



Stantec

Stantec Consulting Corporation
3017 Kilgore Road Suite 100
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RECEIVED

9:07 am, Mar 28, 2011

Alameda County
Environmental Health

March 25, 2011

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

RE: Enclosed Additional Site Assessment Report
7-Eleven Store #32266
1339 North Vasco Road
Livermore, CA 94551
Stantec Project #:211502037.220.0502

Dear Mr. Wickham:

Stantec Consulting Corporation 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 Corporation

Damon Brown
Geologic Associate
Project Manager

Ed Simonis, PG
Senior Geologist

LIMITED AUTHORIZATION

KNOW ALL MEN BY THESE PRESENTS:

That 7-ELEVEN, INC. ("7-Eleven"), a Texas corporation, acting by and through Gary C. Lockhart, Vice President, does hereby nominate, constitute and appoint STANTEC CONSULTING CORPORATION, a Delaware corporation formerly known as SECOR International Incorporated, 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 Agreement by and between 7-Eleven and Agent, dated as of February 1, 2003 (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.

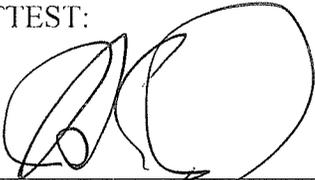
Any and all acts of Agent hereunder shall comply with all applicable federal, state and local laws, regulations, rules and ordinances and with all applicable orders of any courts of competent jurisdiction.

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

APPROVED AND EXECUTED this 22nd day of MAY, 2008, to be effective as of June 1, 2008.

7-ELEVEN, INC.

ATTEST:



Assistant Secretary

By: 
Title: Vice President

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.



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RE: **Additional Site Assessment Report**
7-Eleven Store #32266
1339 North Vasco Road
Livermore, CA 94551
Stantec Project #: 211502037.220.0502

Dear Mr. Wickham:

This report was prepared by Stantec Consulting Corporation (Stantec) on behalf of 7-Eleven Inc. (7-Eleven) to document the installation of three groundwater monitoring wells (MW-1, MW-2 and MW-3) 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 September 29, 2010, *Work Plan for Additional Site Assessment and Results of Detailed Well Survey* and the October 25, 2010, approval letter from the Alameda County Environmental Health Services (ACEHS) (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 tanks (USTs) (Figure 2). Stantec supervised the installation of three groundwater monitoring wells to further define the limits of MtBE impacts in soil and groundwater at the site and to determine 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 three boring locations using Underground Service Alert (USA) and a private utility locator.
4. Installation and development of three groundwater monitoring wells.
5. Submitting soil 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 (ug/L) and benzene was reported at 25 ug/L in UST excavation water sample W1 (Table 2). TPHg was detected at 3,400 ug/L. No TPHg was detected in either Baker Tank sample (BT-1 or BT-2). Total xylenes were reported in sample BT-1 at 0.70 ug/L. MtBE was detected in both samples at concentrations of 340 ug/L (BT-1) to 400 ug/L (BT-2). Based on the results of the water samples collected, 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, Stantec's field scientist collected one soil sample in native soil from beneath four of the six dispensers (D1-5.0, D2-5.0, D3-5.0 and D4-5.0) during fuel system upgrade activities at the site. In addition, Stantec collected four soil samples from stockpiled excavated backfill material. The four stockpile samples were combined at the laboratory for one four-part composite sample SP1(ABCD). TPHg, benzene, toluene, ethyl-benzene and total xylenes (BTEX) were not detected above laboratory reporting limits in the dispenser soil samples collected, with the exception of dispenser sample D2-5. Soil sample D2-5 contained 0.21 mg/kg benzene, 0.59 mg/kg toluene, 0.26 mg/kg ethyl-benzene, 1.4 mg/kg xylenes, and 12 mg/kg TPHg. MtBE and TBA were detected exclusively in soil sample D1-5.5, at concentrations of 0.024 mg/kg and 0.0076 mg/kg, respectively. Di-isopropyl ether (DIPE), ethyl tertiary butyl ether (EtBE), and tertiary amyl methyl ether (TAME) were not detected above laboratory reporting limits in any dispenser soil samples collected. BTEX, TPHg, MtBE, TBA, DIPE, ETBE, and TAME were not detected at concentrations above laboratory reporting limits in the stockpiled soil sample collected during this investigation. Total lead was detected at concentration of 4.4 mg/kg.

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

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

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

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

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

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 (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.

Soil Borings

Between February 23 and 24, 2011, Stantec supervised as WDC installed three groundwater monitoring wells (MW-1, MW-2 and MW-3) at the locations shown on Figure 2. The wells were drilled to a depth of 20 and 25 feet bgs, using a truck mounted drilling rig equipped with 8-inch diameter hollow-stem augers (HSA). Downhole drilling equipment was properly cleaned before drilling each borehole. The soil boring and well construction details for MW-1, MW-2 and MW-3 are summarized in Table 3. Field notes are included in Attachment C.

Soil Sampling

Soil samples were collected from each boring using a split-spoon sampler lined with 2-inch diameter by 6-inch long brass sample tubes. 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 were sealed with Teflon[®] 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, MtBE, DIPE, EtBE, TAME and TBA by Environmental Protection Agency (EPA) Method 8260B.

Soil Stratigraphy and Geology

Based on the description of the soil samples collected from the new wells MW-1, MW-2 and MW-3, the soil stratigraphy encountered consists mainly of clay from ground surface to about 18 feet bgs. Thin layers of silt and fine sand were encountered between 18 and 25 feet bgs. Copies of the soil boring logs are included in Attachment D.

Well Installation

Groundwater monitoring wells MW-1, MW-2 and MW-3 were constructed using 2-inch diameter polyvinyl chloride (PVC) blank casing and 0.020-inch-slot well screen. The wells were installed to 20 feet bgs and were screened from 5 to 20 feet bgs (Table 3). A number 3 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 each well was sealed with one foot of bentonite on top of the sand, and a portland cement/bentonite slurry to the surface. An 8-inch-diameter, traffic-rated, water-tight street box was installed to protect the wells from surface traffic. Well construction details are summarized in Table 3. Field notes are included in Attachment C.

Well Development

On March 1, 2011, Stantec supervised WDC during the development of monitoring wells MW-1, MW-2 and MW-3, 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 each 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.

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 E. Copies of the waste disposal documentation will be provided under a separate cover.

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

A total of seven soil samples were collected from soil borings MW-1, MW-2 and MW-3 for laboratory analysis. MtBE and TBA were reported solely in the soil samples collected from MW-3, with concentrations ranging from 0.0082 mg/kg to 0.33 mg/kg. The analytes BTEX, TPHg, DIPE, EtBE, and TAME were not detected at concentrations above the laboratory reporting limits in any of the samples collected during this investigation. A copy of the certified laboratory analytical reports and chain-of-custody documentation are included in Attachment E.

WELL LOCATION SURVEY

Stantec, a certified surveyor in California, surveyed the locations of the newly installed wells. The tops of casings of the newly installed wells were surveyed to 0.01 foot relative to mean sea level. A copy of the well survey map is included in Attachment F.

SUMMARY AND CONCLUSIONS

Three groundwater monitoring wells MW-1, MW-2, and MW-3 were installed between February 23 and 24, 2011. 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.

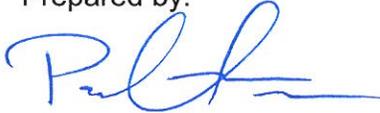
Stantec will commence quarterly groundwater monitoring and sampling of the newly installed wells during first quarter 2011. Groundwater samples will be submitted to Kiff for analysis of TPHg, BTEX, MtBE, DIPE, EtBE, TAME and TBA by EPA Method 8260B.

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 Corporation

Prepared by:



Patrick Herrmann
Project Scientist

Reviewed by:



Damon Brown
Geologic Associate
Project Manager

Reviewed by:



Ed Simonis, PG
Senior Geologist



ATTACHMENTS

Figures

Tables

Attachment A – Regulatory Correspondence

Attachment B – Well Installation Permits

Attachment C – Field Notes

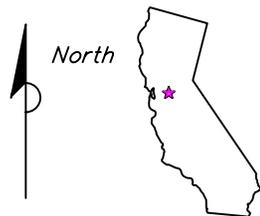
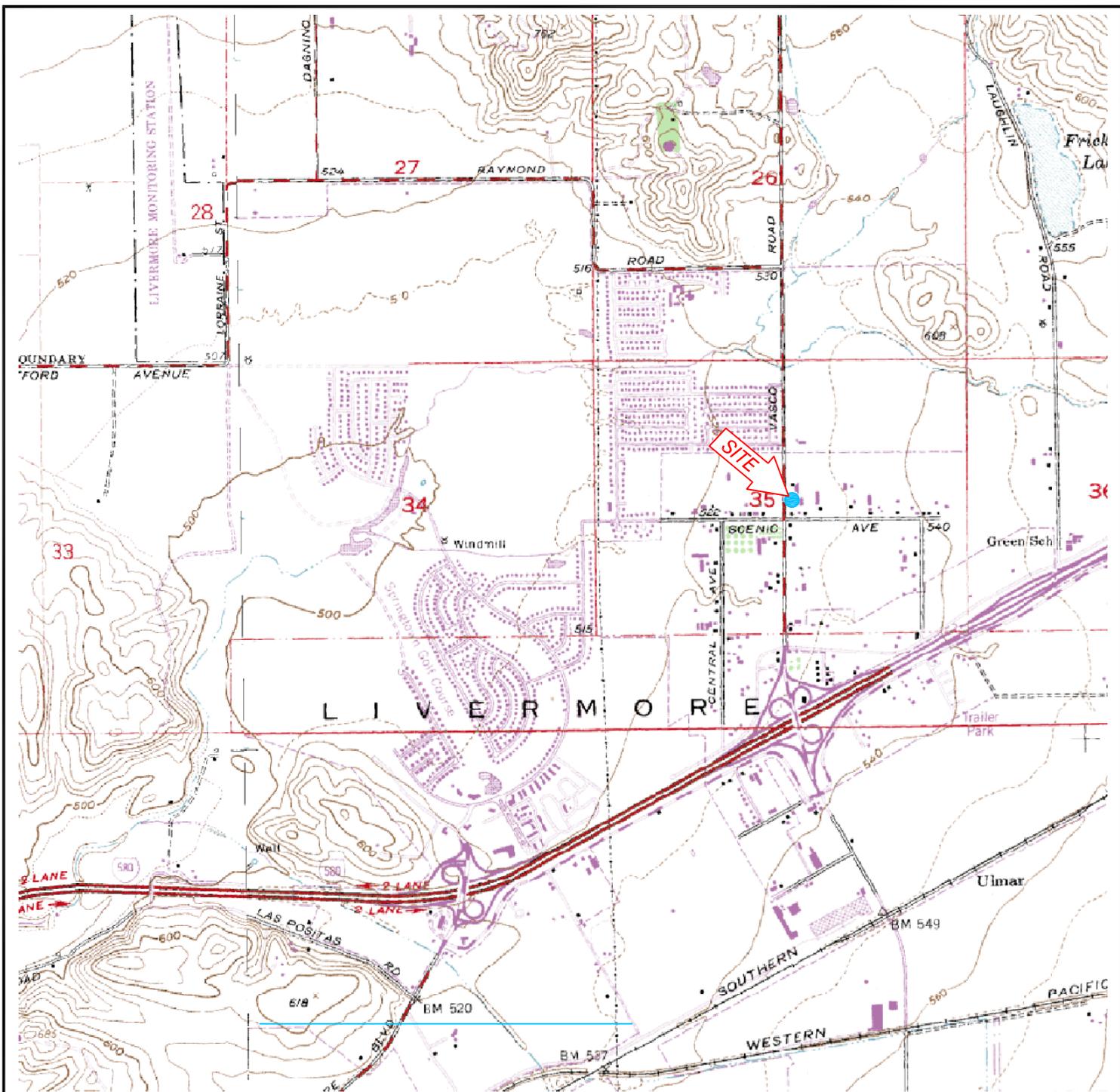
Attachment D – Soil Boring Logs

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

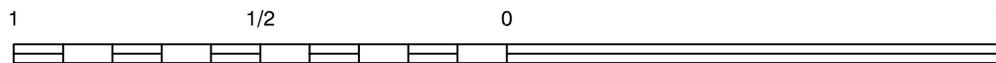
Attachment F – Survey Map

cc: Mr. John Wainwright, Stantec, 308 East 4500 South, Suite 100, Murray, Utah 84101

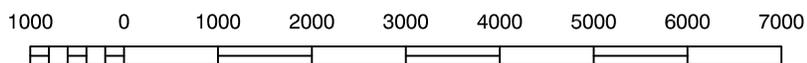
Figures



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

MW-3 (02/23/11)

DEPTH	TPHg	B	MtBE
10'	<1.0	<0.0050	0.33
20'	<1.0	<0.0050	0.22
25'	<1.0	<0.0050	0.084

T2-3-12 (01/28/05)

DEPTH	TPHg	B	MtBE
12'	<1.0	<0.0050	0.18

GP-3 (04/20/10)

DEPTH	TPHg	B	MtBE
5'	<1.0	<0.0050	<0.0050
10'	<1.0	<0.0050	0.023
15'	<1.0	<0.0050	1.1

T1-2-12 (01/28/05)

DEPTH	TPHg	B	MtBE
12'	<1.0	<0.0050	2.4

T2-1-12 (01/28/05)

DEPTH	TPHg	B	MtBE
12'	<1.0	<0.0050	0.016

T2-2-12 (01/28/05)

DEPTH	TPHg	B	MtBE
12'	<1.0	<0.0050	0.010

T1-1-12 (01/28/05)

DEPTH	TPHg	B	MtBE
12'	<1.0	<0.0050	0.034

D4-5.0 (12/04/08)

DEPTH	TPHg	B	MtBE
5.0'	<1.0	<0.0050	<0.0050

D4-4.5 (01/28/05)

DEPTH	TPHg	B	MtBE
4.5'	<1.0	<0.0050	0.012

MW-1 (02/23/11)

DEPTH	TPHg	B	MtBE
10'	<1.0	<0.0050	<0.0050
20'	<1.0	<0.0050	<0.0050

L3-4.5 (01/28/05)

DEPTH	TPHg	B	MtBE
4.5'	<1.0	<0.0050	<0.0050

D2-5.0 (12/04/08)

DEPTH	TPHg	B	MtBE
5.0'	12	0.21	<0.0050

D2-5.0 (01/28/05)

DEPTH	TPHg	B	MtBE
5.0'	<1.0	<0.0050	0.039

L1-3.5 (01/28/05)

DEPTH	TPHg	B	MtBE
3.5'	<1.0	<0.0050	<0.0050

D6-6.0 (01/28/05)

DEPTH	TPHg	B	MtBE
6.0'	<1.0	<0.0050	0.018

L2-4.0 (01/28/05)

DEPTH	TPHg	B	MtBE
4.0'	<1.0	<0.0050	<0.0050

GP-2 (04/20/10)

DEPTH	TPHg	B	MtBE
10'	<1.0	<0.0050	<0.0050
15'	<1.0	<0.0050	<0.0050

D5-5.0 (01/28/05)

DEPTH	TPHg	B	MtBE
5.0'	<1.0	<0.0050	<0.0050

L5-4.5 (02/09/05)

DEPTH	TPHg	B	MtBE
4.5'	<1.0	<0.0050	<0.0050

D1-5.5 (01/28/05)

DEPTH	TPHg	B	MtBE
5.5'	<1.0	<0.0050	<0.0050

D3-5.0 (12/04/08)

DEPTH	TPHg	B	MtBE
5.0'	<1.0	<0.0050	<0.0050

MW-2 (02/24/11)

DEPTH	TPHg	B	MtBE
10'	<1.0	<0.0050	<0.0050
20'	<1.0	<0.0050	<0.0050

L4-4.5 (02/09/05)

DEPTH	TPHg	B	MtBE
4.5'	<1.0	<0.0050	<0.0050

GP-1 (04/20/10)

DEPTH	TPHg	B	MtBE
5'	<1.0	<0.0050	<0.0050
10'	<1.0	<0.0050	<0.0050
15'	<1.0	<0.0050	<0.0050

D3-4.5 (01/28/05)

DEPTH	TPHg	B	MtBE
4.5'	<1.0	0.026	0.14

D1-5.0 (12/04/08)

DEPTH	TPHg	B	MtBE
5.0'	<1.0	<0.0050	0.024

D1-5.0 (04/20/10)

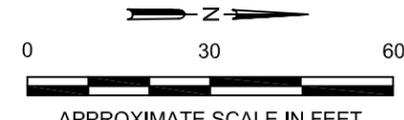
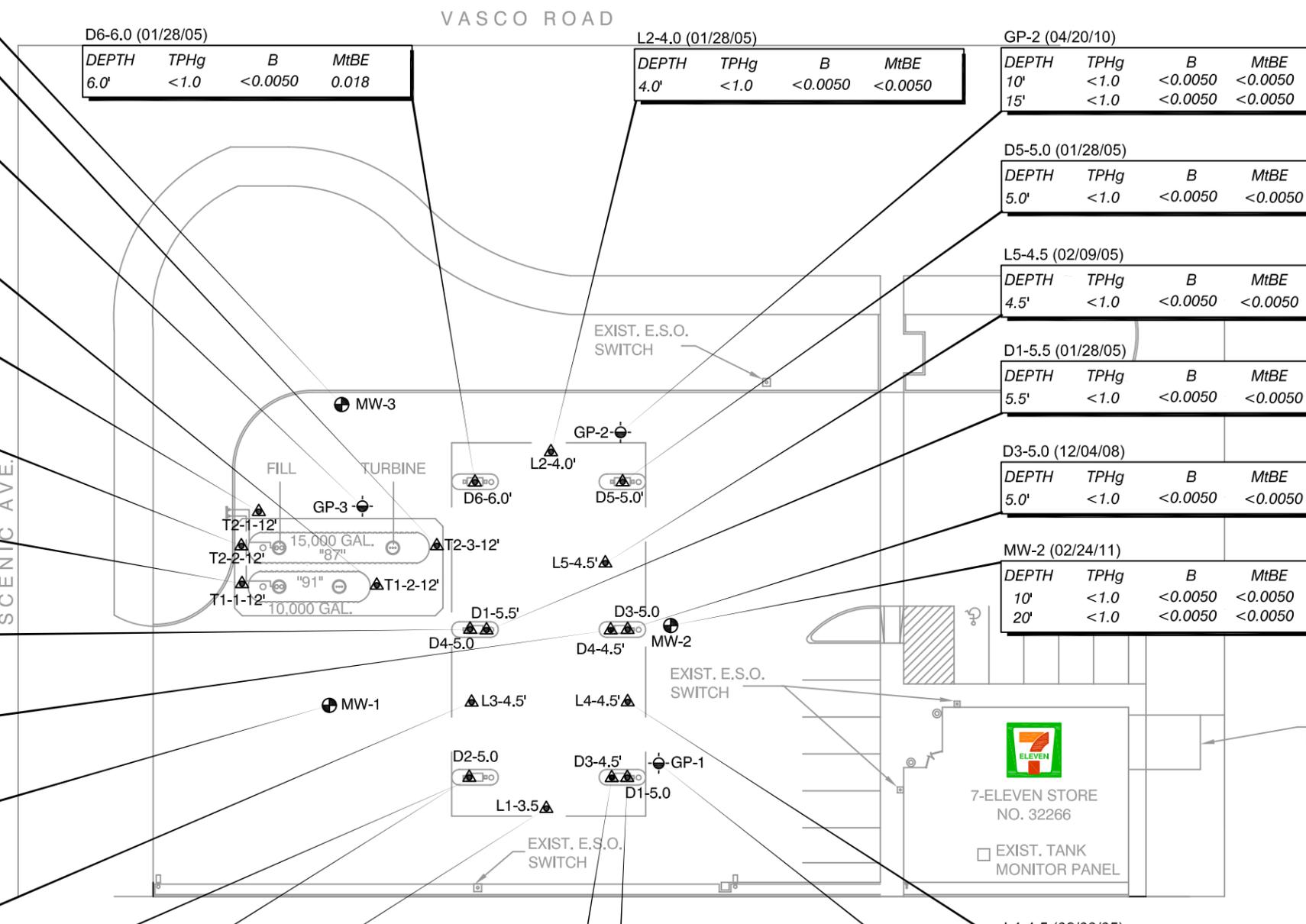
DEPTH	TPHg	B	MtBE
5'	<1.0	<0.0050	<0.0050
10'	<1.0	<0.0050	<0.0050
15'	<1.0	<0.0050	<0.0050

- LEGEND:**
- MW-1 GROUNDWATER MONITORING WELL
 - D1 DISPENSER SAMPLE LOCATION
 - L1 LINE SOIL SAMPLE LOCATION
 - T1 UST EXCAVATION SOIL SAMPLE LOCATION
 - W1 UST EXCAVATION WATER SAMPLE LOCATION
 - GP-1 GEOPROBE SAMPLE LOCATION

CHEMICAL ANALYTICAL RESULTS:

DEPTH	TPHg	B	MtBE	ANALYTE
5.0'	<1.0	<0.0050	<0.0050	CONCENTRATION (mg/kg)

- ANALYTES:**
- DEPTH — DEPTH IN FEET BELOW GRADE SURFACE
 - TPHg — TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (mg/kg)
 - B — BENZENE (mg/kg)
 - MtBE — METHYL TERTIARY BUTYL ETHER (mg/kg)
 - mg/kg — MILLIGRAMS PER KILOGRAM



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

	 STORE NO. 32266 1339 NORTH VASCO ROAD LIVERMORE, CALIFORNIA	HISTORICAL SOIL SAMPLE CONCENTRATION MAP		FIGURE: 2
	JOB NUMBER: 211502037			

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
Dispenser Samples																	
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	6.71	
D2-5.0	01/28/05	5.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	0.039	<0.0050	<0.0050	<0.0050	0.016	<0.0050	<0.0050	0.010	6.57	
D3-4.5	01/28/05	4.5	0.026	0.086	0.010	0.055	<1.0	0.14	<0.0050	<0.0050	<0.0050	0.0064	<0.0050	<0.0050	0.27	28.4	J
D4-4.5	01/28/05	4.5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	0.012	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	6.01	
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	5.53	
D6-6.0	01/28/05	6.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	0.018	<0.0050	<0.0050	<0.0050	0.049	<0.0050	<0.0050	<0.010	4.98	
D1-5.5	12/04/08	5.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	0.024	<0.0050	<0.0050	<0.0050	0.0076	--	--	--	--	a, c
D2-5.0	12/04/08	5.0	0.21	0.59	0.26	1.4	12	<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
Line Samples																	
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	5.51	
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	11.2	
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	7.14	
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	6.61	
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	6.49	
UST Excavation Samples																	
T1-1-12	01/28/05	12	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	0.034	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	5.82	
T1-2-12	01/28/05	12	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	2.4	<0.0050	<0.0050	0.0068	2.6	<0.0050	<0.0050	<0.025	6.49	
T2-1-12	01/28/05	12	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	0.016	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	6.65	
T2-2-12	01/28/05	12	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	7.50	
T2-3-12	01/28/05	12	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	0.18	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	5.66	
Soil Boring Soil Samples																	
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	0.023	<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	1.1	<0.0050	<0.0050	<0.0050	0.0076	--	--	--	--	J

**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
Monitoring Wells																	
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	--	--	--	--	
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	--	--	--	--	
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	--	--	--	--	
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	--	--	--	--	
MW-3-10	02/23/11	10	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	0.33	<0.0050	<0.0050	<0.0050	0.0082	--	--	--	--	J
MW-3-20	02/23/11	20	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	0.22	<0.0050	<0.0050	<0.0050	0.053	--	--	--	--	J
MW-3-25	02/23/11	25	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	0.084	<0.0050	<0.0050	<0.0050	0.010	--	--	--	--	J
Stockpile Soil Samples																	
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	

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.

TABLE 2
Historical Water and/or Groundwater Sample Analytical Results

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

Sample I.D.	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Xylenes (µg/L)	TPHg (µg/L)	MtBE (µg/L)	DIPE (µg/L)	EtBE (µg/L)	TAME (µg/L)	TBA (µg/L)	EDB (µg/L)	EDC (µg/L)	EtOH (µg/L)	Notes
UST Excavation Groundwater Sample															
W1	01/28/05	25	290	62	520	3,400	180	<1.5	<1.5	<1.5	15	<1.5	<1.5	2,600	
Baker Tank Samples															
BT-1	02/04/05	<0.50	<0.50	<0.50	0.70	<50	340	--	--	--	--	--	--	--	
BT-2	02/04/05	<0.90	<0.90	<0.90	<0.90	<90	400	--	--	--	--	--	--	--	
Grab Groundwater Samples															
GP-1W	04/20/10	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	
GP-2W	04/20/10	<0.50	<0.50	<0.50	<0.50	<50	2.9	<0.50	<0.50	<0.50	<5.0	--	--	--	
GP-3W	04/20/10	<0.50	<0.50	<0.50	<0.50	<50	380	<0.50	<0.50	0.71	<5.0	--	--	--	

Explanation:

BTEX, TPHg, MtBE, DIPE, EtBE, TAME, and TBA by 8260B
 TPHg = Total petroleum hydrocarbons-as-gasoline
 MtBE = Methyl-tert-butyl ether
 DIPE = Diisopropyl ether
 EtBE = Ethyl-tert-butyl ether
 TAME = Tert-amyl-methyl ether

TBA = Tert-butyl alcohol
 EDB = 1,2-Dibromoethane
 EDC = 1,2-Dichloroethane
 EtOH = Ethanol
 UST = Underground Storage Tank

ug/L = micrograms per Liter or parts-per-billion
 mg/L = milligrams per liter
 < = Not detected above laboratory reporting limit
 -- = Not sampled/not measured

**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)		
Soil Borings							
GP-1	04/20/10	20	--	--	--	--	
GP-2	04/20/10	25	--	--	--	--	
GP-3	04/20/10	30	--	--	--	--	
Monitoring Wells							
MW-1	02/23/11	20	2	5	20	15	
MW-2	02/24/11	20	2	5	20	15	
MW-3	02/23/11	25	2	5	20	15	
Explanation							
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

October 25, 2010

Mr. Ken Hilliard
7-Eleven, Inc.
One Arts Plaza
1722 Routh Street, Suite 1000
Dallas, TX 75201

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 report entitled, "*Work Plan for Additional Site Assessment and Results of Detailed Well Survey*," dated September 29, 2010 (Work Plan). The Work Plan, which was prepared by Stantec Consulting Corporation on behalf of 7-Eleven, Inc., presents plans for installation and sampling of three groundwater monitoring wells.

The proposed scope of work is conditionally approved and may be implemented provided that the technical comment below is 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. **Soil and Groundwater Analyses.** In addition to the proposed analyses, we request that soil and groundwater samples also be analyzed for TBA using EPA Method 8260.

TECHNICAL REPORT REQUEST

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

- **February 28, 2011** – Well Installation Report

Mr. Ken Hilliard
Mr. Michael Blau
RO0002999
October 25, 2010
Page 2

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org.

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)

Cheryl Dizon (QIC 8021), Zone 7 Water Agency, 100 North Canyons Pkwy, Livermore, CA 94551
(Sent via E-mail to: cdizon@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)

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

GeoTracker, File

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

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

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

PERMIT NUMBER 2011007
WELL NUMBER 2S/2E-35G9 to 35G11 (MW-1 to MW-3)
APN 099B-8122-001-00

Coordinates Source _____ ft. Accuracy _____ ft.
LAT: _____ ft. LONG: _____ ft.
APN _____

PERMIT CONDITIONS
(Circled Permit Requirements Apply)

CLIENT
Name 7-Eleven, Inc. c/o Stantec
Address P.O. Box 711 Phone (916) 861-0400
City Dallas, TX Zip 75221

- 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 Patrick Herrmann
Email patrick.herrmann@stantec.com Fax (916) 861-0430
Address 3017 Kilgore Rd., Suite 100 Phone (916) 861-0400
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, tremied cement grout shall be used in place of compacted cuttings.

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

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

DRILLING COMPANY WDC Exploration and wells
DRILLER'S LICENSE NO. 283326

- F. WELL DESTRUCTION.** See attached.

WELL SPECIFICATIONS:
Drill Hole Diameter 8 in. Maximum
Casing Diameter 2 in. Depth 25 ft.
Surface Seal Depth 9 ft. Number MW-1, MW-2
and MW-3

- 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.

SOIL BORINGS:
Number of Borings 3 Maximum
Hole Diameter 2 in. Depth 25 ft.

ESTIMATED STARTING DATE December 6, 2010
ESTIMATED COMPLETION DATE December 10, 2010

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

APPLICANT'S SIGNATURE [Signature] Date 11/2/10

Approved [Signature] Date 11/27/11
Wyman Hong

ATTACH SITE PLAN OR SKETCH

Attachment C

Field Notes

JOB NAME:	7-Eleven Store #32266	JOB NUMBER:	211502037.220.0600
SITE ADDRESS:	1339 North Vasco Road	START DATE:	2/23/2011
	Livermore, California	DATE PREPARED:	2/15/2011
PREPARED FOR:	Colin Ryan	PREPARED BY:	Patrick Herrmann

SITE VISITATION REPORT

Name(s) Colin Ryan Date: 2/23/10 Did you call in? Yes No
 Arrival Time: 8:15 "Departure Time: _____ Who did you call? Patrick Herrmann
 Weather Notations: SUN CLOUDY RAIN SNOW Temperature _____ F

DRUM INVENTORY

<u>2</u>	Decon WATER	_____	CARBON	TOTAL OPEN TOP	<u>8</u>
<u>6</u>	SOIL	_____	EMPTY	TOTAL BUNG TOP	_____

HEALTH AND SAFETY ASSESSMENT

PPE
Slips/Trips/Falls
Foot/Car Traffic

DESCRIPTION OF ACTIVITIES ONSITE AND NOTES

8:15 - Arrived onsite, reviewed HASP
-Called in to Patrick Herrmann
-Spoke with store manager regarding today's scope of work
8:45 - WDC Vac truck arrives onsite
-Held H&S meeting
9:05 - Begin Setup on MW-3
-Generator out on vac truck, they need to jump-start their battery
9:45 - WDC drillers arrive onsite
10:30 - Using portable generator to do saw-cuts in asphalt
10:46 - MW-3 + MW-1 saw cut complete
11:05 - MW-3 cleared to 6' bgs
- move locations to clear MW-1 ; Begin drilling MW-3
12:30 - Break for lunch
1:00 - Return from lunch
1:15 - Last sample taken from MW-3 @ 25' bgs
- Begin setting well
1:55 - MW-2 cleared to 6' bgs
3:50 - Last sample taken from MW-1 @ 20' bgs

JOB NAME:	7-Eleven Store #32266	JOB NUMBER:	211502037.220.0600
SITE ADDRESS:	1339 North Vasco Road	START DATE:	2/23/2011
	Livermore, California	DATE PREPARED:	2/15/2011
PREPARED FOR:	Colin Ryan	PREPARED BY:	Patrick Herrmann

DESCRIPTION OF ACTIVITIES ON SITE AND NOTES (cont)

Field Work Conducted By: Colin Ryan Date: 2/23/11

4:00- Begin setting well on MW-1
 5:00- Well built, begin setting well box
 6:00- MW-1 complete, site clean, leave for office

Day 2 2/24/11

7:00- Arrived onsite, reviewed NASP, called in to Damon Brown

- Tagged MW-1 @ 8.50' bgs
- Tagged MW-3 @ 9.35' bgs

7:50- WDC arrives onsite

- Held H&S meeting

8:15- Begin setup on MW-2

8:30- Jeff Jones w/ Zone 7 Water Agency arrives onsite to view ~~work~~ finished work

8:40- Jeff Jones leaves site

8:45- Begin advancing augers

9:35- Final sample taken @ 20' bgs

- Begin setting well + removing augers

* All wells constructed to 20' bgs with 15' of 0.020" slotted screen from 5' to 20' bgs.

12:20- Site clean, leave for Sacramento

JOB NAME:	7-Eleven Store #32266	JOB NUMBER:	211502037.220.0600
SITE ADDRESS:	1339 North Vasco Road	START DATE:	3/1/2011
	Livermore, California	DATE PREPARED:	2/25/2011
PREPARED FOR:	Colin Ryan	PREPARED BY:	Patrick Herrmann

SITE VISITATION REPORT

Name(s) Colin Ryan Date: 3/1/11 Did you call in? Yes No
 Arrival Time: 8:00 "Departure Time: _____ Who did you call? Damon Brown
 Weather Notations: SUN CLOUDY RAIN SNOW Temperature _____ F

DRUM INVENTORY

<u>4</u>	WATER	_____	CARBON	TOTAL OPEN TOP	<u>10</u>
<u>6</u>	SOIL	_____	EMPTY	TOTAL BUNG TOP	_____

HEALTH AND SAFETY ASSESSMENT

PPE
Foot/Car Traffic
Slips/Trips/Falls

DESCRIPTION OF ACTIVITIES ONSITE AND NOTES

8:00- Arrived onsite, reviewed HAZP, called in to Damon Brown
 - Spoke with franchisee regarding today's scope of work
 8:45- WDC arrives onsite, held HRS meeting
 - Begin setup on MW-2
 11:15- 20 gallons purged, begin pumping water + taking parameters
 11:30- 25 gallons purged, readings taken
 - Begin setup on MW-1
 12:00- Break for lunch
 12:30- Return from lunch
 - Begin surging MW-1
 2:00- MW-1 developed, move locations to MW-3
 3:45- MW-3 developed, begin site cleanup + water transfer to drums
 5:00- Site clean, 2 purge water drums left @ site
 - Leave for Sacramento

JOB NAME:	7-Eleven Store #32266	JOB NUMBER:	211502037.220.0600
SITE ADDRESS:	1339 North Vasco Road	START DATE:	3/1/2011
	Livermore, California	DATE PREPARED:	2/25/2011
PREPARED FOR:	Colin Ryan	PREPARED BY:	Patrick Herrmann

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-1	20	2"	/	19.15	7.97	1		
MW-2	20	2"	/	19.41	8.32	1		
MW-3	20	2"	/	20.24	9.00	1		

WELL DEVELOPMENT LOG

Project Number 211502037.220.0600 Well MW-1
 Project Name 7-Eleven Store #32266 Development Subcontractor WDC
 Performed/Supervised WDC / Stantes
 Development Method Airlift Sub. Pump Surge Block Bailer Other _____
 Development Criteria 10 casing volumes
 Equipment Cleaning Method _____
 Field Instruments Used _____
 Development Water Disposal Method Drum (55gal)
 Comments _____

DEVELOPMENT DATA

Depth to Water: Start 7.97 End 8.05 Ref. Point Elev. _____ Height Above Ground Surface _____
 Total Depth: Start 19.15 End 19.65

Date	Time	Cumulative Discharge (gallons)	Turbidity	Conductivity	Color	pH	Temperature	Other

See WDC
 Development Log

REMARKS:

WELL DEVELOPMENT LOG

Project Number 211502037.220.0600 Well MW-2
 Project Name 7-Eleven Store #32266 Development Subcontractor WDC
 Performed/Supervised WDC / Colin Ryan
 Development Method Airlift Sub. Pump Surge Block Bailer Other _____
 Development Criteria 10 casing volumes
 Equipment Cleaning Method _____
 Field Instruments Used _____
 Development Water Disposal Method 55 gallon drum
 Comments _____

DEVELOPMENT DATA

Depth to Water: Start 8.32 End 8:75 Ref. Point Elev. _____ Height Above Ground Surface _____
 Total Depth: Start 19.41 End 19.61

Date	Time	Cumulative Discharge (gallons)	Turbidity	Conductivity	Color	pH	Temperature	Other
<u>3/1/11</u>								

SEE WDC
 Development Log

REMARKS:

WELL DEVELOPMENT LOG

Project Number 211502037.220.0600 Well MW-3
 Project Name 7-Eleven Store #32266 Development Subcontractor _____
 Performed/Supervised _____
 Development Method Airlift Sub. Pump Surge Block Bailer Other _____
 Development Criteria 10 casing volumes
 Equipment Cleaning Method _____
 Field Instruments Used _____
 Development Water Disposal Method 55 gallon drum
 Comments _____

DEVELOPMENT DATA

Depth to Water: Start 9.00 End 9.05 Ref. Point Elev. _____ Height Above Ground Surface _____
 Total Depth: Start 20.24 End 20.35

Date	Time	Cumulative Discharge (gallons)	Turbidity	Conductivity	Color	pH	Temperature	Other

See WDC
 Development Log

REMARKS:



**WDC EXPLORATION WELLS
WELL DEVELOPMENT DATA SHEET**

WELL OR LOCATION MW-3

PROJECT _____ EVENT _____ SAMPLER MC DATE 3-1-11

<p>Well type <u>MW</u> (MW, EW, PZ, etc.)</p> <p>Diameter <u>2</u> <u>0.165</u> gal/ft. casing</p>	<p>ACTION</p> <p>Start Pump / Begin</p> <p>Stop</p> <p>Sampled</p> <p>Final IWL</p>	<p>TIME</p>	<p>PUMP RATE (gpm)</p>	<p>DTW</p>
<p>PURGE CALCULATION</p> <p><u>0.165</u> gal/ft. * <u>12.24</u> ft. = <u>2.02</u> gals. X 3 _____ gals.</p> <p align="center"><small>SWL to TD one volume purge volume - 3 casings</small></p> <p><small>2" = 0.165 gal/ft. 4" = 0.65 gal/ft. 6" = 1.47 gal/ft.</small></p>				

Equipment Used / Sampling Method / Description of Event: _____

Actual gallons purged _____

Actual volumes purged _____

Well Yield ⊕ _____

	Gallons Purged *	Temp °C	EC (us / cm)	pH	Turbidity (NTU)	TDS	Other	DTW
	2	20.2	2488	7.35		1253		
	4	19.5	2399	7.36		1203		
	6	19.5	2304	7.34		1159		
	8	19.5	1954	7.24		975		10.9
298	10	20.7	1639	7.07		821		11.78
300	12	20.1	1639	7.04		820		11.78
301	14	20.0	1547	7.02		768		12.3
304	16	20.0	1570	7.04	925	787		12.9
305	18	19.9	1572	7.05	924	784		13.12
307	20	20.0	1587	7.07	947	788		13.65
309	22	19.9	1618	7.09	947 +1K	812		14.12
	24	20.0	1642	7.11	+1K	822		14.53
312	26	19.9	1595	7.11	+1K	792		
	28	19.9	1453	7.13	+1K	926		
	30	19.9	1579	7.10		793		

*Take measurement at approximately each casing volume purged. ⊕

HY - Minimal W.L. drop MY - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump LY - Able to purge 3 volumes by returning later or next day. VLY - Minimal recharge - unable to purge 3 volumes.

Attachment D Soil Boring Logs

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

WELL / PROBEHOLE / BOREHOLE NO:

MW-1 PAGE 1 OF 1



DRILLING / INSTALLATION:
 STARTED **2/23/11** COMPLETED:
 DRILLING COMPANY: **WDC Drilling**
 DRILLING EQUIPMENT: **Hollow Stem**
 DRILLING METHOD: **Auger**
 SAMPLING EQUIPMENT: **Split Spoon**

NORTHING (ft):
 LAT:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **12**
 STATIC DTW (ft): **8.5**
 WELL CASING DIA. (in): **2**
 LOGGED BY: **Colin Ryan**

EASTING (ft):
 LONG:
 TOC ELEV (ft):
 WELL DEPTH (ft): **20.0**
 BOREHOLE DEPTH (ft): **20.0**
 BOREHOLE DIA. (in): **8**
 CHECKED BY: **Ed Simonis**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
			Air Knife to 6' bgs.							8" Well Box
										Grout
										Bentonite
5		CL	CLAY ; CL							
10		CL	SILTY CLAY ; CL ; light brown with light brownish gray; stiff; moist; no HC odor; (0,0,20,80)		3:25 MW-1-10	1.5	22 35 50/4	0.0	10	
15		CL	SANDY CLAY ; CL ; brown; stiff; moist; no HC odor; (0,30,20,50)		3:40 MW-1-15	1.5	25 35 50	0.0	15	
20		CL-ML	SILT AND CLAY ; CL-ML ; light brown; stiff to firm; moist; no HC odor; (0,10,50,40)		3:50 MW-1-20	1.5	25 38 35	0.0	20	
			Borehole terminated at 20 feet.							#3 Sand 0.020" Slotted Screen
25										

GEO FORM 304 MW-1 TO MW-3.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 3/10/11

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

WELL / PROBEHOLE / BOREHOLE NO:

MW-2 PAGE 1 OF 1



DRILLING / INSTALLATION:
 STARTED **2/24/11** COMPLETED:
 DRILLING COMPANY: **WDC Drilling**
 DRILLING EQUIPMENT: **Hollow Stem**
 DRILLING METHOD: **Auger**
 SAMPLING EQUIPMENT: **Split Spoon**

NORTHING (ft):
 LAT:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **12.5**
 STATIC DTW (ft): **8.6**
 WELL CASING DIA. (in): **2**
 LOGGED BY: **Colin Ryan**

EASTING (ft):
 LONG:
 TOC ELEV (ft):
 WELL DEPTH (ft): **20.0**
 BOREHOLE DEPTH (ft): **20.0**
 BOREHOLE DIA. (in): **8**
 CHECKED BY: **Ed Simonis**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
			Air Knife to 6' bgs.							8" Well Box
										Grout
										Bentonite
5		CL	CLAY ; CL							
10		CL	SILTY CLAY ; CL ; light brown with light brownish gray; stiff; moist; no HC odor; (0,0,20,80)		9:05 MW-2-10	1.5	25 25 45	0.0	10	
15		CL	SANDY CLAY ; CL ; brown; stiff; moist; no HC odor; (0,30,10,60)		9:20 MW-2-15	1.5	12 35 40	0.0	15	
20		CL-ML	CLAYEY SILT ; CL-ML ; brown; medium plasticity; firm; moist; no HC odor; (0,10,60,30)		9:35 MW-2-20	1.5	10 15 22	0.0	20	
			Borehole terminated at 20 feet.							#3 Sand 0.020" Slotted Screen
25										

GEO FORM 304 MW-1 TO MW-3.GPJ STANTEC ENV/RO TEMPLATE 010509.GDT 3/10/11

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

WELL / PROBEHOLE / BOREHOLE NO:

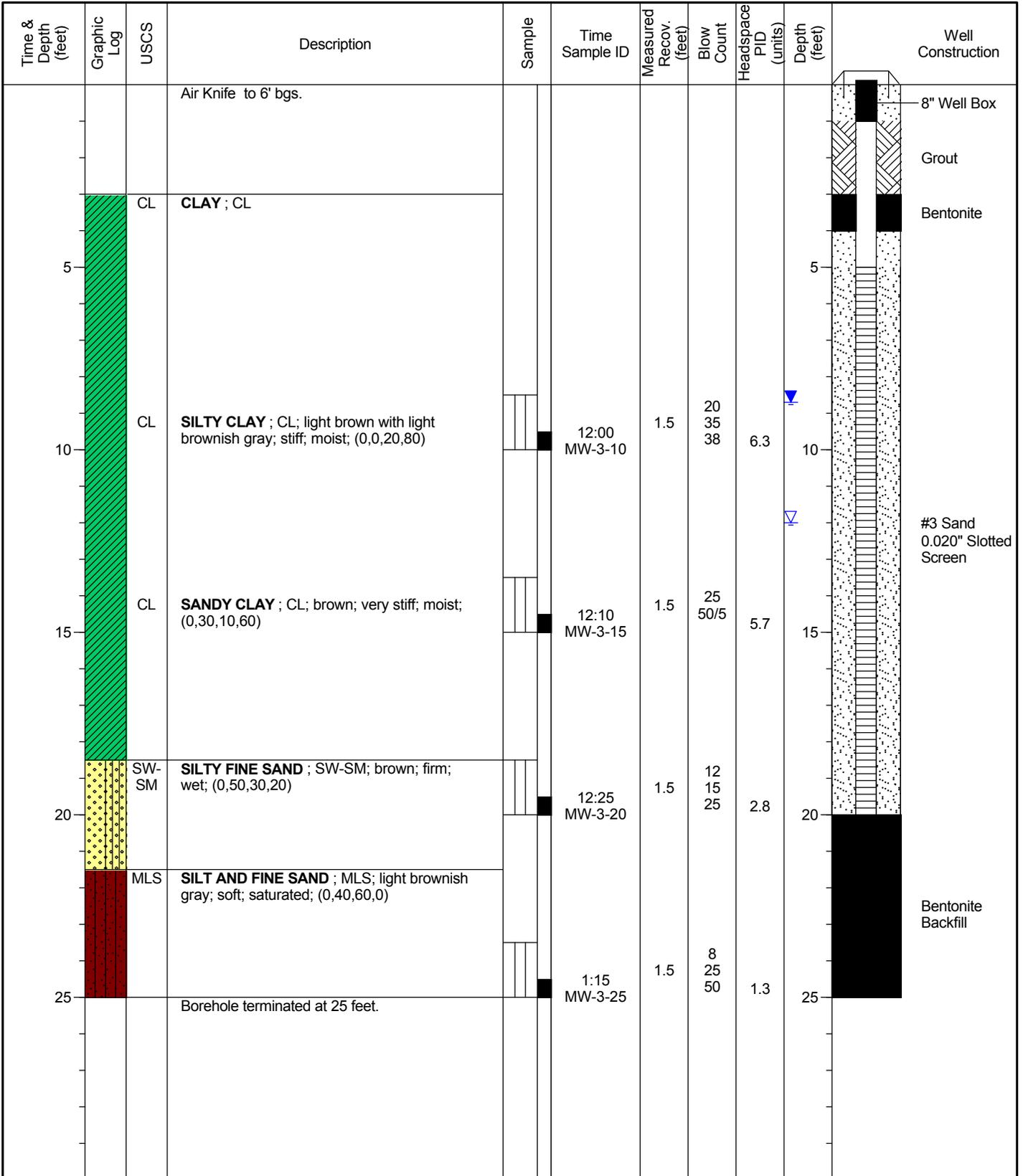
MW-3 PAGE 1 OF 1



DRILLING / INSTALLATION:
 STARTED **2/23/11** COMPLETED:
 DRILLING COMPANY: **WDC Drilling**
 DRILLING EQUIPMENT: **Hollow Stem**
 DRILLING METHOD: **Auger**
 SAMPLING EQUIPMENT: **Split Spoon**

NORTHING (ft):
 LAT:
 GROUND ELEV (ft):
 INITIAL DTW (ft): **12**
 STATIC DTW (ft): **8.7**
 WELL CASING DIA. (in): **2**
 LOGGED BY: **Colin Ryan**

EASTING (ft):
 LONG:
 TOC ELEV (ft):
 WELL DEPTH (ft): **25.0**
 BOREHOLE DEPTH (ft): **25.0**
 BOREHOLE DIA. (in): **8**
 CHECKED BY: **Ed Simonis**



GEO FORM 304 MW-1 TO MW-3.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 3/10/11

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



Laboratory Results

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

Subject : 7 Soil Samples
Project Name : 7-Eleven Store #32266
Project Number : 211502037.220

Dear Mr. Brown,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed. Testing procedures comply with the 2003 NELAC standard. All soil samples are reported on a total weight (wet weight) basis unless noted otherwise in the case narrative. Laboratory results relate only to the samples tested. This report may be freely reproduced in full, but may only be reproduced in part with the express permission of Kiff Analytical, LLC. Kiff Analytical, LLC is certified by the State of California under the National Environmental Laboratory Accreditation Program (NELAP), lab # 08263CA. If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,



Joel Kiff

Subject : 7 Soil Samples
Project Name : 7-Eleven Store #32266
Project Number : 211502037.220

Case Narrative

Tert-Butanol results for samples MW-3-10, MW-3-20 and MW-3-25 may be biased slightly high and are flagged with a 'J'. A fraction of MtBE (up to 5%) converts to Tert-Butanol during the analysis of soil samples. We consider this conversion effect to be mathematically significant in samples that contain MtBE/Tert-Butanol in ratios of over 3:1.

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

Project Number : **211502037.220**

Sample : **MW-1-10**

Matrix : Soil

Lab Number : 76545-01

Sample Date :02/23/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/11 22:54
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/11 22:54
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/11 22:54
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/11 22:54
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/11 22:54
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/11 22:54
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/11 22:54
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/11 22:54
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/11 22:54
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	02/25/11 22:54
1,2-Dichloroethane-d4 (Surr)	108		% Recovery	EPA 8260B	02/25/11 22:54
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	02/25/11 22:54

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

Project Number : **211502037.220**

Sample : **MW-1-20**

Matrix : Soil

Lab Number : 76545-03

Sample Date :02/23/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 12:44
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 12:44
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 12:44
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 12:44
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 12:44
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 12:44
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 12:44
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 12:44
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 12:44
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	02/28/11 12:44
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	02/28/11 12:44
Toluene - d8 (Surr)	99.4		% Recovery	EPA 8260B	02/28/11 12:44

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

Project Number : **211502037.220**

Sample : **MW-2-10**

Matrix : Soil

Lab Number : 76545-04

Sample Date :02/24/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 21:25
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 21:25
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 21:25
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 21:25
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 21:25
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 21:25
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 21:25
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 21:25
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 21:25
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	02/28/11 21:25
1,2-Dichloroethane-d4 (Surr)	107		% Recovery	EPA 8260B	02/28/11 21:25
Toluene - d8 (Surr)	99.5		% Recovery	EPA 8260B	02/28/11 21:25

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

Project Number : **211502037.220**

Sample : **MW-2-20**

Matrix : Soil

Lab Number : 76545-06

Sample Date :02/24/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 20:47
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 20:47
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 20:47
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 20:47
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 20:47
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 20:47
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 20:47
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 20:47
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/11 20:47
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	02/28/11 20:47
1,2-Dichloroethane-d4 (Surr)	104		% Recovery	EPA 8260B	02/28/11 20:47
Toluene - d8 (Surr)	99.1		% Recovery	EPA 8260B	02/28/11 20:47

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

Project Number : **211502037.220**

Sample : **MW-3-10**

Matrix : Soil

Lab Number : 76545-07

Sample Date :02/23/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/11 23:32
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/11 23:32
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/11 23:32
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/11 23:32
Methyl-t-butyl ether (MTBE)	0.33	0.0050	mg/Kg	EPA 8260B	02/25/11 23:32
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/11 23:32
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/11 23:32
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/11 23:32
Tert-Butanol	0.0082 J	0.0050	mg/Kg	EPA 8260B	02/25/11 23:32
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	02/25/11 23:32
1,2-Dichloroethane-d4 (Surr)	104		% Recovery	EPA 8260B	02/25/11 23:32
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	02/25/11 23:32

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

Project Number : **211502037.220**

Sample : **MW-3-20**

Matrix : Soil

Lab Number : 76545-09

Sample Date :02/23/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/26/11 00:41
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/26/11 00:41
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/26/11 00:41
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/26/11 00:41
Methyl-t-butyl ether (MTBE)	0.22	0.0050	mg/Kg	EPA 8260B	02/26/11 00:41
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/26/11 00:41
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/26/11 00:41
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/26/11 00:41
Tert-Butanol	0.053 J	0.0050	mg/Kg	EPA 8260B	02/26/11 00:41
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	02/26/11 00:41
1,2-Dichloroethane-d4 (Surr)	105		% Recovery	EPA 8260B	02/26/11 00:41
Toluene - d8 (Surr)	99.7		% Recovery	EPA 8260B	02/26/11 00:41

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

Project Number : **211502037.220**

Sample : **MW-3-25**

Matrix : Soil

Lab Number : 76545-10

Sample Date :02/23/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/26/11 01:16
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/26/11 01:16
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/26/11 01:16
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/26/11 01:16
Methyl-t-butyl ether (MTBE)	0.084	0.0050	mg/Kg	EPA 8260B	02/26/11 01:16
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/26/11 01:16
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/26/11 01:16
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/26/11 01:16
Tert-Butanol	0.010 J	0.0050	mg/Kg	EPA 8260B	02/26/11 01:16
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	02/26/11 01:16
1,2-Dichloroethane-d4 (Surr)	105		% Recovery	EPA 8260B	02/26/11 01:16
Toluene - d8 (Surr)	99.7		% Recovery	EPA 8260B	02/26/11 01:16

QC Report : Method Blank Data

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

Project Number : **211502037.220**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/2011
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/2011
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/2011
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/2011
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/2011
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/2011
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/2011
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/2011
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/2011
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	02/25/2011
1,2-Dichloroethane-d4 (Surr)	106		%	EPA 8260B	02/25/2011
Toluene - d8 (Surr)	99.6		%	EPA 8260B	02/25/2011
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/2011
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/2011
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/2011
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/2011
Diisopropyl ether (DIPE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/2011
Ethyl-t-butyl ether (ETBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/2011
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/2011
Tert-Butanol	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/2011
Tert-amyl methyl ether (TAME)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/28/2011
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	02/28/2011
1,2-Dichloroethane-d4 (Surr)	103		%	EPA 8260B	02/28/2011
Toluene - d8 (Surr)	97.5		%	EPA 8260B	02/28/2011

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**

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	76545-01	<0.0050	0.0372	0.0395	0.0258	0.0336	mg/Kg	EPA 8260B	2/25/11	69.4	85.1	20.3	67.9-120	25
Diisopropyl ether	76545-01	<0.0050	0.0372	0.0395	0.0293	0.0347	mg/Kg	EPA 8260B	2/25/11	78.6	87.8	11.0	65.2-122	25
Ethyl-tert-butyl ether	76545-01	<0.0050	0.0372	0.0395	0.0264	0.0344	mg/Kg	EPA 8260B	2/25/11	70.8	87.1	20.6	64.6-122	25
Ethylbenzene	76545-01	<0.0050	0.0372	0.0395	0.0291	0.0353	mg/Kg	EPA 8260B	2/25/11	78.1	89.2	13.3	65.5-127	25
Methyl-t-butyl ether	76545-01	<0.0050	0.0371	0.0394	0.0268	0.0350	mg/Kg	EPA 8260B	2/25/11	72.1	88.9	20.9	57.0-122	25
P + M Xylene	76545-01	<0.0050	0.0372	0.0395	0.0304	0.0377	mg/Kg	EPA 8260B	2/25/11	81.6	95.4	15.6	62.5-124	25
Tert-Butanol	76545-01	<0.0050	0.186	0.198	0.140	0.164	mg/Kg	EPA 8260B	2/25/11	75.1	82.9	9.88	64.3-122	25
Tert-amyl-methyl ether	76545-01	<0.0050	0.0373	0.0396	0.0291	0.0368	mg/Kg	EPA 8260B	2/25/11	78.1	92.9	17.3	64.9-122	25
Toluene	76545-01	<0.0050	0.0372	0.0395	0.0269	0.0328	mg/Kg	EPA 8260B	2/25/11	72.3	83.1	13.9	65.7-120	25

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **7-Eleven Store #32266**Project Number : **211502037.220**

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	76545-03	<0.0050	0.0397	0.0394	0.0334	0.0340	mg/Kg	EPA 8260B	2/28/11	84.1	86.1	2.42	67.9-120	25
Diisopropyl ether	76545-03	<0.0050	0.0397	0.0394	0.0330	0.0337	mg/Kg	EPA 8260B	2/28/11	83.1	85.4	2.77	65.2-122	25
Ethyl-tert-butyl ether	76545-03	<0.0050	0.0397	0.0395	0.0331	0.0337	mg/Kg	EPA 8260B	2/28/11	83.4	85.4	2.38	64.6-122	25
Ethylbenzene	76545-03	<0.0050	0.0397	0.0394	0.0364	0.0359	mg/Kg	EPA 8260B	2/28/11	91.7	91.0	0.848	65.5-127	25
Methyl-t-butyl ether	76545-03	<0.0050	0.0395	0.0393	0.0344	0.0344	mg/Kg	EPA 8260B	2/28/11	87.0	87.6	0.640	57.0-122	25
P + M Xylene	76545-03	<0.0050	0.0397	0.0394	0.0383	0.0382	mg/Kg	EPA 8260B	2/28/11	96.6	96.8	0.151	62.5-124	25
Tert-Butanol	76545-03	<0.0050	0.198	0.197	0.158	0.161	mg/Kg	EPA 8260B	2/28/11	79.7	81.6	2.40	64.3-122	25
Tert-amyl-methyl ether	76545-03	<0.0050	0.0397	0.0395	0.0343	0.0351	mg/Kg	EPA 8260B	2/28/11	86.4	88.8	2.78	64.9-122	25
Toluene	76545-03	<0.0050	0.0397	0.0394	0.0337	0.0336	mg/Kg	EPA 8260B	2/28/11	84.9	85.1	0.225	65.7-120	25

QC Report : Laboratory Control Sample (LCS)Project Name : **7-Eleven Store #32266**Project Number : **211502037.220**

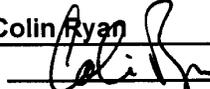
Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	0.0378	mg/Kg	EPA 8260B	2/25/11	91.1	67.9-120
Diisopropyl ether	0.0378	mg/Kg	EPA 8260B	2/25/11	91.5	65.2-122
Ethyl-tert-butyl ether	0.0378	mg/Kg	EPA 8260B	2/25/11	91.8	64.6-122
Ethylbenzene	0.0378	mg/Kg	EPA 8260B	2/25/11	97.0	65.5-127
Methyl-t-butyl ether	0.0377	mg/Kg	EPA 8260B	2/25/11	95.3	57.0-122
P + M Xylene	0.0378	mg/Kg	EPA 8260B	2/25/11	102	62.5-124
Tert-Butanol	0.189	mg/Kg	EPA 8260B	2/25/11	87.6	64.3-122
Tert-amyl-methyl ether	0.0378	mg/Kg	EPA 8260B	2/25/11	96.9	64.9-122
Toluene	0.0378	mg/Kg	EPA 8260B	2/25/11	90.5	65.7-120
Benzene	0.0400	mg/Kg	EPA 8260B	2/28/11	88.8	67.9-120
Diisopropyl ether	0.0400	mg/Kg	EPA 8260B	2/28/11	89.6	65.2-122
Ethyl-tert-butyl ether	0.0400	mg/Kg	EPA 8260B	2/28/11	91.0	64.6-122
Ethylbenzene	0.0400	mg/Kg	EPA 8260B	2/28/11	98.3	65.5-127
Methyl-t-butyl ether	0.0399	mg/Kg	EPA 8260B	2/28/11	95.2	57.0-122
P + M Xylene	0.0400	mg/Kg	EPA 8260B	2/28/11	104	62.5-124
Tert-Butanol	0.200	mg/Kg	EPA 8260B	2/28/11	88.7	64.3-122
Tert-amyl-methyl ether	0.0400	mg/Kg	EPA 8260B	2/28/11	95.2	64.9-122
Toluene	0.0400	mg/Kg	EPA 8260B	2/28/11	89.8	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 # 211502037.220 Task # 0400
 Project Manager Damon Brown
 Laboratory Kiff Analytical
 Turnaround Time Standard

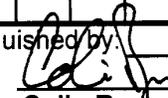
Sampler's Name Colin Ryan
 Sampler's Signature 

Analysis Request

Sample ID	Date	Time	Matrix	HCID	TPHg & BTEX by EPA 8260B	TPHd (Diesel Only) 8015 (modified)	TPH 418.1/MTPH 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	Comments/Instructions	Number of Containers
MW-1-10	2/23/11	3:25	Soil		x							x			1
MW-1-15	↓	3:40												Hold	1
MW-1-20	↓	3:50			X							X			1
MW-2-10	2/24/11	9:05			X							X			1
MW-2-15	↓	9:20												Hold	1
MW-2-20	↓	9:35			X							X			1
MW-3-10	2/23/11	12:00			X							X			1
MW-3-15	↓	12:10												Hold	1
MW-3-20	↓	12:25			X							X			1
MW-3-25	↓	1:15			X							X			1

01
02
03
04
05
06
07
08
09
10

Special Instructions/Comments
5 Oxygenates - MtBE, EtBE, DIPE, TAME, TBA
 Global ID #T10000001067
 email EDD to patrick.herrmann@stantec.com
 email lab report to patrick.herrmann@stantec.com /
damon.brown@stantec.com /
patrick.schiller@stantec.com

Relinquished by: 
 Sign _____
 Print Colin Ryan
 Company Stantec
 Time 2:30 Date 2/24/11

Relinquished by: _____
 Sign _____
 Print _____
 Company _____
 Time _____ Date _____

Received by: _____
 Sign _____
 Print _____
 Company _____
 Time _____ Date _____

Received by: 
 Sign _____
 Print _____
 Company Kiff Analytical
 Time 0918 Date 022511

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

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



Laboratory Results

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

Subject : 1 Soil Sample
Project Name : 7-Eleven Store #32266
Project Number : 211502037.220

Dear Mr. Brown,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed. Testing procedures comply with the 2003 NELAC standard. All soil samples are reported on a total weight (wet weight) basis unless noted otherwise in the case narrative. Laboratory results relate only to the samples tested. This report may be freely reproduced in full, but may only be reproduced in part with the express permission of Kiff Analytical, LLC. Kiff Analytical, LLC is certified by the State of California under the National Environmental Laboratory Accreditation Program (NELAP), lab # 08263CA. If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,



Joel Kiff

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

Project Number : **211502037.220**

Sample : **SP1(ABCD)**

Matrix : Soil

Lab Number : 76546-01

Sample Date :02/24/2011

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Lead	7.6	0.50	mg/Kg	EPA 6010B	02/28/11 14:14
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/26/11 15:06
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/26/11 15:06
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/26/11 15:06
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/26/11 15:06
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/26/11 15:06
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	02/26/11 15:06
1,2-Dichloroethane-d4 (Surr)	104		% Recovery	EPA 8260B	02/26/11 15:06
Toluene - d8 (Surr)	99.6		% Recovery	EPA 8260B	02/26/11 15:06

Report Number : 76546

Date : 03/04/2011

QC Report : Method Blank Data

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

Project Number : **211502037.220**

<u>Parameter</u>	<u>Measured Value</u>	<u>Method Reporting Limit</u>	<u>Units</u>	<u>Analysis Method</u>	<u>Date Analyzed</u>
Lead	< 0.50	0.50	mg/Kg	EPA 6010B	03/02/2011
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/2011
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/2011
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/2011
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/2011
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	02/25/2011
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	02/25/2011
1,2-Dichloroethane-d4 (Surr)	106		%	EPA 8260B	02/25/2011
Toluene - d8 (Surr)	99.6		%	EPA 8260B	02/25/2011

<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 : **211502037.220**

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	76545-01	<0.0050	0.0372	0.0395	0.0258	0.0336	mg/Kg	EPA 8260B	2/25/11	69.4	85.1	20.3	67.9-120	25
Ethylbenzene	76545-01	<0.0050	0.0372	0.0395	0.0291	0.0353	mg/Kg	EPA 8260B	2/25/11	78.1	89.2	13.3	65.5-127	25
Methyl-t-butyl ether	76545-01	<0.0050	0.0371	0.0394	0.0268	0.0350	mg/Kg	EPA 8260B	2/25/11	72.1	88.9	20.9	57.0-122	25
P + M Xylene	76545-01	<0.0050	0.0372	0.0395	0.0304	0.0377	mg/Kg	EPA 8260B	2/25/11	81.6	95.4	15.6	62.5-124	25
Toluene	76545-01	<0.0050	0.0372	0.0395	0.0269	0.0328	mg/Kg	EPA 8260B	2/25/11	72.3	83.1	13.9	65.7-120	25
Lead	76537-01	3.8	50.0	50.0	49.6	57.6	mg/Kg	EPA 6010B	2/28/11	91.7	108	14.8	75-125	20

QC Report : Laboratory Control Sample (LCS)Project Name : **7-Eleven Store #32266**Project Number : **211502037.220**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Lead	50.0	mg/Kg	EPA 6010B	2/28/11	105	85-115
Benzene	0.0378	mg/Kg	EPA 8260B	2/25/11	91.1	67.9-120
Ethylbenzene	0.0378	mg/Kg	EPA 8260B	2/25/11	97.0	65.5-127
Methyl-t-butyl ether	0.0377	mg/Kg	EPA 8260B	2/25/11	95.3	57.0-122
P + M Xylene	0.0378	mg/Kg	EPA 8260B	2/25/11	102	62.5-124
Toluene	0.0378	mg/Kg	EPA 8260B	2/25/11	90.5	65.7-120

Attachment F Survey Map

VASCO ROAD

△ 530.13
PK W/WASHER

⊗ MW-2
530.55

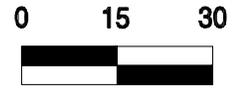
△ 531.14
PK W/WASHER

⊗ MW-3
530.74

△ 530.72
PK W/WASHER

⊗ MW-1
530.22

SCENIC AVENUE



SCALE: 1" = 30'

	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
	NORTHING	EASTING	
MW-1	2085941.283	6207742.337	530.22
MW-2	2086032.540	6207721.308	530.55
MW-3	2085948.598	6207689.408	530.74

V:\2115\active\211502037\dwg\211502037v-xp.dwg nmanrique 3/23/11 10:06

MARCH, 2011
211502037

ORIGINAL SHEET - ANSI A



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**