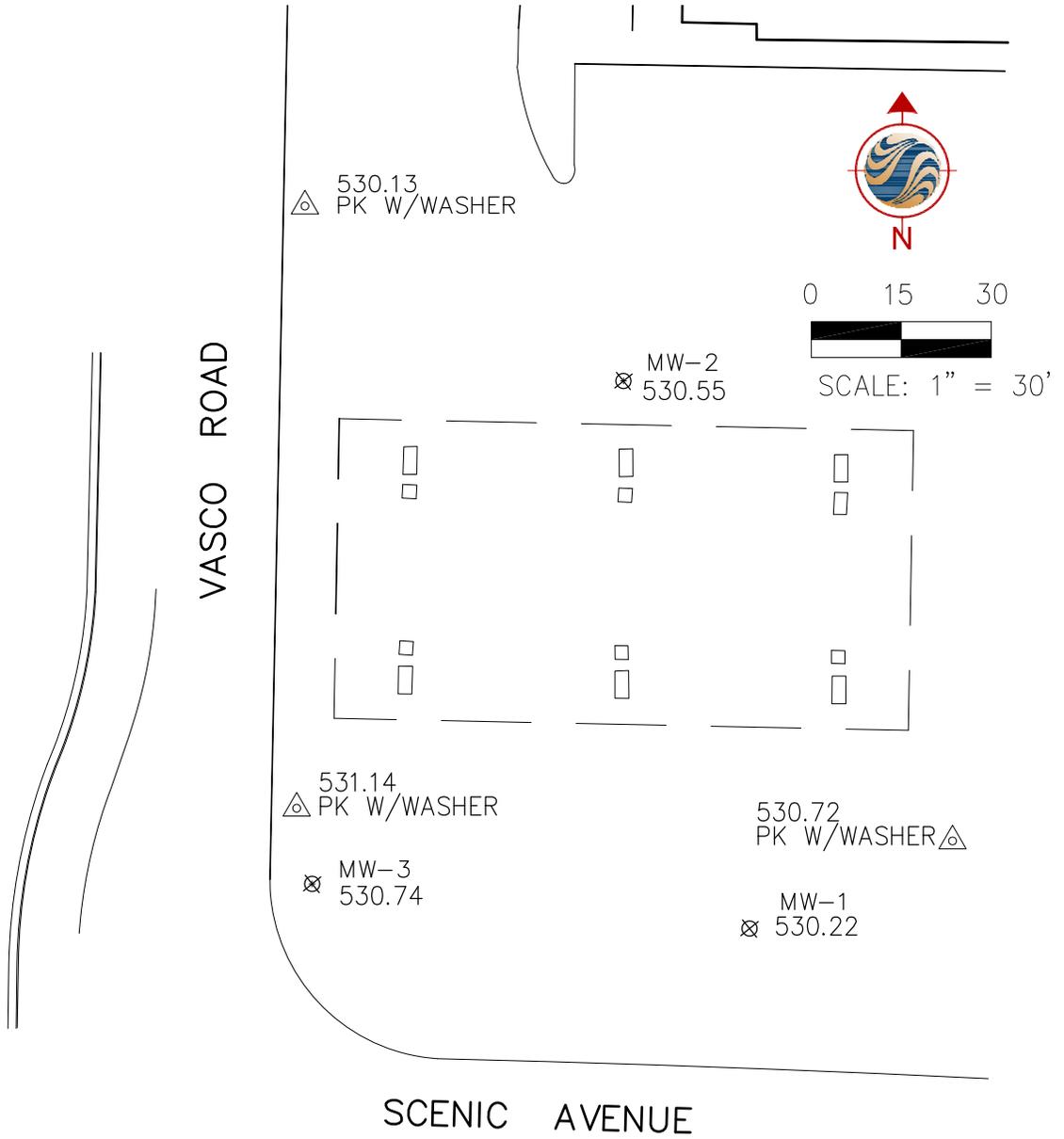
NORTHING (ft):  
 LAT:  
 GROUND ELEV (ft):  
 INITIAL DTW (ft): **Not Encountered**  
 STATIC DTW (ft): **9.5**  
 WELL CASING DIA. (in): **2**  
 LOGGED BY: **A. Hernandez**

EASTING (ft):  
 LONG:  
 TOC ELEV (ft):  
 WELL DEPTH (ft): **23.0**  
 BOREHOLE DEPTH (ft): **25.0**  
 BOREHOLE DIA. (in): **8**  
 CHECKED BY: **A. Magee**

GEO FORM 304 MW-4.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 10/3/12

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
			Asphalt to 16"							8" Well Box
			Base Rock to 2.8'							Grout
		CL	<b>LEAN CLAY</b> ; CL; 2.5Y 3/1 very dark gray; high plasticity; hard; moist; no HC odor; Trace of coarse gravel, (0,5,95)	■	Bag Sample			0.1		Bentonite
5		CL	<b>LEAN CLAY WITH SAND</b> ; CL; 10YR 4/3 brown; medium plasticity; very soft; moist; no HC odor; (0,15,85)	■	11:20 MW-4-5			0.0	5	
		CL	<b>LEAN CLAY WITH SAND</b> ; CL; 10YR 4/3 brown; medium plasticity; very soft; moist; no HC odor; (0,15,85)							
10		CL	<b>LEAN CLAY</b> ; CL; 10YR 4/4 dark yellowish brown; low plasticity; firm; moist; no HC odor; some caliche, (0,5,95)	■	09:50 MW-4-10			0.0	10	
		CL	<b>LEAN CLAY</b> ; CL; 10YR 4/4 dark yellowish brown; low plasticity; firm; moist; no HC odor; some caliche, (0,5,95)			18				
15		CL	<b>LEAN CLAY</b> ; CL; 10YR 4/4 dark yellowish brown; low plasticity; firm; moist; no HC odor; some caliche, (0,5,95)	■	09:55 MW-4-15			0.1	15	
		CL	<b>LEAN CLAY</b> ; CL; 10YR 4/4 dark yellowish brown; high plasticity; hard; moist; no HC odor; with light brown mottling, (0,5,95)							
20		CL	<b>LEAN CLAY</b> ; CL; 10YR 4/4 dark yellowish brown; high plasticity; hard; moist; no HC odor; with light brown mottling, (0,5,95)	■	10:00 MW-4-20			0.2	20	
		CL	<b>LEAN CLAY</b> ; CL; 10YR 4/4 dark yellowish brown; high plasticity; hard; moist; no HC odor; with light brown mottling, (0,5,95)	■	Bag Sample			0.7		
25			No recovery 23-25' bgs. Overdrilled to 20' bgs. with auger and direct push sampling to 25' bgs.							
			Borehole terminated at 25 feet.						25	#3 Sand 0.020" Slotted Screen

# Attachment E Survey Map



	LATITUDE	LONGITUDE	
MW-1	37.7172456	-121.7236444	530.22
MW-2	37.7174954	-121.7237213	530.55
MW-3	37.7172630	-121.7238969	530.74
MW-4	37.7172646	-121.7240997	529.93
GP-4	37.7173381	-121.7240893	530.43
GP-5	37.7172801	-121.7240942	530.46
GP-6	37.7172268	-121.7240957	530.52
GP-7	37.7171572	-121.7240934	530.48

	NORTHING	EASTING	
MW-1	2085941.283	6207742.337	530.22
MW-2	2086032.540	6207721.306	530.55
MW-3	2085948.598	6207669.408	530.74
MW-4	2085949.932	6207610.757	529.93
GP-4	2085976.654	6207614.108	530.43
GP-5	2085955.556	6207612.415	530.46
GP-6	2085936.161	6207611.736	530.52
GP-7	2085910.821	6207612.062	530.48

V:\2115\active\211502037\dwg\211502037v-xp.dwg nmanrique 9/28/12 14:02

SEPTEMBER, 2012  
211502037

ORIGINAL SHEET - ANSI A



**Stantec**

**Stantec Consulting Inc.**

1016 - 12th Street  
Modesto CA  
95354  
Tel. 209.521.8986  
Fax. 209.521.9045  
www.stantec.com

Client/Project

7-ELEVEN  
STORE NO. 32266

Figure No.

Title

**MONITORING WELL  
SURVEY**

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



## Laboratory Results

Damon Brown  
Stantec Consulting Services Inc.  
3017 Kilgore Road, Suite 100  
Rancho Cordova, CA 95670

Subject : 3 Soil Samples  
Project Name : 7-Eleven Store #32266  
Project Number : 211502037.230.0400

Dear Mr. Brown,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed. Testing procedures comply with the 2003 NELAC 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 : 3 Soil Samples  
Project Name : 7-Eleven Store #32266  
Project Number : 211502037.230.0400

## Case Narrative

All soil samples were reported on a total weight (wet weight) basis.

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

Project Number : **211502037.230.0400**

Sample : **MW-4@10'**

Matrix : Soil

Lab Number : 82534-01

Sample Date :09/07/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/11/12 12:52
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/11/12 12:52
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/11/12 12:52
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/11/12 12:52
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/11/12 12:52
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	09/11/12 12:52
1,2-Dichloroethane-d4 (Surr)	97.9		% Recovery	EPA 8260B	09/11/12 12:52
Toluene - d8 (Surr)	99.6		% Recovery	EPA 8260B	09/11/12 12:52

Sample : **MW-4@15'**

Matrix : Soil

Lab Number : 82534-02

Sample Date :09/07/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/11/12 13:30
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/11/12 13:30
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/11/12 13:30
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/11/12 13:30
<b>Methyl-t-butyl ether (MTBE)</b>	<b>0.010</b>	0.0050	mg/Kg	EPA 8260B	09/11/12 13:30
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	09/11/12 13:30
1,2-Dichloroethane-d4 (Surr)	104		% Recovery	EPA 8260B	09/11/12 13:30
Toluene - d8 (Surr)	99.8		% Recovery	EPA 8260B	09/11/12 13:30

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

Project Number : **211502037.230.0400**

Sample : **MW-4@19.5'**

Matrix : Soil

Lab Number : 82534-03

Sample Date :09/07/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/11/12 14:07
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/11/12 14:07
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/11/12 14:07
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/11/12 14:07
<b>Methyl-t-butyl ether (MTBE)</b>	<b>0.016</b>	0.0050	mg/Kg	EPA 8260B	09/11/12 14:07
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	09/11/12 14:07
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	09/11/12 14:07
Toluene - d8 (Surr)	99.5		% Recovery	EPA 8260B	09/11/12 14:07

**QC Report : Method Blank Data**

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

Project Number : **211502037.230.0400**

<u>Parameter</u>	<u>Measured Value</u>	<u>Method Reporting Limit</u>	<u>Units</u>	<u>Analysis Method</u>	<u>Date Analyzed</u>
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/11/2012
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/11/2012
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/11/2012
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/11/2012
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/11/2012
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	09/11/2012
1,2-Dichloroethane-d4 (Surr)	105		%	EPA 8260B	09/11/2012
Toluene - d8 (Surr)	99.2		%	EPA 8260B	09/11/2012

<u>Parameter</u>	<u>Measured Value</u>	<u>Method Reporting Limit</u>	<u>Units</u>	<u>Analysis Method</u>	<u>Date Analyzed</u>
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**QC Report : Matrix Spike/ Matrix Spike Duplicate**Project Name : **7-Eleven Store #32266**Project Number : **211502037.230.0400**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	82543-02	<0.0050	0.0391	0.0392	0.0377	0.0373	mg/Kg	EPA 8260B	9/11/12	96.4	95.1	1.39	67.9-120	25
Ethylbenzene	82543-02	<0.0050	0.0391	0.0392	0.0403	0.0406	mg/Kg	EPA 8260B	9/11/12	103	103	0.217	65.5-127	25
Methyl-t-butyl ether	82543-02	<0.0050	0.0391	0.0392	0.0386	0.0353	mg/Kg	EPA 8260B	9/11/12	98.7	90.1	9.18	57.0-122	25
P + M Xylene	82543-02	<0.0050	0.0391	0.0392	0.0404	0.0407	mg/Kg	EPA 8260B	9/11/12	103	104	0.295	62.5-124	25
Toluene	82543-02	<0.0050	0.0391	0.0392	0.0373	0.0376	mg/Kg	EPA 8260B	9/11/12	95.6	95.9	0.373	65.7-120	25

**QC Report : Laboratory Control Sample (LCS)**Project Name : **7-Eleven Store #32266**Project Number : **211502037.230.0400**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	0.0397	mg/Kg	EPA 8260B	9/11/12	96.3	67.9-120
Ethylbenzene	0.0397	mg/Kg	EPA 8260B	9/11/12	102	65.5-127
Methyl-t-butyl ether	0.0397	mg/Kg	EPA 8260B	9/11/12	92.8	57.0-122
P + M Xylene	0.0397	mg/Kg	EPA 8260B	9/11/12	102	62.5-124
Toluene	0.0397	mg/Kg	EPA 8260B	9/11/12	95.8	65.7-120

# Stantec Chain-of-Custody Record

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

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

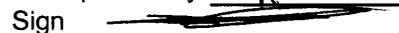
Project # 211502037.230 Task # 0400  
 Project Manager Damon Brown  
 Laboratory Kiff Analytical  
 Turnaround Time Standard

Sampler's Name Alejandra Hernandez  
 Sampler's Signature 

Sample ID	Date	Time	Matrix
MW-4@10'	9/7/12	0950	Soil
MW-4@15'	9/7/12	0955	Soil
MW-4@20' 19.5'	9/7/12	1000	Soil
MW-4@25'	9/6/12	1120	Soil

Analysis Request												Number of Containers
HCID	TPHG & BTEX by EPA 8260B	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 by EPA 8260B	1,2 DCA - 8260B	MBE by EPA 8260B		
	X									X	Hold	7
	X									X		1
	X									X		1
										X	PM will email	1

Special Instructions/Comments  
**Global ID #T10000001067**  
 email EDD and lab report to [debbie.lichtenberger@stantec.com](mailto:debbie.lichtenberger@stantec.com),  
[damon.brown@stantec.com](mailto:damon.brown@stantec.com),  
[amanda.magee@stantec.com](mailto:amanda.magee@stantec.com)

Relinquished by: AH  
 Sign   
 Print Alejandra Hernandez  
 Company Stantec  
 Time 1700 Date 9/7/12

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

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

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

Received by: Levi Roberts  
 Sign   
 Print Levi Roberts  
 Company Kiff Analytical  
 Time 1700 Date 090712

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

61000000





## Laboratory Results

Damon Brown  
Stantec Consulting Services Inc.  
3017 Kilgore Road, Suite 100  
Rancho Cordova, CA 95670

Subject : 1 Soil Sample  
Project Name : 7-Eleven Store #32266  
Project Number : 211502037.220.0400

Dear Mr. Brown,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed. Testing procedures comply with the 2003 NELAC 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 : 1 Soil Sample  
Project Name : 7-Eleven Store #32266  
Project Number : 211502037.220.0400

## Case Narrative

All soil samples were reported on a total weight (wet weight) basis.

Matrix Spike/Matrix Spike Duplicate results associated with sample SP1(ABCD) for the analyte Ethylbenzene were affected by the analyte concentrations already present in the un-spiked sample.

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

Project Number : **211502037.220.0400**

Sample : **SP1(ABCD)**

Matrix : Soil

Lab Number : 82535-01

Sample Date :09/07/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
<b>Lead</b>	<b>6.1</b>	0.50	mg/Kg	EPA 6010B	09/13/12 12:05
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/13/12 16:37
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/13/12 16:37
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/13/12 16:37
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/13/12 16:37
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/13/12 16:37
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	09/13/12 16:37
1,2-Dichloroethane-d4 (Surr)	112		% Recovery	EPA 8260B	09/13/12 16:37
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	09/13/12 16:37

**QC Report : Method Blank Data**

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

Project Number : **211502037.220.0400**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Lead	< 0.50	0.50	mg/Kg	EPA 6010B	09/12/2012
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/13/2012
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/13/2012
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/13/2012
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/13/2012
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/13/2012
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	09/13/2012
1,2-Dichloroethane-d4 (Surr)	106		%	EPA 8260B	09/13/2012
Toluene - d8 (Surr)	99.4		%	EPA 8260B	09/13/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
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**QC Report : Matrix Spike/ Matrix Spike Duplicate**Project Name : **7-Eleven Store #32266**Project Number : **211502037.220.0400**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Lead	82488-01	4.1	50.0	50.0	46.5	46.8	mg/Kg	EPA 6010B	9/12/12	84.8	85.5	0.697	75-125	20
Benzene	82537-03	<0.0050	0.0388	0.0394	0.0363	0.0342	mg/Kg	EPA 8260B	9/13/12	93.5	87.0	7.22	67.9-120	25
<b>Ethylbenzene</b>	82537-03	0.028	0.0388	0.0394	0.0481	0.0452	mg/Kg	EPA 8260B	9/13/12	<b>52.0</b>	<b>43.9</b>	16.8	65.5-127	25
Methyl-t-butyl ether	82537-03	<0.0050	0.0388	0.0394	0.0368	0.0374	mg/Kg	EPA 8260B	9/13/12	94.8	94.9	0.190	57.0-122	25
P + M Xylene	82537-03	<0.0050	0.0388	0.0394	0.0383	0.0340	mg/Kg	EPA 8260B	9/13/12	98.6	86.5	13.1	62.5-124	25
Toluene	82537-03	<0.0050	0.0388	0.0394	0.0370	0.0339	mg/Kg	EPA 8260B	9/13/12	95.1	86.2	9.92	65.7-120	25

**QC Report : Laboratory Control Sample (LCS)**Project Name : **7-Eleven Store #32266**Project Number : **211502037.220.0400**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Lead	50.0	mg/Kg	EPA 6010B	9/12/12	94.2	85-115
Benzene	0.0386	mg/Kg	EPA 8260B	9/13/12	88.8	67.9-120
Ethylbenzene	0.0386	mg/Kg	EPA 8260B	9/13/12	94.7	65.5-127
Methyl-t-butyl ether	0.0386	mg/Kg	EPA 8260B	9/13/12	80.0	57.0-122
P + M Xylene	0.0386	mg/Kg	EPA 8260B	9/13/12	95.6	62.5-124
Toluene	0.0386	mg/Kg	EPA 8260B	9/13/12	89.9	65.7-120





## Laboratory Results

Damon Brown  
Stantec Consulting Services Inc.  
3017 Kilgore Road, Suite 100  
Rancho Cordova, CA 95670

Subject : 1 Soil Sample  
Project Name : 7-Eleven Store #32266  
Project Number : 211502037.230.0400

Dear Mr. Brown,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed. Testing procedures comply with the 2003 NELAC 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 : 1 Soil Sample  
Project Name : 7-Eleven Store #32266  
Project Number : 211502037.230.0400

## Case Narrative

All soil samples were reported on a total weight (wet weight) basis.

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

Project Number : **211502037.230.0400**

Sample : **MW-5-5**

Matrix : Soil

Lab Number : 82604-01

Sample Date :09/12/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/19/12 01:59
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/19/12 01:59
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/19/12 01:59
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/19/12 01:59
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/19/12 01:59
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	09/19/12 01:59
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	09/19/12 01:59
Toluene - d8 (Surr)	99.3		% Recovery	EPA 8260B	09/19/12 01:59

Report Number : 82604

Date : 09/19/2012

**QC Report : Method Blank Data**

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

Project Number : **211502037.230.0400**

<u>Parameter</u>	<u>Measured Value</u>	<u>Method Reporting Limit</u>	<u>Units</u>	<u>Analysis Method</u>	<u>Date Analyzed</u>
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/18/2012
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/18/2012
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/18/2012
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/18/2012
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	09/18/2012
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	09/18/2012
1,2-Dichloroethane-d4 (Surr)	103		%	EPA 8260B	09/18/2012
Toluene - d8 (Surr)	99.7		%	EPA 8260B	09/18/2012

<u>Parameter</u>	<u>Measured Value</u>	<u>Method Reporting Limit</u>	<u>Units</u>	<u>Analysis Method</u>	<u>Date Analyzed</u>
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**QC Report : Matrix Spike/ Matrix Spike Duplicate**Project Name : **7-Eleven Store #32266**Project Number : **211502037.230.0400**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	82641-01	<0.0050	0.0389	0.0388	0.0401	0.0405	mg/Kg	EPA 8260B	9/18/12	103	104	1.12	67.9-120	25
Ethylbenzene	82641-01	<0.0050	0.0389	0.0388	0.0445	0.0435	mg/Kg	EPA 8260B	9/18/12	114	112	2.09	65.5-127	25
Methyl-t-butyl ether	82641-01	<0.0050	0.0389	0.0388	0.0397	0.0380	mg/Kg	EPA 8260B	9/18/12	102	97.8	4.28	57.0-122	25
P + M Xylene	82641-01	<0.0050	0.0389	0.0388	0.0466	0.0430	mg/Kg	EPA 8260B	9/18/12	120	111	7.82	62.5-124	25
Toluene	82641-01	<0.0050	0.0389	0.0388	0.0384	0.0390	mg/Kg	EPA 8260B	9/18/12	98.8	100	1.76	65.7-120	25

**QC Report : Laboratory Control Sample (LCS)**Project Name : **7-Eleven Store #32266**Project Number : **211502037.230.0400**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	0.0396	mg/Kg	EPA 8260B	9/18/12	102	67.9-120
Ethylbenzene	0.0396	mg/Kg	EPA 8260B	9/18/12	108	65.5-127
Methyl-t-butyl ether	0.0396	mg/Kg	EPA 8260B	9/18/12	104	57.0-122
P + M Xylene	0.0396	mg/Kg	EPA 8260B	9/18/12	102	62.5-124
Toluene	0.0396	mg/Kg	EPA 8260B	9/18/12	100	65.7-120







## Laboratory Results

Damon Brown  
Stantec Consulting Services Inc.  
3017 Kilgore Road, Suite 100  
Rancho Cordova, CA 95670

Subject : 2 Water Samples  
Project Name : 7-Eleven Store #32266  
Project Number : 211502037.230.0400

Dear Mr. Brown,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed. Testing procedures comply with the 2003 NELAC 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 : 2 Water Samples  
Project Name : 7-Eleven Store #32266  
Project Number : 211502037.230.0400

## 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.

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

Project Number : **211502037.230.0400**

Sample : **MW-3**

Matrix : Water

Lab Number : 82717-01

Sample Date :09/21/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 1.5	1.5	ug/L	EPA 8260B	10/01/12 12:33
Toluene	< 1.5	1.5	ug/L	EPA 8260B	10/01/12 12:33
Ethylbenzene	< 1.5	1.5	ug/L	EPA 8260B	10/01/12 12:33
Total Xylenes	< 1.5	1.5	ug/L	EPA 8260B	10/01/12 12:33
<b>Methyl-t-butyl ether (MTBE)</b>	<b>760</b>	1.5	ug/L	EPA 8260B	10/01/12 12:33
Diisopropyl ether (DIPE)	< 1.5	1.5	ug/L	EPA 8260B	10/01/12 12:33
Ethyl-t-butyl ether (ETBE)	< 1.5	1.5	ug/L	EPA 8260B	10/01/12 12:33
<b>Tert-amyl methyl ether (TAME)</b>	<b>1.5</b>	1.5	ug/L	EPA 8260B	10/01/12 12:33
<b>Tert-Butanol</b>	<b>32 J</b>	7.0	ug/L	EPA 8260B	10/01/12 12:33
TPH as Gasoline	< 150	150	ug/L	EPA 8260B	10/01/12 12:33
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	10/01/12 12:33
Toluene - d8 (Surr)	97.1		% Recovery	EPA 8260B	10/01/12 12:33

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

Project Number : **211502037.230.0400**

Sample : **MW-4**

Matrix : Water

Lab Number : 82717-02

Sample Date :09/21/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/30/12 20:46
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/30/12 20:46
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/30/12 20:46
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/30/12 20:46
<b>Methyl-t-butyl ether (MTBE)</b>	<b>400</b>	0.50	ug/L	EPA 8260B	09/30/12 20:46
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	09/30/12 20:46
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	09/30/12 20:46
<b>Tert-amyl methyl ether (TAME)</b>	<b>0.69</b>	0.50	ug/L	EPA 8260B	09/30/12 20:46
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	09/30/12 20:46
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/30/12 20:46
1,2-Dichloroethane-d4 (Surr)	98.6		% Recovery	EPA 8260B	09/30/12 20:46
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	09/30/12 20:46

**QC Report : Method Blank Data**Project Name : **7-Eleven Store #32266**Project Number : **211502037.230.0400**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	09/30/2012
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	09/30/2012
Toluene	< 0.50	0.50	ug/L	EPA 8260B	09/30/2012
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	09/30/2012
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	09/30/2012
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	09/30/2012
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	09/30/2012
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	09/30/2012
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	09/30/2012
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	09/30/2012
1,2-Dichloroethane-d4 (Surr)	101		%	EPA 8260B	09/30/2012
Toluene - d8 (Surr)	104		%	EPA 8260B	09/30/2012
Benzene	< 0.50	0.50	ug/L	EPA 8260B	10/01/2012
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	10/01/2012
Toluene	< 0.50	0.50	ug/L	EPA 8260B	10/01/2012
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	10/01/2012
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	10/01/2012
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	10/01/2012
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	10/01/2012
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	10/01/2012
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	10/01/2012
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	10/01/2012
1,2-Dichloroethane-d4 (Surr)	101		%	EPA 8260B	10/01/2012
Toluene - d8 (Surr)	96.7		%	EPA 8260B	10/01/2012

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

Project Name : 7-Eleven Store #32266

Project Number : 211502037.230.0400

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	82721-06	190	40.0	40.0	233	232	ug/L	EPA 8260B	9/30/12	98.6	94.3	4.39	80-120	25
Diisopropyl ether	82721-06	35	39.5	39.5	73.3	72.5	ug/L	EPA 8260B	9/30/12	97.7	95.8	1.99	80-120	25
Ethyl-tert-butyl ether	82721-06	<0.50	39.8	39.8	37.9	37.8	ug/L	EPA 8260B	9/30/12	95.2	95.0	0.125	76.5-120	25
Ethylbenzene	82721-06	35	40.0	40.0	75.5	75.8	ug/L	EPA 8260B	9/30/12	102	102	0.655	80-120	25
Methyl-t-butyl ether	82721-06	130	40.0	40.0	169	164	ug/L	EPA 8260B	9/30/12	103	90.4	13.1	69.7-121	25
P + M Xylene	82721-06	70	40.0	40.0	110	111	ug/L	EPA 8260B	9/30/12	99.4	101	1.52	76.8-120	25
Tert-Butanol	82721-06	<5.0	202	202	194	198	ug/L	EPA 8260B	9/30/12	96.4	98.4	2.00	80-120	25
Tert-amyl-methyl ether	82721-06	<0.50	39.9	39.9	39.0	39.5	ug/L	EPA 8260B	9/30/12	97.5	99.0	1.51	78.9-120	25
Toluene	82721-06	9.1	40.0	40.0	50.2	50.0	ug/L	EPA 8260B	9/30/12	103	102	0.564	80-120	25

## QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : 7-Eleven Store #32266

Project Number : 211502037.230.0400

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	82718-15	<0.50	40.0	40.0	41.3	39.7	ug/L	EPA 8260B	10/1/12	103	99.3	3.87	80-120	25
Diisopropyl ether	82718-15	<0.50	39.5	39.5	39.9	39.8	ug/L	EPA 8260B	10/1/12	101	100	0.281	80-120	25
Ethyl-tert-butyl ether	82718-15	<0.50	39.8	39.8	39.8	39.6	ug/L	EPA 8260B	10/1/12	100	99.4	0.631	76.5-120	25
Ethylbenzene	82718-15	<0.50	40.0	40.0	41.9	40.1	ug/L	EPA 8260B	10/1/12	105	100	4.43	80-120	25
Methyl-t-butyl ether	82718-15	<0.50	40.0	40.0	37.1	37.5	ug/L	EPA 8260B	10/1/12	92.7	93.8	1.24	69.7-121	25
P + M Xylene	82718-15	<0.50	40.0	40.0	40.8	38.5	ug/L	EPA 8260B	10/1/12	102	96.3	5.84	76.8-120	25
Tert-Butanol	82718-15	<5.0	202	202	205	203	ug/L	EPA 8260B	10/1/12	102	101	0.796	80-120	25
Tert-amyl-methyl ether	82718-15	<0.50	39.9	39.9	41.0	40.7	ug/L	EPA 8260B	10/1/12	103	102	0.589	78.9-120	25
Toluene	82718-15	<0.50	40.0	40.0	39.6	38.1	ug/L	EPA 8260B	10/1/12	99.0	95.2	3.90	80-120	25

**QC Report : Laboratory Control Sample (LCS)**Project Name : **7-Eleven Store #32266**Project Number : **211502037.230.0400**

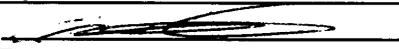
Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	39.8	ug/L	EPA 8260B	9/30/12	94.8	80-120
Diisopropyl ether	39.4	ug/L	EPA 8260B	9/30/12	95.5	80-120
Ethyl-tert-butyl ether	39.6	ug/L	EPA 8260B	9/30/12	93.6	76.5-120
Ethylbenzene	39.8	ug/L	EPA 8260B	9/30/12	97.9	80-120
Methyl-t-butyl ether	39.8	ug/L	EPA 8260B	9/30/12	89.2	69.7-121
P + M Xylene	39.8	ug/L	EPA 8260B	9/30/12	96.5	76.8-120
TPH as Gasoline	478	ug/L	EPA 8260B	9/30/12	97.3	70.0-130
Tert-Butanol	201	ug/L	EPA 8260B	9/30/12	93.3	80-120
Tert-amyl-methyl ether	39.7	ug/L	EPA 8260B	9/30/12	95.8	78.9-120
Toluene	39.8	ug/L	EPA 8260B	9/30/12	98.4	80-120
Benzene	39.9	ug/L	EPA 8260B	10/1/12	101	80-120
Diisopropyl ether	39.4	ug/L	EPA 8260B	10/1/12	98.4	80-120
Ethyl-tert-butyl ether	39.7	ug/L	EPA 8260B	10/1/12	98.6	76.5-120
Ethylbenzene	39.9	ug/L	EPA 8260B	10/1/12	103	80-120
Methyl-t-butyl ether	39.9	ug/L	EPA 8260B	10/1/12	89.9	69.7-121
P + M Xylene	39.9	ug/L	EPA 8260B	10/1/12	98.5	76.8-120
TPH as Gasoline	478	ug/L	EPA 8260B	10/1/12	109	70.0-130
Tert-Butanol	201	ug/L	EPA 8260B	10/1/12	99.1	80-120
Tert-amyl-methyl ether	39.8	ug/L	EPA 8260B	10/1/12	99.4	78.9-120
Toluene	39.9	ug/L	EPA 8260B	10/1/12	97.3	80-120

## Stantec Chain-of Custody Record

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

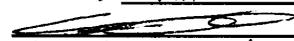
Additional documents are attached, and are part of this Record.  
 Job Name: 7-Eleven Store #32266  
 Location: 1339 North Vasco Road  
Livermore, CA

Project # 211502037.230 Task # 0400  
 Project Manager Damon Brown  
 Laboratory Kiff Analytical  
 Turnaround Time Standard

Sampler's Name Alejandra Hernandez  
 Sampler's Signature 

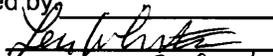
Sample ID	Date	Time	Matrix	Analysis Request												Comments/Instructions	Number of Containers			
				HCl-preserved	TPH/g/BTEX - EPA 8260	TPHd (Diesel Only) 8015 (modified)	TPH 418.1/WTPH 418.1	Aromatic Volatiles 602/8020	Volatile rganics 624/8240 (g=GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	5 Oxygenates EPA 8260B	Chloroform, PCE - EPA 8260B							
MW-3	9-21-12	11:45	Water	3	X														3	01
MW-4	9-21-12	11:50	Water	3	X														3	02

Special Instructions/Comments  
**5 Oxygenates - MtBE, EtBE, DIPE, TAME, TBA**  
 Global ID #T10000001067  
 email EDD and lab report to [amanda.magee@stantec.com](mailto:amanda.magee@stantec.com),  
[debbie.lichtenberger@stantec.com](mailto:debbie.lichtenberger@stantec.com)  
[damon.brown@stantec.com](mailto:damon.brown@stantec.com)

Relinquished by: AH  
 Sign   
 Print Alejandra Hernandez  
 Company Stantec  
 Time 1750 Date 9-21-12

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

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

Received by:   
 Sign Levi Roberts  
 Print Levi Roberts  
 Company Kiff Analytical  
 Time 1750 Date 092112

**Sample Receipt**

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

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

Page 9 of 10

