August 5, 2011

Jerry Wickham, CEG
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1131Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: **Sunol Tree Gas**
3004 Andrade Road, Sunol
Fuel Leak Case No. RO0002448

Dear Mr. Wickham:

Enclosed is the *Quarterly Groundwater Monitoring Report – Second Quarter 2011* for the subject LUFT site. In compliance with state and local regulations, electronic submittals of this report have been uploaded to the Geotracker database and the Alameda County ftp website.

I declare under penalty of perjury that the information and/or recommendations contained in the attached report are true and correct to the best of my knowledge.

Please call Tim Cook at Cook Environmental Services at (925) 478-8390 if you have questions or comments in regards to the technical content of this report.

Very truly yours,

Khan Petroleum, Inc.

Obaid Abdullah
President

cc: Jennifer Rice, Esq
Tim Cook, Cook Environmental Services, Inc.

Quarterly Groundwater Monitoring Report
Second Quarter 2011

PROJECT SITE:
Sunol Tree Gas Station
3004 Andrade Rd.
Sunol, California 94586-9453
Fuel Leak Case No. RO0002448

PREPARED FOR:

Khan Petroleum Inc.
3004 Andrade Road
Sunol, California 94586-9453

SUBMITTED TO:
Alameda County Department of Environmental Health
Environmental Health Services,
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

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Project No. 1024

August 5, 2011

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Second Quarter 2011

Sunol Tree Gas Station
3004 Andrade Rd.
Sunol, California 94586-9453
Fuel Leak Case No. RO0002448

By: Cook Environmental Services, Inc.

Project No. 1024
August 5, 2011

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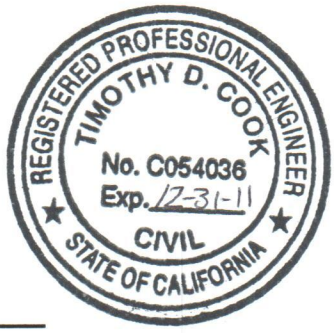
The conclusions presented in this document are professional opinions based solely upon visual observations of the site and vicinity, and interpretation of available information as described in this report. The limited scope of services performed in execution of this investigation may not be appropriate to satisfy the needs, or requirements of other regulatory agencies, or of other users. Any use or reuse of this document or its findings, conclusions or recommendations presented herein is at the sole risk of said user.



Tim Cook, P.E.
Principle Engineer

INTRODUCTION

This report is part of an ongoing environmental investigation related to the release of hydrocarbons at the Sunol Tree Gas Station (Site) located at 3004 Andrade Road in Sunol, California. The owner, Kahn Petroleum, Inc., authorized Cook Environmental Services, Inc. (CES) to conduct this investigation. Alameda County Environmental Health (ACEH) is the local oversight program (LOP) agency for this investigation.

Purpose

The Site background related to the hydrocarbon release is provided in **Appendix A.** This description is summarized from *Status of Active Fuel Leak Investigation*, dated May 6, 2009 (Weber Hayes & Associates). The Site location is shown on **Figure 1**. An annotated aerial photo of the Site is shown on **Figure 2**. A detailed site map, including the downgradient T Bear Ranch, is shown on **Figure 3**.

In a letter to the owner dated July 28, 2009, ACEH reduced the groundwater monitoring requirements to quarterly sampling of the wellhead carbon treatment system at the T Bear Water Supply Well.

CES conducted the last sampling event at the Site on April 19, 2010 and submitted the results in the Quarter Groundwater Monitoring Report, Second Quarter 2010, dated May 19, 2010. In that report CES proposed reducing the groundwater monitoring schedule to semi-annual sampling of wells CMT-1, CMT-3, CMT-6, CMT-10 and PZ-2 and annual sampling of wells CMT-2, CMT-4, CMT-5 and CMT-12. In a letter to the owner dated July 15, 2010, ACEH concurred with this reduced sampling schedule for the October 2010 only and requested the submittal of a Draft Corrective Action Plan (CAP) meeting the requirements of section 2725 of the UST regulations. The Draft CAP was submitted to ACEH on December 15, 2010. The ACEH responded with comments to the Draft CAP in a letter to the owner dated January 26, 2011.

In response, CES prepared an Interim Remedial Action Plan (IRAP) dated March 15, 2011 proposing a pilot test to evaluate the effectiveness of ozone sparging. Ozone will be injected into the intermediate water-bearing zone using two new sparge wells. Two multi-chamber groundwater monitoring wells are to be installed downgradient of the sparge wells to monitor the progress of the pilot test. On March 30, 2011 ACEH conditionally approved the IRAP provided that monitoring of the two new wells includes potential toxic daughter products (e.g., hexavalent chromium and bromate) due to ozone sparging.

ACEH requested sampling of the Sunol Tree in a meeting dated March 9, 2011. Neither hydrocarbons nor MtBE were detected in this well when sampled on March 30, 2011.

SCOPE OF WORK

The scope of work performed this quarter included the following:

- Measured static water levels and total depths in 3 PZ wells;
- Sampled wells CMT-1, CMT-3, CMT-6, CMT-7, PZ-2a, and PZ-2b;
- Analyzed groundwater samples for total petroleum hydrocarbons as gasoline (TPH-g), benzene, toluene, ethylbenzene and xylenes (BTEX) and 9 fuel oxygenates;
- Compiled data tables and iso-concentration maps;
- Prepared this groundwater monitoring report; and
- Updated the California State Water Resources Control Board (SWRCB) GeoTracker database and the Alameda County ftp website.

FIELD PROCEDURES

The following discussion describes field methods used to prepare for sampling and sampling techniques used to collect groundwater samples.

Each CMT well is a multiple completion well, consisting of three 0.375-inch diameter wells, denoted generally as CMT-X-1 (shallow), CMT-X-2 (medium) and CMT-X-3 (deep). The purpose of the CMT well cluster is to sample the aquifer at three discrete depths. Each PZ well is a multiple completion well, consisting of two 0.75-inch diameter wells, denoted generally as PZ-X-a (shallow) and PZ-X-b (deep). The purpose of the PZ well cluster is to sample the aquifer at two discrete depths.

The depth to water was measured and the total volume of each well was calculated to determine the appropriate purge volume for each well. Well sampling field procedures are described in **Appendix B**.

CES collected 18 water samples from wells CMT-1, CMT-3, CMT-6, CMT-7, PZ-2a, and PZ-2b on June 6, 2011. A peristaltic pump with clean silicone tubing for each well was used for purging and sample collection of the monitoring wells. The domestic well was sampled by turning on the water at a hose bib located on the side of the building and allowing the water to run for approximately 5 minutes prior to collecting a sample.

Depth to water and top of casing elevations from the three PZ wells were used to triangulate the shallow and deep groundwater flow direction and gradient. The shallow groundwater flow direction and gradient was $S70^0E$ at 0.022. The deeper groundwater flow direction and gradient could not be calculated for this quarter since a baseline reference point for triangulation (PZ-3b) was not measured. The shallow groundwater gradient is depicted on **Figure 4A.** The gradient for the intermediate/deeper water bearing zone could not be determined this quarter because one of the three triangulation points (piezometer PZ-3b) could not be accessed. Measured

groundwater elevations for this zone are depicted on **Figure 4B**. Groundwater elevation data is summarized in **Table 1**. Depths to water measurements were recorded on field logs included in **Appendix C**.

GROUNDWATER SAMPLE RESULTS

Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg), methyl-tertiary butyl ether (MTBE), and benzene, toluene, ethylbenzene, and xylenes (collectively referred to as BTEX) by EPA Method 8021B/8015Bm. Results were compared with environmental screening levels (ESLs) for groundwater established by the San Francisco Bay Regional Water Quality Control Board. Groundwater analytical results are summarized in **Table 3**. Laboratory analytical reports are included in **Appendix D**.

Twelve groundwater samples were collected from the multi-chamber (CMT) wells located along Transect A-A'. This transect is located approximately 150 feet downgradient (east) of the former USTs. Groundwater samples were also collected from piezometers PZ-2a and PZ-2b, which are located in close proximity to the T Bear ranch water supply well.

Methyl tert-butyl ether (MtBE) and tert butyl alcohol (tBA) were the only hydrocarbon constituents detected in these wells.

MtBE was detected above the ESL (5 ug/L) in the shallow water-bearing zone in CMT-6-1 and CMT-7-1 at 79 and 7.6 ug/L, respectively. MtBE was not detected at sampling points CMT-1-1 and CMT-3-1. MtBE concentrations in the shallow water-bearing zone are shown on **Figure 5a**. tBA was not detected above the ESL (12ug/l) in the shallow zone, however it was detected below the ESL in CMT-1-1, CMT-3-1 and PZ-2a at 8.7, 3.8 and 2.9 ug/L, respectively.

MtBE was detected in the intermediate water-bearing zone above its ESL in CMT-1-2, CMT-3-2, CMT-6-2 and CMT-7-2 at 17, 15, 18 and 140 ug/L, respectively. MtBE was most widespread in the intermediate water-bearing zone and likely represents the preferred pathway for MtBE contamination. MtBE concentrations in the intermediate water-bearing zone are shown on **Figure 5b**. tBA was not detected above its ESL in the intermediate zone, however it was detected below the ESL in CMT-3-2 at 3.8 ug/L.

MtBE was detected in the deep water-bearing zone above its ESL in CMT-6-3 and CMT-7-3 at 23 and 8.2 ug/L, respectively. MtBE was not detected in CMT-1-3 or CMT-3-3. MtBE concentrations in the deep water-bearing zone are shown on **Figure 5c**. tBA was not detected above its ESL in the deep water-bearing zone, however it was detected below the ESL in CMT-1-3 at 2.8 ug/L.

Well PZ-2a is important because it is located approximately 43 feet upgradient (west) of` the T Bear Ranch water supply well and is considered to be a sentinel well for this water supply well.

MtBE was not detected (the detection level was 0.5 ug/L) in the influent to the treatment system on the T-Bear Ranch water supply well on April 25, 2011, the last sampling event for which we have data (Weber, Hayes & Associates, June 2011).

The location of Transect A-A' which contains a line of sampling points downgradient of the source area is shown on **Figure 6**. The vertical cross-section of MtBE concentrations across Transect A-A' this quarter is shown on **Figure 7**.

CONCLUSIONS

There is a fairly well defined plume of dissolved MtBE migrating from the Site that remains at low concentrations. MtBE concentrations are lower since the last time these wells were sampled on March 30 2011. MtBE and tBA are the only constituents of concern at the Site as they are the only hydrocarbon constituents that exceed ESLs. The highest MtBE concentration this quarter was 140 ug/l in CMT-7-2. This sampling point has consistently yielded the highest MtBE concentration.

MtBE concentrations have largely stabilized, with slight variations compared to previous results. MtBE was below detection limits at five sampling points. tBA concentrations decreased to below detection limits in six sampling points where it was previously detected. tBA was detected in CMT-1 in all three zones (at 8.7, 6.9, and 2.8 ug/l), where it has not been previously detected, though it is still below its ESL. tBA was also detected at CMT-3-1 at 2.7 ug/l and CMT-3-2 at 3.8 ug/l as well as at PZ-2a at 2.9 ug/l, the same as last quarter. tBA is typically the daughter product of MtBE. Previously, we observed tBA concentrations increasing while MtBE concentrations decreased. These changes were attributed to natural attenuation, although such a correlation is not apparent this quarter.

The MtBE plume is delineated on the north by CMT-8. The plume is not delineated to the south since MtBE was detected in the intermediate water-bearing zone of the most southerly well, CMT-1, at 17 ug/L. The plume is delineated on the west by wells CMT-11 and CMT-12. The plume is not delineated to the east since MtBE was detected in the most easterly well, PZ-2a (shallow water-bearing zone) at 3.4 ug/L. When compared to previous sampling results the MtBE concentration dropped from 7.5 to 3.4 ug/L, however the tBA concentration remained the same at 2.9 ug/L. This well is located approximately 43 feet upgradient of the T Bear water supply well.

RECOMMENDATIONS

Both MtBE and tBA concentrations in groundwater remain fairly stable at all sampling points when compared to the previous sampling results. We are currently initiating the pilot test to evaluate the effectiveness of the proposed ozone sparge system. We have completed three CPT

borings and collected groundwater samples from all three water bearing zones in four temporary borings. We plan on installing two ozone sparge wells in the intermediate zone and two additional multi-chamber monitoring wells downgradient of the sparge wells later this month. This scope of work is included in the approved IRAP, dated March 15, 2011. Pilot testing of the two new monitoring wells will begin shortly after the ozone sparge system commences operation.

CES will continue quarterly sampling of the monitoring well network and Weber Hayes Associates will continue quarterly maintenance and monitoring of the T-Bear Ranch wellhead treatment system.

TABLES

Table 1 Groundwater Elevations
Sunol Tree Gas Station
3004 Andrade Road, Sunol, California

Well ID	PZ-1a		PZ-1b		PZ-2a		PZ-2b		PZ-3a		PZ-3b	
TOC Elev	274.50		274.62		267.94		267.94		271.40		271.16	
Date	DTW	Elev	DTW	Elev	DTW	Elev	DTW	Elev	DTW	Elev	DTW	Elev
07/25/04	10.22	264.28	14.84	259.78	6.10	261.84	8.25	259.69	6.57	264.83	11.02	260.14
08/02/04	10.41	264.09	14.56	260.06	6.05	261.89	7.82	260.12	7.69	263.71	10.99	260.17
08/05/04	10.65	263.85	14.68	259.94	6.21	261.73	7.95	259.99	8.00	263.40	11.18	259.98
08/13/04	10.95	263.55	14.79	259.83	6.53	261.41	7.95	259.99	8.64	262.76	11.31	259.85
09/08/04	11.93	262.57	15.69	258.93	7.58	260.36	8.95	258.99	9.64	261.76	12.25	258.91
12/03/04	10.41	264.09	14.31	260.31	6.65	261.29	7.79	260.15	9.04	262.36	11.09	260.07
01/18/05	4.96	269.54	10.37	264.25	2.91	265.03	3.52	264.42	5.94	265.46	6.87	264.29
03/21/05	3.69	270.81	9.26	265.36	1.88	266.06	2.38	265.56	3.11	268.29	5.74	265.42
07/12/05	6.28	268.22	11.71	262.91	0.94	267.00	5.53	262.41	4.27	267.13	8.14	263.02
08/15/06	6.59	267.91	12.47	262.15	0.49	267.45	5.52	262.42	4.75	266.65	8.81	262.35
10/27/06	8.72	265.78	13.68	260.94	5.07	262.87	6.96	260.98	6.66	264.74	10.32	260.84
04/23/10	4.86	269.64	9.50	265.12	0.98	266.96	2.94	265.00	6.38	265.02	6.38	264.78
03/29/11	2.54	271.96	7.76	266.86	1.16	266.78	0.97	266.97	3.08	268.32	4.31	266.85
06/06/11	6.13	268.37	10.62	264.00	5.74	262.20	3.39	264.55	4.22	267.18	NM	
Δ		-3.59		-2.86		-4.58		-2.42		-1.14		
Maximum	11.93	271.96	15.69	266.86	7.58	267.45	8.95	266.97	9.64	268.32	12.25	266.85
Minimum	2.54	262.57	7.76	258.93	0.49	260.36	0.97	258.99	3.08	261.76	4.31	258.91

Notes: All measurements are in feet.
DTW = Depth to water below TOC Elevations are based on NAVD 88 datum
NM = Not measured this quarter
Δ = The change in water level for the current quarter
TOC = Top of casing
Elev = Elevation above mean sea level

Table 2. Groundwater Results - Multi-Level Wells
Sunol Tree Gas Station
3004 Andrade Road, Sunol, CA

Well- ID	Date	Depth (feet, bgs)	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	TBA	ETBE	DIPE	TAME	Ethanol	Comments
CMT-1-1	12/29/04	21	< 25	< 0.5	< 0.5	< 0.5	< 0.5	**15 /14**	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow
	07/13/05		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	08/15/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/26/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	8.7	<0.5	<0.5	<0.5	<50	
CMT-1-2	12/29/04	41	< 25	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate
	07/13/05		ND	ND	ND	ND	ND	2.7	ND	ND	ND	ND	ND	
	08/15/06		ND	ND	ND	ND	ND	**6.5**	ND	ND	ND	ND	ND	
	10/26/06		ND	ND	ND	ND	ND	**7.9**	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	**12**	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	**14**	<2.0	<0.5	<0.5	<0.5	<50	
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	**12**	<2.0	<0.5	<0.5	<0.5	<50	
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	**17**	6.9	<0.5	<0.5	<0.5	<50	
CMT-1-3	12/29/04	51	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep
	07/13/05		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	08/15/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/26/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	2.8	<0.5	<0.5	<0.5	<50	
CMT-2-1	12/29/04	22	< 25	< 0.5	0.58 /<0.5	< 0.5	< 0.5	**13/14**	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow
	07/13/05		ND	ND	ND	ND	ND	**13**	ND	ND	ND	ND	ND	
	08/15/06		ND	ND	ND	ND	ND	2.3	ND	ND	ND	ND	ND	
	10/26/06		ND	ND	ND	ND	ND	2.7	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	0.61	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
CMT-2-2	12/29/04	42	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate
	07/13/05		ND	ND	ND	ND	ND	4.6	ND	ND	ND	ND	ND	
	08/15/06		ND	ND	ND	ND	ND	**14**	ND	ND	ND	ND	ND	
	10/26/06		56	ND	0.70	ND	1.1	**14**	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	**19**	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
CMT-2-3	12/29/04	52	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep
	07/13/05		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	08/15/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/26/06		39	ND	0.52	ND	0.96	ND	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
Environmental Screening Levels (ESLs)			100	1.0	40	30	20	5.0	12	NE	NE	NE	NE	

Table 2. Groundwater Results - Multi-Level Wells
Sunol Tree Gas Station
3004 Andrade Road, Sunol, CA

Well- ID	Date	Depth (feet, bgs)	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	TBA	ETBE	DIPE	TAME	Ethanol	Comments
CMT-3-1	01/18/05	22	< 25	< 0.5	< 0.5	< 0.5	< 0.5	**15**	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow
	07/13/05		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	08/16/06		ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND	ND	
	10/27/06		37	ND	1.2	0.53	2.9	1.5	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	3.1	<0.5	<0.5	<0.5	<50	
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	0.52	ND	<0.5	<0.5	<0.5	<50	
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	2.7	<0.5	<0.5	<0.5	<50	
CMT-3-2	01/18/05	42	**190**	< 2.5	< 2.5	< 2.5	< 2.5	**190**	< 50	< 25	< 25	< 25	< 500	Intermediate
	07/13/05		55	ND	ND	ND	ND	**69**	ND	ND	ND	ND	ND	
	08/16/06		36	ND	ND	ND	ND	**27**	ND	ND	ND	ND	ND	
	10/27/06		39	ND	0.90	ND	2.4	**28**	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	**19**	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	**23**	2.8	<0.5	<0.5	<0.5	<50	
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	**18**	ND	<0.5	<0.5	<0.5	<50	
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	**15**	3.8	<0.5	<0.5	<0.5	<50	
CMT-3-3	01/18/05	52	< 25	< 0.5	< 0.5	< 0.5	< 0.5	4.9	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep
	07/13/05		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	08/16/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/27/06		ND	ND	ND	ND	1.8	ND	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	0.73	<2.0	<0.5	<0.5	<0.5	<50	
CMT-4-1	01/11/05	13.5	< 25	< 0.5	< 0.5	< 0.5	< 0.5	**15**	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow
	07/12/05		ND	ND	ND	ND	ND	**5.3**	ND	ND	ND	ND	ND	
	08/16/06		ND	ND	ND	ND	ND	2.0	ND	ND	ND	ND	ND	
	10/27/06		ND	ND	ND	ND	0.76	2.1	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	0.54	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
CMT-4-2	01/11/05	42	35	< 0.5	< 0.5	< 0.5	< 0.5	**29**	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate
	07/12/05		60	ND	ND	ND	ND	**66**	ND	ND	ND	ND	ND	
	08/16/06		**110**	ND	ND	ND	ND	**110**	ND	ND	ND	ND	ND	
	10/27/06		**140**	< 1.0	< 1.0	< 1.0	< 1.0	**140**	< 20	< 10	< 10	< 10	< 200	
	04/19/10		<50	<5.0	<5.0	<5.0	<5.0	**180**	<20	<5.0	<5.0	<5.0	<500	
	10/16/10		NM	NM	NM	NM	NM	**NM**	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
CMT-4-3	01/11/05	52	29	< 0.5	< 0.5	< 0.5	< 0.5	**27**	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep
	07/12/05		ND	ND	ND	ND	ND	**11**	ND	ND	ND	ND	ND	
	08/16/06		ND	ND	ND	ND	ND	**11**	ND	ND	ND	ND	ND	
	10/27/06		ND	ND	ND	ND	0.53	**16**	ND	ND	ND	ND	ND	
	04/19/10		<50	<1.0	<1.0	<1.0	<1.0	**40**	<4.0	<1.0	<1.0	<1.0	<100	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
Environmental Screening Levels (ESLs)			100	1.0	40	30	20	5.0	12	NE	NE	NE	NE	

Table 2. Groundwater Results - Multi-Level Wells
Sunol Tree Gas Station
3004 Andrade Road, Sunol, CA

Well- ID	Date	Depth (feet, bgs)	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	TBA	ETBE	DIPE	TAME	Ethanol	Comments
CMT-5-1	12/29/04	21	< 25	< 0.5	0.7	< 0.5	< 0.5	**19**	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow
	07/12/05		ND	ND	ND	ND	ND	**12**	ND	ND	ND	ND	ND	
	08/16/06		ND	ND	ND	ND	ND	4.7	ND	ND	ND	ND	ND	
	10/27/06		46	ND	ND	ND	0.87	3.6	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	**11**	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
CMT-5-2	12/29/04	42	< 25	< 0.5	0.54	< 0.5	< 0.5	3.5	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate
	07/12/05		31	ND	ND	ND	ND	**37**	ND	ND	ND	ND	ND	
	08/16/06		88	ND	ND	ND	ND	**89**	ND	ND	ND	ND	ND	
	10/27/06		**130**	< 1.0	< 1.0	< 1.0	< 1.0	**92**	< 20	< 10	< 10	< 10	< 200	
	04/19/10		<50	<5.0	<5.0	<5.0	<5.0	**140**	<20	<5.0	<5.0	<5.0	<500	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
CMT-5-3	12/29/04	52	< 25	< 0.5	0.52	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep
	07/12/05		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	08/16/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/27/06		ND	ND	ND	ND	0.67	ND	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	0.57	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
CMT-6-1	01/11/05	22	40	< 0.5	< 0.5	< 0.5	< 0.5	**41**	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow
	07/12/05		64	ND	ND	ND	ND	**79**	ND	ND	ND	ND	ND	
	08/16/06		71	ND	ND	ND	ND	**71**	ND	ND	ND	ND	ND	
	10/27/06		**110**	< 1.0	< 1.0	< 1.0	1.3	**84**	< 20	< 10	< 10	< 10	< 200	
	04/19/10		<50	<2.5	<2.5	<2.5	<2.5	**88**	<10	<2.5	<2.5	<2.5	<250	
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	**95**	**16**	<1.7	<1.7	<1.7	<170	
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	**79**	<6.7	<1.7	<1.7	<1.7	<170	
	06/06/11		<50	<1.2	<1.2	<1.2	<1.2	**79**	<5.0	<1.2	<1.2	<1.2	<120	
CMT-6-2	01/11/05	43	< 25	< 0.5	< 0.5	< 0.5	< 0.5	**8.7**	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate
	07/12/05		ND	ND	ND	ND	ND	**15**	ND	ND	ND	ND	ND	
	08/16/06		ND	ND	ND	ND	ND	**12**	ND	ND	ND	ND	ND	
	10/27/06		40	ND	ND	ND	0.76	**19**	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	**18**	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	**28**	2.3	<0.5	<0.5	<0.5	<50	
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	**24**	<2.0	<0.5	<0.5	<0.5	<50	
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	**18**	<2.0	<0.5	<0.5	<0.5	<50	
CMT-6-3	01/11/05	57	< 25	< 0.5	< 0.5	< 0.5	< 0.5	4.5	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep
	07/12/05		ND	ND	ND	ND	ND	4.7	ND	ND	ND	ND	ND	
	08/16/06		25	ND	0.77	ND	ND	**5.5**	ND	ND	ND	ND	ND	
	10/27/06		38	ND	ND	ND	0.68	**7.7**	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	**25**	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	**20**	<2.0	<0.5	<0.5	<0.5	<50	
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	**16**	<2.0	<0.5	<0.5	<0.5	<50	
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	**23**	<2.0	<0.5	<0.5	<0.5	<50	
Environmental Screening Levels (ESLs)			100	1.0	40	30	20	5.0	12	NE	NE	NE	NE	

Table 2. Groundwater Results - Multi-Level Wells
Sunol Tree Gas Station
3004 Andrade Road, Sunol, CA

Well- ID	Date	Depth (feet, bgs)	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	TBA	ETBE	DIPE	TAME	Ethanol	Comments
CMT-7-1	01/11/05	13.5	< 25	< 0.5	0.52	< 0.5	< 0.5	2.5	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow
	07/13/05		ND	ND	ND	ND	ND	3.7	ND	ND	ND	ND	ND	
	08/16/06		42	ND	ND	ND	ND	**27**	ND	ND	ND	ND	ND	
	10/27/06		50	ND	2.2	ND	2.7	**37**	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	**13**	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	**11**	2.6	<0.5	<0.5	<0.5	<50	
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	**9**	<2.0	<0.5	<0.5	<0.5	<50	
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	**7.6**	<2.0	<0.5	<0.5	<0.5	<50	
CMT-7-2	01/10/05	43	< 25	< 0.5	< 0.5	< 0.5	< 0.5	**7.4**	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate
	07/13/05		**230**	< 2.5	< 2.5	< 2.5	< 2.5	**320**	< 50	< 25	< 25	< 25	< 500	
	08/16/06		**400**	< 2.5	< 2.5	< 2.5	< 2.5	**390**	< 50	< 25	< 25	< 25	< 500	
	10/27/06		**490**	< 5.0	< 5.0	< 5.0	< 5.0	**400**	< 100	< 50	< 50	< 50	< 1,000	
	04/19/10		<50	<2.5	<2.5	<2.5	<2.5	**170**	<10	<2.5	<2.5	<2.5	<250	
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	**180**	<20	<5.0	<5.0	<5.0	<500	
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	**140**	<20	<5.0	<5.0	<5.0	<500	
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	**140**	<10	<5.0	<5.0	<5.0	<500	
CMT-7-3	01/10/05	57	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep
	07/13/05		ND	ND	ND	ND	ND	1.1	ND	ND	ND	ND	ND	
	08/16/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/27/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	**8.2**	<2.0	<0.5	<0.5	<0.5	<50	
CMT-8-1	01/14/05	22	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow
	08/16/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/26/06		26	ND	0.78	ND	1.4	ND	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
CMT-8-2	01/14/05	43.5	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate
	08/16/06		ND	ND	ND	ND	ND	ND	**80**	ND	ND	ND	ND	
	10/26/06		ND	ND	0.81	ND	1.2	ND	**80**	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
CMT-8-3	01/14/05	52	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep
	08/16/06		ND	ND	ND	ND	ND	< 1.0	**80**	ND	ND	ND	ND	
	10/26/06		ND	ND	0.70	ND	1.1	ND	**80**	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
Environmental Screening Levels (ESLs)			100	1.0	40	30	20	5.0	12	NE	NE	NE	NE	

Table 2. Groundwater Results - Multi-Level Wells
Sunol Tree Gas Station
3004 Andrade Road, Sunol, CA

Well- ID	Date	Depth (feet, bgs)	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	TBA	ETBE	DIPE	TAME	Ethanol	Comments
CMT-9-1	01/14/05	22	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow
	08/16/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/26/06		ND	ND	0.72	ND	1.0	ND	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
CMT-9-2	01/14/05	43.5	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate
	08/16/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/26/06		ND	ND	0.77	ND	1.2	ND	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
CMT-9-3	01/14/05	52	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep
	08/16/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/26/06		ND	ND	0.57	ND	0.94	ND	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
CMT-10-1	01/14/05	22	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow
	07/13/05		ND	ND	ND	ND	ND	3.8	ND	ND	ND	ND	ND	
	08/15/06		ND	ND	ND	ND	ND	1.6	ND	ND	ND	ND	ND	
	10/26/06		ND	ND	0.8	ND	1.5	2.4	ND	ND	ND	ND	ND	
	04/19/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		< 50	< 0.5	< 0.5	< 0.5	< 0.5	<0.5	< 2.0	< 0.5	< 0.5	< 0.5	<50	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
CMT-10-2	01/14/05	42	< 25	< 0.5	< 0.5	< 0.5	< 0.5	2.6	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate
	07/13/05		ND	ND	ND	ND	ND	4.8	ND	ND	ND	ND	ND	
	08/15/06		ND	ND	ND	ND	ND	1.6	ND	ND	ND	ND	ND	
	10/26/06		35	ND	1.2	ND	2.3	4.9	ND	ND	ND	ND	ND	
	04/19/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		< 50	< 0.5	< 0.5	< 0.5	< 0.5	1	< 2.0	< 0.5	< 0.5	< 0.5	<50	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
CMT-10-3	01/14/05	52	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep
	07/13/05		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	08/15/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/26/06		ND	ND	0.9	ND	1.6	ND	ND	ND	ND	ND	ND	
	04/19/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		< 50	< 0.5	< 0.5	< 0.5	< 0.5	1	< 2.0	< 0.5	< 0.5	< 0.5	<50	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
Environmental Screening Levels (ESLs)			100	1.0	40	30	20	5.0	12	NE	NE	NE	NE	

Table 2. Groundwater Results - Multi-Level Wells
Sunol Tree Gas Station
3004 Andrade Road, Sunol, CA

Well- ID	Date	Depth (feet, bgs)	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	TBA	ETBE	DIPE	TAME	Ethanol	Comments
CMT-11-1	01/10/05	22.5	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow
	08/15/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/26/06		25	ND	1.2	ND	1.8	ND	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
CMT-11-2	01/10/05	32	< 25	< 0.5	< 0.5	< 0.5	< 0.5	1.3	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate
	08/15/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/26/06		31	ND	0.83	ND	1.6	ND	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
CMT-11-3	01/10/05	53	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep
	08/15/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/26/06		26	ND	0.64	ND	1.2	ND	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
CMT-12-1	01/10/05	22.75	< 25	< 0.5	< 0.5	< 0.5	< 0.5	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow
	08/15/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/26/06		ND	ND	0.56	ND	0.93	ND	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
CMT-12-2	01/10/05	38.25	< 25	< 0.5	< 0.5	< 0.5	< 0.5	1.4	< 10	< 5.0	< 5.0	< 5.0	< 100	Intermediate
	08/15/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/26/06		ND	ND	1.0	ND	1.9	ND	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	**23**	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
CMT-12-3	01/10/05	57.25	< 25	< 0.5	< 0.5	< 0.5	< 0.5	1.7	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep
	08/15/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/26/06		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
Environmental Screening Levels (ESLs)			100	1.0	40	30	20	5.0	12	NE	NE	NE	NE	

Table 2. Groundwater Results - Multi-Level Wells
Sunol Tree Gas Station
3004 Andrade Road, Sunol, CA

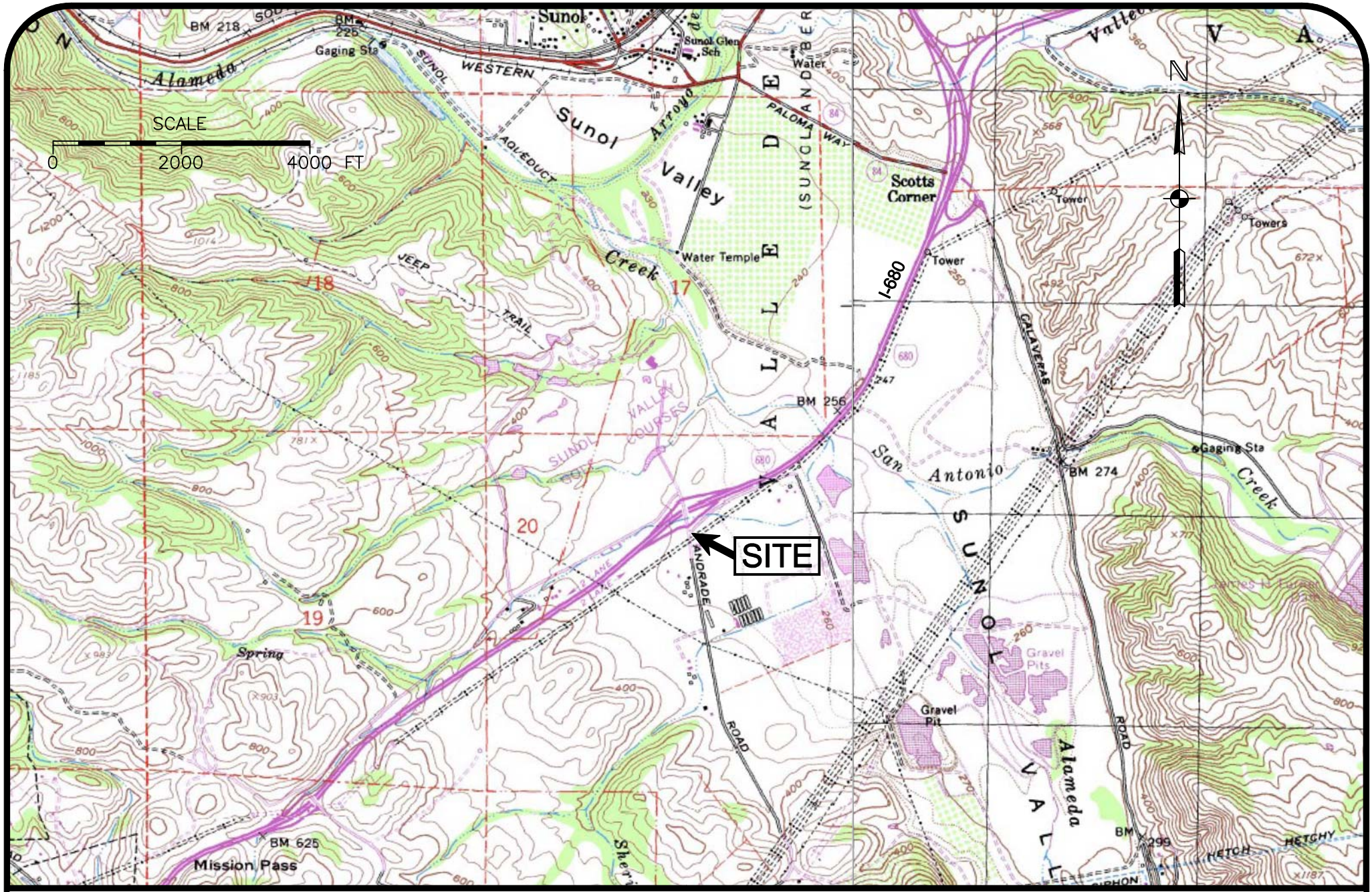
Well- ID	Date	Depth (feet, bgs)	TPH-g	benzene	toluene	ethyl-benzene	xylenes	MtBE	TBA	ETBE	DIPE	TAME	Ethanol	Comments
PZ-1a	12/03/04	17	**180**	< 1.0	< 1.0	< 1.0	< 2	**190**	< 20	< 10	< 10	< 10	< 200	Shallow
	08/16/06		**440**	ND	ND	ND	ND	**57**	ND	ND	ND	ND	ND	
	10/27/06		**130**	ND	ND	ND	ND	**52**	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	**23**	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
PZ-1b	12/03/04	46.5	38	< 0.5	< 0.5	< 0.5	< 1	**28**	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep
	08/16/06		51	ND	ND	ND	ND	**38**	ND	ND	ND	ND	ND	
	10/27/06		58	ND	ND	ND	0.79	**50**	ND	ND	ND	ND	ND	
	04/19/10		<50	<2.5	<2.5	<2.5	<2.5	**63**	<10	<2.5	<2.5	<2.5	<250	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
PZ-2a	12/03/04	29	**270**	< 2.5	< 2.5	< 2.5	< 5	**280**	< 50	< 25	< 25	< 25	< 500	Shallow
	07/12/05		**120**	< 1.0	< 1.0	< 1.0	< 1.0	**110**	< 20	< 10	< 10	< 10	< 200	
	08/15/06		**100**	ND	ND	ND	ND	**92**	ND	ND	ND	ND	ND	
	10/26/06		68	ND	ND	ND	ND	**56**	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	**22**	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		<50	<0.5	<0.5	<0.5	<0.5	**18**	3.0	<0.5	<0.5	<0.5	<50	
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	**8**	2.9	<0.5	<0.5	<0.5	<50	
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	3.4	2.9	<0.5	<0.5	<0.5	<50	
PZ-2b	12/03/04	49	**160**	< 1.0	< 1.0	< 1.0	< 2	**150**	< 20	< 10	< 10	< 10	< 200	Deep
	07/12/05		ND	ND	ND	< 1.0	ND	**15**	ND	ND	ND	ND	ND	
	08/15/06		ND	ND	ND	ND	ND	**17**	ND	ND	ND	ND	ND	
	10/26/06		43	ND	ND	ND	ND	**17**	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		<50	<0.5	<0.5	<0.5	<0.5	3	<2.0	<0.5	<0.5	<0.5	<50	
	06/06/11		<50	<0.5	<0.5	<0.5	<0.5	3.8	<2.0	<0.5	<0.5	<0.5	<50	
PZ-3a	12/03/04	21	29	< 0.5	< 0.5	< 0.5	< 1.0	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Shallow
	08/16/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/26/06		27	< 0.5	1.8	< 0.5	2.9	ND	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
PZ-3b	12/03/04	49	< 25	< 0.5	< 0.5	< 0.5	< 1.0	< 1.0	< 10	< 5.0	< 5.0	< 5.0	< 100	Deep
	08/16/06		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	10/26/06		ND	ND	0.54	ND	0.88	ND	ND	ND	ND	ND	ND	
	04/19/10		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<50	
	10/16/10		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	03/30/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
	06/06/11		NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	
Sunol Tree	03/30/11	153?	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	Deep
Environmental Screening Levels (ESLs)			100	1.0	40	30	20	5.0	12	NE	NE	NE	NE	

BOLD = Bold Print indicates concentrations are above ESLs.
< # = Detection limit elevated due to sample dilution.
ND = Not detected at or above the lab's practical quantitation limit.
NS= Not sampled
MtBE detections are confirmed by EPA Method #8260.

MTBE = Methyl-tert-Butyl ether
TAME = Tert-amyl methyl ether
ETBE = Ethyl tert-butyl ether
DIPE = Di-isopropyl either
tBA - tert butyl alcohol

TPH-g - total petroleum hydrocarbons as gasoline
concentrations: micrograms per liter (ug/L)
ESLs are from San Francisco Bay RWQCB where groundwater is a drinking water resource.
13/14 = dupicate sample results

FIGURES



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Sunol Tree Gas Station
Site Location Map
3004 Andrade Road
Sunol, CA 94586

Project: 1024	Figure: 1
Date: 8/5/11	
Scale: 1" = 2000 '	

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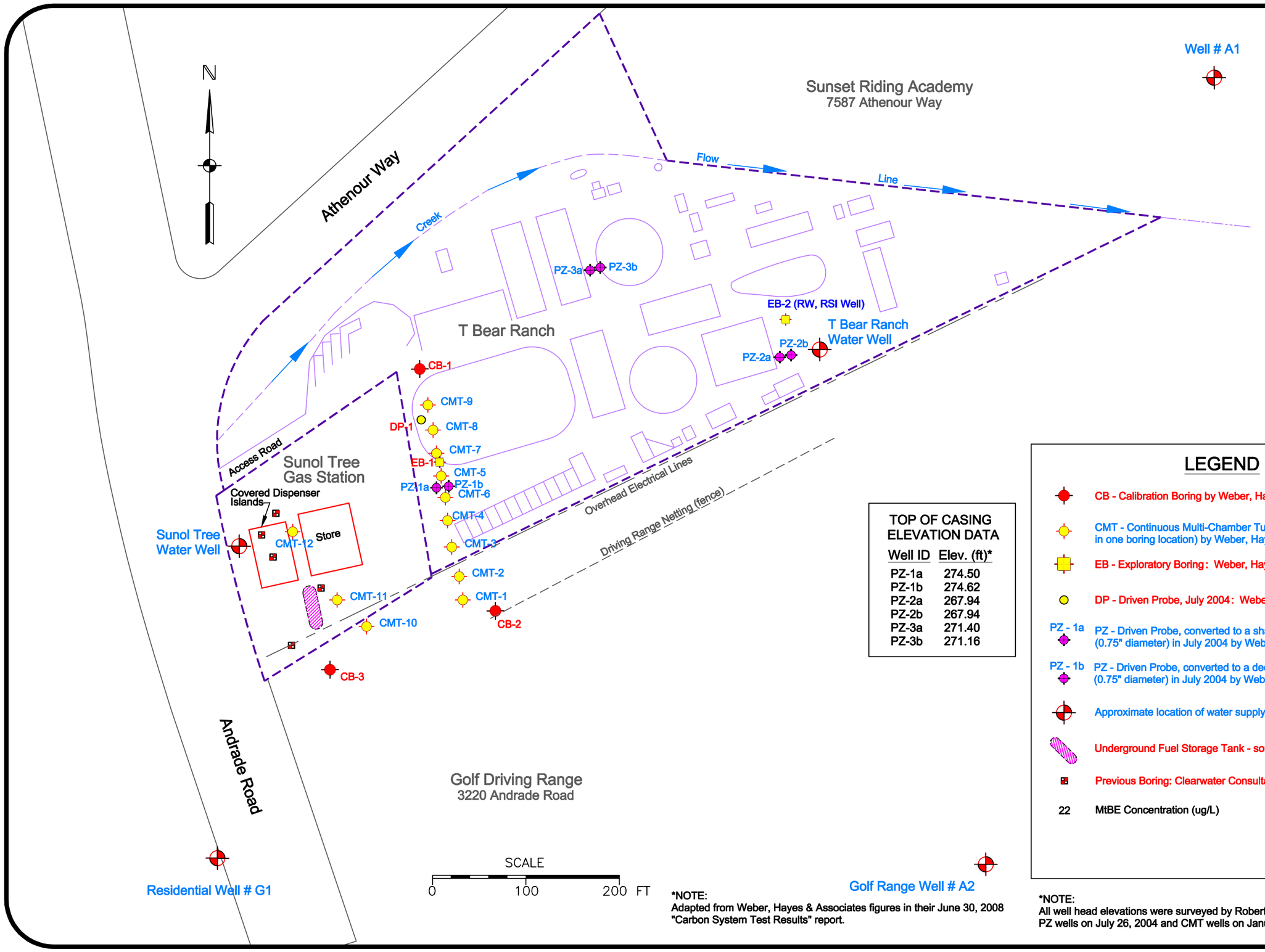
Sunol Tree Gas Station
Site Aerial Photograph
3400 Andrade Road
Sunol, CA 94586

Project 1024	Figure: 2
Date: 8/5/11	
Scale: 1" = 50'	



TOP OF CASING ELEVATION DATA

Well ID	Elev. (ft)*
PZ-1a	274.50
PZ-1b	274.62
PZ-2a	267.94
PZ-2b	267.94
PZ-3a	271.40
PZ-3b	271.16

*NOTE:
Adapted from Weber, Hayes & Associates figures in their June 30, 2008 "Carbon System Test Results" report.

LEGEND

- CB - Calibration Boring by Weber, Hayes & Associates
- CMT - Continuous Multi-Chamber Tubing Well (3 - 0.375" wells in one boring location) by Weber, Hayes & Associates
- EB - Exploratory Boring: Weber, Hayes & Associates
- DP - Driven Probe, July 2004: Weber, Hayes & Associates
- PZ - 1a — PZ - Driven Probe, converted to a shallow Piezometer Well (0.75" diameter) in July 2004 by Weber, Hayes & Associates
- PZ - 1b — PZ - Driven Probe, converted to a deep Piezometer Well (0.75" diameter) in July 2004 by Weber, Hayes & Associates
- Approximate location of water supply well
- Underground Fuel Storage Tank - source of release
- Previous Boring: Clearwater Consultants, 2002
- 22 — MtBE Concentration (ug/L)

*NOTE:
All well head elevations were surveyed by Robert McGregor (Lic. #5946); PZ wells on July 26, 2004 and CMT wells on January 21, 2005.

Figure: 3

Project 1024 | Date: 8/5/11 | Scale:1" = 100 '

Sunol Tree Gas Station
Monitoring Well and Soil Boring Locations
3004 Andrade Road
Sunol, CA 94586

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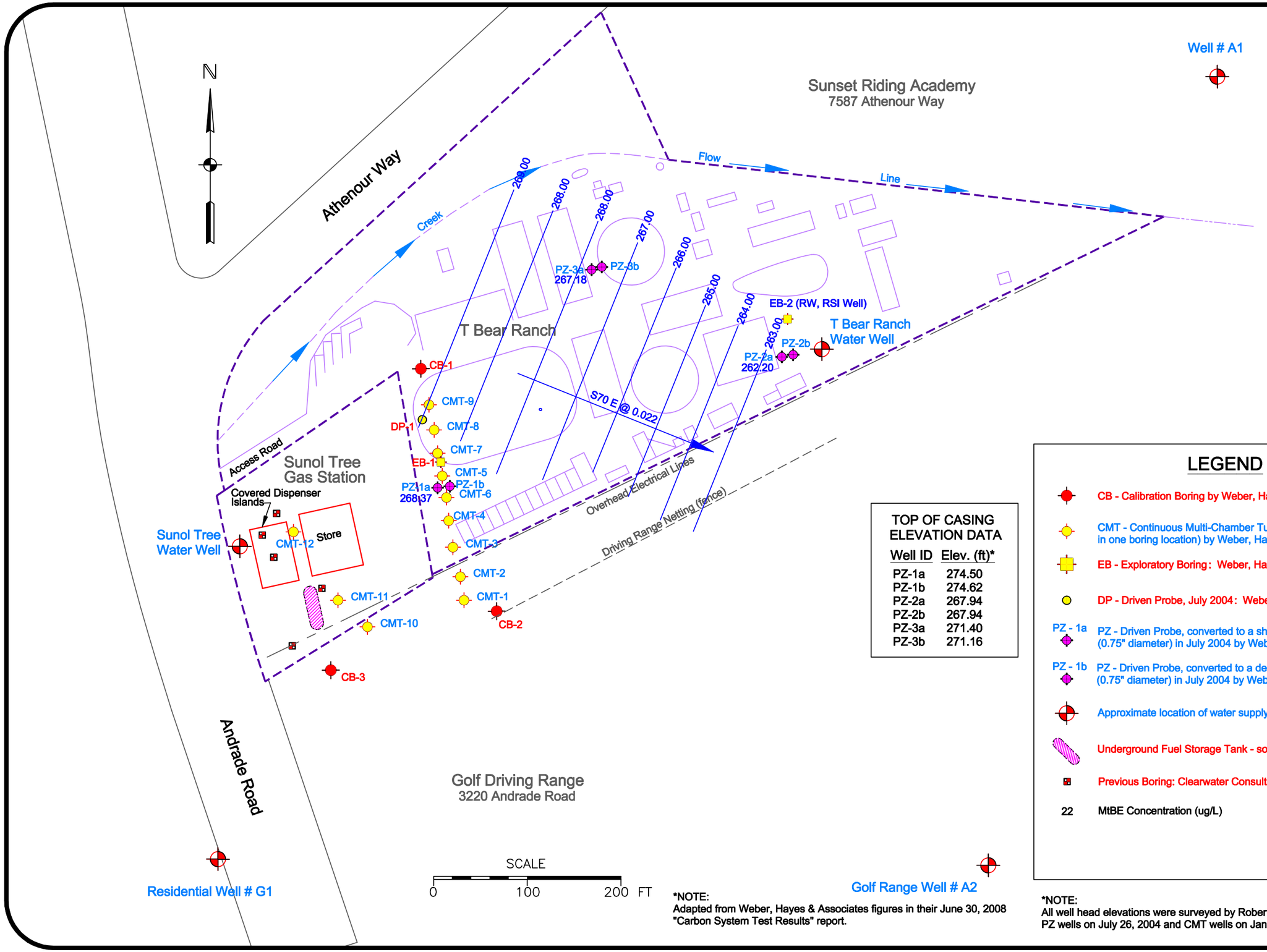

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PZ-1b	274.62
PZ-2a	267.94
PZ-2b	267.94
PZ-3a	271.40
PZ-3b	271.16

*NOTE:
Adapted from Weber, Hayes & Associates figures in their June 30, 2008 "Carbon System Test Results" report.

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- Underground Fuel Storage Tank - source of release
- Previous Boring: Clearwater Consultants, 2002
- 22 — MtBE Concentration (ug/L)

*NOTE:
All well head elevations were surveyed by Robert McGregor (Lic. #5946); PZ wells on July 26, 2004 and CMT wells on January 21, 2005.

Figure: 4A

Project 1024 | Date: 8/5/11 | Scale:1" = 100 '

Sunol Tree Gas Station
Shallow Groundwater Gradient Map
3004 Andrade Road
Sunol, CA 94586

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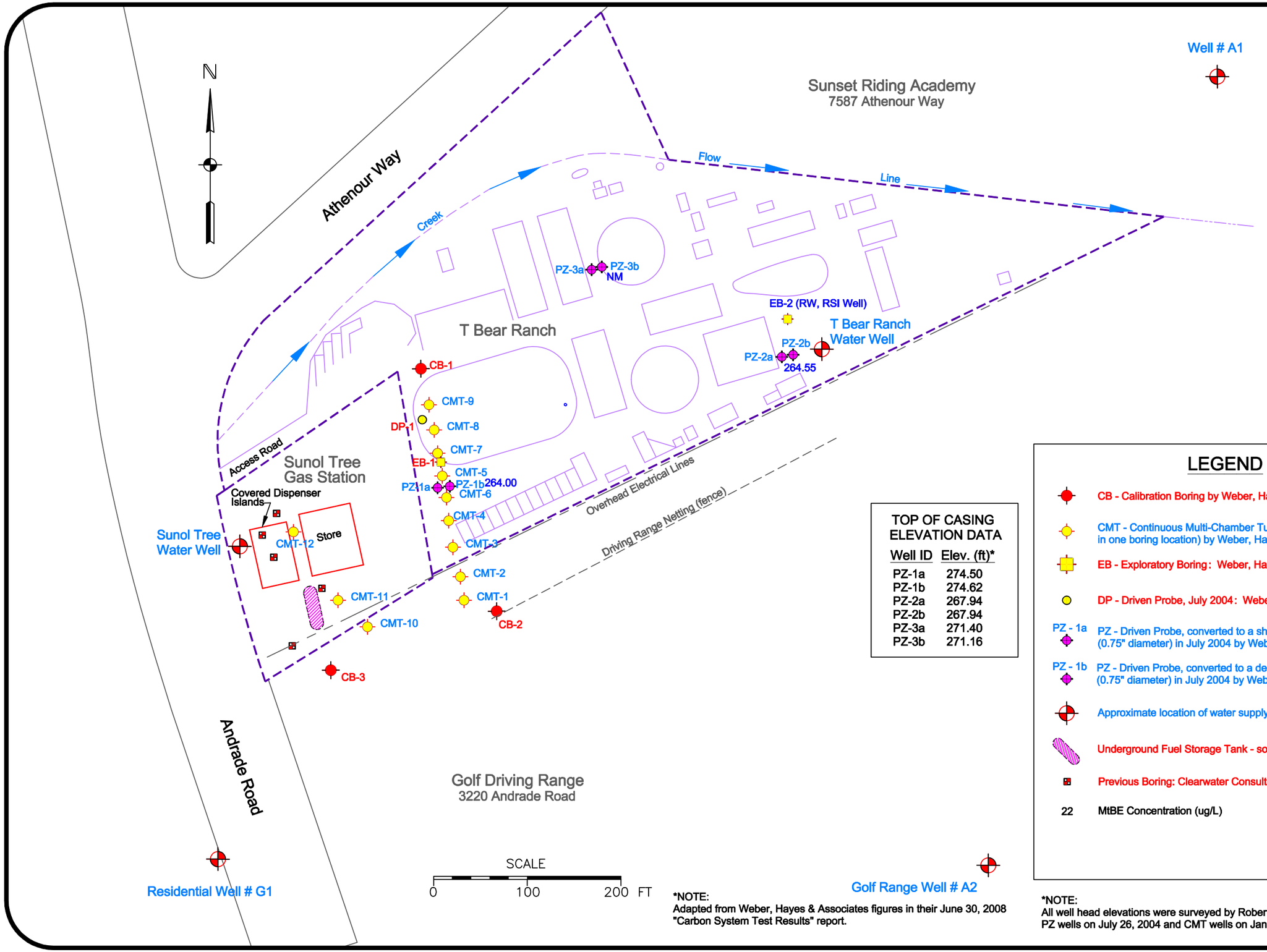
Sunol Tree Gas Station
Intermediate/Deep Groundwater Gradient Map
3004 Andrade Road
Sunol, CA 94586

Figure: 4B

Project 1024 | Date: 8/5/11 | Scale:1" = 100 '



TOP OF CASING ELEVATION DATA

Well ID	Elev. (ft)*
PZ-1a	274.50
PZ-1b	274.62
PZ-2a	267.94
PZ-2b	267.94
PZ-3a	271.40
PZ-3b	271.16

*NOTE:
Adapted from Weber, Hayes & Associates figures in their June 30, 2008 "Carbon System Test Results" report.

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- Approximate location of water supply well
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- Previous Boring: Clearwater Consultants, 2002
- 22 — MtBE Concentration (ug/L)

*NOTE:
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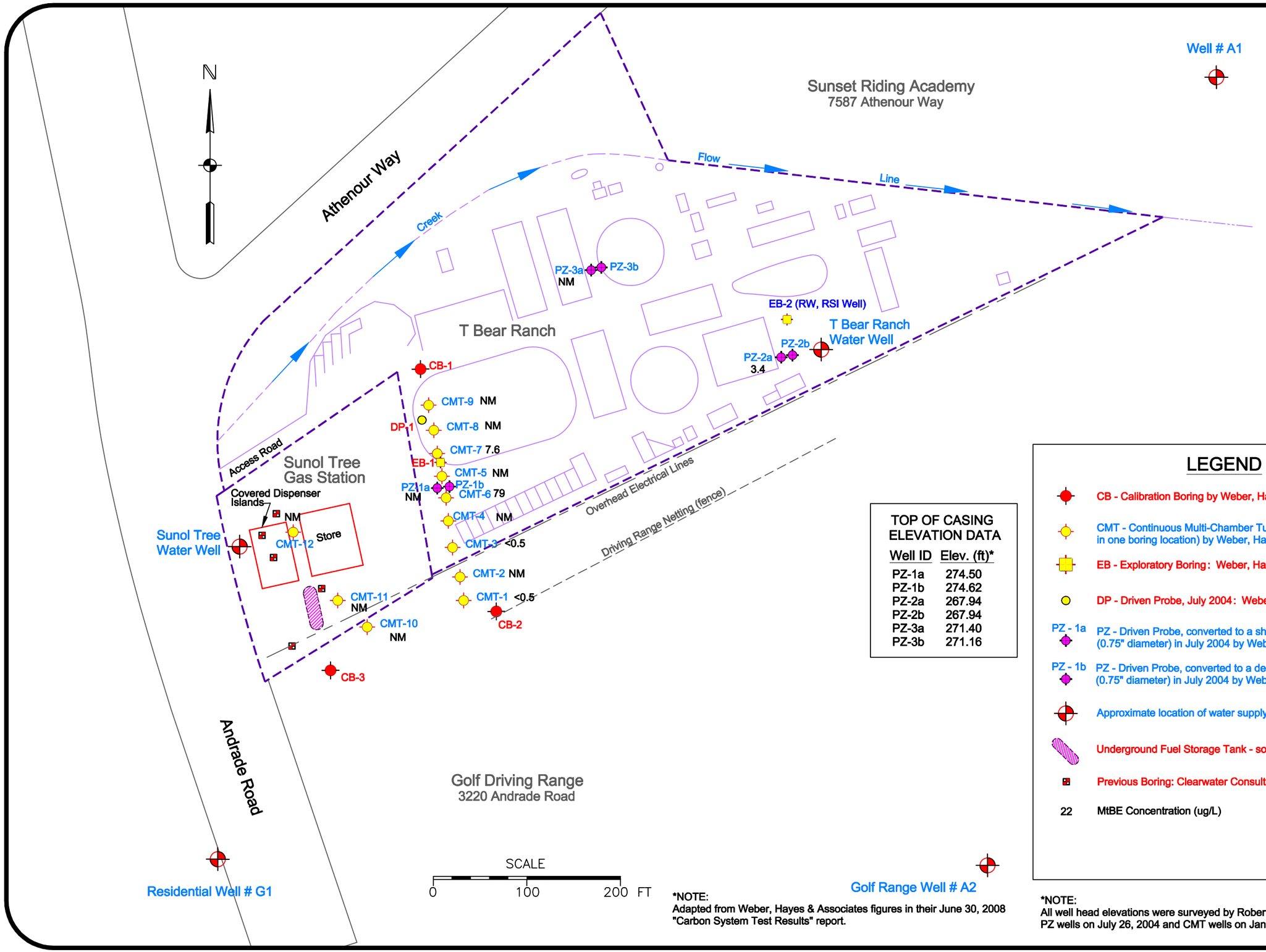

TOP OF CASING ELEVATION DATA

Well ID	Elev. (ft)*
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PZ-1b	274.62
PZ-2a	267.94
PZ-2b	267.94
PZ-3a	271.40
PZ-3b	271.16

*NOTE:
Adapted from Weber, Hayes & Associates figures in their June 30, 2008 "Carbon System Test Results" report.

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- Approximate location of water supply well
- Underground Fuel Storage Tank - source of release
- Previous Boring: Clearwater Consultants, 2002
- 22 MtBE Concentration (ug/L)

*NOTE:
All well head elevations were surveyed by Robert McGregor (Lic. #5946); PZ wells on July 26, 2004 and CMT wells on January 21, 2005.

Figure: 5A

Project 1024 | Date: 8/5/11 | Scale:1" = 100 '

Sunol Tree Gas Station
MtBE Concentrations
Shallow Water-Bearing Zone
3004 Andrade Road
Sunol, CA 94586

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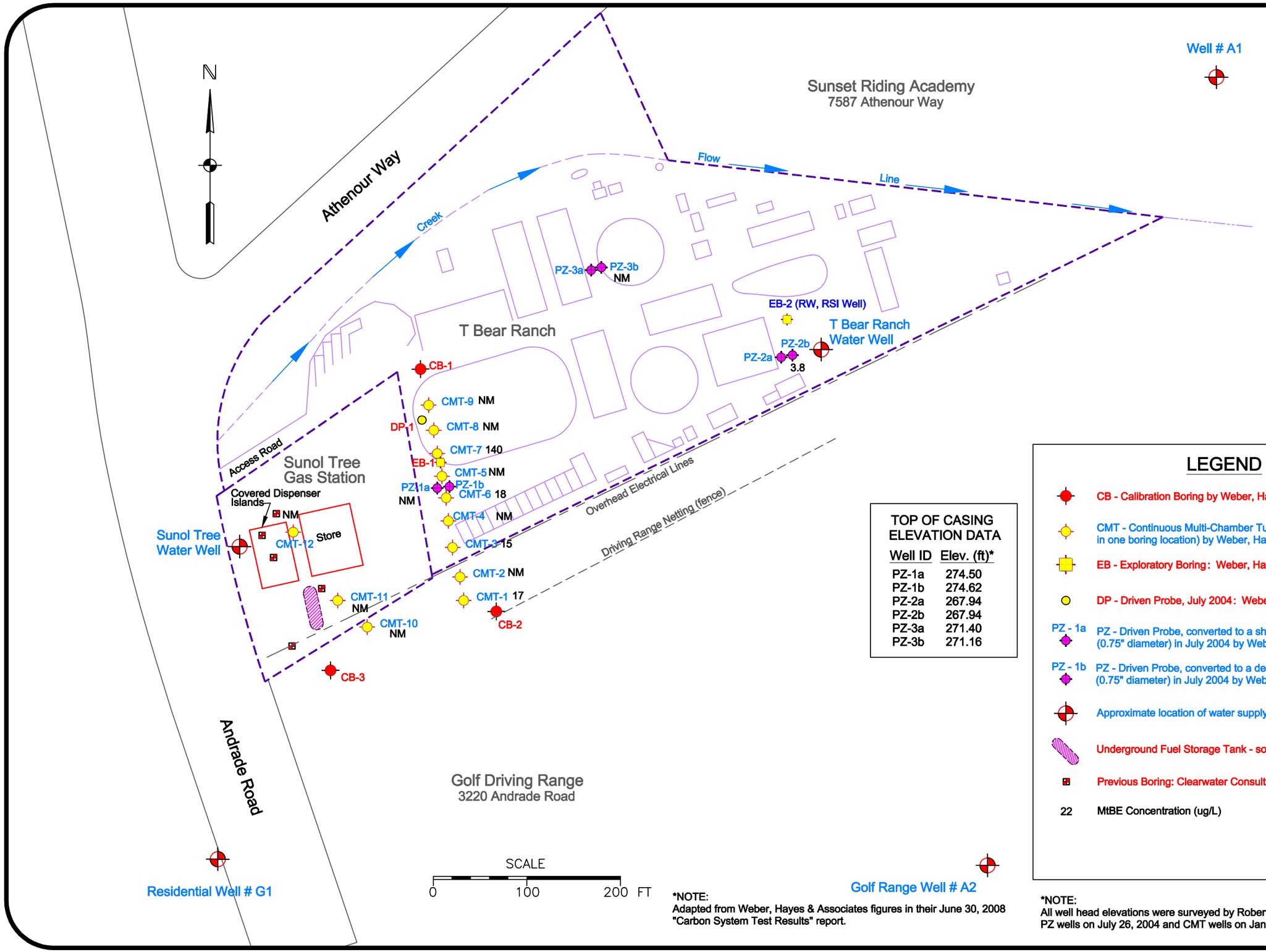

TOP OF CASING ELEVATION DATA

Well ID	Elev. (ft)*
PZ-1a	274.50
PZ-1b	274.62
PZ-2a	267.94
PZ-2b	267.94
PZ-3a	271.40
PZ-3b	271.16

LEGEND

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- PZ - 1a — PZ - Driven Probe, converted to a shallow Piezometer Well (0.75" diameter) in July 2004 by Weber, Hayes & Associates
- PZ - 1b — PZ - Driven Probe, converted to a deep Piezometer Well (0.75" diameter) in July 2004 by Weber, Hayes & Associates
- Approximate location of water supply well
- Underground Fuel Storage Tank - source of release
- Previous Boring: Clearwater Consultants, 2002
- 22 — MtBE Concentration (ug/L)

*NOTE:
Adapted from Weber, Hayes & Associates figures in their June 30, 2008 "Carbon System Test Results" report.

*NOTE:
All well head elevations were surveyed by Robert McGregor (Lic. #5946); PZ wells on July 26, 2004 and CMT wells on January 21, 2005.

Figure: 5B

Project 1024 | Date: 8/5/11 | Scale:1" = 100 '

Sunol Tree Gas Station
MtBE Concentrations
Intermediate Water-Bearing Zone

3004 Andrade Road
Sunol, CA 94586

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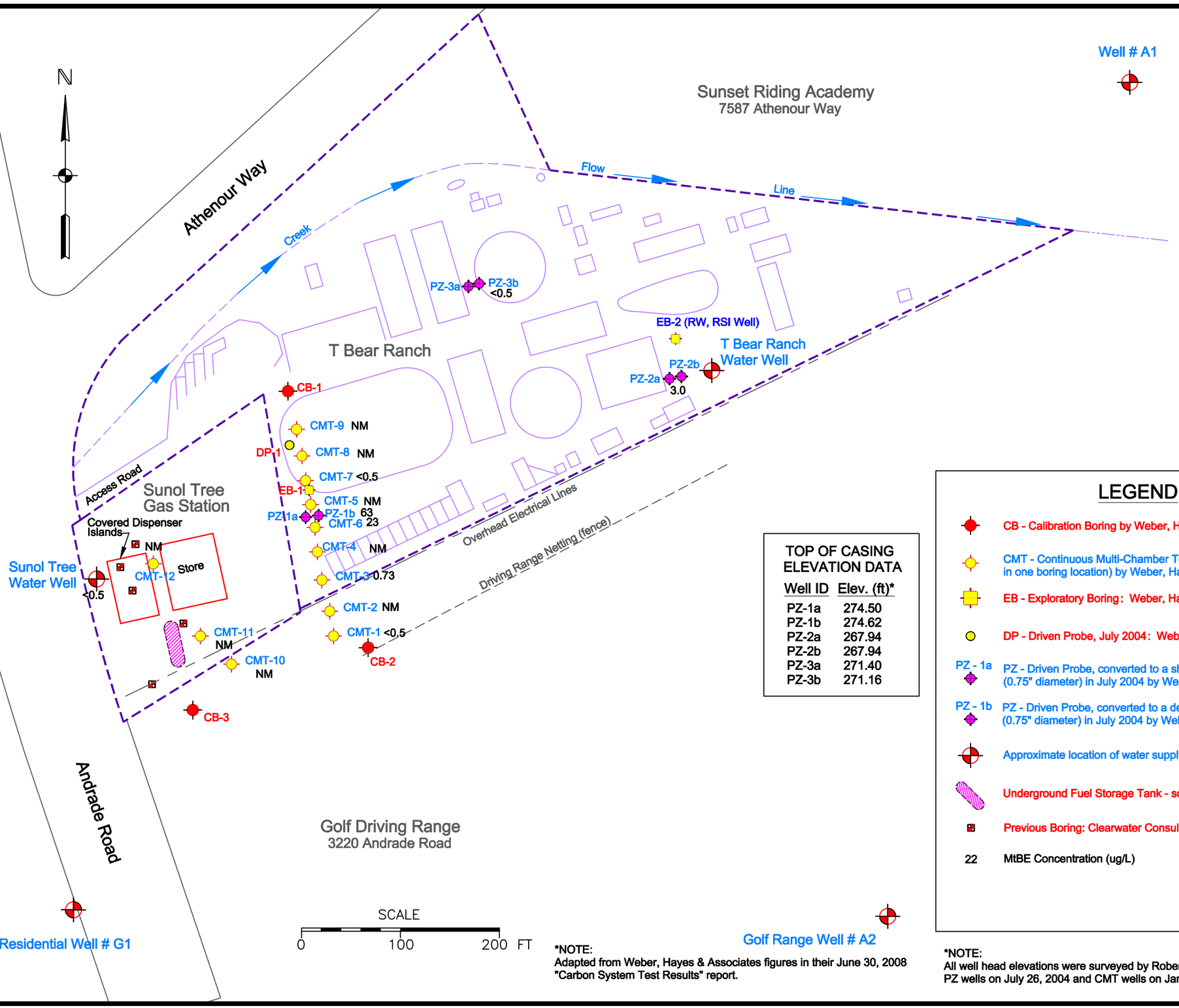
Sunol Tree Gas Station
MtBE Concentrations
Deep Water-Bearing Zone
3004 Andrade Road
Sunol, CA 94586

Figure: 5C

Project 1024 | Date: 8/5/11 | Scale:1" = 100 '



TOP OF CASING ELEVATION DATA

Well ID	Elev. (ft)*
PZ-1a	274.50
PZ-1b	274.62
PZ-2a	267.94
PZ-2b	267.94
PZ-3a	271.40
PZ-3b	271.16

*NOTE:
Adapted from Weber, Hayes & Associates figures in their June 30, 2008 "Carbon System Test Results" report.

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- CMT - Continuous Multi-Chamber Tubing Well (3 - 0.375" wells in one boring location) by Weber, Hayes & Associates
- EB - Exploratory Boring: Weber, Hayes & Associates
- DP - Driven Probe, July 2004: Weber, Hayes & Associates
- PZ - 1a — PZ - Driven Probe, converted to a shallow Piezometer Well (0.75" diameter) in July 2004 by Weber, Hayes & Associates
- PZ - 1b — PZ - Driven Probe, converted to a deep Piezometer Well (0.75" diameter) in July 2004 by Weber, Hayes & Associates
- Approximate location of water supply well
- Underground Fuel Storage Tank - source of release
- Previous Boring: Clearwater Consultants, 2002
- 22 — MtBE Concentration (ug/L)

*NOTE:
All well head elevations were surveyed by Robert McGregor (Lic. #5946); PZ wells on July 26, 2004 and CMT wells on January 21, 2005.

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(925) 787-6869 cell
tcook@cookenvironmental.com

Sunol Tree Gas Station
Site Map with Transect A-A'

3004 Andrade Road
Sunol, CA 94586

Figure: 6

Project 1024 | Date: 8/5/11 | Scale:1" = 100'

N

Athenour Way

Sunset Riding Academy
7587 Athenour Way

Well # A1

Ditch

Flow Line

Drainage Ditch

Drainage

PZ-3a PZ-3b

T Bear Ranch

EB-2 (RW, RSI Well)

T Bear Ranch Water Well

PZ-2b

PZ-2a

Local Groundwater Flow Direction

CB-1

A

CMT-9

DP-1

CMT-8

CMT-7

EB-1

CMT-5

PZ-1a PZ-1b

CMT-6

CMT-4

CMT-3

CMT-2

CMT-1

A'

CB-2

Access Road

Sunol Tree Gas Station

Covered Dispenser Islands

Sunol Tree Water Well

CMT-12

Store

CMT-11

CMT-10

CB-3

Overhead Electrical Lines

Driving Range Netting (fence)

Andrade Road

Golf Driving Range
3220 Andrade Road

Residential Well # G1

Golf Range Well # A2

SCALE
0 100 200 FT

*NOTE:
Adapted from Weber, Hayes & Associates figures in their June 30, 2008 "Carbon System Test Results" report.

TOP OF CASING ELEVATION DATA

Well ID	Elev. (ft)*
PZ-1a	274.62
PZ-1b	274.50
PZ-2a	267.94
PZ-2b	267.94
PZ-3a	271.40
PZ-3b	271.16

LEGEND

- CB - Calibration Boring by Weber, Hayes & Associates
- CMT - Continuous Multi-Chamber Tubing Well (3 - 0.375" wells in one boring location) by Weber, Hayes & Associates
- EB - Exploratory Boring: Weber, Hayes & Associates
- DP - Driven Probe, July 2004: Weber, Hayes & Associates
- PZ - 1a — PZ - Driven Probe, converted to a shallow Piezometer Well (0.75" diameter) in July 2004 by Weber, Hayes & Associates
- PZ - 1b — PZ - Driven Probe, converted to a deep Piezometer Well (0.75" diameter) in July 2004 by Weber, Hayes & Associates
- Approximate location of water supply well
- Underground Fuel Storage Tank - source of release
- Previous Boring: Clearwater Consultants, 2002

*NOTE:
All well head elevations were surveyed by Robert McGregor (Lic. #5946); PZ wells on July 26, 2004 and CMT wells on January 21, 2005.

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Sunol Tree Gas Station
MtBE Concentrations on Transect A-A'
3004 Andrade Road
Sunol, CA 94586

Figure: 7

Project 1024 | Date: 8/5/11 | Scale: as shown

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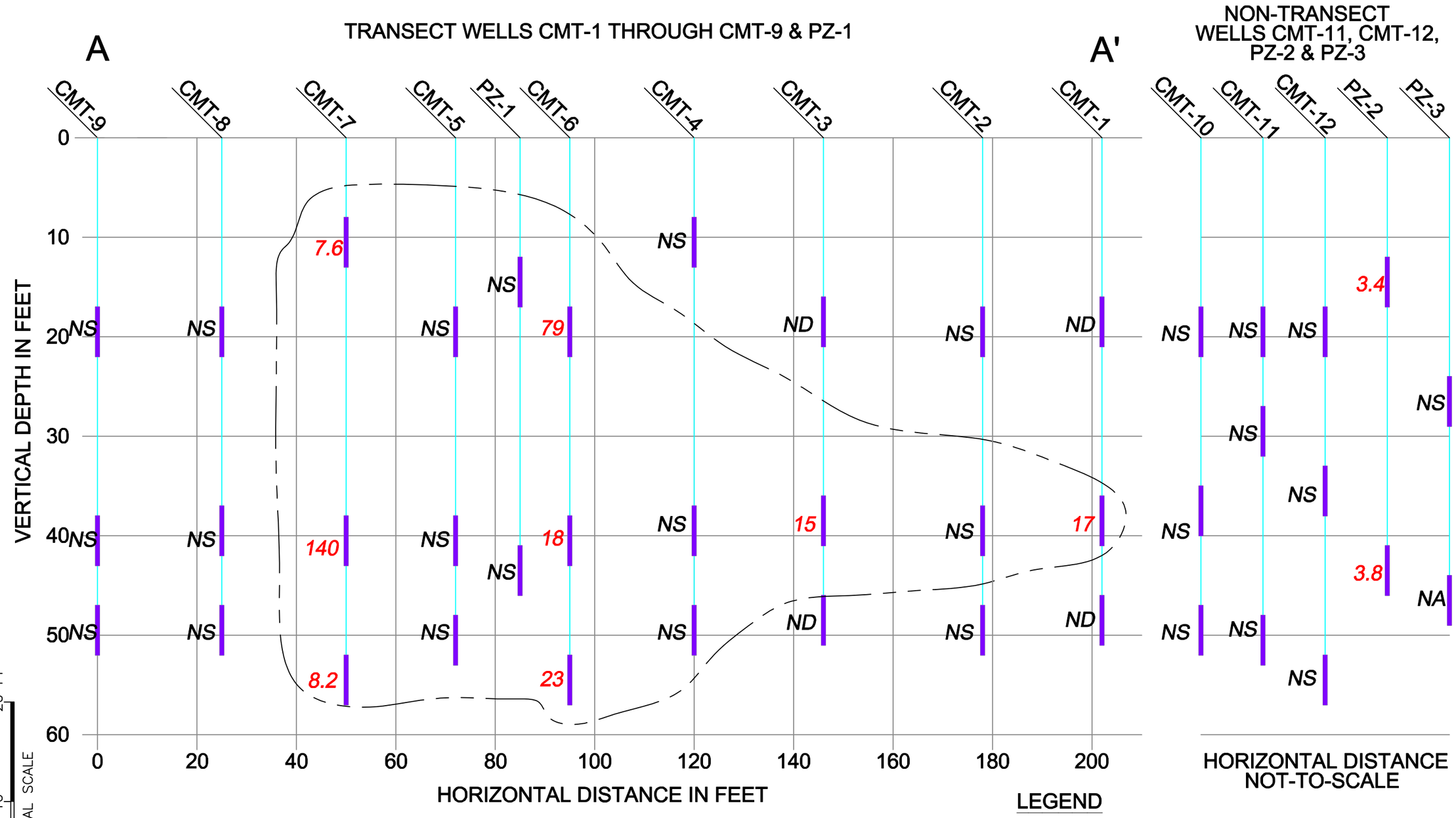
TRANSECT WELLS CMT-1 THROUGH CMT-9 & PZ-1

NON-TRANSECT WELLS CMT-11, CMT-12, PZ-2 & PZ-3



VERTICAL SCALE: 0, 10, 20 FT

HORIZONTAL SCALE: 0, 20, 40 FT

LEGEND

63	MtBE in parts per billion, ug/L
ND	Non-detectable
NA	Not found
NS	Not sampled

APPENDIX A
Site Background

Regional Setting: The subject site is situated in the southwestern portion of the Sunol groundwater Basin (in a "subbasin" identified as the Sunol subbasin, see http://aceh.intranets.com/~docs/GroupDocuments/FIGURES/2-Topograph-3D.pdf?id=28390&ord=040200 Figure 1)). The Sunol Valley is a structural trough surrounded by Diablo Range hills. Unconsolidated surface soils at the subject site have previously been mapped as water-bearing, alluvium deposits (Qal). Underlying the shallow alluvial deposits is the Livermore Formation (Tlo), significant water-bearing strata for the region. Non-water bearing, marine shale and sandstone deposits (JK) underlie the Livermore Formation. The Livermore and Sunol region is offset by a number of faults including the nearby Sinbad fault, which is buried beneath Alameda Creek-deposited alluvium, approximately 2,000 feet northwest of the site.

The general direction of regional groundwater movement is from the upland areas toward Alameda Creek and then westward toward the outlet of the basin (see Figure 1). The main surface water drainage in the Sunol subbasin is the northwest-flowing Alameda Creek located approximately 2,000 feet north of the subject site. Locally, groundwater is reported to be both confined and unconfined and generally flows to the northwest. Recharge occurs by infiltration of the surface water along Alameda Creek. The northwest trending Sinbad fault is likely to act as a barrier to the lateral movement of groundwater. Regional geologic cross-sections indicate the subject site is on the up-gradient side of the Sinbad fault where groundwater levels reportedly stand higher

The Sunol Valley contains two water-bearing geologic formations that are documented to yield adequate to large quantities of groundwater from production wells. They include Plio-Plesistocene sediments of the Livermore Formation (Tlo) and more recent Quaternary alluvium (Qal). These aquifer sediments are composed largely of sand and gravel with discontinuous layers of clay, and are underlain at a shallow depth by nonwater-bearing rocks that are exposed in the bordering highlands. Specifically, the total thickness of these water-bearing sediments is reported to be less than 200 feet in the vicinity of the site. Drillers logs completed during the drilling of two nearby water production wells indicate non-water bearing shale was logged at a depth of approximately 140' although, given soil descriptions of other borings in the area suggest it is likely to be blue clay.

Logs of local water wells installed in the vicinity of the fuel leak site suggests some continuity in the shallow aquifer containing upwards of 50 feet of sand and gravel with limited clay. The stratigraphy underlying the shallow aquifer is less consistent due to the logged description of shale in two well logs but discontinuous sand and gravel lenses appearing at varying depths could indicate aquifer connectivity by river channel deposition.

- Drinking Water Well Testing: Testing was completed on the Sunol Tree Gas Station well and the 5 downgradient/sidegradient water wells in May 2003 following the discovery of MTBE in the T-Bear Ranch well. Off-site water production wells were located between approximately 550-1,700 feet downgradient from the former underground fuel storage tanks (USTs). Additional sampling was also completed on two upgradient water production wells (July 2004). The results indicate the T Bear Ranch was the only well that was significantly impacted (130 ppb MTBE).

- Drinking Water Well Testing: Testing was completed on the Sunol Tree Gas Station well and the 5 downgradient/sidegradient water wells in May 2003 following the discovery of MTBE in the T-Bear Ranch well. Off-site water production wells were located between approximately 550-1,700 feet downgradient from the former underground fuel storage tanks (USTs). Additional sampling was also completed on two upgradient water production wells (July 2004). The results indicate: The T-Bear Ranch was the only well that was significantly impacted (130 ppb MTBE). No driller's log is available for this well although a video log is scheduled for June 29, 2004.

Preferential Pathways

Active/Abandoned Wells: A water well survey appears to have been completed based on DWR drilling logs and maps provided by Zone 7 Water District but it is unclear whether a detailed site reconnaissance was completed. A follow-up testing program included collection of water samples from a number of local wells but accurate mapping and sampling protocols have not been documented.

On-Site Water Well: The Sunol Tree Gas Station has a production well on the premises and the well construction is unclear, as no log exists. A video log was completed which has cryptic information on the well screen. Specifically, first screens appear at 60 feet, and "water movement was noted at 62', 67', 101', & 103') At this point we assume the well is perforated from 60' to 153 below ground surface.

T Bear Well: The MTBE-impacted T Bear Ranch well was fully characterized using video logging, geophysical & discrete testing. However, recent communication from a local driller indicates the PVC casing may be an insert to a deeper cable tool drilled well (metal cased), so unusual preferential flow paths may exist.

Utility Survey: No utility survey has yet been completed in the immediate vicinity of the fuel release site (i.e., utility trenches with gas, sewer, water, storm drain, telephone, and electric lines).

Site Setting: The fuel release occurred at Sunol Tree Gas Station, an operating facility selling gasoline and diesel. The site located at 3004 Andrade Road, in Sunol, California, near the northbound exit ramp of Highway 680. The relatively flat-lying site contains 6 USTs.

The fuel release was discovered on April 12, 2002, during the removal of five, 15,000-gallon underground fuel tanks (USTs) and piping at the Sunol Tree Gas Station. The USTs were reported to be in good condition having no observable holes or corrosion. The consultant on-site noted hydrocarbon odor and soil staining in excavated soils. Ten sidewall samples and a water sample were obtained from the tank pit. Trace to non-detectable levels of TPH(gas-diesel)+BTEX-MTBE were found in the sidewall samples (ND-to-0.25 mg/kg MTBE). The pit water sample contained 84 ug/L MTBE. Sampling beneath the dispensers (12 samples) and piping trenches (3 samples) revealed generally low concentrations of gas and BTEX. A single elevated diesel hit was detected beneath dispenser #7 (1,300 mg/kg) and trace to elevated MTBE concentrations were detected in nine of the 14 samples (0.0058 to 5.9 mg/kg).

Approximately 3-500-4,000 cubic yards of soil was excavated, stockpiled on-site, and covered with plastic sheeting. Stockpile screening (four composite samples) revealed only trace

concentrations of diesel/motor oil and no detections of gas-BTEX-MTBE. In addition, 160,000 gallons of contaminated water were pumped out during installation of replacement tanks. The containerized water samples had MTBE detections ranging from 73 to 190 ug/L.

- **Source Area:** TPH and MTBE were detected in soil sidewalls during the UST closure operations in May 2002 when five, 15,000-gallon USTs were replaced. Pit sidewall and dispenser samples generally contained low concentrations of fuel contaminants (gas/diesel) and volatile constituent compounds. Specifically, soil concentrations ranged from non-detect to 150 ppm for gasoline, nondetect to 5.9 ppm for MTBE, trace TBA, and no DIPE, ETBE or TAME.

  Groundwater samples were subsequently obtained from driven probe borings cored at 5 locations targeting the dispensers and USTs. Groundwater samples contained up to 17,000 ppb gasoline and 43 ppb MTBE (Nov-2002).

- **Dissolved plume:** The dissolved plume appears to be fully characterized. During the May 2002 UST Closure Operations, collected pit water contained no detectable gasoline concentrations but did contain 84 ppb MTBE. Disposal acceptance testing of 160,000 gallons of fuel-impacted groundwater pumped from the open pit containerized in storage tanks contained up to 170 ppb gasoline and 190 ppb MTBE.

-

Chronology of the Sunol Tree Gas Station Fuel Release + Impact to the T-Bear Ranch Well

2002

• April 12, 2002: Contamination discovered during removal of 5 underground fuel tanks at the Sunol Tree Gas Station

  • 4,000 cubic yards of contaminated removed and stockpiled on-site.

  • 160,000 gallons of contaminated water were pumped out during installation of new tanks

• June 27, 2002: AC-HCSA directive requiring workplan.

• Aug-20, 2002: Clearwater Consultants sampled water from a faucet on the Kelso property-results came back clean.

• Aug-23, 2002: *PRELIMINARY SITE ASSESSMENT* (PSA) *WORKPLAN* submitted by Clearwater Consultants. PSA work tasks were completed in Aug-Dec, including:

  • Nov-27, 2002: Five borings were drilled on-site. Groundwater encountered at depths between 16-19' (approx). Relatively low soil contamination but elevated groundwater contamination.

  • Dec-12, 2002: Video log of Kelso well showed total depth to be 153 feet and "Mils Knife" perforations located at 60', 62', 67', 101', & 103'. The well pump was located at a depth 100'. Depth to water was at 20 feet. Apparently no discrete samples were obtained from within the well.

  • Mar-14, 2003: Summary Report concluded more delineation was necessary including placement of wells.

  • Aug-27, 2002: AC-HCSA approval of workplan.

2003

• Feb-12, 2003: T-Bear property refinance rejected by Washington Mutual Bank due to perceived financial liability associated with the Kelsoe gasoline contamination. Washington termed the T-Bear Ranch "Unacceptable Collateral at the present time". The bank's environmental appraisal statement included the following rationale for rejection of the bank financing:

> "The subject parcel (T-Bear Ranch) adjoins a chevron gas station. The underground tanks at the station have been identified as leaking per the EPA (really - AC-HCSA). The tanks and a significant amount of adjoining earth and soil have been removed. .....The subject parcel (T-Bear Ranch) derives it's water from two wells - obvious concerns regarding this.....This could cost multiple thousands of dollars and dictate that the Owner of the parcel (i.e.. Hayes, Tovani, lender) clean and dispose of any contaminated soil. Phase II report might lead to a Phase III report if sufficient contaminants are found to be present....."

• Feb-13, 2003: T-Bear Ranch well water sampled and tested by RJ Lee Group, Inc (Pennsylvania). MTBE detected at a concentration of 73 parts per billion (ppb).

• Feb-27, 2003: T-Bear Ranch well water sampled from "Kitchen Sink" and tested by Cerco Analytical (Pleasanton). MTBE detected at a concentration of 87.3 ppb

• Mar-3, 2003: T-Bear Ranch well water re-sampled and tested by Zone 7 Water District. MTBE detected at a concentration of 130 ppb.

• Mar-14, 2003: Clearwater Consultants submitted *PRELIMINARY SITE ASSESSMENT* (PSA) *SUMMARY REPORT* to AC-HCSA. As noted above, the report summarized field work completed in Aug-Dec, 2002, and concluded that more delineation was necessary including placement of wells.

• Mar-20, 2003: AC-HCSA 1) response to the *PSA Summary Report*, and 2) directive requiring further expedited work. AC-HCSA directed Mr. Kelso to submit a *Soil and Water Investigation (SWI) Workplan* by April 4, 202 for completing an intensive subsurface investigation, which included the following tasks:

> • Collecting and testing water from domestic/commercial water wells in the vicinity of the Kelose gas station.
>
> • Removal of the 4,000 cubic yard stockpile at the Kelose gas station
>
> • Developing a full understanding of site conditions ("site conceptual model") by completing investigative work tasks including: on-site soil logging to at least 60 feet, installation of wells to characterize the full, 3-dimensional extent of contamination, survey of utilities and wells in the vicinity, video logging of the T-Bear well, and reporting.

• Apr-4, 2003: Request for extension of *SWI Workplan* submittal due date.

• Apr-7, 2003: AC-HCSA granted extension for the submittal of the of *SWI Workplan* to April 25th.

• Apr-11, 2003: T-Bear Ranch well water re-sampled by Clearwater Consultants. MTBE detected at a concentration of 120 ppb.

• May-6, 2003: *WELL SAMPLING REPORT* submitted by Clearwater Consultants. The report documents the sampling of 5 production wells located downgradient of the station, including the T-Bear Ranch well. Two of the wells had detections of MTBE including T-Bear Ranch well (120 ppb) and the adjacent golf driving range well (at the detection limit of 0.5 ppb, tested by Zone 7

on 3-4-02). The adjacent golf range well was resampled on April 11, 2003 by Clearwater Consultants and no MTBE was detected by their lab.

- May-8, 2003: *WORK PLAN FOR SOIL AND WATER INVESTIGATION (SWI)* submitted by Clearwater Consultants.

- May-12, 2003: State Underground Storage Tank Fund (State FUND) rejected Murray Kelsoe's application for acceptance on the grounds that he failed to comply with permit requirements. If accepted to the State FUND, Mr. Kelsoe would have been eligible for up to $1.5 million dollars toward characterization and cleanup of the fuel release.

- Jun-13, 2003: AC-HCSA 1) rejection of the May-8 *SWI Workplan* (above) due to "substantial deficiencies" and required immediate re-submittal of an amended workplan.
    - AC-HCSA rejected the proposal to provide water to the T-Bear Ranch via the Kelsoe well, located at the gas station due to concerns of pulling the fuel release downward to the well screens.
    - Deficiencies noted by AC-HCSA included:
        - inadequate presentation of site-specific subsurface conditions (i.e.. "Site Conceptual Model") which is the rationale for initial installation of piezometers and subsequent installation of monitoring wells.
        - nested wells construction problems;
        - removal of the stockpile.

- Jul-3, 2003: Mr. Kelsoe's attorney submitted a letter appealing the State FUND's rejection.

- Aug-2003: State FUND rejected the appeal.

- Nov-6, 2003: A non-standard, carbon filtration system was installed to remove MTBE from groundwater pumped at the T Bear Ranch well.
    - initial breakthrough of first set of carbon vessels occurred after 89 days (Jan-27th) = 0.63 ppb MTBE.
    - initial breakthrough of second set of carbon vessels occurred after 202 days (May-5th) @ 1.6 ppb.
    - Carbon Change-out of all vessels occurred after 221 days (May-25th).

- 2003 to present: Ongoing Carbon System Monitoring (trace MTBE influent into the system does not require significant carbon change outs – see table for details).

APPENDIX B
Field Procedures

APPENDIX B
FIELD SAMPLING METHODOLOGY
AND ELECTRONIC DATA DELIVERY

Cook Environmental Services, Inc. (CES) groundwater sampling methodology is based on procedures specified in the California State Water Resource Control Board *LUFT Field Manual*. Monitoring wells are exposed to atmospheric conditions for approximately 30 minutes prior to measurements to equalize barometric pressure in the well. If the well appears to be pressurized, or the groundwater level is fluctuating, measurements are collected until the level stabilizes.

CES uses an electronic well sounder to measure the static water levels in piezometer wells (e.g. PZ-1, PZ-2, PZ-3) to the nearest hundredth (0.01) of a foot. Depth-to-water measurements are subtracted from the top of casing elevations to obtain static water elevations.

Dedicated plastic tubing is stored in each sampling point is used to purge and sample each sampling point. During purging, physical parameters such as temperature, conductivity, pH and dissolved oxygen (DO) are monitored with field instruments to ensure that these parameters have stabilized to within a variation of fifteen percent prior to sampling. Field instruments are calibrated at the beginning of each sampling event. Purging is complete when field parameters have stabilized or after three well volumes are removed, whichever is greater.

A groundwater sample is collected from each well using the dedicated plastic tubing attached to a short length of clean silicone tubing. The silicone tubing is run through a peristaltic pump. The samples are collected from the effluent end of the silicone tubing after it passes through the peristaltic pump. Samples are collected directly into 40 milliliter volatile organic analysis (VOA) vials preserved with concentrated hydrochloric acid such that the pH of the sample drops to below 2.0. Samples are immediately placed in a cooler and chilled to 4 degrees Celsius until delivered to the laboratory. The samples are typically delivered to the lab the same day they are collected. Observations of groundwater conditions during purging, such as odor, volume of water purged, temperature, pH, specific conductivity, DO, and turbidity are recorded in the sampling logs. Groundwater samples are labeled with the project number, sample ID, and date collected. The same information is recorded on a chain-of-custody form. The samples are placed in an ice chest pending delivery to the ELAP certified laboratory.

Chemical analysis data are submitted electronically to the SWRCB Geographical Environmental Information Management System (GeoTracker) database, as required by AB2886 (Water Code Sections 13195-13198). The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) also require submission of reports in electronic form to the Alameda County FTP site. Electronic analytical reports (EDF files) are prepared and formatted by the laboratory and submitted to GeoTracker by CES. Along with the analytical results, well latitudes, longitudes (GEO_XY files), and elevations (GEO_Z files) are submitted to the database, as necessary. Submittal of a well status and usage report (GEO_WELL file) is required for each monitoring event. Current maps (GEO_MAP files) are also submitted when Site features are added or changed. Each report is submitted in pdf format (GEO_REPORT file) as they are completed.

APPENDIX C
Well Sampling Logs

COOK ENVIRONMENTAL SERVICES
MONITORING WELL SAMPLING LOG

Site Name: Sunol Tree Gas Job # 1024

Date: 6-6-11 Sampler: L. Fuller

Well ID: CMT-1-1 Well Diameter 0.375" Column _____ft

Well Depth 21.15 Depth to Water _____ft

Casing Volume _____oz. 3 Casing Volumes _____oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump Sample Method peristaltic pump

Time	Gallons Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments

Well ID: CMT-1-2 Well Diameter 0.375" Column _____ft

Well Depth 41.27 Depth to Water _____ft

Casing Volume _____oz. 3 Casing Volumes _____oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump Sample Method peristaltic pump

Time	Gallons Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments

Well ID: CMT-1-3 Well Diameter 0.375" Column _____ft

Well Depth 51.37 Depth to Water _____ft

Casing Volume _____oz 3 Casing Volumes _____oz
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump Sample Method peristaltic pump

Time	Gallons Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments

CMT-1 had a snake on the well cover, be careful!

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COOK ENVIRONMENTAL SERVICES
MONITORING WELL SAMPLING LOG

Site Name: Sunol Tree Gas Job # 1024

Date: 6-6-11 Sampler: L. Fuller

Well ID: CMT-3-1 Well Diameter 0.375" Column _____ft

Well Depth 20.92 Depth to Water _____ft

Casing Volume _____oz. 3 Casing Volumes _____oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump Sample Method peristaltic pump

Time	Gallons Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments

Well ID: CMT-3-2 Well Diameter 0.375" Column _____ft

Well Depth 40.91 Depth to Water _____ft

Casing Volume _____oz. 3 Casing Volumes _____oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump Sample Method peristaltic pump

Time	Gallons Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments

Well ID: CMT-3-3 Well Diameter 0.375" Column _____ft

Well Depth 50.93 Depth to Water _____ft

Casing Volume _____oz 3 Casing Volumes _____oz
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump Sample Method peristaltic pump

Time	Gallons Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments

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COOK ENVIRONMENTAL SERVICES
MONITORING WELL SAMPLING LOG

Site Name: Sunol Tree Gas Job # 1024

Date: 6-6-11 Sampler: L. Fuller

Well ID: CMT-6-1 Well Diameter 0.375" Column _____ft

Well Depth 21.66 Depth to Water _____ft

Casing Volume _____oz. 3 Casing Volumes _____oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump Sample Method peristaltic pump

Time	Gallons Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments

Well ID: CMT-6-2 Well Diameter 0.375" Column _____ft

Well Depth 42.68 Depth to Water _____ft

Casing Volume _____oz. 3 Casing Volumes _____oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump Sample Method peristaltic pump

Time	Gallons Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments

Well ID: CMT-6-3 Well Diameter 0.375" Column _____ft

Well Depth 56.67 Depth to Water _____ft

Casing Volume _____oz 3 Casing Volumes _____oz
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump Sample Method peristaltic pump

Time	Gallons Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments

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COOK ENVIRONMENTAL SERVICES
MONITORING WELL SAMPLING LOG

Site Name: Sunol Tree Gas Job # 1024

Date: 6-6-11 Sampler: L. Fuller

Well ID: CMT-7-1 Well Diameter 0.375" Column _____ft

Well Depth 13.14 ft Depth to Water _____ft

Casing Volume _____oz. 3 Casing Volumes _____oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump Sample Method peristaltic pump

Time	Gallons Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments

Well ID: CMT-7-2 Well Diameter 0.375" Column _____ft

Well Depth 42.72 .ft Depth to Water _____ft

Casing Volume _____oz. 3 Casing Volumes _____oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump Sample Method peristaltic pump

Time	Gallons Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments

Well ID: CMT-7-3 Well Diameter 0.375" Column _____ft

Well Depth 56.72 ft Depth to Water _____ft

Casing Volume _____oz 3 Casing Volumes _____oz
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump Sample Method peristaltic pump

Time	Gallons Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments

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COOK ENVIRONMENTAL SERVICES
MONITORING WELL SAMPLING LOG

Site Name: Sunol Tree Gas Job # 1024

Date: 6-6-11 Sampler: L. Fuller

Well ID: CMT-10-1 Well Diameter 0.375" Column _____ft

Well Depth 21.72 ft Depth to Water _____ft

Casing Volume _____oz. 3 Casing Volumes _____oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump Sample Method peristaltic pump

Time	Gallons Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
							Well was completely dry

Well ID: CMT-10-2 Well Diameter 0.375" Column _____ft

Well Depth 41.72 ft Depth to Water _____ft

Casing Volume _____oz. 3 Casing Volumes _____oz.
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump Sample Method peristaltic pump

Time	Gallons Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
							Well was completely dry

Well ID: CMT-10-3 Well Diameter 0.375" Column _____ft

Well Depth 51.74 ft Depth to Water _____ft

Casing Volume _____oz 3 Casing Volumes _____oz
(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump Sample Method peristaltic pump

Time	Gallons Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
							well was completely dry

*could not get water from any CMT-10 wells.

Cook Environmental Services, Inc.
1485 Treat Blvd., Suite 230A
Walnut Creek, CA 94597
(925) 478-8390

COOK ENVIRONMENTAL SERVICES
MONITORING WELL SAMPLING LOG

Site Name: Sunol Tree Gas Job # 1024

Date: 6-6-11 Sampler: L. Fuller

Well ID: PZ-2-a Well Diameter 0.75" Column 23.26 ft

Well Depth 29.0 ft Depth to Water 5.74 ft

Casing Volume ~~11.39~~ 62.80oz oz. 3 Casing Volumes ~~34.19~~ 188.41 oz.

(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump Sample Method peristaltic pump

Time	Gallons Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
8:48am							

Well ID: PZ-2-b Well Diameter 0.75" Column ~~45.36~~ ft

Well Depth 48.77 ft Depth to Water 3.39 ft

Casing Volume ~~22.23~~ 122.53oz oz. 3 Casing Volumes ~~66.71~~ 367.58oz oz.

(0.375" well = col height * 0.49 oz/ft, 0.75" well = 2.7 oz/ft)

Purge Method: peristaltic pump Sample Method peristaltic pump

Time	Gallons Purged	Temp C	pH	SC (uS)	TDS (mg/L)	DO (mg/L)	Purge Comments
9:05am							

DEPTH TO WATER IN PEIZOMETERS

Well ID: PZ-1-a Depth to Water 6.13 ft

Well ID: PZ-1-b Depth to Water 10.62 ft

Well ID: PZ-3-a Depth to Water 4.22 ft

Well ID: PZ-3-b Depth to Water _____ ft Could not locate PZ-3-b

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Walnut Creek, CA 94597
(925) 478-8390

APPENDIX D
Laboratory Analytical Reports

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Cook Environmental Services, Inc.	Client Project ID: #1024; Kahn Petroleum	Date Sampled: 06/06/11
		Date Received: 06/06/11
1485 Treat Blvd, Ste. 203A	Client Contact: Tim Cook	Date Reported: 06/10/11
Walnut Creek, CA 94597	Client P.O.:	Date Completed: 06/10/11

WorkOrder: 1106200

June 10, 2011

Dear Tim:

Enclosed within are:

1) The results of the **9** analyzed samples from your project: **#1024; Kahn Petroleum,**
2) A QC report for the above samples,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

McCAMPBELL ANALYTICAL, INC.
1534 Willow Pass Rd.
Pittsburg, CA 94565
Website: www.mccampbell.com
Email: main@mccampbell.com
Telephone: (877) 252-9262
Fax: (925) 252-9269

1106200

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ■ 5 DAY

EDF Required? Coelt (Normal) Yes Write On (DW) No

Report To: Tim Cook Bill To:

Company: Cook Environmental Services, Inc.
1485 Treat Blvd, Suite 203A
Walnut Creek, CA 94597 E-Mail: tcook@cookenvironmental.com

Tele: (925) 478-8390 Fax: (925) 478-8394

Project #:1024 Project Name: Kahn Petroleum

Project Location: Sunol, CA

Sampler Name & Signature:

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: TPH-g, BTEX & 9 Oxys by 8260	TPH as Diesel (8015) & TPHmo	EPA 8260 – Full Scan	8310 Pluse 2-methyl napthalene	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 8260 (9 oxys only)	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Other: SPLC Leach	Other: TTLC Leach	Comments
CMT-1-C1		6-6-11	12:45	4	VOA	X						X			X																		Filter Samples for Metals analysis: Yes / No
CMT-1-C2		6-6-11	1:01	4	VOA	X						X			X																		
CMT-1-C3		6-6-11	1:12	4	VOA	X						X			X																		
CMT-3-C1		6-6-11	11:01	4	VOA	X						X			X																		
CMT-3-C2		6-6-11	11:14	4	VOA	X						X			X																		
CMT-3-C3		6-6-11	11:27	4	VOA	X						X			X																		
CMT-6-C1		6-6-11	10:07	4	VOA	X						X			X																		
CMT-6-C2		6-6-11	10:13	4	VOA	X						X			X																		
CMT-6-C3		6-6-11	10:17	4	VOA	X						X			X																		

Relinquished By:	Date:	Time:	Received By:
COOK ENV.	6-6-11	2:58 PM	ENVIRO TECH SVCS ARLENE ALAVI AA 14:58
ENVIRO-TECH SVCS AA	6/6/11	15:45	
	6/6/11	1610	

ICE/t° 3.8

COMMENTS:

GOOD CONDITION___
HEAD SPACE ABSENT_____
DECHLORINATED IN LAB_____
APPROPRIATE CONTAINERS_____
PRESERVED IN LAB_____

PRESERVATION	VOAS	O&G	METALS	OTHER
			pH<2	

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1106200 **ClientCode: CESW**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Tim Cook
Cook Environmental Services, Inc.
1485 Treat Blvd, Ste. 203A
Walnut Creek, CA 94597
925-937-1759 FAX 925-937-1759

Email: tcook@cookenvironmental.com
cc:
PO:
ProjectNo: #1024; Kahn Petroleum

Bill to:
Tim Cook
Cook Environmental Services, Inc.
1485 Treat Blvd, Ste. 203A
Walnut Creek, CA 94597

Requested TAT: 5 days

Date Received: **06/06/2011**
Date Printed: **06/06/2011**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below) 1	2	3	4	5	6	7	8	9	10	11	12
1106200-001	CMT-1-C1	Water	6/6/2011 12:45	☐	A											
1106200-002	CMT-1-C2	Water	6/6/2011 13:01	☐	A											
1106200-003	CMT-1-C3	Water	6/6/2011 14:12	☐	A											
1106200-004	CMT-3-C1	Water	6/6/2011 11:01	☐	A											
1106200-005	CMT-3-C2	Water	6/6/2011 11:14	☐	A											
1106200-006	CMT-3-C3	Water	6/6/2011 11:27	☐	A											
1106200-007	CMT-6-C1	Water	6/6/2011 10:07	☐	A											
1106200-008	CMT-6-C2	Water	6/6/2011 10:13	☐	A											
1106200-009	CMT-6-C3	Water	6/6/2011 10:17	☐	A											

Test Legend:

1	GAS8260_W	2		3		4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A contain testgroup.

Prepared by: Zoraida Cortez

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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Telephone: 877-252-9262 Fax: 925-252-9269

Sample Receipt Checklist

Client Name: **Cook Environmental Services, Inc.**
Date and Time Received: **6/6/2011 6:22:38 PM**

Project Name: **#1024; Kahn Petroleum**
Checklist completed and reviewed by: Zoraida Cortez

WorkOrder N°: **1106200** Matrix Water
Carrier: Derik Cartan (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☐	No ☑

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 3.8°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Client contacted: Date contacted: Contacted by:

Comments:

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Telephone: 877-252-9262 Fax: 925-252-9269

Cook Environmental Services, Inc.	Client Project ID: #1024; Kahn Petroleum	Date Sampled: 06/06/11
		Date Received: 06/06/11
1485 Treat Blvd, Ste. 203A	Client Contact: Tim Cook	Date Extracted: 06/08/11
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed 06/08/11

TPH(g) by Purge & Trap and GC/MS*

Extraction method SW5030B Analytical methods SW8260B Work Order: 1106200

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS	Comments
001A	CMT-1-C1	W	ND	1	103	
002A	CMT-1-C2	W	ND	1	103	
003A	CMT-1-C3	W	ND	1	102	
004A	CMT-3-C1	W	ND	1	102	
005A	CMT-3-C2	W	ND	1	104	
006A	CMT-3-C3	W	ND	1	101	
007A	CMT-6-C1	W	ND	1	101	
008A	CMT-6-C2	W	ND	1	102	
009A	CMT-6-C3	W	ND	1	102	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
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Telephone: 877-252-9262 Fax: 925-252-9269

Cook Environmental Services, Inc. 1485 Treat Blvd, Ste. 203A Walnut Creek, CA 94597	Client Project ID: #1024; Kahn Petroleum	Date Sampled: 06/06/11
		Date Received: 06/06/11
	Client Contact: Tim Cook	Date Extracted: 06/08/11
	Client P.O.:	Date Analyzed: 06/08/11

Oxygenates, MBTEX & Lead Scavengers by GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1106200

Lab ID	1106200-001A	1106200-002A	1106200-003A	1106200-004A	Reporting Limit for DF =1	
Client ID	CMT-1-C1	CMT-1-C2	CMT-1-C3	CMT-3-C1		
Matrix	W	W	W	W		
DF	1	1	1	1	S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND	ND	ND	NA	0.5
Benzene	ND	ND	ND	ND	NA	0.5
t-Butyl alcohol (TBA)	8.7	6.9	2.8	2.7	NA	2.0
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND	ND	NA	0.5
Diisopropyl ether (DIPE)	ND	ND	ND	ND	NA	0.5
Ethanol	ND	ND	ND	ND	NA	50
Ethylbenzene	ND	ND	ND	ND	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND	ND	ND	NA	0.5
Methanol	ND	ND	ND	ND	NA	500
Methyl-t-butyl ether (MTBE)	ND	17	ND	ND	NA	0.5
Toluene	ND	ND	ND	ND	NA	0.5
Xylenes, Total	ND	ND	ND	ND	NA	0.5
Surrogate Recoveries (%)						
%SS1:	90	90	90	89		
%SS2:	98	98	98	98		
%SS3:	89	88	87	88		
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

DHS ELAP Certification 1644

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Cook Environmental Services, Inc. 1485 Treat Blvd, Ste. 203A Walnut Creek, CA 94597	Client Project ID: #1024; Kahn Petroleum	Date Sampled: 06/06/11
		Date Received: 06/06/11
	Client Contact: Tim Cook	Date Extracted: 06/08/11
	Client P.O.:	Date Analyzed: 06/08/11

Oxygenates, MBTEX & Lead Scavengers by GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1106200

Lab ID	1106200-005A	1106200-006A	1106200-007A	1106200-008A	Reporting Limit for DF =1	
Client ID	CMT-3-C2	CMT-3-C3	CMT-6-C1	CMT-6-C2		
Matrix	W	W	W	W		
DF	1	1	2.5	1	S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND	ND<1.2	ND	NA	0.5
Benzene	ND	ND	ND<1.2	ND	NA	0.5
t-Butyl alcohol (TBA)	3.8	ND	ND<5.0	ND	NA	2.0
1,2-Dibromoethane (EDB)	ND	ND	ND<1.2	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND<1.2	ND	NA	0.5
Diisopropyl ether (DIPE)	ND	ND	ND<1.2	ND	NA	0.5
Ethanol	ND	ND	ND<120	ND	NA	50
Ethylbenzene	ND	ND	ND<1.2	ND	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND	ND<1.2	ND	NA	0.5
Methanol	ND	ND	ND<1200	ND	NA	500
Methyl-t-butyl ether (MTBE)	15	0.73	79	18	NA	0.5
Toluene	ND	ND	ND<1.2	ND	NA	0.5
Xylenes, Total	ND	ND	ND<1.2	ND	NA	0.5
Surrogate Recoveries (%)						
%SS1:	91	91	91	91		
%SS2:	99	95	95	96		
%SS3:	85	87	86	90		
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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Cook Environmental Services, Inc. 1485 Treat Blvd, Ste. 203A Walnut Creek, CA 94597	Client Project ID: #1024; Kahn Petroleum	Date Sampled: 06/06/11
		Date Received: 06/06/11
	Client Contact: Tim Cook	Date Extracted: 06/08/11
	Client P.O.:	Date Analyzed: 06/08/11

Oxygenates, MBTEX & Lead Scavengers by GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1106200

Lab ID	1106200-009A				Reporting Limit for DF =1		
Client ID	CMT-6-C3						
Matrix	W						
DF	1				S	W	
Compound	**Concentration**				ug/kg	µg/L	
tert-Amyl methyl ether (TAME)	ND				NA	0.5	
Benzene	ND				NA	0.5	
t-Butyl alcohol (TBA)	ND				NA	2.0	
1,2-Dibromoethane (EDB)	ND				NA	0.5	
1,2-Dichloroethane (1,2-DCA)	ND				NA	0.5	
Diisopropyl ether (DIPE)	ND				NA	0.5	
Ethanol	ND				NA	50	
Ethylbenzene	ND				NA	0.5	
Ethyl tert-butyl ether (ETBE)	ND				NA	0.5	
Methanol	ND				NA	500	
Methyl-t-butyl ether (MTBE)	23				NA	0.5	
Toluene	ND				NA	0.5	
Xylenes, Total	ND				NA	0.5	
Surrogate Recoveries (%)							
%SS1:	92						
%SS2:	96						
%SS3:	90						
Comments							

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 58861 WorkOrder 1106200

EPA Method SW8260B **Extraction SW5030B** **Spiked Sample ID: 1106200-004A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	10	92.2	92.3	0.175	87.9	84.6	3.76	70 - 130	30	70 - 130	30
Benzene	ND	10	108	107	0.710	98.3	96.2	2.16	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	2.7	50	102	102	0	97	88.3	9.45	70 - 130	30	70 - 130	30
Chlorobenzene	ND	10	104	104	0	98.9	98.5	0.392	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	106	109	2.65	99.3	96.4	2.91	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	102	102	0	104	101	2.21	70 - 130	30	70 - 130	30
1,1-Dichloroethene	ND	10	99.6	95.9	3.75	102	99.7	1.95	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	115	113	1.44	101	99.4	1.66	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	111	110	1.38	101	98.1	3.11	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	118	117	0.812	105	100	4.77	70 - 130	30	70 - 130	30
Toluene	ND	10	104	104	0	97.6	97.1	0.510	70 - 130	30	70 - 130	30
Trichloroethene	ND	10	101	101	0	102	100	2.08	70 - 130	30	70 - 130	30
%SS1:	89	25	90	91	0.150	95	94	1.21	70 - 130	30	70 - 130	30
%SS2:	98	25	97	96	0.691	96	97	1.11	70 - 130	30	70 - 130	30
%SS3:	88	2.5	94	93	1.73	96	91	6.04	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 58861 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1106200-001A	06/06/11 12:45 PM	06/08/11	06/08/11 1:20 AM	1106200-002A	06/06/11 1:01 PM	06/08/11	06/08/11 2:01 AM
1106200-003A	06/06/11 2:12 PM	06/08/11	06/08/11 2:42 AM	1106200-004A	06/06/11 11:01 AM	06/08/11	06/08/11 3:24 AM
1106200-005A	06/06/11 11:14 AM	06/08/11	06/08/11 4:07 AM	1106200-006A	06/06/11 11:27 AM	06/08/11	06/08/11 4:12 PM
1106200-007A	06/06/11 10:07 AM	06/08/11	06/08/11 4:53 PM	1106200-008A	06/06/11 10:13 AM	06/08/11	06/08/11 5:35 PM
1106200-009A	06/06/11 10:17 AM	06/08/11	06/08/11 6:16 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery. The LCS and LCSD are spikes into a clean, known, similar matrix and they and the surrogate standards reflect the overall validity of their extraction batch. Our control limits are 70-130% recovery and a 30% RPD for the LCS-LCSD and for the Surrogate Standards.

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
"When Quality Counts"

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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Cook Environmental Services, Inc. 1485 Treat Blvd, Ste. 203A Walnut Creek, CA 94597	Client Project ID: #1024; Kahn Petroleum	Date Sampled: 06/06/11
		Date Received: 06/06/11
	Client Contact: Tim Cook	Date Reported: 06/10/11
	Client P.O.:	Date Completed: 06/09/11

WorkOrder: 1106202

June 10, 2011

Dear Tim:

Enclosed within are:

1) The results of the **5** analyzed samples from your project: **#1024; Kahn Petroleum,**
2) A QC report for the above samples,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

1106202

McCAMPBELL ANALYTICAL, INC.
1534 Willow Pass Rd.
Pittsburg, CA 94565
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (877) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ■ 5 DAY

EDF Required? Coelt (Normal) Yes Write On (DW) No

Report To: Tim Cook & Frank Stott Bill To:

Company: Cook Environmental Services, Inc.

1485 Treat Blvd, Suite 203A

Walnut Creek, CA 94597 E-Mail: tcook@cookenvironmental.com

Tele: (925) 478-8390 Fax: (925) 478-8394

Project #:1024 Project Name: Kahn Petroleum

Project Location: 3004 Andrade Road, Sunol, CA

Sampler Name & Signature: T. Cook/A. Venegas

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	Soil	Air	Sludge	Other	METHOD PRESERVED ICE	HCL	HNO_3	Other	TPH-g, BTEX & 9 Oxys by 8260	TPH as Diesel (8015) & TPHmo	EPA 8260 – Full Scan	8310 Pluse 2-methyl napthalene	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 8260 (9 oxys only)	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	SPLC Leach	TTLC Leach	Other	Comments
CMT-7-C1		6-6-11	9:42	4	VOA	X						X			X																		
CMT-7-C2		6-6-11	9:50	4	VOA	X						X			X																		
CMT-7-C3		6-6-11	9:59	4	VOA	X						X			X																		
~~CMT-10-C1~~		~~6-6-11~~		~~4~~	~~VOA~~	X						X			X																		
~~CMT-10-C2~~		~~6-6-11~~		~~4~~	~~VOA~~	X						X			X																		
~~CMT-10-C3~~		~~6-6-11~~		~~4~~	~~VOA~~	X						X			X																		
PZ-2A		6-6-11	9:18 am	4	VOA	X						X			X																		
PZ-2B		6-6-11	9:22 am	4	VOA	X						X			X																		

Relinquished By:	Date:	Time:	Received By:
COOK ENV	6-6-11	2:58 pm	ENVIRO-TECH SERVICES AA 14.58
ENVIRO-TECH SERVICES	6/6/11	15:45	
	6/6/11	1610	

ICE/t° 5.2 COMMENTS:

GOOD CONDITION___

HEAD SPACE ABSENT_____

DECHLORINATED IN LAB_____

APPROPRIATE CONTAINERS_____

PRESERVED IN LAB_____

PRESERVATION	VOAS	O&G	METALS pH<2	OTHER

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1106202 **ClientCode: CESW**

☐ WaterTrax ☐ WriteOn ☐ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Tim Cook
Cook Environmental Services, Inc.
1485 Treat Blvd, Ste. 203A
Walnut Creek, CA 94597
925-937-1759 FAX 925-937-1759

Email: tcook@cookenvironmental.com
cc:
PO:
ProjectNo: #1024; Kahn Petroleum

Bill to:
Tim Cook
Cook Environmental Services, Inc.
1485 Treat Blvd, Ste. 203A
Walnut Creek, CA 94597

Requested TAT: 5 days

Date Received: **06/06/2011**
Date Printed: **06/06/2011**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1106202-001	CMT-7-C1	Water	6/6/2011 9:42	☐	A											
1106202-002	CMT-7-C2	Water	6/6/2011 9:50	☐	A											
1106202-003	CMT-7-C3	Water	6/6/2011 9:59	☐	A											
1106202-004	PZ-2A	Water	6/6/2011 9:18	☐	A											
1106202-005	PZ-2B	Water	6/6/2011 9:22	☐	A											

Test Legend:

1	GAS8260_W	2		3		4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A, 003A, 004A, 005A contain testgroup.

Prepared by: Ana Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

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Sample Receipt Checklist

Client Name: **Cook Environmental Services, Inc.**
Date and Time Received: **6/6/2011 6:41:01 PM**

Project Name: **#1024; Kahn Petroleum**
Checklist completed and reviewed by: Ana Venegas

WorkOrder N°: **1106202** Matrix Water
Carrier: Derik Cartan (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 5.2°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	No VOA vials submitted ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Client contacted: Date contacted: Contacted by:

Comments:

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Cook Environmental Services, Inc.	Client Project ID: #1024; Kahn Petroleum	Date Sampled: 06/06/11
		Date Received: 06/06/11
1485 Treat Blvd, Ste. 203A	Client Contact: Tim Cook	Date Extracted: 06/07/11-06/08/11
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed 06/07/11-06/08/11

TPH(g) by Purge & Trap and GC/MS*

Extraction method SW5030B Analytical methods SW8260B Work Order: 1106202

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS	Comments
001A	CMT-7-C1	W	ND	1	103	
002A	CMT-7-C2	W	ND	1	100	
003A	CMT-7-C3	W	ND	1	103	
004A	PZ-2A	W	ND	1	103	
005A	PZ-2B	W	ND	1	105	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

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Angela Rydelius, Lab Manager

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Cook Environmental Services, Inc.	Client Project ID: #1024; Kahn Petroleum	Date Sampled: 06/06/11
		Date Received: 06/06/11
1485 Treat Blvd, Ste. 203A	Client Contact: Tim Cook	Date Extracted: 06/07/11-06/08/11
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed: 06/07/11-06/08/11

Oxygenates, MBTEX & Lead Scavengers by GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1106202

Lab ID	1106202-001A	1106202-002A	1106202-003A	1106202-004A	Reporting Limit for DF =1	
Client ID	CMT-7-C1	CMT-7-C2	CMT-7-C3	PZ-2A		
Matrix	W	W	W	W		
DF	1	5	1	1	S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND<2.5	ND	ND	NA	0.5
Benzene	ND	ND<2.5	ND	ND	NA	0.5
t-Butyl alcohol (TBA)	ND	ND<10	ND	ND	NA	2.0
1,2-Dibromoethane (EDB)	ND	ND<2.5	ND	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND<2.5	ND	ND	NA	0.5
Diisopropyl ether (DIPE)	ND	ND<2.5	ND	ND	NA	0.5
Ethanol	ND	ND<250	ND	ND	NA	50
Ethylbenzene	ND	ND<2.5	ND	ND	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND<2.5	ND	ND	NA	0.5
Methanol	ND	ND<2500	ND	ND	NA	500
Methyl-t-butyl ether (MTBE)	7.6	140	8.2	3.4	NA	0.5
Toluene	ND	ND<2.5	ND	ND	NA	0.5
Xylenes, Total	ND	ND<2.5	ND	ND	NA	0.5
Surrogate Recoveries (%)						
%SS1:	91	91	91	93		
%SS2:	98	94	98	99		
%SS3:	91	89	89	92		
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

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Angela Rydelius, Lab Manager

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Cook Environmental Services, Inc. 1485 Treat Blvd, Ste. 203A Walnut Creek, CA 94597	Client Project ID: #1024; Kahn Petroleum	Date Sampled: 06/06/11
		Date Received: 06/06/11
	Client Contact: Tim Cook	Date Extracted: 06/07/11-06/08/11
	Client P.O.:	Date Analyzed: 06/07/11-06/08/11

Oxygenates, MBTEX & Lead Scavengers by GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1106202

					Reporting Limit for DF =1	
Lab ID	1106202-005A					
Client ID	PZ-2B					
Matrix	W					
DF	1				S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND				NA	0.5
Benzene	ND				NA	0.5
t-Butyl alcohol (TBA)	ND				NA	2.0
1,2-Dibromoethane (EDB)	ND				NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND				NA	0.5
Diisopropyl ether (DIPE)	ND				NA	0.5
Ethanol	ND				NA	50
Ethylbenzene	ND				NA	0.5
Ethyl tert-butyl ether (ETBE)	ND				NA	0.5
Methanol	ND				NA	500
Methyl-t-butyl ether (MTBE)	3.8				NA	0.5
Toluene	ND				NA	0.5
Xylenes, Total	ND				NA	0.5
Surrogate Recoveries (%)						
%SS1:	91					
%SS2:	100					
%SS3:	92					
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

%SS = Percent Recovery of Surrogate Standard
DF = Dilution Factor

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 58861 WorkOrder 1106202

EPA Method SW8260B **Extraction SW5030B** **Spiked Sample ID: 1106200-004A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	10	92.2	92.3	0.175	87.9	84.6	3.76	70 - 130	30	70 - 130	30
Benzene	ND	10	108	107	0.710	98.3	96.2	2.16	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	2.7	50	102	102	0	97	88.3	9.45	70 - 130	30	70 - 130	30
Chlorobenzene	ND	10	104	104	0	98.9	98.5	0.392	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	106	109	2.65	99.3	96.4	2.91	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	102	102	0	104	101	2.21	70 - 130	30	70 - 130	30
1,1-Dichloroethene	ND	10	99.6	95.9	3.75	102	99.7	1.95	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	115	113	1.44	101	99.4	1.66	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	111	110	1.38	101	98.1	3.11	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	118	117	0.812	105	100	4.77	70 - 130	30	70 - 130	30
Toluene	ND	10	104	104	0	97.6	97.1	0.510	70 - 130	30	70 - 130	30
Trichloroethene	ND	10	101	101	0	102	100	2.08	70 - 130	30	70 - 130	30
%SS1:	89	25	90	91	0.150	95	94	1.21	70 - 130	30	70 - 130	30
%SS2:	98	25	97	96	0.691	96	97	1.11	70 - 130	30	70 - 130	30
%SS3:	88	2.5	94	93	1.73	96	91	6.04	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 58861 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1106202-001A	06/06/11 9:42 AM	06/07/11	06/07/11 9:45 PM	1106202-002A	06/06/11 9:50 AM	06/08/11	06/08/11 3:30 PM
1106202-003A	06/06/11 9:59 AM	06/07/11	06/07/11 11:11 PM	1106202-004A	06/06/11 9:18 AM	06/07/11	06/07/11 11:54 PM
1106202-005A	06/06/11 9:22 AM	06/08/11	06/08/11 12:37 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS – MSD) / (MS + MSD) * 2.

MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery. The LCS and LCSD are spikes into a clean, known, similar matrix and they and the surrogate standards reflect the overall validity of their extraction batch. Our control limits are 70-130% recovery and a 30% RPD for the LCS-LCSD and for the Surrogate Standards.

DHS ELAP Certification 1644

QA/QC Officer