May 21, 2010

Jerry Wickham, CEG
Senior Hazardous Materials Specialist
Alameda County Environmental Health
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 2010* 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 Frank Stott 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,

**Kahn Petroleum, Inc.**

Obaid Abdullah
President

cc: Jennifer Rice, Esq
Tim Cook, Cook Environmental Services, Inc.
Jeffery Lawson, Esq..
Cheri McCaulou, RWQCB Region 2

Original was signed and mailed with the report. -Cook Environmental Services, Inc.

# *Quarterly Groundwater Monitoring Report*
# *Second Quarter 2010*

PROJECT SITE:
**Sunol Tree Gas Station**
**3004 Andrade Rd.**
**Sunol, California 94586-9453**

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**

PREPARED BY:
**Cook Environmental Services, Inc.**
**1485 Treat Blvd, Suite 203A**
**Walnut Creek, California 94597**

**Project No. 1024**

**May 19, 2010**

# TABLE OF CONTENTS



**LIST OF TABLES:**



**LIST OF FIGURES:**



**LIST OF APPENDICES:**

# PROFESSIONAL CERTIFICATION

***Quarterly Groundwater Monitoring Report***
***Second Quarter 2010***

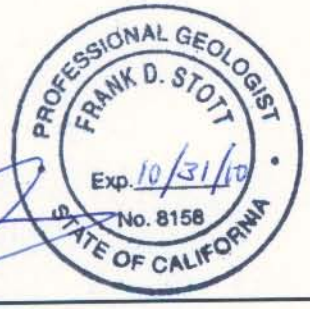
**Sunol Tree Gas Station**
**3004 Andrade Rd.**
**Sunol, California 94586-9453**

**By: Cook Environmental Services, Inc.**

**Project No. 1024**
**May 19, 2010**

Cook Environmental Services, Inc. prepared this document under the professional supervision of the person whose seal and signature appears hereon. No warranty, either expressed or implied, is made as to the professional advice presented herein. The analysis, conclusions and recommendations contained in this document are based upon site conditions at the time of the investigation, which are subject to change.

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.




Frank Stott, P.G. #8158
Project Geologist

# 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 of the Site, Kahn Petroleum, Inc., authorized Cook Environmental Services, Inc. (CES) to conduct this investigation. Alameda County Environmental Health (ACEH) is the lead oversight agency for the 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**.

The last sampling event at the Site occurred in October 2006. 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 to assure that the water supply well meets water quality standards for domestic wells. In a letter to the owner dated March 18, 2010, the ACEH requested that existing monitoring wells be sampled and a report be submitted including sample results and recommendations for future actions at the Site. Future actions may include additional investigation or corrective action. The ACEH requested that the scope and rational for each recommendation be described in sufficient detail to allow an independent evaluation. The ACEH requested submittal of the report by June 29, 2010. The purpose of this report is to respond to ACEH's request for additional data and recommendations.

# SCOPE OF WORK

The scope of work performed this quarter included the following:

- Located and inventoried monitoring wells to determine sampling equipment needed to sample multi-level (CMT) monitoring wells and piezometer (PZ) wells;
- Measured static water levels and total depths in 33 of 36 CMT wells and 6 PZ wells;
- Installed dedicated tubing in each well;
- Purged and sampled each well;
- Analyzed groundwater samples for total petroleum hydrocarbons as gasoline (TPH-g), benzene, toluene, ethylbenzene and xylenes (BTEX) and 9 fuel oxygenates;
- Compiled data tables, a groundwater gradient map and isoconcentration 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.

### *Evaluation of Wells*

On March 23, 2010, CES located twelve multi-channel (CMT) wells and three piezometer (PZ) wells. The wells were accessed and the condition of each well was noted. Dirt and debris were covered many of the protective well boxes, since they had not been accessed in approximately four years. The well boxes were marked to aid in future location.

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.

### *Sampling Preparation*

On April 8, 2010, CES measured the static water level and the total depth of each well. The information was recorded on monitoring well sampling logs. CES then installed dedicated ¼-inch O.D. tubing in each well. The tubing extended to the bottom of the well to ensure that representative samples from the screened interval were collected.

### *Second Quarter 2010 Groundwater Monitoring*

CES collected groundwater samples on April 19 and 23, 2010. 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 fully in **Appendix B**.

CES collected 18 water samples from wells CMT-1 though CMT-6 on April 19, 2010. CES collected 21 water samples, from wells CMT-7 through CMT-12 and PZ-1 through PZ-3. CES used a peristaltic pump for purging and sample collection.

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 $N9^0E$ at 0.014. The deeper groundwater flow direction and gradient was $N17^0E$ at 0.0005. The shallow groundwater gradient is depicted on **Figure 4A** and the deeper groundwater gradient is depicted on **Figure 4B**. Groundwater elevation data is summarized in **Table 1**. Depth to water measurements were recorded on field logs included in **Appendix C**.

# GROUNDWATER SAMPLE RESULTS

Groundwater samples were analyzed for TPH-g by EPA method 8015 modified and for BTEX and nine fuel oxygenates by EPA method 8260B. Results were compared with environmental screening levels (ESLs) for groundwater established by the San Francisco Bay Regional Water Quality Control Board.

Discussion of the results of this sampling event are grouped as follows:

- Onsite upgradient wells CMT-11 and CMT-12;
- Offsite downgradient wells CMT-1 through CMT-9, PZ-1a and PZ-1b; and
- Offsite downgradient wells PZ-2a, PZ-2b, PZ-3a and PZ-3b.

***Onsite Upgradient Wells***

Six groundwater samples were collected from wells CMT-11 and CMT-12. The only hydrocarbon constituent detected was MtBE, which was detected in CMT-12-2 at 23 ug/L.

***Offsite Downgradient Wells CMT-1 through CMT-9, PZ-1a and PZ-1b***

Twenty-nine groundwater samples were collected from these eleven wells located along transect A-A' in the Site figures. Transect A-A' is located approximately 150 feet downgradient (east) of the former USTs.

MtBE was the only hydrocarbon constituent detected in these wells. MtBE was detected in the shallow water-bearing zone above the ESL (5 ug/L) in wells CMT-5, CMT-6, CMT-7 and PZ-1a, at 11, 88, 13 and 23 ug/L, respectively.

MTBE was detected in the intermediate water-bearing zone above its ESL in wells CMT-1, CMT-2, CMT-3, CMT-4, CMT-5, CMT-6, CMT-7 and PZ-1b, at 12, 19, 19, 180, 140, 18, 170 and 63 ug/L, respectively.

MtBE was detected in the deep water-bearing zone above its ESL in wells CMT-4 and CMT-6 at 40 and 25 ug/L, respectively.

***Offsite Downgradient Wells PZ-2a, PZ-2b, PZ-3a and PZ-3b***

Four groundwater samples were collected from wells PZ-2a, PZ-2b, PZ-3a and PZ-3b. MtBE was not detected in wells PZ-3a, PZ-3b and PZ-2b. MtBE was detected in PZ-2a at 23 ug/L. Wells PZ-2a and PZ-2b are important because they are located approximately 43 and 31 feet upgradient (west) of` the T Bear Ranch water supply well and are sentinel wells for the water supply well. Note that MtBE was not sampled during this sampling event. MtBE was not detected in the T Bear Ranch water supply well during the February 13, 2009 sampling event, that last sampling event for which we have data (Weber, Hayes & Associates, May 6, 2009).

## CONCLUSIONS

There is a fairly well defined plume of dissolved MTBE concentrations migrating from the Site that remains at fairly stable concentrations since the last time these wells were sampled on October 26, 2006. MtBE is the only constituent of concern at the Site as it is the only hydrocarbon constituent that exceeds its ESL. MtBE concentrations in groundwater increased at nine sampling points and decreased at ten sample points. The most dramatic change was observed in well CMT-7, where concentrations in the intermediate water-bearing zone decreased from 400 ug/L to 170 ug/L.

The MtBE contaminant plume is delineated on the north by CMT-8. MtBE was not detected in this well in all three water-bearing zones. The lateral extent of the plume is not defined to the south. MtBE was detected in the intermediate water-bearing zone of the most southerly well, CMT-1, at 12 ug/L. The plume is delineated on the west by onsite wells CMT-11 and CMT-12. The lateral extent of the plume is not defined to the east. Although MtBE was not detected in wells PZ-3a, PZ-3b, or PZ-2b, it was detected in well PZ-2a (shallow water-bearing zone) at 22 ug/L. This well is located approximately 43 feet upgradient of the T Bear water supply well.

## RECOMMENDATIONS

Since MtBE concentrations in groundwater increased at nine sampling points and decreased at ten sampling points, when compared to the previous sampling results, it is difficult to assess the success of natural attenuation as a remedial strategy. It is important to note that the MtBE concentration in the influent to the T Bear water supply well, prior to treatment, has been less than the ESL since November 26, 2007 (*Status of Active Fuel Leak Investigation*, Weber, Hayes & Associates, May 6, 2009).

Based on previous work by Weber Hayes & Associates, it appears the MtBE plume is being pulled laterally toward the cone of depression created by T Bear Ranch water supply well. This well is acting as a pump and treat remediation system. MtBE concentrations in this water supply well are decreasing over time.

We recommend a reduction in the sampling frequency and number of wells sampled. Wells CMT-8, CMT-9, CMT-11, CMT-12 and PZ-3 have a history of non-detect results and can be safely removed from the sampling plan. Transect A-A' (wells CMT-1 through CMT-9 and PZ-1) provide more data than is necessary to adequately monitor this Site. We recommend adjusting the sampling schedule as follows:

| Annual Sampling | Semi-Annual Sampling | Excluded |
|---|---|---|
| CMT-2 | CMT-1 | CMT-8 |
| CMT-4 | CMT-3 | CMT-9 |
| CMT-4 | CMT-6 | CMT-11 |
| -- | CMT-7 | CMT-12 |

| Annual Sampling | Semi-Annual Sampling | Excluded |
|---|---|---|
| -- | CMT-10 | PZ-1 |
| -- | PZ-2 | PZ-3 |

Well CMT-10 was inaccessible during this sampling event. We recommend that this well be sampled at the next scheduled sampling event in October 2010. Based on the results from that sampling event, an appropriate sampling interval for CMT-10 will be determined. This reduced sampling schedule is intended to comply with the recent directive from the State Water Resources Control Board to lower monitoring costs without negatively impacting the quality of Site data.

# 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 |
| Δ | | -2.13 | | -1.21 | | -4.58 | | -1.44 | | -1.91 | | -1.51 |
| Maximum | 11.93 | 270.81 | 15.69 | 265.36 | 7.58 | 267.45 | 8.95 | 265.56 | 9.64 | 268.29 | 12.25 | 265.42 |
| Minimum | 3.69 | 262.57 | 9.26 | 258.93 | 0.49 | 260.36 | 2.38 | 258.99 | 3.11 | 261.76 | 5.74 | 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** (Dup @ **14**) | < 10 | < 5.0 | < 5.0 | < 5.0 | < 100 | Shallow |
| | 07/13/05 | 21 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 08/15/06 | 21 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 10/26/06 | 21 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 04/19/10 | 21 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2.0 | <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 | 41 | ND | ND | ND | ND | ND | 2.7 | ND | ND | ND | ND | ND | |
| | 08/15/06 | 41 | ND | ND | ND | ND | ND | **6.5** | ND | ND | ND | ND | ND | |
| | 10/26/06 | 41 | ND | ND | ND | ND | ND | **7.9** | ND | ND | ND | ND | ND | |
| | 04/19/10 | 41 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | **12** | <2.0 | <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 | 51 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 08/15/06 | 51 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 10/26/06 | 51 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 04/19/10 | 51 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2.0 | <0.5 | <0.5 | <0.5 | <50 | |
| **CMT-2-1** | 12/29/04 | 22 | < 25 | < 0.5 | 0.58 *Dup* <0.5 | < 0.5 | < 0.5 | **13** (Dup @ **14**) | < 10 | < 5.0 | < 5.0 | < 5.0 | < 100 | Shallow |
| | 07/13/05 | 22 | ND | ND | ND | ND | ND | **13** | ND | ND | ND | ND | ND | |
| | 08/15/06 | 22 | ND | ND | ND | ND | ND | 2.3 | ND | ND | ND | ND | ND | |
| | 10/26/06 | 22 | ND | ND | ND | ND | ND | 2.7 | ND | ND | ND | ND | ND | |
| | 04/19/10 | 22 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 0.61 | <2.0 | <0.5 | <0.5 | <0.5 | <50 | |
| **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 | 42 | ND | ND | ND | ND | ND | 4.6 | ND | ND | ND | ND | ND | |
| | 08/15/06 | 42 | ND | ND | ND | ND | ND | **14** | ND | ND | ND | ND | ND | |
| | 10/26/06 | 42 | 56 | ND | 0.70 | ND | 1.1 | **14** | ND | ND | ND | ND | ND | |
| | 04/19/10 | 42 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | **19** | <2.0 | <0.5 | <0.5 | <0.5 | <50 | |
| **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 | 52 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 08/15/06 | 52 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 10/26/06 | 52 | 39 | ND | 0.52 | ND | 0.96 | ND | ND | ND | ND | ND | ND | |
| | 04/19/10 | 52 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <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 | |
| Practical Quantitation Limit (PQLs) | | | 25 | 0.5 | 0.5 | 0.5 | 0.5 | 1.0 | 10 | 5.0 | 5.0 | 5.0 | 100 | |

# 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 | 22 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 08/16/06 | 22 | ND | ND | ND | ND | ND | 1.2 | ND | ND | ND | ND | ND | |
| | 10/27/06 | 22 | 37 | ND | 1.2 | 0.53 | 2.9 | 1.5 | ND | ND | ND | ND | ND | |
| | 04/19/10 | 21 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2.0 | <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 | 42 | 55 | ND | ND | ND | ND | **69** | ND | ND | ND | ND | ND | |
| | 08/16/06 | 42 | 36 | ND | ND | ND | ND | **27** | ND | ND | ND | ND | ND | |
| | 10/27/06 | 42 | 39 | ND | 0.90 | ND | 2.4 | **28** | ND | ND | ND | ND | ND | |
| | 04/19/10 | 41 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | **19** | <2.0 | <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 | 52 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 08/16/06 | 52 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 10/27/06 | 52 | ND | ND | ND | ND | 1.8 | ND | ND | ND | ND | ND | ND | |
| | 04/19/10 | 51 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <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 | 13.5 | ND | ND | ND | ND | ND | **5.3** | ND | ND | ND | ND | ND | |
| | 08/16/06 | 13.5 | ND | ND | ND | ND | ND | 2.0 | ND | ND | ND | ND | ND | |
| | 10/27/06 | 13.5 | ND | ND | ND | ND | 0.76 | 2.1 | ND | ND | ND | ND | ND | |
| | 04/19/10 | 13 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 0.54 | <2.0 | <0.5 | <0.5 | <0.5 | <50 | |
| 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 | 42 | 60 | ND | ND | ND | ND | **66** | ND | ND | ND | ND | ND | |
| | 08/16/06 | 42 | **110** | ND | ND | ND | ND | **110** | ND | ND | ND | ND | ND | |
| | 10/27/06 | 42 | **140** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | **140** | < 20 | < 10 | < 10 | < 10 | < 200 | |
| | 04/19/10 | 42 | <50 | <5.0 | <5.0 | <5.0 | <5.0 | **180** | <20 | <5.0 | <5.0 | <5.0 | <500 | |
| 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 | 52 | ND | ND | ND | ND | ND | **11** | ND | ND | ND | ND | ND | |
| | 08/16/06 | 52 | ND | ND | ND | ND | ND | **11** | ND | ND | ND | ND | ND | |
| | 10/27/06 | 52 | ND | ND | ND | ND | 0.53 | **16** | ND | ND | ND | ND | ND | |
| | 04/19/10 | 52 | <50 | <1.0 | <1.0 | <1.0 | <1.0 | **40** | <4.0 | <1.0 | <1.0 | <1.0 | <100 | |
| Environmental Screening Levels (ESLs) | | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | 12 | NE | NE | NE | NE | |
| Practical Quantitation Limit (PQLs) | | | 25 | 0.5 | 0.5 | 0.5 | 0.5 | 1.0 | 10 | 5.0 | 5.0 | 5.0 | 100 | |

# 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 | 21 | ND | ND | ND | ND | ND | **12** | ND | ND | ND | ND | ND | |
| | 08/16/06 | 21 | ND | ND | ND | ND | ND | 4.7 | ND | ND | ND | ND | ND | |
| | 10/27/06 | 21 | 46 | ND | ND | ND | 0.87 | 3.6 | ND | ND | ND | ND | ND | |
| | 04/19/10 | 22 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | **11** | <2.0 | <0.5 | <0.5 | <0.5 | <50 | |
| 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 | 42 | 31 | ND | ND | ND | ND | **37** | ND | ND | ND | ND | ND | |
| | 08/16/06 | 42 | 88 | ND | ND | ND | ND | **89** | ND | ND | ND | ND | ND | |
| | 10/27/06 | 42 | **130** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | **92** | < 20 | < 10 | < 10 | < 10 | < 200 | |
| | 04/19/10 | 43 | <50 | <5.0 | <5.0 | <5.0 | <5.0 | **140** | <20 | <5.0 | <5.0 | <5.0 | <500 | |
| 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 | 52 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 08/16/06 | 52 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 10/27/06 | 52 | ND | ND | ND | ND | 0.67 | ND | ND | ND | ND | ND | ND | |
| | 04/19/10 | 52 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | 0.57 | <2.0 | <0.5 | <0.5 | <0.5 | <50 | |
| 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 | 22 | 64 | ND | ND | ND | ND | **79** | ND | ND | ND | ND | ND | |
| | 08/16/06 | 22 | 71 | ND | ND | ND | ND | **71** | ND | ND | ND | ND | ND | |
| | 10/27/06 | 22 | **110** | < 1.0 | < 1.0 | < 1.0 | 1.3 | **84** | < 20 | < 10 | < 10 | < 10 | < 200 | |
| | 04/19/10 | 22 | <50 | <2.5 | <2.5 | <2.5 | <2.5 | **88** | <10 | <2.5 | <2.5 | <2.5 | <250 | |
| 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 | 43 | ND | ND | ND | ND | ND | **15** | ND | ND | ND | ND | ND | |
| | 08/16/06 | 43 | ND | ND | ND | ND | ND | **12** | ND | ND | ND | ND | ND | |
| | 10/27/06 | 43 | 40 | ND | ND | ND | 0.76 | **19** | ND | ND | ND | ND | ND | |
| | 04/19/10 | 43 | <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 | 57 | ND | ND | ND | ND | ND | 4.7 | ND | ND | ND | ND | ND | |
| | 08/16/06 | 57 | 25 | ND | 0.77 | ND | ND | **5.5** | ND | ND | ND | ND | ND | |
| | 10/27/06 | 57 | 38 | ND | ND | ND | 0.68 | **7.7** | ND | ND | ND | ND | ND | |
| | 04/19/10 | 57 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | **25** | <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 | |
| Practical Quantitation Limit (PQLs) | | | 25 | 0.5 | 0.5 | 0.5 | 0.5 | 1.0 | 10 | 5.0 | 5.0 | 5.0 | 100 | |

# 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 | 13.5 | ND | ND | ND | ND | ND | 3.7 | ND | ND | ND | ND | ND | |
| | 08/16/06 | 13.5 | 42 | ND | ND | ND | ND | **27** | ND | ND | ND | ND | ND | |
| | 10/27/06 | 13.5 | 50 | ND | 2.2 | ND | 2.7 | **37** | ND | ND | ND | ND | ND | |
| | 04/19/10 | 13 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | **13** | <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 | 43 | **230** | < 2.5 | < 2.5 | < 2.5 | < 2.5 | **320** | < 50 | < 25 | < 25 | < 25 | < 500 | |
| | 08/16/06 | 43 | **400** | < 2.5 | < 2.5 | < 2.5 | < 2.5 | **390** | < 50 | < 25 | < 25 | < 25 | < 500 | |
| | 10/27/06 | 43 | **490** | < 5.0 | < 5.0 | < 5.0 | < 5.0 | **400** | < 100 | < 50 | < 50 | < 50 | < 1,000 | |
| | 04/19/10 | 43 | <50 | <2.5 | <2.5 | <2.5 | <2.5 | **170** | <10 | <2.5 | <2.5 | <2.5 | <250 | |
| **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 | 57 | ND | ND | ND | ND | ND | 1.1 | ND | ND | ND | ND | ND | |
| | 08/16/06 | 57 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 10/27/06 | 57 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 04/19/10 | 57 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <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 | 22 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 10/26/06 | 22 | 26 | ND | 0.78 | ND | 1.4 | ND | ND | ND | ND | ND | ND | |
| | 04/19/10 | 22 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2.0 | <0.5 | <0.5 | <0.5 | <50 | |
| **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 | 43.5 | ND | ND | ND | ND | ND | ND | **80** | ND | ND | ND | ND | |
| | 10/26/06 | 43.5 | ND | ND | 0.81 | ND | 1.2 | ND | **80** | ND | ND | ND | ND | |
| | 04/19/10 | 42 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2.0 | <0.5 | <0.5 | <0.5 | <50 | |
| **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 | 43.5 | ND | ND | ND | ND | ND | < 1.0 | **80** | ND | ND | ND | ND | |
| | 10/26/06 | 43.5 | ND | ND | 0.70 | ND | 1.1 | ND | **80** | ND | ND | ND | ND | |
| | 04/19/10 | 52 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <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 | |
| Practical Quantitation Limit (PQLs) | | | 25 | 0.5 | 0.5 | 0.5 | 0.5 | 1.0 | 10 | 5.0 | 5.0 | 5.0 | 100 | |

# 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 | 22 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 10/26/06 | 22 | ND | ND | 0.72 | ND | 1.0 | ND | ND | ND | ND | ND | ND | |
| | 04/19/10 | 22 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2.0 | <0.5 | <0.5 | <0.5 | <50 | |
| 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 | 43.5 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 10/26/06 | 43.5 | ND | ND | 0.77 | ND | 1.2 | ND | ND | ND | ND | ND | ND | |
| | 04/19/10 | 43 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2.0 | <0.5 | <0.5 | <0.5 | <50 | |
| 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 | 52 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 10/26/06 | 52 | ND | ND | 0.57 | ND | 0.94 | ND | ND | ND | ND | ND | ND | |
| | 04/19/10 | 52 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2.0 | <0.5 | <0.5 | <0.5 | <50 | |
| 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 | 22 | ND | ND | ND | ND | ND | 3.8 | ND | ND | ND | ND | ND | |
| | 08/15/06 | 22 | ND | ND | ND | ND | ND | 1.6 | ND | ND | ND | ND | ND | |
| | 10/26/06 | 22 | ND | ND | 0.8 | ND | 1.5 | 2.4 | ND | ND | ND | ND | ND | |
| | 04/19/10 | Well Not Accessible | | | | | | | | | | | | |
| 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 | 42 | ND | ND | ND | ND | ND | 4.8 | ND | ND | ND | ND | ND | |
| | 08/15/06 | 22 | ND | ND | ND | ND | ND | 1.6 | ND | ND | ND | ND | ND | |
| | 10/26/06 | 22 | 35 | ND | 1.2 | ND | 2.3 | 4.9 | ND | ND | ND | ND | ND | |
| | 04/19/10 | Well Not Accessible | | | | | | | | | | | | |
| 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 | 52 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 08/15/06 | 52 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 10/26/06 | 52 | ND | ND | 0.9 | ND | 1.6 | ND | ND | ND | ND | ND | ND | |
| | 04/19/10 | Well Not Accessible | | | | | | | | | | | | |
| Environmental Screening Levels (ESLs) | | | 100 | 1.0 | 40 | 30 | 20 | 5.0 | 12 | NE | NE | NE | NE | |
| Practical Quantitation Limit (PQLs) | | | 25 | 0.5 | 0.5 | 0.5 | 0.5 | 1.0 | 10 | 5.0 | 5.0 | 5.0 | 100 | |

# 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 | 22.5 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 10/26/06 | 22.5 | 25 | ND | 1.2 | ND | 1.8 | ND | ND | ND | ND | ND | ND | |
| | 04/19/10 | 22 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2.0 | <0.5 | <0.5 | <0.5 | <50 | |
| **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 | 32 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 10/26/06 | 32 | 31 | ND | 0.83 | ND | 1.6 | ND | ND | ND | ND | ND | ND | |
| | 04/19/10 | 32 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2.0 | <0.5 | <0.5 | <0.5 | <50 | |
| **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 | 53 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 10/26/06 | 53 | 26 | ND | 0.64 | ND | 1.2 | ND | ND | ND | ND | ND | ND | |
| | 04/19/10 | 53 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2.0 | <0.5 | <0.5 | <0.5 | <50 | |
| **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 | 22.75 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 10/26/06 | 22.75 | ND | ND | 0.56 | ND | 0.93 | ND | ND | ND | ND | ND | ND | |
| | 04/19/10 | 22 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2.0 | <0.5 | <0.5 | <0.5 | <50 | |
| **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 | 38.25 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 10/26/06 | 38.25 | ND | ND | 1.0 | ND | 1.9 | ND | ND | ND | ND | ND | ND | |
| | 04/19/10 | 38 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | **23** | <2.0 | <0.5 | <0.5 | <0.5 | <50 | |
| **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 | 57.25 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 10/26/06 | 57.25 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | |
| | 04/19/10 | 57 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <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 | |
| Practical Quantitation Limit (PQLs) | | | 25 | 0.5 | 0.5 | 0.5 | 0.5 | 1.0 | 10 | 5.0 | 5.0 | 5.0 | 100 | |

# 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 | 10.5 | **180** | < 1.0 | < 1.0 | < 1.0 | < 2 | **190** | < 20 | < 10 | < 10 | < 10 | < 200 | Shallow |
| | 08/16/06 | 17 | **440** | ND | ND | ND | ND | **57** | ND | ND | ND | ND | ND | |
| | 10/27/06 | 17 | **130** | ND | ND | ND | ND | **52** | ND | ND | ND | ND | ND | |
| | 04/19/10 | 17 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | **23** | <2.0 | <0.5 | <0.5 | <0.5 | <50 | |
| PZ-1b | 12/03/04 | 14.3 | 38 | < 0.5 | < 0.5 | < 0.5 | < 1 | **28** | < 10 | < 5.0 | < 5.0 | < 5.0 | < 100 | Deep |
| | 08/16/06 | 46.5 | 51 | ND | ND | ND | ND | **38** | ND | ND | ND | ND | ND | |
| | 10/27/06 | 46.5 | 58 | ND | ND | ND | 0.79 | **50** | ND | ND | ND | ND | ND | |
| | 04/19/10 | 46 | <50 | <2.5 | <2.5 | <2.5 | <2.5 | **63** | <10 | <2.5 | <2.5 | <2.5 | <250 | |
| PZ-2a | 12/03/04 | 6.5 | **270** | < 2.5 | < 2.5 | < 2.5 | < 5 | **280** | < 50 | < 25 | < 25 | < 25 | < 500 | Shallow |
| | 07/12/05 | 29 | **120** | < 1.0 | < 1.0 | < 1.0 | < 1.0 | **110** | < 20 | < 10 | < 10 | < 10 | < 200 | |
| | 08/15/06 | 17 | **100** | ND | ND | ND | ND | **92** | ND | ND | ND | ND | ND | |
| | 10/26/06 | 29 | 68 | ND | ND | ND | ND | **56** | ND | ND | ND | ND | ND | |
| | 04/19/10 | 29 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | **22** | <2.0 | <0.5 | <0.5 | <0.5 | <50 | |
| PZ-2b | 12/03/04 | 8 | **160** | < 1.0 | < 1.0 | < 1.0 | < 2 | **150** | < 20 | < 10 | < 10 | < 10 | < 200 | Deep |
| | 07/12/05 | 49 | ND | ND | ND | < 1.0 | ND | **15** | ND | ND | ND | ND | ND | |
| | 08/15/06 | 49 | ND | ND | ND | ND | ND | **17** | ND | ND | ND | ND | ND | |
| | 10/26/06 | 49 | 43 | ND | ND | ND | ND | **17** | ND | ND | ND | ND | ND | |
| | 04/19/10 | 49 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2.0 | <0.5 | <0.5 | <0.5 | <50 | |
| PZ-3a | 12/03/04 | 9 | 29 | < 0.5 | < 0.5 | < 0.5 | < 1.0 | < 1.0 | < 10 | < 5.0 | < 5.0 | < 5.0 | < 100 | Shallow |
| | 08/16/06 | 21 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 10/26/06 | 21 | 27 | < 0.5 | 1.8 | < 0.5 | 2.9 | ND | ND | ND | ND | ND | ND | |
| | 04/19/10 | 21 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2.0 | <0.5 | <0.5 | <0.5 | <50 | |
| PZ-3b | 12/03/04 | 11 | < 25 | < 0.5 | < 0.5 | < 0.5 | < 1.0 | < 1.0 | < 10 | < 5.0 | < 5.0 | < 5.0 | < 100 | Deep |
| | 08/16/06 | 49 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| | 10/26/06 | 49 | ND | ND | 0.54 | ND | 0.88 | ND | ND | ND | ND | ND | ND | |
| | 04/19/10 | 49 | <50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <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 | |
| Practical Quantitation Limit (PQLs) | | | 25 | 0.5 | 0.5 | 0.5 | 0.5 | 1.0 | 10 | 5.0 | 5.0 | 5.0 | 100 | |

**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.

concentraqtions are micrograms per liter (ug/L)

ESLs are from San Francisco Bay RWQCB where groundwater is a drinking

**MTBE =** Methyl-tert-Butyl ether

**TAME =** Tert-amyl methyl ether

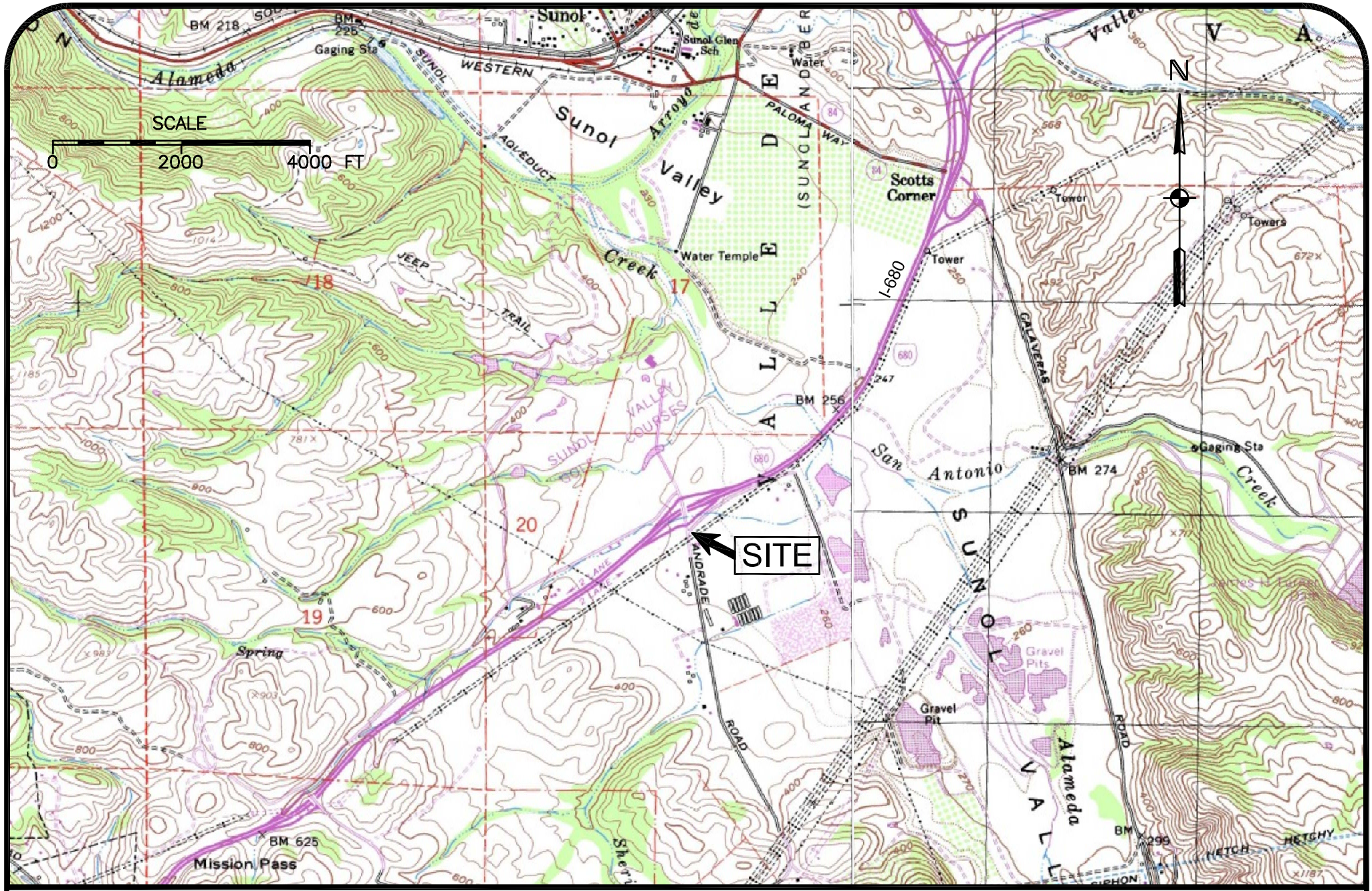
**ETBE =** Ethyl tert-butyl ether

**DIPE =** Di-isopropyl either

**tBA** - tert butyl alcohol

**TPH-g** - total petroleum hydrocarbons as gasoline

# FIGURES




Cook Environmental Services, Inc.
1485 Treat Blvd. Ste. 203A
Walnut Creek, CA
(925) 478-8390 work
(925) 787-6869 cell
tcook@cookenvironmental.com

# Sunol Tree Gas Station
# Site Location Map

**3004 Andrade Road**
**Sunol, CA 94586**

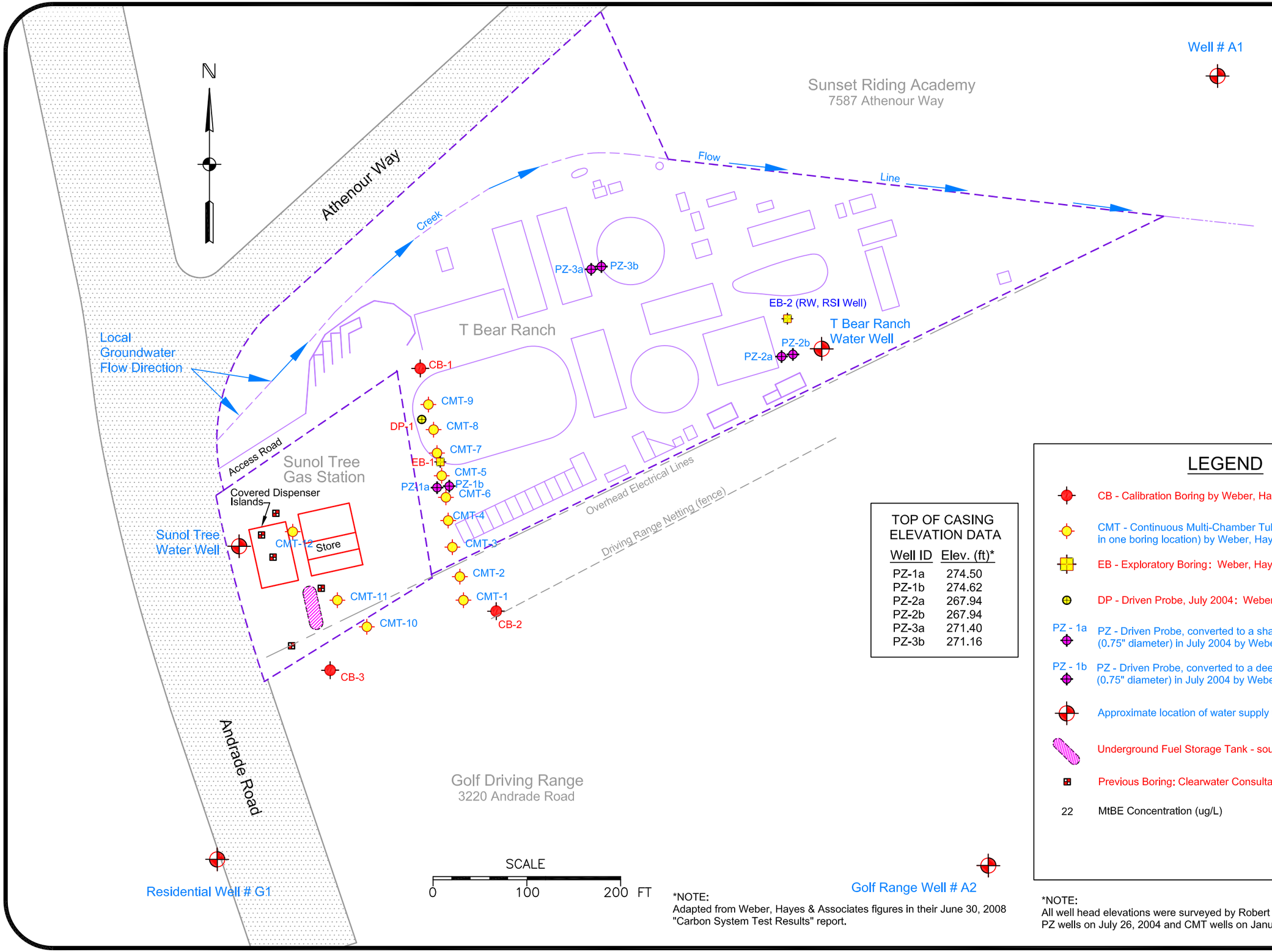
| | |
|---|---|
| Project: 1024 | Figure: 1 |
| Date: 5/19/10 | |
| Scale: 1" = 2000 ' | |


Cook Environmental Services, Inc.
1485 Treat Blvd, Ste. 203A
Walnut Creek, CA 94597
(925) 478-8390 work
(925) 787-6869 cell
tcook@cookenvironmental.com

# Sunol Tree Gas Station
# Site Aerial Photograph

**3400 Andrade Road**
**Sunol, CA 94586**

| | |
|---|---|
| Project 1024 | Figure: 2 |
| Date: 5/19/10 | |
| 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

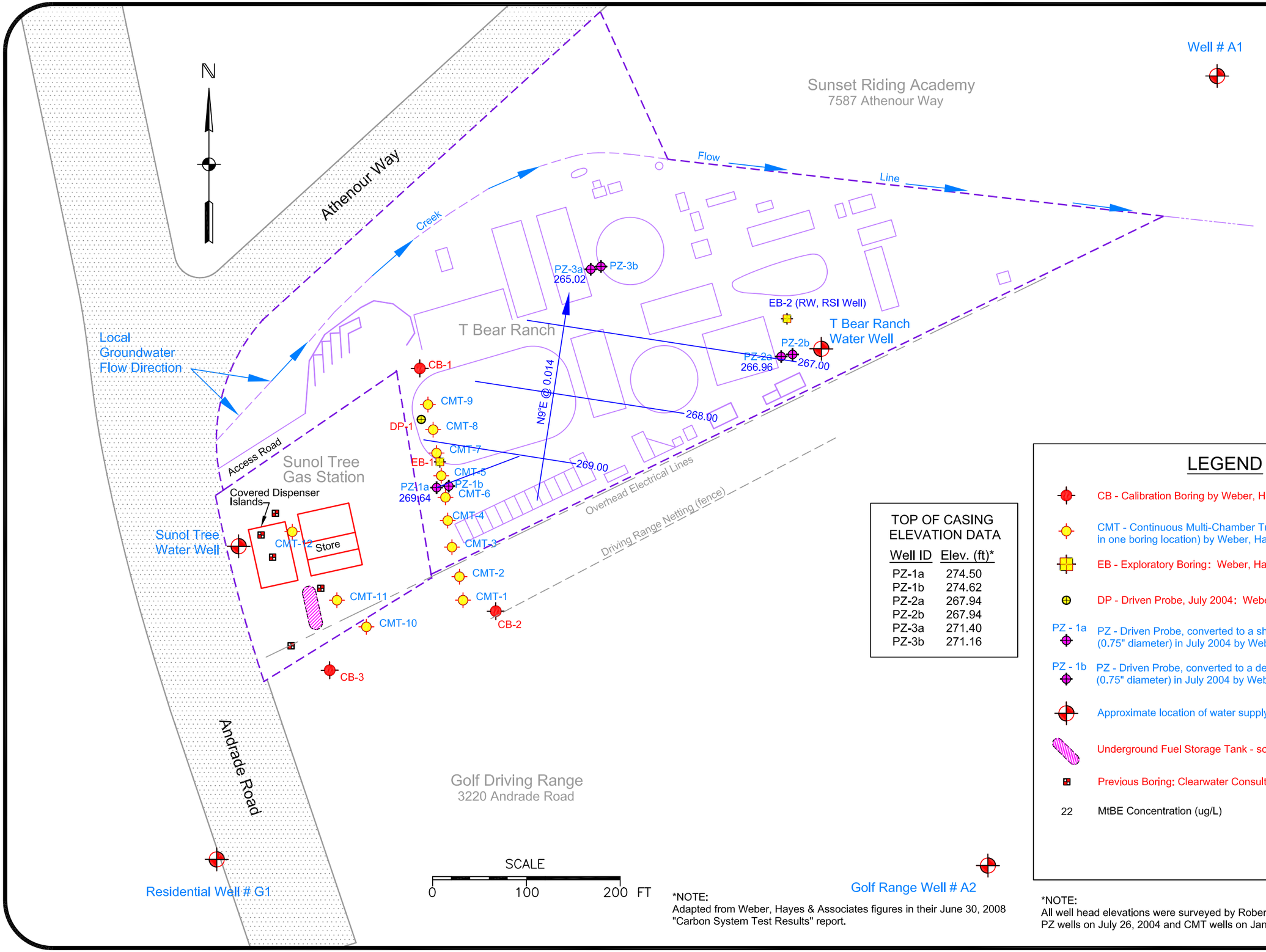
Project 1024 | Date: 5/19/10 | Scale: 1" = 100'

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

Cook Environmental Services, Inc.
1485 Treat Blvd, Ste. 203A
Walnut Creek, CA 94597
(925) 478-8390 work
(925) 787-6869 cell
tcook@cookenvironmental.com

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

Figure: 4A
Project 1024
Date: 5/19/10
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 |

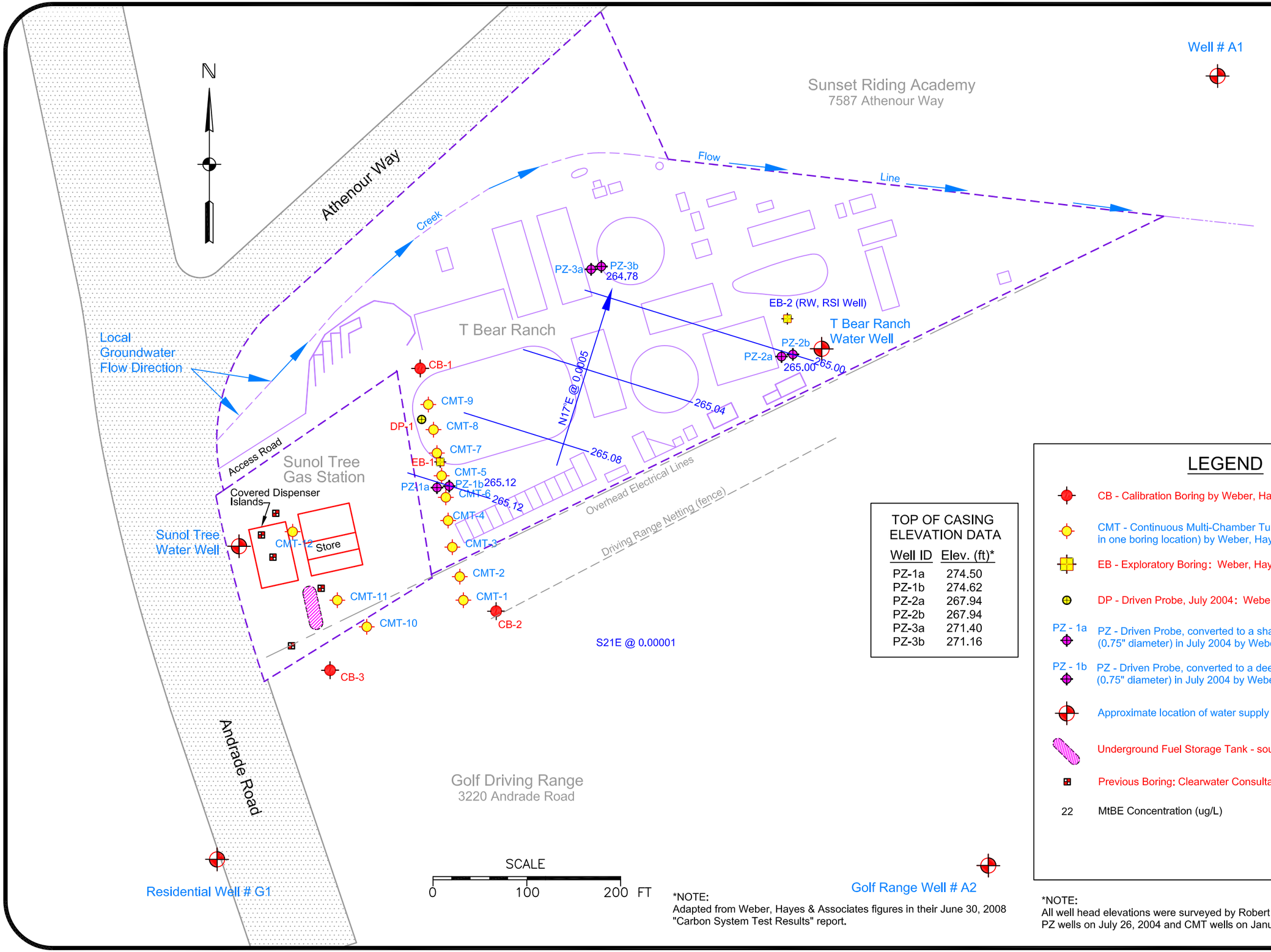
*NOTE:
Adapted from Weber, Hayes & Associates figures in their June 30, 2008 "Carbon System Test Results" report.

## 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.


Cook Environmental Services, Inc.
1485 Treat Blvd, Ste. 203A
Walnut Creek, CA 94597
(925) 478-8390 work
(925) 787-6869 cell
tcook@cookenvironmental.com




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

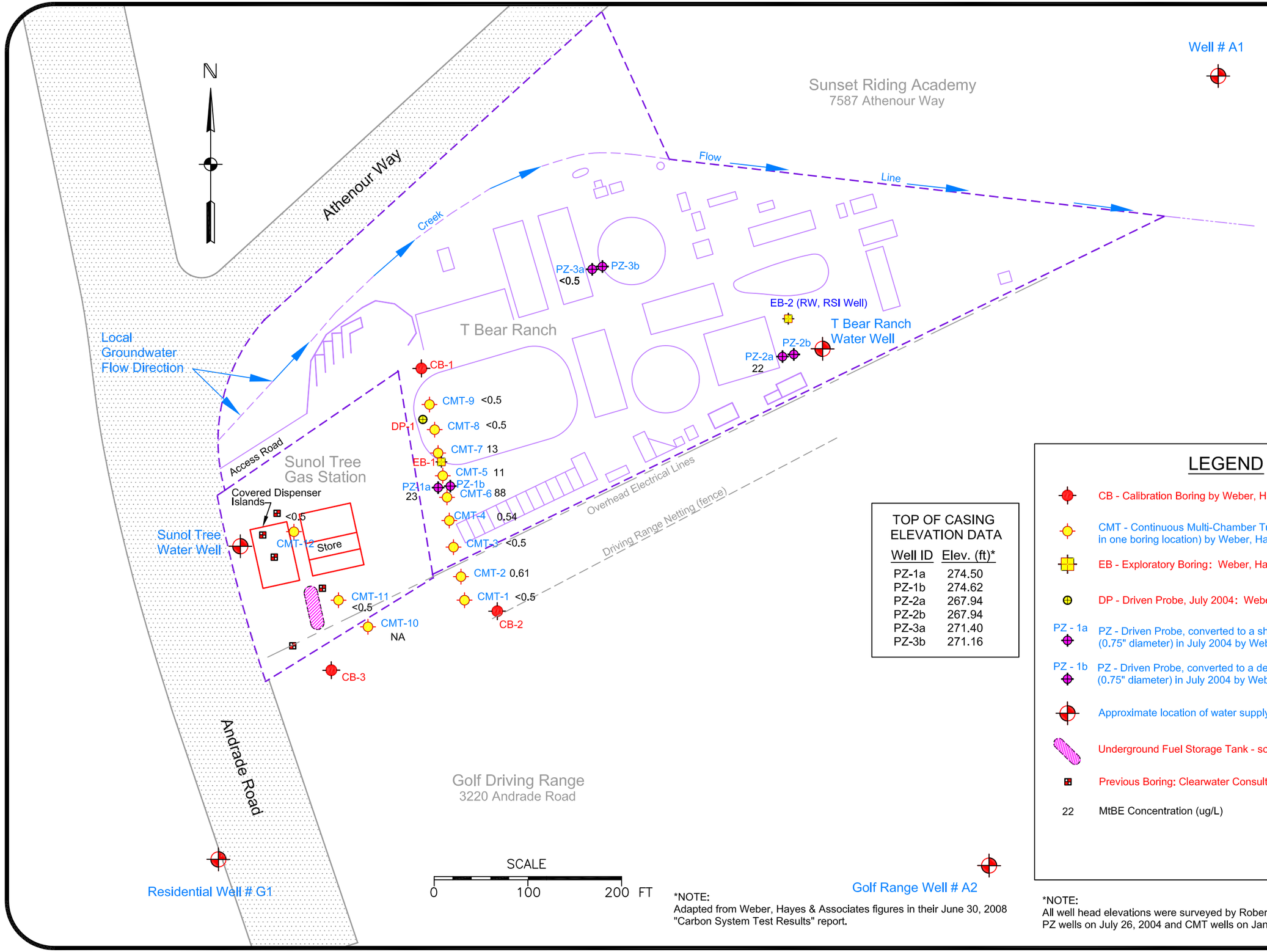
- CB - Calibration Boring by Weber, Hayes & Associates
- CMT - Continuous Multi-Chamber Tubing Well (3 - 0.375" wells in one boring location) by Weber, Hayes & Associates
- EB - Exploratory Boring: Weber, Hayes & Associates
- DP - Driven Probe, July 2004: Weber, Hayes & Associates
- PZ - 1a — PZ - Driven 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.

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

Figure: 4B
Project 1024
Date: 5/19/10
Scale:1" = 100'

Cook Environmental Services, Inc.
1485 Treat Blvd, Ste. 203A
Walnut Creek, CA 94597
(925) 478-8390 work
(925) 787-6869 cell
tcook@cookenvironmental.com




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: 5A

Project 1024 | Date: 5/19/10 | Scale:1" = 100 '

# Sunol Tree Gas Station
## MtBE Concentrations
## Shallow Water-Bearing Zone

3004 Andrade Road
Sunol, CA 94586

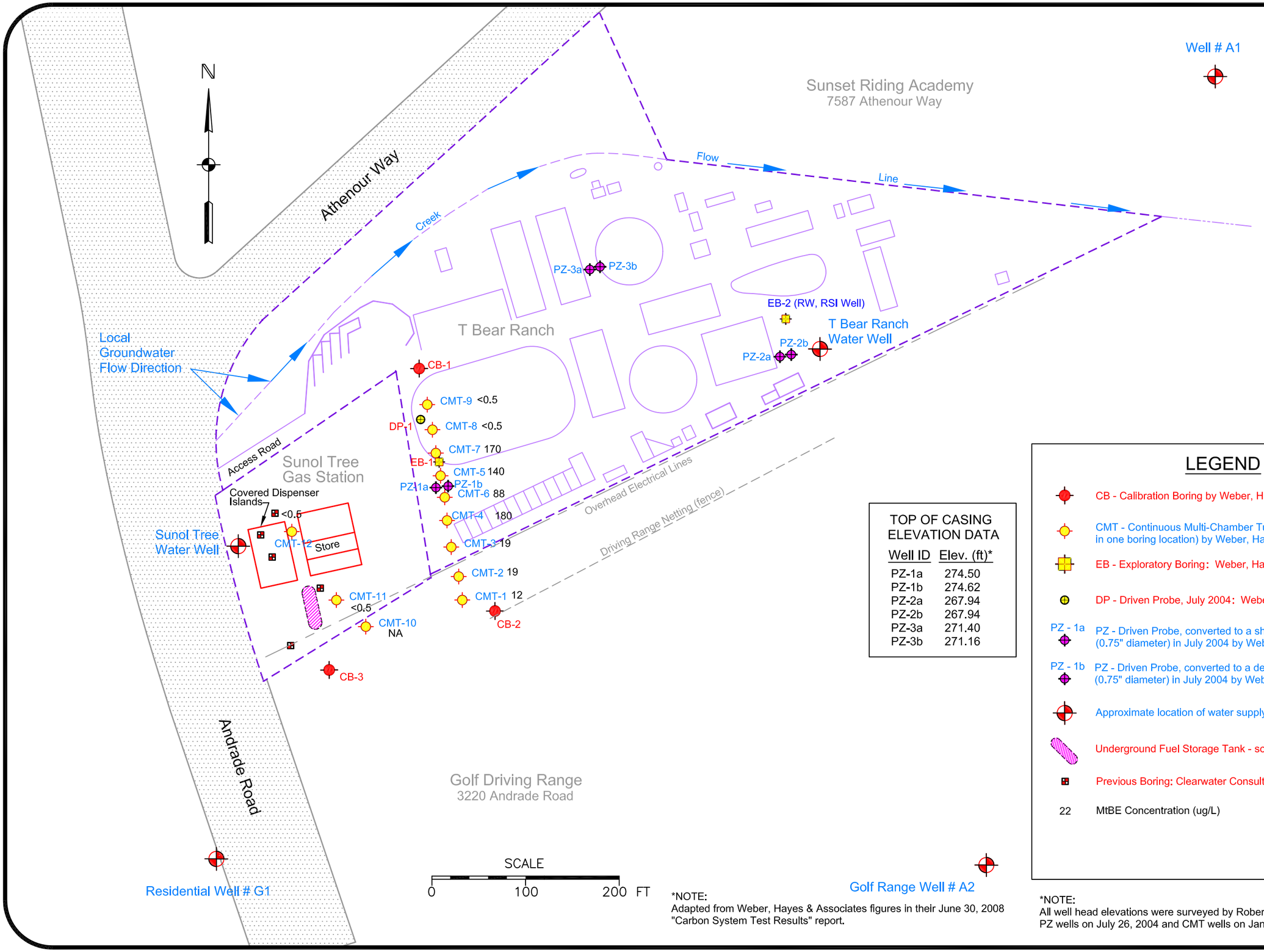
Cook Environmental Services, Inc.
1485 Treat Blvd, Ste. 203A
Walnut Creek, CA 94597
(925) 478-8390 work
(925) 787-6869 cell
tcook@cookenvironmental.com

# Sunol Tree Gas Station
# MtBE Concentrations
# Intermediate Water-Bearing Zone

3004 Andrade Road
Sunol, CA 94586

Figure: 5B

Project 1024 | Date: 5/19/10 | 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.

## 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.

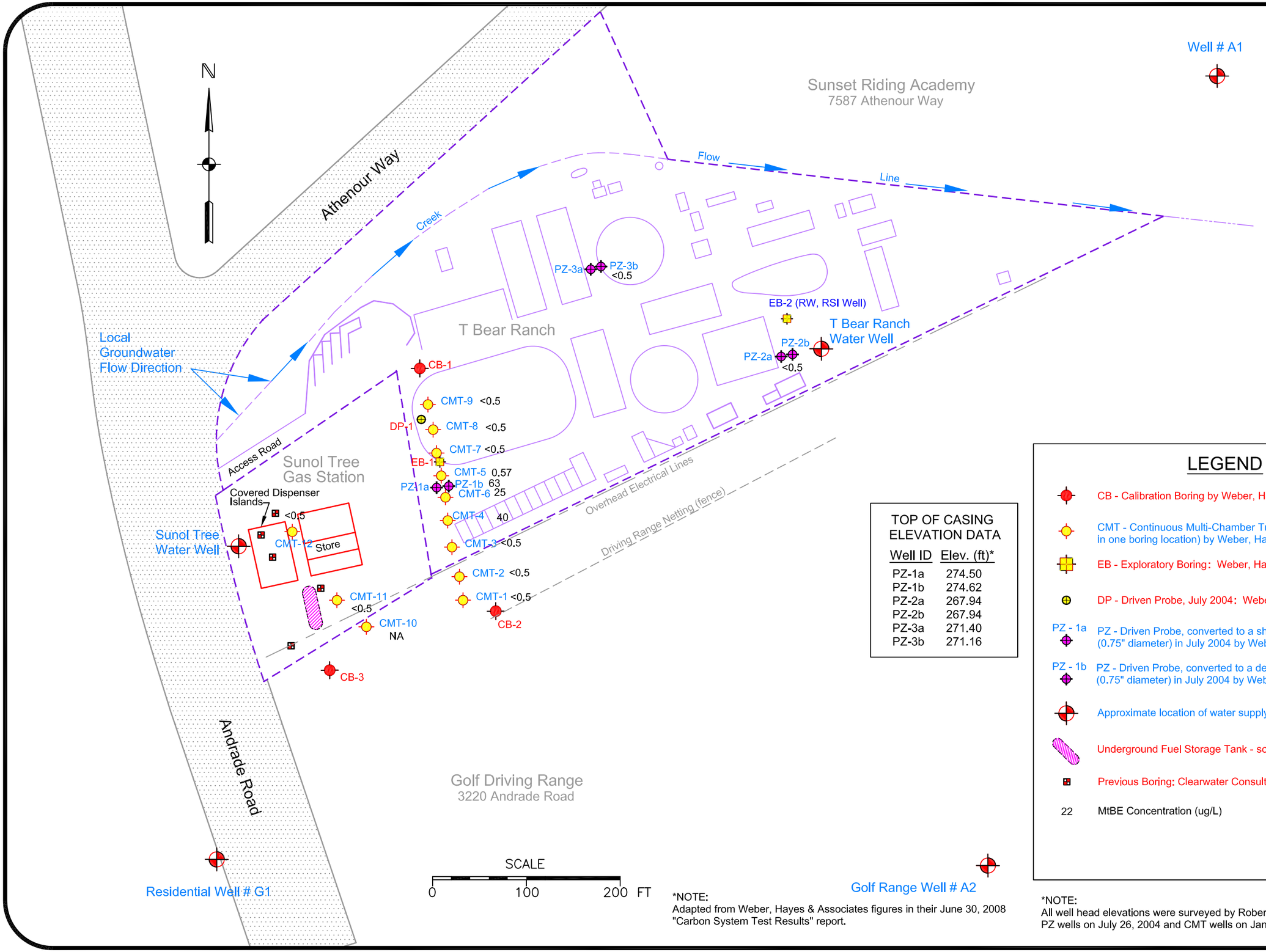

Cook Environmental Services, Inc.
1485 Treat Blvd, Ste. 203A
Walnut Creek, CA 94597
(925) 478-8390 work
(925) 787-6869 cell
tcook@cookenvironmental.com

# Sunol Tree Gas Station
# MtBE Concentrations
# Deep Water-Bearing Zone

3004 Andrade Road
Sunol, CA 94586

Figure: 5C

Project 1024 | Date: 5/19/10 | 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 |

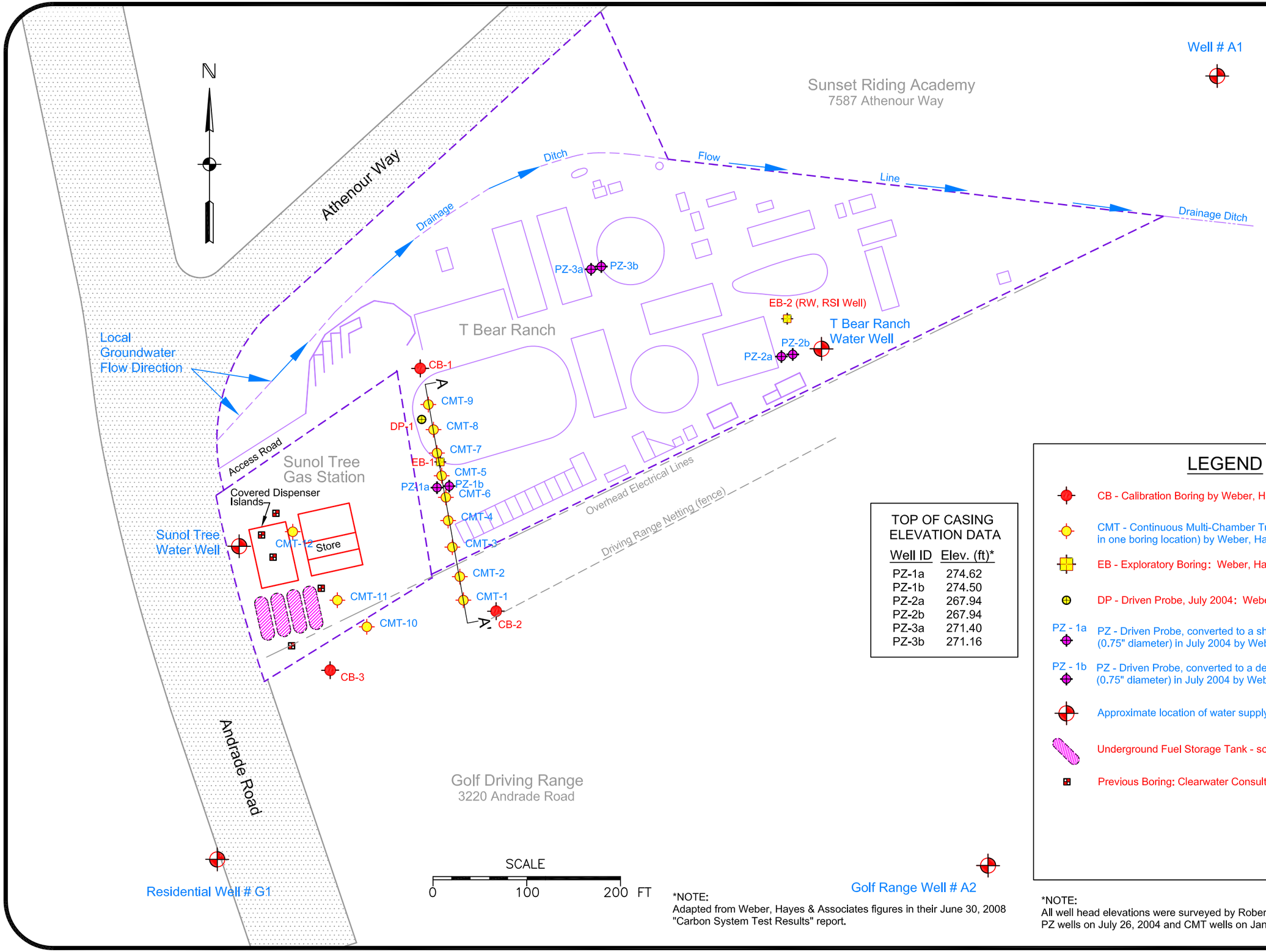
*NOTE:
Adapted from Weber, Hayes & Associates figures in their June 30, 2008 "Carbon System Test Results" report.

## 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.


Cook Environmental Services, Inc.
1485 Treat Blvd, Ste. 203A
Walnut Creek, CA 94597
(925) 478-8390 work
(925) 787-6869 cell
tcook@cookenvironmental.com




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 |

*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

*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:

| Project 1024 | Date: 5/19/10 | Scale:1" = 100 ' |
|---|---|---|

# Sunol Tree Gas Station
## Site Map with Transect A-A'
3004 Andrade Road
Sunol, CA 94586

Cook Environmental Services, Inc.
1485 Treat Blvd, Ste. 203A
Walnut Creek, CA 94597
(925) 478-8390 work
(925) 787-6869 cell
tcook@cookenvironmental.com

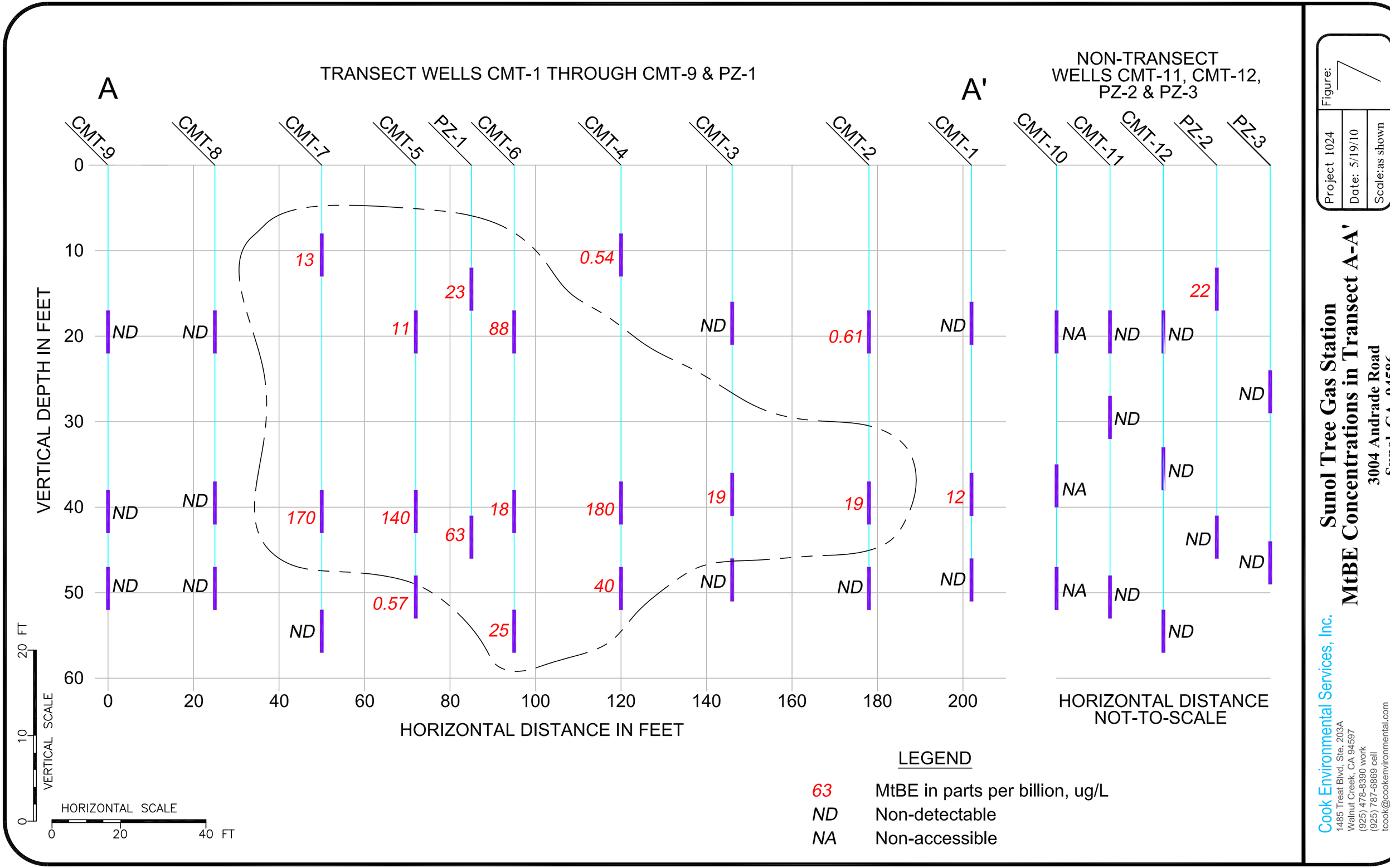



Figure:

Project 1024

Date: 5/19/10

Scale:as shown

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


Cook Environmental Services, Inc.
1485 Treat Blvd, Ste. 203A
Walnut Creek, CA 94597
(925) 478-8390 work
(925) 787-6869 cell
tcook@cookenvironmental.com

# 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 A
# 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 monitoring wells 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.

After the depth to groundwater is measured, the well is checked for the presence of free product with a clear, disposable polyethylene bailer. If free product is present, the thickness of the layer is recorded, and the well is bailed until there is just a sheen.

Samples are collected in order from least contaminated to most contaminated, which minimizes the possibility of cross contamination.

A clean disposable polyethylene bailer is used to purge each well. During purging the physical parameters of 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. These field instruments are calibrated before each use. Purging is complete when field parameters have stabilized or after three well volumes are removed, whichever is greater.

The purged water is stored on-Site in sealed, labeled 55-gallon steel drums and is periodically removed from the site and disposed of at a licensed facility.

After purging, the water level in the well is allowed to recover to at least 80 percent of its original depth before a sample is collected. A groundwater sample is collected from each well with a clean disposable bailer.

Immediately after purging each well, groundwater samples are collected using the same disposable bailer used to purge the well. Each sample is decanted from the disposable bailer into the appropriate laboratory prepared sample bottles. If necessary, the laboratory added? the appropriate preservative to the sample bottles.

Observations of groundwater conditions during purging, such as odor, volume of water purged, temperature, pH, specific conductivity, DO, and turbidity arerecorded in the sampling logs.

The DO/temperature probe and the well sounder probe are decontaminated after each use by washing in an Alconox® detergent solution followed by a tap water rinse.

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). 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

# DAILY FIELD TRACKING LOG

Prepared by: FRANK STOTT
Client: KAHN PETROLEUM
Day: TUESDAY
Date: 3/23/10
Project Name: SUNOL TREE MART
Project No: 1024

Description of Work: EVALUATION OF WELL CONDITION

LABOR:

| Name | Occupation | Quantity Unit | Quantity Rate | Quantity Amount | Straight Time Hours | Straight Time Rate | Amount | Overtime Hours | Overtime Rate | Amount | Total Amount |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FRANK STOTT | SENIOR FIELD | | | | 7.75 | | | | | | |
| MILEAGE | | | | 52 | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | Subtotal | |

EQUIPMENT:

| Equipment No. | Description | Rental Rate Unit | Rental Rate Rate | Amount | Overtime Hours | Overtime Rate | Amount | Total Amount |
|---|---|---|---|---|---|---|---|---|
| | HAND TOOLS | 1 | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | Subtotal | |

SUPPLIES AND MATERIALS:

| Supplier | Description | Quantity | Unit Rate | Amount | Overtime Hours | Overtime Rate | Amount | Total Amount |
|---|---|---|---|---|---|---|---|---|
| | | 1 | | | | | | |
| | | 1 | | | | | | |
| | | | | | | | | |
| | | | | | | | Subtotal | |

SUBCONTRACTORS:

| Name | Description | Quantity Unit | Quantity Rate | Quantity Amount | Straight Time Hours | Straight Time Rate | Amount | Overtime Hours | Overtime Rate | Amount | Total Amount |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | Subtotal | |
| | | | | | | | | | | TOTAL | |

| | | | |
|---|---|---|---|
| Name of Preparer: Frank Stott | Print Name: | Title: | Date: |
| Accepted By: | Print Name: | Title: | Date: |

Comments:

# DAILY FIELD ACTIVITY LOG

Prepared by: FRANK STOTT
Client: KAHN PETROLEUM
Day: TUESDAY
Date: 3/23/10
Project Name: SUNOL TREE MART
Project #: 1024
Weather: SUNNY, WARMING
Page: 1 of 2

Site Visitors:

| | |
|---|---|
| 7:30 AM | DRIVE TO STORAGE, LOAD EQUIPMENT |
| 8:30 AM | LEAVE FOR SITE |
| 9:30 AM | ARRIVE AT SITE BEGIN EVALUATION OF WELLS WITH TIM |
| 2:00 PM | DONE, LEAVE FOR OFFICE |
| 2:30 PM | LUNCH |
| 3:00 PM | CLEAN UP FROM JOBSITE, COMPLETE FIELD NOTES, EVALUATE REPORT FOR MISSING WELLS |
| 3:30 PM | CALLS FOR EQUIPMENT TO GUAGE, BAIL & SAMPLE WELLS |
| 3:45 PM | DONE |

# DAILY FIELD ACTIVITY LOG

Prepared by: FRANK STOTT
Client: KAHN PETROLEUM
Day: TUESDAY
Date: 3/23/10
Project Name: SUNOL TREE MART
Project #: 1024
Weather: SUNNY, WARMING
Page: 2 of 2

Site Visitors:

WELL & WELL BOX CONDITION

| | LOCATION | TYPE OF WELL | CONDITION OF WELL | CONDITION OF CHRISTIE BOX | |
|---|---|---|---|---|---|
| CMT-1 | | | | | |
| CMT-2 | | 3-CHAMBER | WELL ID IS BROKEN | 9"-GOOD | |
| CMT-3 | | 3-CHAMBER | GOOD | 9"-GOOD | |
| CMT-4 | | 3-CHAMBER | GOOD | 9"- GOOD | |
| CMT-5 | | 3-CHAMBER | GOOD | 9"-GOOD | IRRIGATION BOX COVERS 9" CHRISTIE ALSO! ON FIGURE, CMT-5 & CMT-6 ARE OUT OF SEQUENCE. TAG WELLS TO ID. |
| CMT-6 | | 3-CHAMBER | GOOD | 9" GOOD - SEE NOTE → | |
| CMT-7 | | 3-CHAMBER | GOOD | 9" GOOD | |
| CMT-8 | | 3-CHAMBER | GOOD | 9" GOOD | |
| CMT-9 | | 3-CHAMBER | GOOD | 9" GOOD | |
| CMT-10 | | 3-CHAMBER | 9"-GOOD 4" CAP BAD | 6" GOOD | |
| CMT-11 | IMMED DOWNGRAD OF USTs | 3-CHAMBER | GOOD | 6" GOOD | |
| CMT-12 | | 3-CHAMBER | GOOD | 6" GOOD | |
| | | | | | |
| | | | | | |

| | | | |
|---|---|---|---|
| PZ-3 | | 2.6" W/PLASTIC STRUCTURE | GOOD | 8" ONG SCREW STRIPPED |

3/23/10 Sand Tree MW2T Tim Cook Sunny Clear 55°F
At site w/ Frank Stoh @ 9:30A to inventory mon wells

CMT-11 immed downgrad of tanks in good shape. 3 chambers
will take mini bailers, casing in good shape
6" christy box, 4" well casing securing 3 chamber
well

CMT-10 could not locate

CMT-12 10" christy lid, 3 chamber well w/ ¼" diam mult chm wells
Allen wrench needed to remove caps. On lt (3)
side of dirt road on driving range, 20' east of black
water tank, coll pr needs to be fixed, bail water from
inside well prior to sampling

CMT-1

Sch 80 ST
Multi chamber
wells

# COOK ENVIRONMENTAL SERVICES
# MONITORING WELL SAMPLING LOG

Site Name: Kahn Petroleum

Job # 1024

Date: 4/19/10

Sampler: F. Stott & L. Fuller

Well ID: CMT-1-1

Well Diameter: 0.375

Column: 14.35

Well Depth: 21.15

Depth to Water: 6.80

Casing Volume: 7.03

3 Casing Volumes: 21.09

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 11:34 | 7 | 16.9 | 7.80 | 2.40 | 1194 | |
| 11:37 | 14 | 16.9 | 7.55 | 2.15 | 1169 | |
| 11:39 | 21 | 17.2 | 7.67 | 1.68 | 1161 | |
| 11:39 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:

Gauge/Sample Order:

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: Kahn Petroleum

Job # 1024

Date: 4/19/10

Sampler: F. Stott & L. Fuller

Well ID: CMT-1-2

Well Diameter: 0.375

Column: 28.07

Well Depth: 41.27

Depth to Water: 13.20

Casing Volume: 13.75

3 Casing Volumes: 41.3

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 11:45 | 14 | 18.1 | 2.67 | 1008 | 1.10 | |
| 11:47 | 28 | 17.8 | 2.91 | 1033 | 1.80 | |
| 11:48 | 42 | 17.6 | 2.79 | 1009 | 1.34 | |
| 11:49 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:

Gauge/Sample Order:

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: Kahn Petroleum

Job # 1024

Date: 4/19/10

Sampler: F. Stott & L. Fuller

Well ID: CMT-1-3 Well Diameter: 0.375 Column: 36.17

Well Depth: 51.37 Depth to Water: 15.20

Casing Volume: ~~17.7~~ 17.7 3 Casing Volumes: 53.2

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 11:54 | 18 | 8.00 | ~~10.77~~ 8.00 | ~~8.00~~ 1008 | 1.50 | |
| 11:56 | 36 | 7.80 | ~~10.17~~ 7.84 | ~~7.80~~ 1017 | 1.98 | |
| 11:59 | 54 | 7.92 | ~~10.14~~ 7.92 | ~~10.92~~ 1041 | 1.37 | |
| 12:00NOON | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:

Gauge/Sample Order:

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: Kahn Petroleum

Job # 1024

Date: 4/19/10

Sampler: F. Stott & L. Fuller

Well ID: CMT-2-1

Well Diameter: 0.375

Column: 16.15

Well Depth: 21.85

Depth to Water: 5.70

Casing Volume: 7.91

3 Casing Volumes: 23.7

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 12:25 | 8.0 | 20.3 | 7.83 | 847 | 1.75 | |
| 12:28 | 16.0 | 19.2 | 7.94 | 918 | 1.54 | |
| 12:30 | 24.0 | 20.3 | 7.72 | 972 | 1.72 | |
| 12:31 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:

Gauge/Sample Order:

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: Kahn Petroleum

Job # 1024

Date: 4/19/16

Sampler: F. Stott & L. Fuller

Well ID: CMT-2-2

Well Diameter: 0.375

Column: 24.00

Well Depth: 41.60

Depth to Water: 17.60

Casing Volume: 11.76

3 Casing Volumes: 35.3

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 12:36 | 12 | 19.4 | 7.71 | 443 | 1.91 | |
| 12:37 | 24 | 19.5 | 7.57 | 640 | 1.77 | |
| 12:40 | 36 | 18.7 | 7.56 | 876 | 1.47 | |
| 12:41 | SAMPLED | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:

Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/19/10  Sampler: F. Stott & L. Fuller

Well ID: CMT-2-3  Well Diameter: 0.375  Column: 32.86

Well Depth: 52.06  Depth to Water: 19.20

Casing Volume: 16.1  3 Casing Volumes: 48.3

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 12:44 | 16 | 19.5 | 7.95 | 882 | 1.55 | |
| 12:46 | 32 | 20.1 | 7.68 | 934 | 1.34 | |
| 12:48 | 48 | 19.6 | 7.63 | 1034 | 1.56 | |
| 12:49 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:  Gauge/Sample Order:

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: Kahn Petroleum

Job # 1024

Date: 4/19/10

Sampler: F. Stott & L. Fuller

Well ID: CMT-3-1

Well Diameter: 0.375

Column: 12.12

Well Depth: 20.92

Depth to Water: 8.80

Casing Volume: 5.94

3 Casing Volumes: 17.82

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 13:41 | 6.0 | 19.8 | 7.36 | 1051 | 2.08 | |
| 13:43 | 12.0 | 19.1 | 7.51 | 1094 | 1.86 | |
| 13:44 | 18.0 | 19.1 | 7.48 | 1134 | 2.33 | |
| 13:45 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:

Gauge/Sample Order:

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: Kahn Petroleum

Job # 1024

Date: 4/19/10

Sampler: F. Stott & L. Fuller

Well ID: CMT-3-2

Well Diameter: 0.375

Column: 21.11

Well Depth: 40.91

Depth to Water: 19.80

Casing Volume: 9.7

3 Casing Volumes: ~~10.39~~ 29.1

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:

Gauge/Sample Order:

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: Kahn Petroleum

Job # 1024

Date: 4/19/10

Sampler: F. Stott & L. Fuller

Well ID: CMT-3-3

Well Diameter: 0.375

Column: 30.53

Well Depth: 50.93

Depth to Water: 20.40

Casing Volume: 14.96

3 Casing Volumes: 44.88

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 13:54 | 15 | 19.8 | 7.48 | 1136 | 1.45 | |
| 13:55 | 30 | 18.9 | 7.35 | 1146 | 1.74 | |
| 13:57 | 45 | 18.7 | 7.49 | 1121 | 1.86 | |
| 13:58 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:

Gauge/Sample Order:

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: Kahn Petroleum

Job # 1024

Date: 4/19/10

Sampler: F. Stott & L. Fuller

Well ID: CMT-4-1

Well Diameter: 0.375

Column: 7.02

Well Depth: 13.22

Depth to Water: 6.20

Casing Volume: 3.44

3 Casing Volumes: 10.32

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 14:11 | 4 | 17.2 | 7.70 | 1379 | 3.57 | |
| 14:13 | 8 | 17.4 | 7.46 | 1540 | 2.30 | |
| 14:15 | 12 | 17.5 | 7.50 | 1497 | 1.73 | |
| 14:16 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:

Gauge/Sample Order:

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: Kahn Petroleum

Job # 1024

Date: 4/19/10

Sampler: F. Stott & L. Fuller

Well ID: CMT-4-2

Well Diameter: 0.375

Column: 26.80

Well Depth: 41.80

Depth to Water: 15.00

Casing Volume: 13.13

3 Casing Volumes: 13.40

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 14:18 | 13 | 17.6 | 7.20 | | 2.54 | |
| 14:20 | 26 | 17.4 | ~~7.25~~ | ~~1060~~ | 2.71 | |
| 14:21 | 39 | 17.6 | ~~7.08~~ 7.31 | 1081 | 2.37 | |
| 14:22 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:

Gauge/Sample Order:

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: Kahn Petroleum

Job # 1024

Date: 4/19/10

Sampler: F. Stott & L. Fuller

Well ID: CMT-4-3

Well Diameter: 0.375

Column: 32.93

Well Depth: 51.83

Depth to Water: 18.90

Casing Volume: 16.14

3 Casing Volumes: 48.41

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 14:22 | 16 | 17.5 | 7.33 | 1044 | 1.43 | |
| 14:23 | 32 | 17.5 | 7.36 | 1034 | 2.00 | |
| 14:24 | 48 | 17.6 | 7.35 | 1032 | 1.26 | |
| 14:25 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:

Gauge/Sample Order:

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: Kahn Petroleum

Job # 1024

Date: 4/19/10

Sampler: F. Stott & L. Fuller

Well ID: CMT-5-1

Well Diameter: 0.375

Column: 15.53

Well Depth: 21.53

Depth to Water: 6.00

Casing Volume: 7.61

3 Casing Volumes: 22.8

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 15:24 | 8.0 | 17.8 | 7.96 | 946 | 1.87 | |
| 15:25 | 16.0 | 17.5 | 7.87 | 1117 | 2.01 | |
| 15:26 | 24.0 | 17.6 | 7.50 | 1136 | 1.17 | |
| 15:27 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:

Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/19/10  Sampler: F. Stott & L. Fuller

Well ID: CMT-5-2  Well Diameter: 0.375  Column: 28.47

Well Depth: 42.67  Depth to Water: 14.20

Casing Volume: 13.95  3 Casing Volumes: 41.85

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 15:30 | 14 | 17.6 | 7.66 | 984 | 1.76 | |
| 15:31 | 28 | 17.6 | 7.62 | 998 | 1.60 | |
| 15:33 | 42 | 17.8 | 7.66 | 1013 | 1.15 | |
| 15:34 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:  Gauge/Sample Order:

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: Kahn Petroleum

Job # 1024

Date: 4/19/10

Sampler: F. Stott & L. Fuller

Well ID: CMT-5-3

Well Diameter: 0.375

Column: 34.80

Well Depth: 52.50

Depth to Water: 17.70

Casing Volume: 17.05

3 Casing Volumes: 51.16

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 15:35 | 17 | 17.5 | 7.66 | 1079 | 1.67 | |
| 15:37 | 34 | 17.6 | 7.77 | 1129 | 1.43 | |
| 15:38 | 41 | 17.7 | 7.76 | 1135 | 1.77 | |
| 15:39 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:

Gauge/Sample Order:

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: Kahn Petroleum

Job # 1024

Date: 4/19/10

Sampler: F. Stott & L. Fuller

Well ID: CMT-6-1

Well Diameter: 0.375

Column: 14.76

Well Depth: 21.66

Depth to Water: 6.90

Casing Volume: 7.23

3 Casing Volumes: 21.70

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 14:42 | 8.0 | 18.6 | 7.84 | 1079 | 2.10 | |
| 14:44 | 16.0 | 17.4 | 7.79 | 1083 | 2.43 | |
| 14:46 | 24.0 | 17.4 | 7.98 | 1060 | 2.90 | |
| 14:47 | SAMPLES | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:

Gauge/Sample Order:

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: Kahn Petroleum

Job # 1024

Date: 4/19/10

Sampler: F. Stott & L. Fuller

Well ID: CMT-6-2

Well Diameter: 0.375

Column: 28.18

Well Depth: 42.68

Depth to Water: 14.5

Casing Volume: 10.38

3 Casing Volumes: 31.13

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 14:58 | 11 | 17.5 | 7.46 | 956 | 2.40 | |
| 15:01 | 22 | 17.2 | 7.70 | 947 | 3.30 | |
| 15:02 | 33 | 17.5 | 7.55 | 950 | 3.12 | |
| 15:03 | SAMPLES | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:

Gauge/Sample Order:

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: Kahn Petroleum

Job # 1024

Date: 4/19/10

Sampler: F. Stott & L. Fuller

Well ID: CMT-6-3

Well Diameter: 0.375

Column: 44.67

Well Depth: 56.67

Depth to Water: 12.00

Casing Volume: 21.89

3 Casing Volumes: 65.66

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 15:05 | 22 | 17.4 | 7.71 | 973 | 2.40 | |
| 15:07 | 44 | 17.5 | 7.57 | 962 | 2.31 | |
| 15:09 | 66 | 17.6 | 7.61 | 950 | 2.25 | |
| 15:10 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:

Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/23/10  Sampler: F. Stott & L. Fuller

Well ID: CMT-7-1  Well Diameter: 0.375  Column: 7.24

Well Depth: 13.14  Depth to Water: 5.90

Casing Volume: 3.55  3 Casing Volumes: 10.64

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 10:33 | 4 | 18.7 | 7.12 | 1438 | 1.90 | |
| 10:35 | 8 | 17.9 | 7.20 | 1428 | 1.48 | |
| 10:38 | 16 | 18.0 | 7.06 | 1430 | 1.77 | |
| 10:39 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:  Gauge/Sample Order:

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: Kahn Petroleum

Job # 1024

Date: 4/23/10

Sampler: F. Stott & L. Fuller

Well ID: CMT-7-2

Well Diameter: 0.375

Column: 29.22

Well Depth: 42.72

Depth to Water: 13.50

Casing Volume: 14.32

3 Casing Volumes: 42.95

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 10:54 | 15 | 19.7 | 7.10 | 1100 | 2.62 | |
| 10:57 | 30 | 18.9 | 7.21 | 1106 | 2.18 | |
| 11:01 | 45 | 19.3 | 7.24 | 1113 | 2.01 | |
| 11:02 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:

Gauge/Sample Order:

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: Kahn Petroleum

Job # 1024

Date: 4/23/10

Sampler: F. Stott & L. Fuller

Well ID: CMT-7-3

Well Diameter: 0.375

Column: 40.72

Well Depth: 56.72

Depth to Water: 16.00

Casing Volume: 19.95

3 Casing Volumes: 59.86

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 11:07 | 20 | 19.2 | 7.47 | 1261 | 2.74 | |
| 11:08 | 40 | 19.3 | 7.35 | 1218 | 2.82 | |
| 11:09 | 60 | 20.0 | 7.30 | 1185 | 2.92 | |
| 11:10 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:

Gauge/Sample Order:

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: Kahn Petroleum

Job # 1024

Date: 4/23/10

Sampler: F. Stott & L. Fuller

Well ID: CMT-8-1

Well Diameter: 0.375

Column: 15.43

Well Depth: 21.63

Depth to Water: 6.20

Casing Volume: 7.56

3 Casing Volumes: 22.68

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 13:03 | 8 | 18.6 | 7.54 | 934 | 3.17 | |
| 13:06 | 16 | 18.2 | 7.50 | 1090 | 3.09 | |
| 13:09 | 24 | 18.4 | 7.13 | 1095 | 2.45 | |
| 13:10 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:

Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/23/10  Sampler: F. Stott & L. Fuller

Well ID: CMT-8-2  Well Diameter: 0.375  Column: 31.09

Well Depth: 41.83  Depth to Water: 10.74

Casing Volume: 15.23  3 Casing Volumes: 45.70

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 13:18 | 16 | 18.2 | 7.68 | 1086 | 3.51 | |
| 13:20 | 32 | 18.1 | 7.75 | 1094 | 4.42 | |
| 13:22 | 48 | 18.3 | 7.60 | 1091 | 4.95 | |
| 13:23 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:  Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/23/10  Sampler: F. Stott & L. Fuller

Well ID: CMT-8-3  Well Diameter: 0.375  Column: 38.13

Well Depth: 51.73  Depth to Water: 13.66

Casing Volume: 18.68  3 Casing Volumes: 56.05

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 13:25 | 19 | 17.9 | 7.87 | 1131 | 3.23 | |
| 13:28 | 38 | 17.9 | 7.72 | 1117 | 5.15 | |
| 13:32 | 57 | 18.3 | 7.27 | 1119 | 2.07 | |
| 13:33 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:  Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/23/10  Sampler: F. Stott & L. Fuller

Well ID: CMT-9-1  Well Diameter: 0.375  Column: ~~3690~~ 15.96

Well Depth: 22.02  Depth to Water: 6.06

Casing Volume: 7.87  3 Casing Volumes: 23.46

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 13:43 | 8. | 18.1 | 7.88 | 1106 | 2.57 | |
| 13:45 | 16 | 17.7 | 7.77 | 1124 | 3.48 | |
| 13:46 | 24 | 18.1 | 7.41 | 1117 | 3.52 | |
| 13:47 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:  Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/23/10  Sampler: F. Stott & L. Fuller

Well ID: CMT-9-2  Well Diameter: 0.375  Column: 30.05

Well Depth: 43.25  Depth to Water: 13.20

Casing Volume: 14.72  3 Casing Volumes: 44.17

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 13:51 | ~~24.0~~ 15 | 17.6 | 7.71 | 982 | 4.06 | |
| 13:53 | 30 | 17.9 | 7.67 | 1012 | 5.38 | |
| 13:55 | 45 | 17.9 | 7.47 | 1009 | 4.18 | |
| 13:56 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:  Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/23/10  Sampler: F. Stott & L. Fuller

Well ID: CMT-9-3  Well Diameter: 0.375  Column: 33.72

Well Depth: 51.72  Depth to Water: 18.06

Casing Volume: 16.52  3 Casing Volumes: 49.56

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 14:01 | 17 | 18.0 | 7.62 | 1163 | 5.06 | |
| 14:04 | 34 | 17.9 | 7.54 | 1170 | 2.94 | |
| 14:15 | 51 | 18.0 | 7.31 | 1176 | 2.52 | |
| 14:16 | SAMPLES | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:  Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/23/10  Sampler: F. Stott & L. Fuller

Well ID: CMT-10-1  Well Diameter: 0.375  Column: _____

Well Depth: 21.72  Depth to Water: _____

Casing Volume: _____  3 Casing Volumes: _____

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments: NOT ACCESSIBLE

Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/23/10  Sampler: F. Stott & L. Fuller

Well ID: CMT-10-2  Well Diameter: 0.375  Column: _____

Well Depth: 41.72  Depth to Water: _____

Casing Volume: _____  3 Casing Volumes: _____

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments: NOT ACCESSIBLE

Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/23/10  Sampler: F. Stott & L. Fuller

Well ID: CMT-10-3  Well Diameter: 0.375  Column: _____

Well Depth: 51.74  Depth to Water: _____

Casing Volume: _____  3 Casing Volumes: _____

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments: NOT ACCESSIBLE

Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/23/10  Sampler: F. Stott & L. Fuller

Well ID: CMT-11-1  Well Diameter: 0.375  Column: 8.55

Well Depth: 22.15  Depth to Water: 13.66

Casing Volume: 4.19  3 Casing Volumes: 12.57

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 15:38 | 4 | 19.5 | 8.08 | 990 | 5.15 | |
| 15:40 | 8 | 19.1 | 7.80 | 984 | 4.74 | |
| 15:43 | 12 | 20.1 | 7.54 | 976 | 5.40 | |
| 15:44 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:  Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/23/10  Sampler: F. Stott & L. Fuller

Well ID: CMT-11-2  Well Diameter: 0.375  Column: 14.00

Well Depth: 31.70  Depth to Water: 17.70

Casing Volume: 6.86  3 Casing Volumes: 20.58

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 15:44 | 7 | 19.1 | 7.58 | 1101 | 3.76 | |
| 15:47 | 14 | 18.3 | 7.68 | 1097 | 3.31 | |
| 15:48 | 21 | 18.3 | 7.73 | 1103 | 3.44 | |
| 15:49 | SHARPS | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:  Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/23/10  Sampler: F. Stott & L. Fuller

Well ID: CMT-11-3  Well Diameter: 0.375  Column: 33.20

Well Depth: 52.67  Depth to Water: 19.40

Casing Volume: 16.27  3 Casing Volumes: 48.80

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 15:51 | 16 | 18.6 | 7.80 | 1057 | 4.94 | |
| 15:55 | 32 | 18.8 | 7.91 | 1081 | 4.10 | |
| 16:00 | 48 | 19.3 | 7.48 | 1087 | 2.61 | |
| 16:01 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:  Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/23/10  Sampler: F. Stott & L. Fuller

Well ID: CMT-12-1  Well Diameter: 0.375  Column: 8.79

Well Depth: 22.49  Depth to Water: 13.70

Casing Volume: 4.31  3 Casing Volumes: 12.92

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 14:49 | 4 | 20.3 | 7.93 | 1034 | 3.42 | |
| 14:52 | 8 | 19.1 | 7.54 | 1041 | 3.57 | |
| 14:54 | 12 | 18.6 | 7.42 | 1023 | 3.56 | |
| 14:55 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:  Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/23/10  Sampler: F. Stott & L. Fuller

Well ID: CMT-12-2  Well Diameter: 0.375  Column: 16.39

Well Depth: 37.99  Depth to Water: 21.66

Casing Volume: 8.03  3 Casing Volumes: 24.09

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 14:59 | 8 | 19.6 | 7.60 | 1032 | 3.64 | |
| 15:02 | 16 | 19.7 | 9.84 | 1069 | 2.97 | |
| 15:04 | 32 | 18.8 | 7.78 | 1060 | 5.58 | |
| 15:05 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:  Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/23/10  Sampler: F. Stott & L. Fuller

Well ID: CMT-12-3  Well Diameter: 0.375  Column: 36.02

Well Depth: 56.87  Depth to Water: 20.80

Casing Volume: 17.68  3 Casing Volumes: 53.05

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 15:09 | 18 | 18.5 | 7.03 | 1670 | 3.67 | |
| 15:12 | 36 | 18.5 | 7.81 | 1089 | 5.06 | |
| 15:16 | 54 | 18.6 | 7.49 | 1105 | 5.76 | |
| 15:17 | SAMPLES | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:  Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/23/10  Sampler: F. Stott & L. Fuller

Well ID: PZ-1-a  Well Diameter: 0.75  Column: ~~10.86~~ 16.86 tk 0

Well Depth: 16.72  Depth to Water: 4.86

Casing Volume: ~~8.81~~ 45.52  3 Casing Volumes: ~~17.43~~ 136.57

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 11:36 | 45 | 18.5 | 7.38 | 1141 | 2.94 | |
| 11:40 | 90 | 17.0 | 7.42 | 1135 | 3.47 | |
| 11:41 | 135 | 17.7 | 7.19 | 1171 | 3.56 | |
| 11:42 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:  Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/23/10  Sampler: F. Stott & L. Fuller

Well ID: PZ-1-b  Well Diameter: 0.375  Column: 36.50

Well Depth: 46.00  Depth to Water: 9.50

Casing Volume: 98.55  3 Casing Volumes: 295.65

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 12:02 | 100 | 18.6 | 7.43 | 975 | 3.50 | |
| 12:05 | 200 | 18.2 | 7.50 | 977 | 4.73 | |
| 12:08 | 300 | 18.2 | 7.47 | 959 | 3.58 | |
| 12:09 | SAMPLES | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:  Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/23/10  Sampler: F. Stott & L. Fuller

Well ID: PZ-2-a  Well Diameter: 0.75  Column: ~~28.00~~ 28.02

Well Depth: 29.00  Depth to Water: 0.98

Casing Volume: 75.65  3 Casing Volumes: 226.96

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 17:12 | 75 | 17.4 | | | | |
| 17:18 | 150 | 18.4 | | | | |
| 17:20 | ~~225~~ | | | | | WELL DEWATERING |
| 17:21 | SAMPLED | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:  Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/23/10  Sampler: F. Stott & L. Fuller

Well ID: PZ-2-b  Well Diameter: 0.75  Column: 45.83

Well Depth: 48.77  Depth to Water: 2.94

Casing Volume: 123.74  3 Casing Volumes: 371.23

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 17:45 | 125 | 18.0 | 7.83 | 1320 | 4.17 | |
| 17:57 | 250 | 18.0 | 7.75 | 1325 | 2.88 | |
| 18:01 | 375 | 17.5 | 7.46 | 1323 | 5.79 | |
| 18:02 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:  Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/23/16  Sampler: F. Stott & L. Fuller

Well ID: PZ-3-a  Well Diameter: 0.75  Column: 17.75

Well Depth: 21.03  Depth to Water: 3.28

Casing Volume: ~~8.1~~ 47.93  3 Casing Volumes: ~~24.3~~ 143.78

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 18:35 | 50 | 17.9 | 7.95 | 1049 | 5.69 | |
| 18:37 | 100 | 17.4 | 7.85 | 1079 | 3.93 | WELL DEWATERING |
| 18:38 | ~~150~~ | | | | | |
| 18:39 | SAMPLE | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:  Gauge/Sample Order:

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: Kahn Petroleum  Job # 1024

Date: 4/23/10  Sampler: F. Stott & L. Fuller

Well ID: PZ-3-b  Well Diameter: 0.75  Column: 42.62

Well Depth: 49.00  Depth to Water: 6.38

Casing Volume: 115.07  3 Casing Volumes: 345.22

(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 | Ounces Purged | Temp C | pH | SC (uS) | DO (mg/L) | Purge Comments |
|---|---|---|---|---|---|---|
| 18:20 | 115 | 17.8 | 8.25 | 1158 | 4.85 | |
| 18:24 | 230 | 17.7 | 7.92 | 1193 | 4.37 | |
| 18:28 | 345 | 17.8 | 7.87 | 1198 | 4.69 | |
| 18:29 | SAMPLES | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Comments:  Gauge/Sample Order:

Cook Environmental Services, Inc.
1485 Treat Blvd., Suite 230A
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: 04/23/10 |
| 1485 Treat Blvd, Ste. 203A | | Date Received: 04/26/10 |
| | Client Contact: Tim Cook | Date Reported: 04/29/10 |
| Walnut Creek, CA 94597 | Client P.O.: | Date Completed: 04/28/10 |

**WorkOrder: 1004797**

April 29, 2010

Dear Tim:

Enclosed within are:

1) The results of the **6** 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.

1004797

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: Frank Stott

| 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) | SPLP Leach | TTLC Leach | Other | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PZ-1-a | | 4/23/14 | 11:42 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | | |
| PZ-1-b | | | 12:09 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | | |
| PZ-2-a | | | 17:21 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | | |
| PZ-2-b | | | 18:02 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | | |
| PZ-3-a | | | 18:38 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | | |
| PZ-3-b | | | 18:29 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| | 4/24/14 | 8:46 | ENVIRO-TECH SERVICES AA |
| Relinquished By: ENVIRO-TECH SVR. | Date: 4/26 | Time: 1555 | Received By: |
| Relinquished By: | Date: 4/26 | Time: 1610 | Received By: |

ICE/t° 3.2c

GOOD CONDITION ✓

HEAD SPACE ABSENT ____

DECHLORINATED IN LAB ____

APPROPRIATE CONTAINERS ✓

PRESERVED IN LAB ____

| PRESERVATION | VOAS | O&G | METALS pH<2 | OTHER |
|---|---|---|---|---|
| | ✓ | | | |

COMMENTS:

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

# CHAIN-OF-CUSTODY RECORD



**WorkOrder: 1004797** **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, cooken
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:*** **04/26/2010**
***Date Printed:*** **04/26/2010**

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1004797-001 | PZ-1-a | Water | 4/23/2010 11:42 | ☐ | A | | | | | | | | | | | |
| 1004797-002 | PZ-1-b | Water | 4/23/2010 12:09 | ☐ | A | | | | | | | | | | | |
| 1004797-003 | PZ-2-a | Water | 4/23/2010 17:21 | ☐ | A | | | | | | | | | | | |
| 1004797-004 | PZ-2-b | Water | 4/23/2010 18:02 | ☐ | A | | | | | | | | | | | |
| 1004797-005 | PZ-3-a | Water | 4/23/2010 18:38 | ☐ | A | | | | | | | | | | | |
| 1004797-006 | PZ-3-b | Water | 4/23/2010 18:29 | ☐ | 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 contain testgroup.

**Prepared by: Melissa Valles**

**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.

**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

# Sample Receipt Checklist

Client Name: **Cook Environmental Services, Inc.**
Date and Time Received: **4/26/2010 5:01:51 PM**

Project Name: **#1024; Kahn Petroleum**
Checklist completed and reviewed by: Melissa Valles

WorkOrder N°: **1004797** Matrix Water
Carrier: EnviroTech (MTZ)

## 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:

**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.<br><br>1485 Treat Blvd, Ste. 203A<br><br>Walnut Creek, CA 94597 | Client Project ID: #1024; Kahn Petroleum | Date Sampled: 04/23/10 |
| | | Date Received: 04/26/10 |
| | Client Contact: Tim Cook | Date Extracted: 04/28/10 |
| | Client P.O.: | Date Analyzed: 04/28/10 |

**MTBE and BTEX by GC/MS***

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1004797

| Lab ID | 1004797-001A | 1004797-002A | 1004797-003A | 1004797-004A | Reporting Limit for DF =1 | |
|---|---|---|---|---|---|---|
| Client ID | PZ-1-a | PZ-1-b | PZ-2-a | PZ-2-b | | |
| 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) | 23 | 63 | 22 | ND | NA | 0.5 |
| Toluene | ND | ND<2.5 | ND | ND | NA | 0.5 |
| Xylenes | ND | ND<2.5 | ND | ND | NA | 0.5 |
| **Surrogate Recoveries (%)** | | | | | | |
| %SS1: | 111 | 110 | 111 | 111 | | |
| %SS2: | 100 | 105 | 100 | 100 | | |
| **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.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

**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: 04/23/10 |
| | | Date Received: 04/26/10 |
| 1485 Treat Blvd, Ste. 203A | Client Contact: Tim Cook | Date Extracted: 04/28/10 |
| Walnut Creek, CA 94597 | Client P.O.: | Date Analyzed: 04/28/10 |

**MTBE and BTEX by GC/MS***

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1004797

| Lab ID | 1004797-005A | 1004797-006A | | | Reporting Limit for DF =1 | |
|---|---|---|---|---|---|---|
| Client ID | PZ-3-a | PZ-3-b | | | | |
| Matrix | W | W | | | | |
| DF | 1 | 1 | | | S | W |
| **Compound** | **Concentration** | | | | ug/kg | µg/L |
| tert-Amyl methyl ether (TAME) | ND | ND | | | NA | 0.5 |
| Benzene | ND | ND | | | NA | 0.5 |
| t-Butyl alcohol (TBA) | ND | ND | | | NA | 2.0 |
| 1,2-Dibromoethane (EDB) | ND | ND | | | NA | 0.5 |
| 1,2-Dichloroethane (1,2-DCA) | ND | ND | | | NA | 0.5 |
| Diisopropyl ether (DIPE) | ND | ND | | | NA | 0.5 |
| Ethanol | ND | ND | | | NA | 50 |
| Ethylbenzene | ND | ND | | | NA | 0.5 |
| Ethyl tert-butyl ether (ETBE) | ND | ND | | | NA | 0.5 |
| Methanol | ND | ND | | | NA | 500 |
| Methyl-t-butyl ether (MTBE) | ND | ND | | | NA | 0.5 |
| Toluene | ND | ND | | | NA | 0.5 |
| Xylenes | ND | ND | | | NA | 0.5 |
| **Surrogate Recoveries (%)** | | | | | | |
| %SS1: | 111 | 114 | | | | |
| %SS2: | 99 | 99 | | | | |
| **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.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

**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: 04/23/10 |
| | | Date Received: 04/26/10 |
| 1485 Treat Blvd, Ste. 203A | Client Contact: Tim Cook | Date Extracted: 04/28/10 |
| Walnut Creek, CA 94597 | Client P.O.: | Date Analyzed 04/28/10 |

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

Extraction method SW5030B Analytical methods SW8260B Work Order: 1004797

| Lab ID | Client ID | Matrix | TPH(g) | DF | % SS | Comments |
|---|---|---|---|---|---|---|
| 001A | PZ-1-a | W | ND | 1 | 99 | |
| 002A | PZ-1-b | W | ND | 1 | 98 | |
| 003A | PZ-2-a | W | ND | 1 | 99 | |
| 004A | PZ-2-b | W | ND | 1 | 98 | |
| 005A | PZ-3-a | W | ND | 1 | 98 | |
| 006A | PZ-3-b | W | ND | 1 | 98 | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| | | | |
|---|---|---|---|
| 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.

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

# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 50248 WorkOrder 1004797

**EPA Method SW8260B** **Extraction SW5030B** **Spiked Sample ID: N/A**

| 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) | N/A | 10 | N/A | N/A | N/A | 95.1 | 96.2 | 1.22 | N/A | N/A | 70 - 130 | 30 |
| Benzene | N/A | 10 | N/A | N/A | N/A | 101 | 102 | 0.377 | N/A | N/A | 70 - 130 | 30 |
| t-Butyl alcohol (TBA) | N/A | 50 | N/A | N/A | N/A | 89.2 | 92.4 | 3.49 | N/A | N/A | 70 - 130 | 30 |
| Diisopropyl ether (DIPE) | N/A | 10 | N/A | N/A | N/A | 95.8 | 97.5 | 1.72 | N/A | N/A | 70 - 130 | 30 |
| Ethyl tert-butyl ether (ETBE) | N/A | 10 | N/A | N/A | N/A | 103 | 102 | 0.481 | N/A | N/A | 70 - 130 | 30 |
| Methyl-t-butyl ether (MTBE) | N/A | 10 | N/A | N/A | N/A | 110 | 109 | 0.572 | N/A | N/A | 70 - 130 | 30 |
| Toluene | N/A | 10 | N/A | N/A | N/A | 106 | 104 | 1.91 | N/A | N/A | 70 - 130 | 30 |
| %SS1: | N/A | 25 | N/A | N/A | N/A | 88 | 88 | 0 | N/A | N/A | 70 - 130 | 30 |
| %SS2: | N/A | 25 | N/A | N/A | N/A | 101 | 101 | 0 | N/A | N/A | 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 50248 SUMMARY

| Lab ID | Date Sampled | Date Extracted | Date Analyzed | Lab ID | Date Sampled | Date Extracted | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1004797-001A | 04/23/10 11:42 AM | 04/28/10 | 04/28/10 2:57 AM | 1004797-002A | 04/23/10 12:09 PM | 04/28/10 | 04/28/10 4:32 PM |
| 1004797-003A | 04/23/10 5:21 PM | 04/28/10 | 04/28/10 4:21 AM | 1004797-004A | 04/23/10 6:02 PM | 04/28/10 | 04/28/10 5:03 AM |
| 1004797-005A | 04/23/10 6:38 PM | 04/28/10 | 04/28/10 5:46 AM | 1004797-006A | 04/23/10 6:29 PM | 04/28/10 | 04/28/10 6:28 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 / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644

QA/QC Officer

**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; Khan Petroleum | Date Sampled: 04/23/10 |
| 1485 Treat Blvd, Ste. 203A | | Date Received: 04/26/10 |
| | Client Contact: Tim Cook | Date Reported: 04/29/10 |
| Walnut Creek, CA 94597 | Client P.O.: | Date Completed: 04/28/10 |

**WorkOrder: 1004791**

May 03, 2010

Dear Tim:

Enclosed within are:

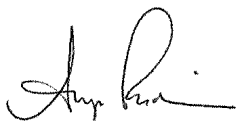
1) The results of the **15** analyzed samples from your project: **#1024; Khan Petroleum,**
2) A QC report for the above samples,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

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.

1004791

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: Khan Petroleum

Project Location: 3004 Andrade Road, Sunol, CA

Sampler Name & Signature: Frank Stott

| 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-7-1 | | 4/23/10 | 10:39 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | Filter Samples for Metals analysis: Yes / No |
| CMT-7-2 | | | 11:02 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| CMT-7-3 | | | 11:10 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| CMT-8-1 | | | 13:10 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| CMT-8-2 | | | 13:23 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| CMT-8-3 | | | 13:33 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| CMT-9-1 | | | 13:47 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| CMT-9-2 | | | 13:56 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| CMT-9-3 | | | 14:16 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| | 4/26/10 | 8:46 | ENVIRO-TECH SERVICES AA |
| Enviro-Tech Svc. | 4/26 | 1555 | Dark Cook |
| Dark Cook | 4/26 | 1610 | Maria V |

ICE/t° 3.8

GOOD CONDITION /

HEAD SPACE ABSENT /

DECHLORINATED IN LAB

APPROPRIATE CONTAINERS /

PRESERVED IN LAB

| PRESERVATION | VOAS | O&G | METALS pH<2 | OTHER |
|---|---|---|---|---|
| | / | | | |

COMMENTS:

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: Khan Petroleum

Project Location: 3004 Andrade Road, Sunol, CA

Sampler Name & Signature: Frank Stott

| 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 | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ~~CMT-10-1~~ | | 4/23/19 | ~~15:44~~ | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| ~~CMT-10-2~~ | | | ~~15:47~~ | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| ~~CMT-10-3~~ | | | ~~16:01~~ | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| + CMT-11-1 | 15:44 | | ~~14:55~~ | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| + CMT-11-2 | 15:49 | | ~~15:05~~ | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| + CMT-11-3 | 16:01 | | ~~15:17~~ | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| + CMT-12-1 | 14:55 | | ~~14:42~~ | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| + CMT-12-2 | 15:05 | | ~~17:09~~ | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| + CMT-12-3 | 15:42 | | ~~17:21~~ | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | |
|---|---|---|---|
| Relinquished By: | Date: 4/26/19 | Time: 8:46 | Received By: ENVIRO-TECH SERVICES AA |
| Relinquished By: Enviro-Tech Svc. | Date: 4/26 | Time: 1555 | Received By: |
| Relinquished By: | Date: 4/26 | Time: 1610 | Received By: |

ICE/t°_____ COMMENTS:
GOOD CONDITION___
HEAD SPACE ABSENT_____
DECHLORINATED IN LAB_____
APPROPRIATE CONTAINERS_____
PRESERVED IN LAB_____

| PRESERVATION | VOAS | O&G | METALS | OTHER |
|---|---|---|---|---|
| | | | pH<2 | |

Filter Samples for Metals analysis: Yes / No

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

# CHAIN-OF-CUSTODY RECORD



**WorkOrder: 1004791** **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, cooken
cc:
PO:
ProjectNo: #1024; Khan Petroleum

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

**Requested TAT:** 5 days

***Date Received:*** **04/26/2010**
***Date Printed:*** **04/26/2010**

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1004791-001 | CMT-7-1 | Water | 4/23/2010 10:39 | ☐ | A | | | | | | | | | | | |
| 1004791-002 | CMT-7-2 | Water | 4/23/2010 11:02 | ☐ | A | | | | | | | | | | | |
| 1004791-003 | CMT-7-3 | Water | 4/23/2010 11:10 | ☐ | A | | | | | | | | | | | |
| 1004791-004 | CMT-8-1 | Water | 4/23/2010 13:10 | ☐ | A | | | | | | | | | | | |
| 1004791-005 | CMT-8-2 | Water | 4/23/2010 13:23 | ☐ | A | | | | | | | | | | | |
| 1004791-006 | CMT-8-3 | Water | 4/23/2010 13:33 | ☐ | A | | | | | | | | | | | |
| 1004791-007 | CMT-9-1 | Water | 4/23/2010 13:47 | ☐ | A | | | | | | | | | | | |
| 1004791-008 | CMT-9-2 | Water | 4/23/2010 13:56 | ☐ | A | | | | | | | | | | | |
| 1004791-009 | CMT-9-3 | Water | 4/23/2010 14:16 | ☐ | A | | | | | | | | | | | |
| 1004791-010 | CMT-11-1 | Water | 4/23/2010 15:44 | ☐ | A | | | | | | | | | | | |
| 1004791-011 | CMT-11-2 | Water | 4/23/2010 15:49 | ☐ | A | | | | | | | | | | | |
| 1004791-012 | CMT-11-3 | Water | 4/23/2010 16:01 | ☐ | A | | | | | | | | | | | |
| 1004791-013 | CMT-12-1 | Water | 4/23/2010 14:55 | ☐ | A | | | | | | | | | | | |
| 1004791-014 | CMT-12-2 | Water | 4/23/2010 15:05 | ☐ | 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, 010A, 011A, 012A, 013A, 014A, 015A contain testgroup.

**Prepared by: Maria 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.

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

# CHAIN-OF-CUSTODY RECORD



**WorkOrder: 1004791** **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, cooken
cc:
PO:
ProjectNo: #1024; Khan Petroleum

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

**Requested TAT: 5 days**

***Date Received:*** **04/26/2010**
***Date Printed:*** **04/26/2010**

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1004791-015 | CMT-12-3 | Water | 4/23/2010 15:42 | ☐ | 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, 010A, 011A, 012A, 013A, 014A, 015A contain testgroup.

**Prepared by: Maria 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.

**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

# Sample Receipt Checklist

Client Name: **Cook Environmental Services, Inc.**
Date and Time Received: **4/26/2010 4:12:08 PM**

Project Name: **#1024; Khan Petroleum**
Checklist completed and reviewed by: Maria Venegas

WorkOrder N°: **1004791** 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:

**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.<br><br>1485 Treat Blvd, Ste. 203A<br><br>Walnut Creek, CA 94597 | Client Project ID: #1024; Khan Petroleum | Date Sampled: 04/23/10 |
| | | Date Received: 04/26/10 |
| | Client Contact: Tim Cook | Date Extracted: 04/27/10-04/28/10 |
| | Client P.O.: | Date Analyzed: 04/27/10-04/28/10 |

**MTBE and BTEX by GC/MS***

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1004791

| Lab ID | 1004791-001A | 1004791-002A | 1004791-003A | 1004791-004A | Reporting Limit for DF =1 | |
|---|---|---|---|---|---|---|
| Client ID | CMT-7-1 | CMT-7-2 | CMT-7-3 | CMT-8-1 | | |
| 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) | 13 | 170 | ND | ND | NA | 0.5 |
| Toluene | ND | ND<2.5 | ND | ND | NA | 0.5 |
| Xylenes | ND | ND<2.5 | ND | ND | NA | 0.5 |
| **Surrogate Recoveries (%)** | | | | | | |
| %SS1: | 111 | 110 | 109 | 107 | | |
| %SS2: | 103 | 105 | 102 | 100 | | |
| **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.



Angela Rydelius, Lab Manager

**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.<br><br>1485 Treat Blvd, Ste. 203A<br><br>Walnut Creek, CA 94597 | Client Project ID: #1024; Khan Petroleum | Date Sampled: 04/23/10 |
| | | Date Received: 04/26/10 |
| | Client Contact: Tim Cook | Date Extracted: 04/27/10-04/28/10 |
| | Client P.O.: | Date Analyzed: 04/27/10-04/28/10 |

**MTBE and BTEX by GC/MS***

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1004791

| Lab ID | 1004791-005A | 1004791-006A | 1004791-007A | 1004791-008A | Reporting Limit for DF =1 | |
|---|---|---|---|---|---|---|
| Client ID | CMT-8-2 | CMT-8-3 | CMT-9-1 | CMT-9-2 | | |
| 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) | ND | ND | ND | ND | 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 | ND | ND | ND | NA | 0.5 |
| Toluene | ND | ND | ND | ND | NA | 0.5 |
| Xylenes | ND | ND | ND | ND | NA | 0.5 |
| **Surrogate Recoveries (%)** | | | | | | |
| %SS1: | 110 | 110 | 111 | 112 | | |
| %SS2: | 102 | 101 | 100 | 101 | | |
| **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.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

**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.<br><br>1485 Treat Blvd, Ste. 203A<br><br>Walnut Creek, CA 94597 | Client Project ID: #1024; Khan Petroleum | Date Sampled: 04/23/10 |
| | | Date Received: 04/26/10 |
| | Client Contact: Tim Cook | Date Extracted: 04/27/10-04/28/10 |
| | Client P.O.: | Date Analyzed: 04/27/10-04/28/10 |

**MTBE and BTEX by GC/MS***

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1004791

| Lab ID | 1004791-009A | 1004791-010A | 1004791-011A | 1004791-012A | Reporting Limit for DF =1 | |
|---|---|---|---|---|---|---|
| Client ID | CMT-9-3 | CMT-11-1 | CMT-11-2 | CMT-11-3 | | |
| 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) | ND | ND | ND | ND | 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 | ND | ND | ND | NA | 0.5 |
| Toluene | ND | ND | ND | ND | NA | 0.5 |
| Xylenes | ND | ND | ND | ND | NA | 0.5 |
| **Surrogate Recoveries (%)** | | | | | | |
| %SS1: | 112 | 112 | 110 | 112 | | |
| %SS2: | 101 | 100 | 101 | 100 | | |
| **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.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

**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; Khan Petroleum | Date Sampled: 04/23/10 |
| | | Date Received: 04/26/10 |
| 1485 Treat Blvd, Ste. 203A | Client Contact: Tim Cook | Date Extracted: 04/27/10-04/28/10 |
| Walnut Creek, CA 94597 | Client P.O.: | Date Analyzed: 04/27/10-04/28/10 |

**MTBE and BTEX by GC/MS***

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1004791

| Lab ID | 1004791-013A | 1004791-014A | 1004791-015A | | Reporting Limit for DF =1 | |
|---|---|---|---|---|---|---|
| Client ID | CMT-12-1 | CMT-12-2 | CMT-12-3 | | | |
| Matrix | W | W | W | | | |
| DF | 1 | 1 | 1 | | S | W |
| **Compound** | **Concentration** | | | | ug/kg | µg/L |
| tert-Amyl methyl ether (TAME) | ND | ND | ND | | NA | 0.5 |
| Benzene | ND | ND | ND | | NA | 0.5 |
| t-Butyl alcohol (TBA) | ND | ND | ND | | NA | 2.0 |
| 1,2-Dibromoethane (EDB) | ND | ND | ND | | NA | 0.5 |
| 1,2-Dichloroethane (1,2-DCA) | ND | ND | ND | | NA | 0.5 |
| Diisopropyl ether (DIPE) | ND | ND | ND | | NA | 0.5 |
| Ethanol | ND | ND | ND | | NA | 50 |
| Ethylbenzene | ND | ND | ND | | NA | 0.5 |
| Ethyl tert-butyl ether (ETBE) | ND | ND | ND | | NA | 0.5 |
| Methanol | ND | ND | ND | | NA | 500 |
| Methyl-t-butyl ether (MTBE) | ND | 23 | ND | | NA | 0.5 |
| Toluene | ND | ND | ND | | NA | 0.5 |
| Xylenes | ND | ND | ND | | NA | 0.5 |
| **Surrogate Recoveries (%)** | | | | | | |
| %SS1: | 113 | 112 | 111 | | | |
| %SS2: | 101 | 102 | 99 | | | |
| **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.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

**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; Khan Petroleum | Date Sampled: 04/23/10 |
| | | Date Received: 04/26/10 |
| 1485 Treat Blvd, Ste. 203A | Client Contact: Tim Cook | Date Extracted: 04/27/10-04/28/10 |
| Walnut Creek, CA 94597 | Client P.O.: | Date Analyzed 04/27/10-04/28/10 |

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

Extraction method SW5030B Analytical methods SW8260B Work Order: 1004791

| Lab ID | Client ID | Matrix | TPH(g) | DF | % SS | Comments |
|---|---|---|---|---|---|---|
| 001A | CMT-7-1 | W | ND | 1 | 99 | |
| 002A | CMT-7-2 | W | ND | 1 | 97 | |
| 003A | CMT-7-3 | W | ND | 1 | 100 | |
| 004A | CMT-8-1 | W | ND | 1 | 97 | |
| 005A | CMT-8-2 | W | ND | 1 | 100 | |
| 006A | CMT-8-3 | W | ND | 1 | 100 | |
| 007A | CMT-9-1 | W | ND | 1 | 99 | |
| 008A | CMT-9-2 | W | ND | 1 | 99 | |
| 009A | CMT-9-3 | W | ND | 1 | 99 | |
| 010A | CMT-11-1 | W | ND | 1 | 98 | |
| 011A | CMT-11-2 | W | ND | 1 | 100 | |
| 012A | CMT-11-3 | W | ND | 1 | 99 | |
| 013A | CMT-12-1 | W | ND | 1 | 98 | |
| 014A | CMT-12-2 | W | ND | 1 | 99 | |
| 015A | CMT-12-3 | W | ND | 1 | 98 | |
| | | | | | | |

| | | | |
|---|---|---|---|
| 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.

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

# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 50230 WorkOrder 1004791

**EPA Method SW8260B** **Extraction SW5030B** **Spiked Sample ID: 1004766-002B**

| 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 | 93.7 | 99.7 | 6.17 | 95.4 | 98 | 2.60 | 70 - 130 | 30 | 70 - 130 | 30 |
| Benzene | ND | 10 | 105 | 102 | 2.00 | 115 | 117 | 1.31 | 70 - 130 | 30 | 70 - 130 | 30 |
| t-Butyl alcohol (TBA) | ND | 50 | 82.9 | 94.5 | 13.2 | 98.2 | 110 | 11.0 | 70 - 130 | 30 | 70 - 130 | 30 |
| Diisopropyl ether (DIPE) | ND | 10 | 101 | 103 | 2.49 | 117 | 119 | 1.97 | 70 - 130 | 30 | 70 - 130 | 30 |
| Ethyl tert-butyl ether (ETBE) | ND | 10 | 104 | 109 | 4.16 | 109 | 111 | 1.45 | 70 - 130 | 30 | 70 - 130 | 30 |
| Methyl-t-butyl ether (MTBE) | ND | 10 | 109 | 113 | 3.68 | 119 | 123 | 2.75 | 70 - 130 | 30 | 70 - 130 | 30 |
| Toluene | ND | 10 | 105 | 104 | 0.122 | 105 | 104 | 1.22 | 70 - 130 | 30 | 70 - 130 | 30 |
| %SS1: | 90 | 25 | 88 | 86 | 2.52 | 93 | 97 | 3.43 | 70 - 130 | 30 | 70 - 130 | 30 |
| %SS2: | 99 | 25 | 101 | 101 | 0 | 103 | 104 | 0.811 | 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 50230 SUMMARY

| Lab ID | Date Sampled | Date Extracted | Date Analyzed | Lab ID | Date Sampled | Date Extracted | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1004791-001A | 04/23/10 10:39 AM | 04/27/10 | 04/27/10 1:29 PM | 1004791-001A | 04/23/10 10:39 AM | 04/27/10 | 04/27/10 3:00 PM |
| 1004791-002A | 04/23/10 11:02 AM | 04/27/10 | 04/27/10 2:11 PM | 1004791-002A | 04/23/10 11:02 AM | 04/28/10 | 04/28/10 3:49 PM |
| 1004791-003A | 04/23/10 11:10 AM | 04/27/10 | 04/27/10 4:24 PM | 1004791-003A | 04/23/10 11:10 AM | 04/27/10 | 04/27/10 4:24 PM |
| 1004791-004A | 04/23/10 1:10 PM | 04/27/10 | 04/27/10 5:08 PM | 1004791-004A | 04/23/10 1:10 PM | 04/27/10 | 04/27/10 5:08 PM |
| 1004791-005A | 04/23/10 1:23 PM | 04/27/10 | 04/27/10 5:50 PM | 1004791-005A | 04/23/10 1:23 PM | 04/27/10 | 04/27/10 5:50 PM |
| 1004791-006A | 04/23/10 1:33 PM | 04/27/10 | 04/27/10 7:56 PM | 1004791-006A | 04/23/10 1:33 PM | 04/27/10 | 04/27/10 7:56 PM |
| 1004791-007A | 04/23/10 1:47 PM | 04/27/10 | 04/27/10 8:37 PM | 1004791-007A | 04/23/10 1:47 PM | 04/27/10 | 04/27/10 8:37 PM |
| 1004791-008A | 04/23/10 1:56 PM | 04/27/10 | 04/27/10 9:19 PM | 1004791-008A | 04/23/10 1:56 PM | 04/27/10 | 04/27/10 9:19 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"

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

# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 50248 WorkOrder 1004791

**EPA Method SW8260B** **Extraction SW5030B** **Spiked Sample ID: 1004808-001A**

| 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<2.5 | 10 | 95.6 | 102 | 6.08 | 95.1 | 96.2 | 1.22 | 70 - 130 | 30 | 70 - 130 | 30 |
| Benzene | ND<2.5 | 10 | 119 | 120 | 0.889 | 101 | 102 | 0.377 | 70 - 130 | 30 | 70 - 130 | 30 |
| t-Butyl alcohol (TBA) | ND<10 | 50 | 98.5 | 117 | 17.1 | 89.2 | 92.4 | 3.49 | 70 - 130 | 30 | 70 - 130 | 30 |
| Diisopropyl ether (DIPE) | ND<2.5 | 10 | 121 | 124 | 2.97 | 95.8 | 97.5 | 1.72 | 70 - 130 | 30 | 70 - 130 | 30 |
| Ethyl tert-butyl ether (ETBE) | ND<2.5 | 10 | 112 | 117 | 3.59 | 103 | 102 | 0.481 | 70 - 130 | 30 | 70 - 130 | 30 |
| Methyl-t-butyl ether (MTBE) | ND<2.5 | 10 | 120 | 127 | 5.33 | 110 | 109 | 0.572 | 70 - 130 | 30 | 70 - 130 | 30 |
| Toluene | ND<2.5 | 10 | 112 | 112 | 0 | 106 | 104 | 1.91 | 70 - 130 | 30 | 70 - 130 | 30 |
| %SS1: | 92 | 25 | 93 | 95 | 1.47 | 88 | 88 | 0 | 70 - 130 | 30 | 70 - 130 | 30 |
| %SS2: | 95 | 25 | 104 | 103 | 0.983 | 101 | 101 | 0 | 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 50248 SUMMARY

| Lab ID | Date Sampled | Date Extracted | Date Analyzed | Lab ID | Date Sampled | Date Extracted | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1004791-009A | 04/23/10 2:16 PM | 04/27/10 | 04/27/10 10:00 PM | 1004791-009A | 04/23/10 2:16 PM | 04/27/10 | 04/27/10 10:00 PM |
| 1004791-010A | 04/23/10 3:44 PM | 04/27/10 | 04/27/10 10:41 PM | 1004791-010A | 04/23/10 3:44 PM | 04/27/10 | 04/27/10 10:41 PM |
| 1004791-011A | 04/23/10 3:49 PM | 04/27/10 | 04/27/10 11:23 PM | 1004791-011A | 04/23/10 3:49 PM | 04/27/10 | 04/27/10 11:23 PM |
| 1004791-012A | 04/23/10 4:01 PM | 04/28/10 | 04/28/10 12:05 AM | 1004791-012A | 04/23/10 4:01 PM | 04/28/10 | 04/28/10 12:05 AM |
| 1004791-013A | 04/23/10 2:55 PM | 04/28/10 | 04/28/10 12:47 AM | 1004791-013A | 04/23/10 2:55 PM | 04/28/10 | 04/28/10 12:47 AM |
| 1004791-014A | 04/23/10 3:05 PM | 04/28/10 | 04/28/10 1:31 AM | 1004791-014A | 04/23/10 3:05 PM | 04/28/10 | 04/28/10 1:31 AM |
| 1004791-015A | 04/23/10 3:42 PM | 04/28/10 | 04/28/10 2:14 AM | 1004791-015A | 04/23/10 3:42 PM | 04/28/10 | 04/28/10 2:14 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

**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; Khan Petroleum | Date Sampled: 04/19/10 |
| 1485 Treat Blvd, Ste. 203A | | Date Received: 04/20/10 |
| | Client Contact: Tim Cook | Date Reported: 04/22/10 |
| Walnut Creek, CA 94597 | Client P.O.: | Date Completed: 04/21/10 |

**WorkOrder: 1004547**

April 22, 2010

Dear Tim:

Enclosed within are:

1) The results of the **18** analyzed samples from your project: **#1024; Khan 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.

1004547

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: Khan Petroleum

Project Location: 3004 Andrade Road, Sunol, CA

Sampler Name & Signature: Frank Stott

| 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-1-1 | | 4/19/10 | 11:39 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | Filter Samples for Metals analysis: Yes / No |
| CMT-1-2 | | | 11:48 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| CMT-1-3 | | | 11:59 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| CMT-2-1 | | | 12:30 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| CMT-2-2 | | | 12:40 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| CMT-2-3 | | | 12:48 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| CMT-3-1 | | | 13:44 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| CMT-3-2 | | | 13:51 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| CMT-3-3 | | | 13:57 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| | 4/19/10 | 4:58 pm | Envirotech T.L. |
| Envirotech T.L | 4/19/10 | 17:54 | |
| | 4/19/10 | 6:00 PM | |

ICE/t° YES 4°C

GOOD CONDITION ✓

HEAD SPACE ABSENT ✓

DECHLORINATED IN LAB N/A

APPROPRIATE CONTAINERS ✓

PRESERVED IN LAB N/A

| PRESERVATION | VOAS | O&G | METALS | OTHER |
|---|---|---|---|---|
| | | | pH<2 | |

COMMENTS:

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: Khan Petroleum

Project Location: 3004 Andrade Road, Sunol, CA

Sampler Name & Signature: Frank Stott

| 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-4-1 | | 4/19/10 | 14:15 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | Filter Samples for Metals analysis: Yes / No |
| CMT-4-2 | | | 14:21 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| CMT-4-3 | | | 14:24 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| CMT-5-1 | 15:26 → | | 14:46 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| CMT-5-2 | | | 15:33 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| CMT-5-3 | | | 15:38 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| CMT-6-1 | | | 14:46 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| CMT-6-2 | | | 15:07 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| CMT-6-3 | | | 15:09 | 4 | VOA | X | | | | | | X | | | X | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| | 4/19/10 | 4:58 pm | Enviroteck T.L |
| Enviroteck T.L | 4/19/10 | 17:54 | Kelly Daly |
| Kelly Daly | 4/19/10 | 6:50 P.M. | |

ICE/t YES 4.8°C

GOOD CONDITION ✓

HEAD SPACE ABSENT ✓

DECHLORINATED IN LAB N/A

APPROPRIATE CONTAINERS ✓

PRESERVED IN LAB N/A

COMMENTS:

| 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: 1004547** **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, cooken
cc:
PO:
ProjectNo: #1024; Khan Petroleum

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

**Requested TAT: 5 days**

***Date Received:*** **04/19/2010**
***Date Printed:*** **04/20/2010**

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1004547-001 | CMT-1-1 | Water | 4/19/2010 11:39 | ☐ | A | | | | | | | | | | | |
| 1004547-002 | CMT-1-2 | Water | 4/19/2010 11:48 | ☐ | A | | | | | | | | | | | |
| 1004547-003 | CMT-1-3 | Water | 4/19/2010 11:59 | ☐ | A | | | | | | | | | | | |
| 1004547-004 | CMT-2-1 | Water | 4/19/2010 12:30 | ☐ | A | | | | | | | | | | | |
| 1004547-005 | CMT-2-2 | Water | 4/19/2010 12:40 | ☐ | A | | | | | | | | | | | |
| 1004547-006 | CMT-2-3 | Water | 4/19/2010 12:48 | ☐ | A | | | | | | | | | | | |
| 1004547-007 | CMT-3-1 | Water | 4/19/2010 13:44 | ☐ | A | | | | | | | | | | | |
| 1004547-008 | CMT-3-2 | Water | 4/19/2010 13:51 | ☐ | A | | | | | | | | | | | |
| 1004547-009 | CMT-3-3 | Water | 4/19/2010 13:57 | ☐ | A | | | | | | | | | | | |
| 1004547-010 | CMT-4-1 | Water | 4/19/2010 14:15 | ☐ | A | | | | | | | | | | | |
| 1004547-011 | CMT-4-2 | Water | 4/19/2010 14:21 | ☐ | A | | | | | | | | | | | |
| 1004547-012 | CMT-4-3 | Water | 4/19/2010 14:24 | ☐ | A | | | | | | | | | | | |
| 1004547-013 | CMT-5-1 | Water | 4/19/2010 15:26 | ☐ | A | | | | | | | | | | | |
| 1004547-014 | CMT-5-2 | Water | 4/19/2010 15:33 | ☐ | 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, 010A, 011A, 012A, 013A, 014A, 015A, 016A, 017A, 018A contain testgroup.

**Prepared by: Maria 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.

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

# CHAIN-OF-CUSTODY RECORD



**WorkOrder: 1004547** **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, cooken
cc:
PO:
ProjectNo: #1024; Khan Petroleum

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

**Requested TAT: 5 days**

***Date Received:*** **04/19/2010**
***Date Printed:*** **04/20/2010**

| 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 |
| 1004547-015 | CMT-5-3 | Water | 4/19/2010 15:38 | ☐ | A | | | | | | | | | | | |
| 1004547-016 | CMT-6-1 | Water | 4/19/2010 14:46 | ☐ | A | | | | | | | | | | | |
| 1004547-017 | CMT-6-2 | Water | 4/19/2010 15:02 | ☐ | A | | | | | | | | | | | |
| 1004547-018 | CMT-6-3 | Water | 4/19/2010 15:09 | ☐ | 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, 010A, 011A, 012A, 013A, 014A, 015A, 016A, 017A, 018A contain testgroup.

**Prepared by: Maria 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.

**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

# Sample Receipt Checklist

Client Name: **Cook Environmental Services, Inc.**
Date and Time Received: **4/19/2010**

Project Name: **#1024; Khan Petroleum**
Checklist completed and reviewed by: Samantha Arbuckle

WorkOrder N°: **1004547** Matrix Water
Carrier: 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: 4.8°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:

**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.<br><br>1485 Treat Blvd, Ste. 203A<br><br>Walnut Creek, CA 94597 | Client Project ID: #1024; Khan Petroleum | Date Sampled: 04/19/10 |
| | | Date Received: 04/20/10 |
| | Client Contact: Tim Cook | Date Extracted: 04/20/10-04/21/10 |
| | Client P.O.: | Date Analyzed: 04/20/10-04/21/10 |

**MTBE and BTEX by GC/MS***

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1004547

| Lab ID | 1004547-001A | 1004547-002A | 1004547-003A | 1004547-004A | Reporting Limit for DF =1 | |
|---|---|---|---|---|---|---|
| Client ID | CMT-1-1 | CMT-1-2 | CMT-1-3 | CMT-2-1 | | |
| 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) | ND | ND | ND | ND | 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 | 12 | ND | 0.61 | NA | 0.5 |
| Toluene | ND | ND | ND | ND | NA | 0.5 |
| Xylenes | ND | ND | ND | ND | NA | 0.5 |
| **Surrogate Recoveries (%)** | | | | | | |
| %SS1: | 110 | 108 | 110 | 110 | | |
| %SS2: | 106 | 107 | 106 | 105 | | |
| **Comments** | b1 | | | | | |

* 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.

b1) aqueous sample that contains greater than ~1 vol. % sediment



Angela Rydelius, Lab Manager

**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.<br><br>1485 Treat Blvd, Ste. 203A<br><br>Walnut Creek, CA 94597 | Client Project ID: #1024; Khan Petroleum | Date Sampled: 04/19/10 |
| | | Date Received: 04/20/10 |
| | Client Contact: Tim Cook | Date Extracted: 04/20/10-04/21/10 |
| | Client P.O.: | Date Analyzed: 04/20/10-04/21/10 |

**MTBE and BTEX by GC/MS***

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1004547

| Lab ID | 1004547-005A | 1004547-006A | 1004547-007A | 1004547-008A | Reporting Limit for DF =1 | |
|---|---|---|---|---|---|---|
| Client ID | CMT-2-2 | CMT-2-3 | CMT-3-1 | CMT-3-2 | | |
| 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) | ND | ND | ND | ND | 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) | 19 | ND | ND | 19 | NA | 0.5 |
| Toluene | ND | ND | ND | ND | NA | 0.5 |
| Xylenes | ND | ND | ND | ND | NA | 0.5 |
| **Surrogate Recoveries (%)** | | | | | | |
| %SS1: | 111 | 112 | 112 | 113 | | |
| %SS2: | 107 | 106 | 107 | 105 | | |
| **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.

b1) aqueous sample that contains greater than ~1 vol. % sediment

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

**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.<br><br>1485 Treat Blvd, Ste. 203A<br><br>Walnut Creek, CA 94597 | Client Project ID: #1024; Khan Petroleum | Date Sampled: 04/19/10 |
| | | Date Received: 04/20/10 |
| | Client Contact: Tim Cook | Date Extracted: 04/20/10-04/21/10 |
| | Client P.O.: | Date Analyzed: 04/20/10-04/21/10 |

**MTBE and BTEX by GC/MS***

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1004547

| Lab ID | 1004547-009A | 1004547-010A | 1004547-011A | 1004547-012A | Reporting Limit for DF =1 | |
|---|---|---|---|---|---|---|
| Client ID | CMT-3-3 | CMT-4-1 | CMT-4-2 | CMT-4-3 | | |
| Matrix | W | W | W | W | | |
| DF | 1 | 1 | 10 | 2 | S | W |
| **Compound** | **Concentration** | | | | ug/kg | µg/L |
| tert-Amyl methyl ether (TAME) | ND | ND | ND<5.0 | ND<1.0 | NA | 0.5 |
| Benzene | ND | ND | ND<5.0 | ND<1.0 | NA | 0.5 |
| t-Butyl alcohol (TBA) | ND | ND | ND<20 | ND<4.0 | NA | 2.0 |
| 1,2-Dibromoethane (EDB) | ND | ND | ND<5.0 | ND<1.0 | NA | 0.5 |
| 1,2-Dichloroethane (1,2-DCA) | ND | ND | ND<5.0 | ND<1.0 | NA | 0.5 |
| Diisopropyl ether (DIPE) | ND | ND | ND<5.0 | ND<1.0 | NA | 0.5 |
| Ethanol | ND | ND | ND<500 | ND<100 | NA | 50 |
| Ethylbenzene | ND | ND | ND<5.0 | ND<1.0 | NA | 0.5 |
| Ethyl tert-butyl ether (ETBE) | ND | ND | ND<5.0 | ND<1.0 | NA | 0.5 |
| Methanol | ND | ND | ND<5000 | ND<1000 | NA | 500 |
| Methyl-t-butyl ether (MTBE) | ND | 0.54 | 180 | 40 | NA | 0.5 |
| Toluene | ND | ND | ND<5.0 | ND<1.0 | NA | 0.5 |
| Xylenes | ND | ND | ND<5.0 | ND<1.0 | NA | 0.5 |
| **Surrogate Recoveries (%)** | | | | | | |
| %SS1: | 113 | 115 | 108 | 108 | | |
| %SS2: | 105 | 104 | 108 | 106 | | |
| **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.

b1) aqueous sample that contains greater than ~1 vol. % sediment



Angela Rydelius, Lab Manager

**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.<br><br>1485 Treat Blvd, Ste. 203A<br><br>Walnut Creek, CA 94597 | Client Project ID: #1024; Khan Petroleum | Date Sampled: 04/19/10 |
| | | Date Received: 04/20/10 |
| | Client Contact: Tim Cook | Date Extracted: 04/20/10-04/21/10 |
| | Client P.O.: | Date Analyzed: 04/20/10-04/21/10 |

**MTBE and BTEX by GC/MS***

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1004547

| Lab ID | 1004547-013A | 1004547-014A | 1004547-015A | 1004547-016A | Reporting Limit for DF =1 | |
|---|---|---|---|---|---|---|
| Client ID | CMT-5-1 | CMT-5-2 | CMT-5-3 | CMT-6-1 | | |
| Matrix | W | W | W | W | | |
| DF | 1 | 10 | 1 | 5 | S | W |
| **Compound** | **Concentration** | | | | ug/kg | µg/L |
| tert-Amyl methyl ether (TAME) | ND | ND<5.0 | ND | ND<2.5 | NA | 0.5 |
| Benzene | ND | ND<5.0 | ND | ND<2.5 | NA | 0.5 |
| t-Butyl alcohol (TBA) | ND | ND<20 | ND | ND<10 | NA | 2.0 |
| 1,2-Dibromoethane (EDB) | ND | ND<5.0 | ND | ND<2.5 | NA | 0.5 |
| 1,2-Dichloroethane (1,2-DCA) | ND | ND<5.0 | ND | ND<2.5 | NA | 0.5 |
| Diisopropyl ether (DIPE) | ND | ND<5.0 | ND | ND<2.5 | NA | 0.5 |
| Ethanol | ND | ND<500 | ND | ND<250 | NA | 50 |
| Ethylbenzene | ND | ND<5.0 | ND | ND<2.5 | NA | 0.5 |
| Ethyl tert-butyl ether (ETBE) | ND | ND<5.0 | ND | ND<2.5 | NA | 0.5 |
| Methanol | ND | ND<5000 | ND | ND<2500 | NA | 500 |
| Methyl-t-butyl ether (MTBE) | 11 | 140 | 0.57 | 88 | NA | 0.5 |
| Toluene | ND | ND<5.0 | ND | ND<2.5 | NA | 0.5 |
| Xylenes | ND | ND<5.0 | ND | ND<2.5 | NA | 0.5 |
| **Surrogate Recoveries (%)** | | | | | | |
| %SS1: | 114 | 108 | 112 | 110 | | |
| %SS2: | 105 | 107 | 106 | 107 | | |
| **Comments** | | b1 | | | | |

* 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.

b1) aqueous sample that contains greater than ~1 vol. % sediment

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

**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.<br><br>1485 Treat Blvd, Ste. 203A<br><br>Walnut Creek, CA 94597 | Client Project ID: #1024; Khan Petroleum | Date Sampled: 04/19/10 |
| | | Date Received: 04/20/10 |
| | Client Contact: Tim Cook | Date Extracted: 04/20/10-04/21/10 |
| | Client P.O.: | Date Analyzed: 04/20/10-04/21/10 |

**MTBE and BTEX by GC/MS***

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 1004547

| | | | | | | |
|---|---|---|---|---|---|---|
| Lab ID | 1004547-017A | 1004547-018A | | | Reporting Limit for DF =1 | |
| Client ID | CMT-6-2 | CMT-6-3 | | | | |
| Matrix | W | W | | | | |
| DF | 1 | 1 | | | S | W |
| **Compound** | **Concentration** | | | | ug/kg | µg/L |
| tert-Amyl methyl ether (TAME) | ND | ND | | | NA | 0.5 |
| Benzene | ND | ND | | | NA | 0.5 |
| t-Butyl alcohol (TBA) | ND | ND | | | NA | 2.0 |
| 1,2-Dibromoethane (EDB) | ND | ND | | | NA | 0.5 |
| 1,2-Dichloroethane (1,2-DCA) | ND | ND | | | NA | 0.5 |
| Diisopropyl ether (DIPE) | ND | ND | | | NA | 0.5 |
| Ethanol | ND | ND | | | NA | 50 |
| Ethylbenzene | ND | ND | | | NA | 0.5 |
| Ethyl tert-butyl ether (ETBE) | ND | ND | | | NA | 0.5 |
| Methanol | ND | ND | | | NA | 500 |
| Methyl-t-butyl ether (MTBE) | 18 | 25 | | | NA | 0.5 |
| Toluene | ND | ND | | | NA | 0.5 |
| Xylenes | ND | ND | | | NA | 0.5 |
| **Surrogate Recoveries (%)** | | | | | | |
| %SS1: | 113 | 113 | | | | |
| %SS2: | 105 | 105 | | | | |
| **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.

b1) aqueous sample that contains greater than ~1 vol. % sediment

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

**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; Khan Petroleum | Date Sampled: 04/19/10 |
| | | Date Received: 04/20/10 |
| 1485 Treat Blvd, Ste. 203A | Client Contact: Tim Cook | Date Extracted: 04/20/10-04/21/10 |
| Walnut Creek, CA 94597 | Client P.O.: | Date Analyzed 04/20/10-04/21/10 |

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

Extraction method SW5030B Analytical methods SW8260B Work Order: 1004547

| Lab ID | Client ID | Matrix | TPH(g) | DF | % SS | Comments |
|---|---|---|---|---|---|---|
| 001A | CMT-1-1 | W | ND | 1 | 101 | b1 |
| 002A | CMT-1-2 | W | ND | 1 | 100 | |
| 003A | CMT-1-3 | W | ND | 1 | 101 | |
| 004A | CMT-2-1 | W | ND | 1 | 100 | |
| 005A | CMT-2-2 | W | ND | 1 | 102 | |
| 006A | CMT-2-3 | W | ND | 1 | 101 | |
| 007A | CMT-3-1 | W | ND | 1 | 101 | |
| 008A | CMT-3-2 | W | ND | 1 | 101 | |
| 009A | CMT-3-3 | W | ND | 1 | 99 | |
| 010A | CMT-4-1 | W | ND | 1 | 99 | |
| 011A | CMT-4-2 | W | ND | 1 | 101 | |
| 012A | CMT-4-3 | W | ND | 1 | 101 | |
| 013A | CMT-5-1 | W | ND | 1 | 101 | |
| 014A | CMT-5-2 | W | ND | 1 | 100 | b1 |
| 015A | CMT-5-3 | W | ND | 1 | 101 | |
| 016A | CMT-6-1 | W | ND | 1 | 101 | |

| | | | |
|---|---|---|---|
| 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.

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

b1) aqueous sample that contains greater than ~1 vol. % sediment

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

**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; Khan Petroleum | Date Sampled: 04/19/10 |
| | | Date Received: 04/20/10 |
| 1485 Treat Blvd, Ste. 203A | Client Contact: Tim Cook | Date Extracted: 04/20/10-04/21/10 |
| Walnut Creek, CA 94597 | Client P.O.: | Date Analyzed 04/20/10-04/21/10 |

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

Extraction method SW5030B Analytical methods SW8260B Work Order: 1004547

| Lab ID | Client ID | Matrix | TPH(g) | DF | % SS | Comments |
|---|---|---|---|---|---|---|
| 017A | CMT-6-2 | W | ND | 1 | 101 | |
| 018A | CMT-6-3 | W | ND | 1 | 100 | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| | | | |
|---|---|---|---|
| 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.

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

b1) aqueous sample that contains greater than ~1 vol. % sediment

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

**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

# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 50084 WorkOrder 1004547

**EPA Method SW8260B** **Extraction SW5030B** **Spiked Sample ID: 1004559-002A**

| 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 | 87.4 | 90.9 | 3.97 | 93.6 | 90.8 | 3.00 | 70 - 130 | 30 | 70 - 130 | 30 |
| Benzene | ND | 10 | 102 | 101 | 0.829 | 97.4 | 95.7 | 1.78 | 70 - 130 | 30 | 70 - 130 | 30 |
| t-Butyl alcohol (TBA) | ND | 50 | 95.2 | 96.9 | 1.82 | 84.2 | 78.4 | 7.13 | 70 - 130 | 30 | 70 - 130 | 30 |
| Diisopropyl ether (DIPE) | ND | 10 | 109 | 105 | 4.26 | 93 | 89.7 | 3.64 | 70 - 130 | 30 | 70 - 130 | 30 |
| Ethyl tert-butyl ether (ETBE) | ND | 10 | 104 | 104 | 0 | 100 | 97.1 | 2.95 | 70 - 130 | 30 | 70 - 130 | 30 |
| Methyl-t-butyl ether (MTBE) | ND | 10 | 110 | 111 | 0.419 | 104 | 102 | 2.07 | 70 - 130 | 30 | 70 - 130 | 30 |
| Toluene | ND | 10 | 103 | 102 | 0.601 | 98.9 | 92.9 | 6.02 | 70 - 130 | 30 | 70 - 130 | 30 |
| %SS1: | 95 | 25 | 104 | 101 | 3.30 | 86 | 89 | 3.84 | 70 - 130 | 30 | 70 - 130 | 30 |
| %SS2: | 103 | 25 | 90 | 90 | 0 | 99 | 98 | 1.17 | 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 50084 SUMMARY

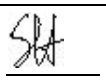
| Lab ID | Date Sampled | Date Extracted | Date Analyzed | Lab ID | Date Sampled | Date Extracted | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1004547-001A | 04/19/10 11:39 AM | 04/20/10 | 04/20/10 5:06 PM | 1004547-001A | 04/19/10 11:39 AM | 04/20/10 | 04/20/10 5:06 PM |
| 1004547-002A | 04/19/10 11:48 AM | 04/20/10 | 04/20/10 5:48 PM | 1004547-002A | 04/19/10 11:48 AM | 04/20/10 | 04/20/10 5:48 PM |
| 1004547-003A | 04/19/10 11:59 AM | 04/20/10 | 04/20/10 6:31 PM | 1004547-003A | 04/19/10 11:59 AM | 04/20/10 | 04/20/10 6:31 PM |
| 1004547-004A | 04/19/10 12:30 PM | 04/20/10 | 04/20/10 8:41 PM | 1004547-004A | 04/19/10 12:30 PM | 04/20/10 | 04/20/10 8:41 PM |
| 1004547-005A | 04/19/10 12:40 PM | 04/20/10 | 04/20/10 9:24 PM | 1004547-005A | 04/19/10 12:40 PM | 04/20/10 | 04/20/10 9:24 PM |
| 1004547-006A | 04/19/10 12:48 PM | 04/20/10 | 04/20/10 10:05 PM | 1004547-006A | 04/19/10 12:48 PM | 04/20/10 | 04/20/10 10:05 PM |
| 1004547-007A | 04/19/10 1:44 PM | 04/20/10 | 04/20/10 10:49 PM | 1004547-007A | 04/19/10 1:44 PM | 04/20/10 | 04/20/10 10:49 PM |
| 1004547-008A | 04/19/10 1:51 PM | 04/20/10 | 04/20/10 11:32 PM | 1004547-008A | 04/19/10 1:51 PM | 04/20/10 | 04/20/10 11:32 PM |
| 1004547-009A | 04/19/10 1:57 PM | 04/21/10 | 04/21/10 12:15 AM | 1004547-009A | 04/19/10 1:57 PM | 04/21/10 | 04/21/10 12:15 AM |
| 1004547-010A | 04/19/10 2:15 PM | 04/21/10 | 04/21/10 12:58 AM | 1004547-010A | 04/19/10 2:15 PM | 04/21/10 | 04/21/10 12:58 AM |
| 1004547-011A | 04/19/10 2:21 PM | 04/21/10 | 04/21/10 1:41 AM | 1004547-011A | 04/19/10 2:21 PM | 04/21/10 | 04/21/10 4:35 PM |
| 1004547-012A | 04/19/10 2:24 PM | 04/21/10 | 04/21/10 2:24 AM | 1004547-012A | 04/19/10 2:24 PM | 04/21/10 | 04/21/10 5:19 PM |
| 1004547-013A | 04/19/10 3:26 PM | 04/21/10 | 04/21/10 3:08 AM | 1004547-013A | 04/19/10 3:26 PM | 04/21/10 | 04/21/10 3:08 AM |
| 1004547-014A | 04/19/10 3:33 PM | 04/21/10 | 04/21/10 3:51 AM | 1004547-014A | 04/19/10 3:33 PM | 04/21/10 | 04/21/10 6:01 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"

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

# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 50086 WorkOrder 1004547

**EPA Method SW8260B** **Extraction SW5030B** **Spiked Sample ID: 1004547-018A**

| 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 | 97.1 | 94.2 | 3.02 | 82.1 | 83.8 | 1.95 | 70 - 130 | 30 | 70 - 130 | 30 |
| Benzene | ND | 10 | 117 | 112 | 3.88 | 101 | 102 | 1.41 | 70 - 130 | 30 | 70 - 130 | 30 |
| t-Butyl alcohol (TBA) | ND | 50 | 107 | 108 | 0.841 | 80.9 | 82.1 | 1.46 | 70 - 130 | 30 | 70 - 130 | 30 |
| Diisopropyl ether (DIPE) | ND | 10 | 121 | 116 | 4.50 | 116 | 115 | 0.831 | 70 - 130 | 30 | 70 - 130 | 30 |
| Ethyl tert-butyl ether (ETBE) | ND | 10 | 112 | 108 | 3.25 | 96.1 | 96.2 | 0.0171 | 70 - 130 | 30 | 70 - 130 | 30 |
| Methyl-t-butyl ether (MTBE) | 25 | 10 | 96.1 | 93.5 | 0.764 | 101 | 102 | 0.488 | 70 - 130 | 30 | 70 - 130 | 30 |
| Toluene | ND | 10 | 107 | 103 | 3.52 | 101 | 101 | 0 | 70 - 130 | 30 | 70 - 130 | 30 |
| %SS1: | 113 | 25 | 95 | 94 | 1.58 | 107 | 109 | 1.35 | 70 - 130 | 30 | 70 - 130 | 30 |
| %SS2: | 105 | 25 | 105 | 104 | 0.475 | 108 | 107 | 0.829 | 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 50086 SUMMARY

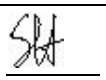
| Lab ID | Date Sampled | Date Extracted | Date Analyzed | Lab ID | Date Sampled | Date Extracted | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1004547-015A | 04/19/10 3:38 PM | 04/21/10 | 04/21/10 4:35 AM | 1004547-015A | 04/19/10 3:38 PM | 04/21/10 | 04/21/10 4:35 AM |
| 1004547-016A | 04/19/10 2:46 PM | 04/21/10 | 04/21/10 5:18 AM | 1004547-016A | 04/19/10 2:46 PM | 04/21/10 | 04/21/10 9:33 PM |
| 1004547-017A | 04/19/10 3:02 PM | 04/21/10 | 04/21/10 6:02 AM | 1004547-017A | 04/19/10 3:02 PM | 04/21/10 | 04/21/10 6:02 AM |
| 1004547-018A | 04/19/10 3:09 PM | 04/21/10 | 04/21/10 6:46 AM | 1004547-018A | 04/19/10 3:09 PM | 04/21/10 | 04/21/10 6:46 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