## RECEIVED

1:41 pm, Oct 06, 2010

Alameda County Environmental Health



August 18, 2010

Ms. Barbara Jakub Alameda County Health Agency 1131 Harbor Bay Parkway Alameda, California 94502

#### Re: Additional Assessment Report and Remedial Action Plan

76 Service Station No. 5760 376 Lewelling Boulevard San Lorenzo, California

Dear Ms. Jakub:

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

If you have any questions or need additional information, please contact me at (916) 558-7612.

Sincerely,

Bill Bargh

Bill Borgh Site Manager – Risk Management and Remediation

Attachment



Stantec Consulting Corporation 290 Conejo Ridge Avenue Thousand Oaks, CA 91361 Tel: (805) 230-1266 Fax: (805) 230-1277

## Additional Assessment Report and Remedial Action Plan

76 Service Station No. 5760 376 Lewelling Boulevard San Lorenzo, California

> ACEHS File No.: RO0000344

Stantec Project No.: 211302687

Submitted to: Ms. Barbara Jakub Alameda County Environmental Health Services 1131 Harbor Bay Parkway, Suite 250 Oakland, California 94502

(Sent Via Electronic Upload to Alameda ftp)

Submitted by: Stantec Consulting Corporation 290 Conejo Ridge Avenue Thousand Oaks, California 91361 805-230-1266

Prepared on behalf of: ConocoPhillips Company Mr. Bill Borgh Site Manager 76 Broadway Sacramento, California 95818

August 16, 2010

## TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	SITE HISTORY	2
	SITE DESCRIPTION	
2.2	PREVIOUS INVESTIGATIONS	2
2.3	GEOLOGY AND HYDROGEOLOGY	3
	SITE REMEDIATION	
2.5	SENSITIVE RECEPTORS	3
3.0	SCOPE OF WORK AND RESULTS	5
3.1	SITE HEALTH AND SAFETY PLAN	5
	PERMITTING	
3.3	SUBSURFACE UTILITY CLEARANCE	5
	SOIL BORING ACTIVITIES	
	CPT BORING ACTIVITIES	
3.6	INVESTIGATION DERIVED WASTE	6
4.0	FINDINGS	7
<b>4.0</b> 4.1	FINDINGS	<b>7</b> 7
4.1 4.2	SUB-SURFACE CONDITIONS	7 7
4.1 4.2	SUB-SURFACE CONDITIONS	7 7
4.1 4.2 4.3 <b>5.0</b>	SUB-SURFACE CONDITIONS ANALYTICAL RESULTS SOIL AND GROUNDWATER DATA EVALUATION AND RECOMMENDATIONS	7 7 8 9
4.1 4.2 4.3 <b>5.0</b> 5.1	SUB-SURFACE CONDITIONS ANALYTICAL RESULTS SOIL AND GROUNDWATER DATA EVALUATION AND RECOMMENDATIONS REMEDIAL ACTION PLAN CONTAMINANTS OF CONCERN	7 7 8 9
4.1 4.2 4.3 <b>5.0</b> 5.1 5.1	SUB-SURFACE CONDITIONS ANALYTICAL RESULTS	7 7 8 9 9
4.1 4.2 4.3 <b>5.0</b> 5.1 5.1 5.2	SUB-SURFACE CONDITIONS ANALYTICAL RESULTS SOIL AND GROUNDWATER DATA EVALUATION AND RECOMMENDATIONS REMEDIAL ACTION PLAN CONTAMINANTS OF CONCERN EXTENT OF HYDROCARBON IMPACTS TO SOIL EXTENT OF HYDROCARBON IMPACTS TO GROUNDWATER	7 7 8 9 9 9
4.1 4.2 4.3 <b>5.0</b> 5.1 5.1 5.2 5.3	SUB-SURFACE CONDITIONSANALYTICAL RESULTSSOIL AND GROUNDWATER DATA EVALUATION AND RECOMMENDATIONS REMEDIAL ACTION PLANCONTAMINANTS OF CONCERNEXTENT OF HYDROCARBON IMPACTS TO SOILEXTENT OF HYDROCARBON IMPACTS TO GROUNDWATEREXTENT OF HYDROCARBON IMPACTS TO GROUNDWATEREVALUATION OF REMEDIAL ALTERNATIVES	7 7 8 9 9 9 9 9
4.1 4.2 4.3 <b>5.0</b> 5.1 5.1 5.2 5.3 5.4	SUB-SURFACE CONDITIONSANALYTICAL RESULTSSOIL AND GROUNDWATER DATA EVALUATION AND RECOMMENDATIONS REMEDIAL ACTION PLANCONTAMINANTS OF CONCERNEXTENT OF HYDROCARBON IMPACTS TO SOILEXTENT OF HYDROCARBON IMPACTS TO GROUNDWATEREVALUATION OF REMEDIAL ALTERNATIVESSOIL AND GROUNDWATER REMEDIATION GOALS	7 7 8 9 9 9 9 9 9
4.1 4.2 4.3 5.0 5.1 5.1 5.2 5.3 5.4 5.5	SUB-SURFACE CONDITIONSANALYTICAL RESULTSSOIL AND GROUNDWATER DATA EVALUATION AND RECOMMENDATIONS REMEDIAL ACTION PLANCONTAMINANTS OF CONCERNEXTENT OF HYDROCARBON IMPACTS TO SOILEXTENT OF HYDROCARBON IMPACTS TO GROUNDWATEREVALUATION OF REMEDIAL ALTERNATIVESSOIL AND GROUNDWATER REMEDIATION GOALS	.7 .7 .8 .9 .9 .9 .9 .9 .9 .9 .10 .10
4.1 4.2 4.3 5.1 5.1 5.2 5.3 5.4 5.5 5.6	SUB-SURFACE CONDITIONS	7 7 8 9 9 9 9 9 10 10
4.1 4.2 4.3 5.1 5.1 5.2 5.3 5.4 5.5 5.6	SUB-SURFACE CONDITIONSANALYTICAL RESULTSSOIL AND GROUNDWATER DATA EVALUATION AND RECOMMENDATIONS REMEDIAL ACTION PLANCONTAMINANTS OF CONCERNEXTENT OF HYDROCARBON IMPACTS TO SOILEXTENT OF HYDROCARBON IMPACTS TO GROUNDWATEREVALUATION OF REMEDIAL ALTERNATIVESSOIL AND GROUNDWATER REMEDIATION GOALS	7 7 8 9 9 9 9 9 10 10

# TABLE OF CONTENTS (continued)

## LIST OF FIGURES

- Figure 1 Site Location Map
- Figure 2 Site Plan
- Figure 3 Lateral Extent of TPHg, Ethylbenzene, and Total Xylenes
- Figure 4 Well U-1R Concentrations vs. Time
- Figure 5 Layout of Proposed Sparge Wells
- Figure 6 Layout of Proposed Sparge Wells and Injection Wells

#### LIST OF TABLES

- Table 1Soil Analytical Results
- Table 2Groundwater Analytical Results
- Table 3
   Evaluation Matrix for Remedial Alternatives
- Table 4Remedial Cost Estimate

#### LIST OF APPENDICES

- Appendix A Soil Boring Permit
- Appendix B Field Procedures
- Appendix C Bore Logs
- Appendix D CPT Electronic Log
- Appendix E Certified Laboratory Analytical Data and Chain-of-Custody Documentation
- Appendix F Historical Groundwater Analytical Results
- Appendix G Historical Soil Analytical Results

## 1.0 INTRODUCTION

Stantec Consulting Corporation (Stantec) has prepared this report on behalf of ConocoPhillips Company, to document additional assessment activities performed at 76 Service Station No. 5760, located at 376 Lewelling Boulevard, San Lorenzo, California (Figures 1 and 2). The objective of this work was to complete vertical and lateral delineation of hydrocarbons adsorbed to soil and dissolved in groundwater beneath the site.

The scope of work was proposed in Stantec's *Revised Work Plan for Additional Site Assessment*, dated April 27, 2009. Stantec's April 27, 2009 work plan was intended to replace a December 1, 2008 work plan prepared by Delta Environmental (Delta [ConocoPhillips' previous consultant for the site]). In Stantec's *Quarterly Summary Report – First Quarter 2010*, dated March 22, 2010, Stantec provided 60-day notification to the Alameda County Environmental Health Services (ACEHS), that unless a response was received, that Stantec would infer that the ACEHS approved the work proposed in Stantec's April 27, 2009 work plan; a response from the ACEHS was not received.

The completed scope of work consisted of advancing two soil borings and one cone penetrometer test (CPT) boring. Soil and groundwater samples were collected from both confirmation soil borings and the CPT boring and were submitted for laboratory analysis. Based on the results of the site assessment activities, Stantec prepared a Remedial Action Plan (RAP), which is presented as Section 5 of this report.

## 2.0 SITE HISTORY

#### 2.1 SITE DESCRIPTION

The site is currently an active 76-branded gasoline service station and auto repair shop located on the southeast corner of the intersection of Lewelling Boulevard and Usher Street in San Lorenzo, California. Site facilities include two underground storage tanks (USTs) used for gasoline storage, and associated piping and fuel dispensers. The station building was observed to contain two mechanic's service bays; a waste-oil UST was also present at the site. A detailed site plan is included as Figure 2.

#### 2.2 PREVIOUS INVESTIGATIONS

In November 1987, Woodward-Clyde Consultants (WCC) oversaw the removal of the former USTs, and the installation of the current USTs. Based on petroleum hydrocarbon impact observed during UST replacement, groundwater monitoring well U-1 was installed. Well installation activities are documented in WCC's *Well Installation Report* dated March 25, 1988.

In August 1990, GSI oversaw the installation of monitoring wells U-2 through U-4. Well installation activities are documented in GSI's *Monitoring Well Installation Report*, dated November 16, 1990.

In March 1992, GSI oversaw the installation of monitoring wells U-5 through U-8 to delineate impact off-site. Well installation activities are documented in GSI's *Well Installation Report*, dated June 15, 1992.

In May 1993, GSI oversaw the installation of monitoring well U-9 to delineate impact off-site. Well installation activities are documented in GSI's *Well Installation Report*, dated August 9, 1993.

In November 2003, Delta oversaw the advancement of five direct push soil borings, GP-1 through GP-5, to a maximum depth of 20 feet below ground surface (bgs). Hydrocarbon impact was observed in the soil sample collected from GP-4 at a depth of 19 feet bgs; TPHg, ethylbenzene, and total xylenes were detected at concentrations of 1,600, 26, and 130 milligrams per kilogram, respectively. A soil sample collected from GP-4 at a depth of 12 feet bgs was "non-detect" for all analyzed constituents. Site assessment activities are documented in Delta's *Baseline Assessment Report*, dated December 10, 2003.

In July 2007, Delta abandoned monitoring wells U-1 and U-3 and installed replacement wells U-1R and U-3R. Wells U-1 and U-3 were destroyed because Delta believed that hydrocarbon impacts observed in the wells originated at the surface and migrating down the well boring through poor surface seals. Well destruction and abandonment activities are documented in Delta's *Monitoring Well Abandonment and Replacement Report*, dated August 27, 2007.

### 2.3 GEOLOGY AND HYDROGEOLOGY

The site is located on the East Bay Plain, which gently slopes westward from the foothills to the east towards the San Francisco Bay. The area is underlain by Holocene-age alluvial deposits. Sand and gravel stream channel deposits are mapped along the alignment of San Lorenzo Creek, which is located approximately 500 feet south of the site. Based on assessment activities performed by various consultants, the subsurface generally consists of highly permeable soils to depths of 15 to 20 feet bgs. Underlying these soils are low permeability soils with occasional sand lenses to the maximum depth explored of approximately 30 feet bgs.

As outlined in the California Department of Water Resources (DWR) 2003 *California Groundwater: Bulletin 118*, the site lies within the East Bay Plain Subbasin of the Santa Clara Valley Groundwater Basin. The East Bay Plain Subbasin is a northwest trending alluvial plain of Quaternary Age, bounded on the north by San Pablo Bay, on the east by the contact with Franciscan Basement rocks, and on the south by the Niles Cone Groundwater Basin. The East Bay Plain Subbasin extends beneath San Francisco Bay to the west.

A soil sieve/hydrometer sample and permeability test was performed in August 1990 by GeoStrategies Incorporated (GSI) on a soil sample collected from boring U-2 at a depth of 30 feet bgs. In the associated boring log, the soil was classified as a clay; the laboratory determined the soil to have a permeability of 6.0x10<sup>-8</sup> centimeters per second.

A three-hour step-drawdown and 24-hour constant-rate discharge test were performed utilizing well U-1 in February 1994. The step-drawdown test indicated a sustainable yield of 2 gallons per minute. Hydraulic conductivity calculated during the constant-rate discharge test ranged from 175.4 gallons per day per square foot (gpd/ft<sup>2</sup>) to 350 gpd/ft<sup>2</sup>, a value consistent with that of a clean sand.

#### 2.4 SITE REMEDIATION

In August 1994, Pacific Environmental Group performed a 5-day soil vapor extraction (SVE) feasibility test at the site. Results of the test indicated that SVE was an effective remedial technology for the site.

In October 1995, an SVE and groundwater treatment system was started up at the site. The system was subsequently operated continuously until February 1997, when the system was shut-down due to diminishing remedial benefits.

Active remediation is not currently being performed at the site.

#### 2.5 SENSITIVE RECEPTORS

In 1992, GSI contacted the Alameda County Flood Control and Water Conservation District to identify water supply wells located within 0.5-mile of the site. Of the six wells identified (all being classified as irrigation wells) as being located within 0.5-mile of the site, five of the wells were determined to be located hydraulically up-gradient of the site, while one well was determined to be located hydraulically cross-gradient of the site. Of the up-gradient wells, one (identified in GSI's *Well Installation Report*, dated June 15, 1992 as well #1) appears to be located immediately east of the site.

In 2006, Delta reviewed DWR well completion logs to identify all wells located within 1 mile of the site. Based on a review of Delta's reports, Delta appears to have identified 39 wells within 1 mile of the site. The six wells identified by GSI in 1992 were not located during the 2006 review of DWR files.

In 2006, Delta mailed a Public Health Assessment Questionnaire to all properties, and owners of properties, located within 1,000 feet of the site. Of the 164 questionnaires sent out, Delta received 13 responses and four returned by the United States Postal Service due to invalid addresses. Of the 13 responses, none of the respondents indicated the presence of a sump on their properties.

Based on the United States Geological Survey Topographic Map for the area (San Leandro quadrangle, 1980), the nearest surface water body is the San Lorenzo Creek, located approximately 500 feet southeast to southwest (down-gradient) of the site. In the vicinity of the site, San Lorenzo Creek is a concrete-lined channel.

## 3.0 SCOPE OF WORK AND RESULTS

The scope of work included the advancement of two-onsite soil borings (GP-6 and GP-7) and one CPT boring (CPT-1) at the site. The completed scope of work is discussed below:

#### 3.1 SITE HEALTH AND SAFETY PLAN

As required by the Occupational Safety and Health Administration (OSHA) Standard "Hazardous Waste Operations and Emergency Response" guidelines (29 CFR 1910.120), and by the California OSHA (Cal-OSHA) "Hazardous Waste Operations and Emergency Response" guidelines (CCR Title 8, Section 5192), Stantec updated the current site-specific Health and Safety Plan (HASP) prior to the commencement of fieldwork. The HASP was reviewed by field staff and contractors before beginning field operations, and was in the possession of Stantec personnel while conducting work activities at the site.

#### 3.2 PERMITTING

A soil boring permit was obtained from the Alameda County Public Works Department prior to the advancement of the soil borings. A copy of the permit is included in Appendix A.

#### 3.3 SUBSURFACE UTILITY CLEARANCE

Prior to initiating field activities, Stantec marked the boring locations, contacted USA a minimum of 48 hours prior to the initiation of field work, and contracted a private utility locator to determine that the proposed boring locations were clear of potential subsurface obstructions. In addition, the borings were air-knifed to 5 feet bgs before machine drilling began. A Stantec borehole checklist was also completed to ensure that borehole locations were cleared of possible safety hazards.

#### 3.4 SOIL BORING ACTIVITIES

On July 8, 2010, Stantec oversaw the drilling of soil borings GP-6 and GP-7 by WDC Exploration & Wells (WDC). The soil borings were drilled using direct-push drilling equipment to maximum depths of 25 feet bgs for soil logging. To collect groundwater samples from the soil borings, a PVC casing was inserted through the drill casing; the drill casing was then retracted approximately four feet to expose the PVC casing. A disposable bailer was utilized to collect the groundwater samples. After the water samples were collected, the boreholes were grouted to ground surface, utilizing the PVC casing as a tremmie pipe. Field procedures are described in Appendix B.

The boreholes were logged by Stantec staff under the direction of a California-licensed Professional Geologist, using the Unified Soil Classification System and standard geologic techniques, and were recorded onto bore logs (Appendix C). The boreholes were continuously cored for lithologic determination. Three soil samples from each soil boring were submitted for chemical analysis. The soil samples were collected in acetate sleeves and capped with Teflon-lined end caps. The soil and groundwater samples were placed on ice and transported to the local Stantec office and stored in a dedicated sample refrigerator, pending pickup by a laboratory-contracted courier.

#### 3.5 CPT BORING ACTIVITIES

On July 9, 2010, Stantec oversaw the drilling of CPT boring CPT-1 by WDC. The CPT boring was advanced (using a CPT drill rig) to a depth of 50 feet bgs. The borehole was logged electronically (included in Appendix D). Due to the presence of above-ground structures, CPT-1 could not be advanced where originally proposed. On July 9, 2010, Stantec oversaw the advancement of soil boring CPT-1A at the originally-proposed location utilizing a direct-push drill rig. CPT-1A was advanced for sampling purposes only and was not logged; soil and groundwater sample intervals were determined based on the electronic log generated at the CPT-1 location.

The soil samples were collected in acetate sleeves and capped with Teflon-lined end caps, while the grab groundwater samples were collected using a hydropunch sampling device. Soil samples were collected at 10-foot intervals for laboratory analysis, while three grab groundwater samples were collected from CPT-1A at depths which were inferred to represent discreet waterbearing zones. The groundwater samples were collected in a manner similar to that utilized to collect groundwater samples from soil borings GP-6 and GP-7. The soil and groundwater samples were placed on ice and transported to the local Stantec office and stored in a dedicated sample refrigerator, pending pickup by a laboratory-contracted courier.

After the boreholes were advanced to the desired depth, and all samples were collected, the boreholes were backfilled with cement grout emplaced via tremmie pipe. Field procedures are described in Appendix B.

#### 3.6 INVESTIGATION DERIVED WASTE

Soil cuttings and decontamination rinsate water generated during the well installation activities were stored in Department of Transportation (DOT) approved 55-gallon capacity steel drums. The drums were staged onsite pending laboratory characterization as non-hazardous waste. American Integrated Services of Wilmington, California was contracted to transport the drums to their licensed facility pending disposal. Copies of the waste disposal manifests will be submitted under separate cover.

## 4.0 FINDINGS

#### 4.1 SUB-SURFACE CONDITIONS

Based on the soil cuttings logged by Stantec on July 8, 2010, the subsurface generally consists of sands to depths of 12 feet bgs, with silt and clay layers generally being encountered beneath the sand layer to a depth of 21 to 24 feet bgs. Below these fine-grained layers, a sand layer was observed. In GP-7, a fat clay was observed below the sand layer at a depth of 24 feet bgs. Copies of the bore logs are included as Appendix C.

Based on the electronic log generated on July 9, 2010 during the advancement of CPT-1, the subsurface generally consists of clay/silt mixtures, with sand layers at depths of approximately 20 to 22 feet, 31 to 34 feet, and at 42 feet bgs. A copy of the electronic log is included as Appendix D.

#### 4.2 ANALYTICAL RESULTS

#### 4.2.1 Soil Data

Soil and groundwater samples were submitted to BC Laboratories on July 14, 2010 for chemical analysis. The soil samples were analyzed for total purgeable petroleum hydrocarbons (TPPH [gasoline]), BTEX, fuel oxygenates MTBE, tert-butyl alcohol (TBA), diisopropyl ether (DIPE), tert-amyl methyl ether (TAME), ethyl tert-butyl ether (ETBE), and ethanol, and lead scavengers 1,2-dibromoethane (EDB) and 1,2-dichloroethane (1,2-DCA).

Results of soil sampling indicate TPPH in soil collected from CPT-1 at a depth of 19.5 feet bgs at a concentration of 470 mg/kg, and MTBE in soil collected from CPT-1 at a depth of 39.5 feet bgs at a concentration of 0.0032 mg/kg, exceeding their respective California Regional Water Quality Control Board – San Francisco Bay Region (CRWQCB-SFBR) Environmental Screening Limits (ESLs) for residential land use. No other analytes exceeded their respective CRWQCB-SFBR ESLs in any of the soil samples collected. It should be noted however, that due to elevated detection levels for several of the groundwater samples collected, several analytes which were reported as "non-detect" may still be present at concentrations exceeding their respective ESLs.

Soil analytical data are summarized in Table 1. A copy of the certified laboratory analytical report is included as Appendix E.

#### 4.2.2 Groundwater Data

Groundwater samples were submitted to BC Laboratories on July 14, 2010 for chemical analysis. The groundwater samples were analyzed for TPPH, BTEX, fuel oxygenates MTBE, TBA, DIPE, TAME, ETBE, and ethanol, and lead scavengers EDB and 1,2-DCA.

When compared to their respective CRWQCB-SFBR ESLs for groundwater that is a current or potential drinking water resource, the TPPH, ethylbenzene, and total xylenes ESLs were exceeded in multiple groundwater samples collected from CPT-1 (actually collected from the CPT-1A location). TPPH, ethylbenzene, and total xylenes were detected at maximum concentrations of 3,100  $\mu$ g/L, 160  $\mu$ g/L, and 130  $\mu$ g/L, respectively (all in the sample [or sample

duplicate] collected at the 19 to 22-foot depth interval). No other analytes were detected at concentrations exceeding their respective CRWQCB-SFBR ESLs.

Groundwater analytical data are summarized in Table 2. A copy of the certified laboratory analytical report is included in Appendix E.

# 4.3 SOIL AND GROUNDWATER DATA EVALUATION AND RECOMMENDATIONS

Based on the soil and groundwater data from the soil borings, remaining hydrocarbon impact is primarily restricted to groundwater beneath the site. The TPHg impact to soil observed in CPT-1A at a depth of approximately 19.5 feet bgs likely represents dissolved-phase impact which had subsequently adsorbed to soil. The groundwater analytical data indicates additional assessment down-gradient of the fuel dispensers is not warranted. While elevated dissolved-phase concentrations were observed in CPT-1A (up to 3,100  $\mu$ g/L TPHg), the concentrations are significantly lower than those observed in up-gradient (and most-impacted) well U-1R, which contained TPHg at a concentration of 12,000  $\mu$ g/L during the latest sampling event (first quarter 2010). It is Stantec's opinion that additional delineation and/or well installation activities are not warranted at this time.

## 5.0 REMEDIAL ACTION PLAN

Stantec has prepared this RAP to address the groundwater impact centered on monitoring well U-1R and observed in down-gradient grab groundwater samples collected from CPT-1A.

## 5.1 CONTAMINANTS OF CONCERN

Available information regarding past and present UST operations at the site indicates that the USTs were used for storing gasoline. Accordingly, laboratory analytical test methods used during the site assessment activities addressed gasoline-related hydrocarbons and additives. Laboratory analysis of soil and groundwater samples collected during assessment identified dissolved-phase gasoline as the principal contaminant of concern (COC) at the site. Gasoline-related COCs ethylbenzene and total xylenes have also been detected at concentrations exceeding their respective ESLs. Historical groundwater analytical results are presented in Appendix F.

## 5.1 EXTENT OF HYDROCARBON IMPACTS TO SOIL

Based on a review of historical soil analytical data (Appendix G) the hydrocarbon impact to soil appears to be restricted to the immediate vicinity of the USTs, and based on the samples collected, at or near the top of the water table. Operation of an SVE system at the site from 1995 to 1997 is believed to have significantly reduced the quantities of hydrocarbons present in the vadose zone. Accordingly, it is Stantec's opinion that further remediation of hydrocarbon-impacted soil is not necessary.

## 5.2 EXTENT OF HYDROCARBON IMPACTS TO GROUNDWATER

Dissolved-phase TPHg, ethylbenzene, and total xylenes concentrations have been reported in site monitoring wells at concentrations exceeding their respective ESLs. Separate phase hydrocarbons (a.k.a. free product) have previously been observed in destroyed monitoring well U-1 from fourth quarter 1990 through fourth quarter 1992. During the most recent sampling event (first quarter 2010, TPHg, ethylbenzene, and total xylenes were detected at maximum concentrations of 12,000  $\mu$ g/L, 1,200  $\mu$ g/L, and 1,200  $\mu$ g/L, respectively in well U-1R. No other analytes were detected at concentrations exceeding their respective ESLs.

Historical groundwater analytical data are presented in Appendix F, while the estimated lateral extent of dissolved-phase TPHg, ethylbenzene, and total xylenes (based on first quarter 2010 data), are outlined on Figure 3.

#### 5.3 EVALUATION OF REMEDIAL ALTERNATIVES

The purpose of this section is to evaluate alternative site remediation strategies for appropriateness and cost-effectiveness. Based on the evaluation, the most appropriate and most cost-effective strategy is selected for implementation at the site. The main focus is the long-term protection of human health and the environment, with TPHg, ethylbenzene, and total xylenes being the COCs. The remedial strategy to be implemented will be chosen based on the following two objectives (listed in order of importance):

1. Stop potential migration of the COCs.

2. Reduce the concentration of dissolved-phase hydrocarbons in the saturated zone to levels that are protective of current and future beneficial uses.

## 5.4 SOIL AND GROUNDWATER REMEDIATION GOALS

The objective of the remediation will be removal and/or *in-situ* destruction of petroleum hydrocarbons dissolved in groundwater beneath the site. It is Stantec's opinion that further remediation of hydrocarbon-impacted soil is not necessary.

## 5.5 EVALUATION OF REMEDIAL ALTERNATIVES

The following technologies to remediate petroleum hydrocarbons adsorbed to soil and dissolved in groundwater at the site were evaluated.

- Natural attenuation with long-term groundwater monitoring;
- Mobile dual-phase extraction events;
- Mobile oxygen injection events; and
- Mobile *in-situ* chemical oxidant and oxygen injection events.

Due to the limited extent of hydrocarbon impact, Stantec omitted reviewing and remedial technologies which require the installation of a permanent remedial system (Stantec's experience suggests that the cost associated with the installation of a permanent remedial system would not be cost-effective at this site). A remediation feasibility matrix summarizing the estimated cost of each remedial option deemed feasible has been included in Table 3.

#### 5.5.1 Alternative 1 – Natural Attenuation with Long-Term Groundwater Monitoring

Based on a review of historical groundwater analytical data collected from well U-1R (the well with the highest COC concentrations), natural attenuation appears to be occurring at the site. Based on data summarized in Figure 4 dissolved-phase TPHg concentrations in well U-1R are expected to attenuate to less than 100  $\mu$ g/L within 13 years, while total xylenes concentrations are expected to attenuate to less than 20  $\mu$ g/L within 6 years. Although ethylbenzene concentrations in well U-1R are expected to take longer than 13 years to attenuate to concentrations of less than 30  $\mu$ g/L, ethylbenzene concentrations are steadily decreasing. Additionally, if the first two detected ethylbenzene concentrations detected in well U-1R (third quarter 2007 and first quarter 2008) are omitted as outliers, ethylbenzene concentrations are expected to attenuate to less than 30  $\mu$ g/L within 7 years (the R<sup>2</sup> value for this trendline is 0.8578, suggesting a strong correlation between time and concentration).

The costs associated with natural attenuation with long-term groundwater monitoring, including 13 years of semi-annual groundwater monitoring and sampling activities, have been included in Table 4.

#### 5.5.2 Alternative 2 – Mobile Dual-Phase Extraction Events

Based on a review of historical O&M data generated during the operation of the SVE and GWE systems at the site from 1995 through 1997, if mobile DPE events were performed at the site,

vapor extraction rates are expected to be approximately 50 standard cubic feet per minute, while groundwater extraction rates are expected to be approximately 1 gallon per minute. Based on the relatively low expected vapor and groundwater extraction rates, Stantec does not recommend DPE as a remedial approach for implementation at the site, and accordingly, has not prepared a cost estimate for inclusion in Tables 3 and 4.

#### 5.5.3 Alternative 3 – Mobile Oxygen Injection Events

A review of TPHg concentration trends in well U-1R suggests that natural degradation of dissolved-phase petroleum hydrocarbons is already occurring. A review of historical dissolved oxygen (DO) data collected in 1997 and 1998 (see Table 2a of Appendix F) indicates DO levels are lower in areas with greater levels of dissolved-phase contamination. While expected, this negative correlation between DO levels and contaminant concentrations suggests that increasing the sub-surface DO levels in the area of impact may result in increased contaminant degradation rates. The movement of groundwater at this site could assist in the distribution of dissolved oxygen introduced into the subsurface through the mobile oxygen injection events.

The costs associated with installation of the required oxygen sparge wells, six months of semimonthly mobile oxygen injection events and 3.5 years of monthly oxygen injection events, along with six years of groundwater monitoring and sampling have been included in Table 4. For the purpose of cost estimation, a conservative ROI of 20 feet was used for the sparge wells. Additionally, based on groundwater analytical data collected from CPT-1A, two discrete waterbearing zones (19 to 22 feet and 41 to 45 feet bgs) exist beneath the site; it is Stantec's opinion that the proposed sparge wells be dual-completion, and installed into both of the identified water-bearing zones. The layout of the proposed sparge wells is outlined in Figure 5.

# 5.5.4 Alternative 4 – Mobile *In-Situ* Chemical Oxidant Injection and Oxygen Injection Events

A review of TPHg concentration trends in well U-1R suggests that natural degradation of dissolved-phase petroleum hydrocarbons is already occurring. Mobile *in-situ* chemical oxidant injection (ISCO) events would be expected to accelerate the rate of degradation. Due to the depth to groundwater beneath the site (approximately 15 feet bgs) and the proximity of groundwater to the USTs, the use of strong oxidants (such as those that would be used for ISCO) is not recommended for implementation in the shallow water-bearing zone (19 to 22 feet bgs) near the USTs. Additionally, based on groundwater analytical data collected from CPT-1A, two discrete water-bearing zones (19 to 22 feet and 41 to 45 feet bgs) exist beneath the site. On-site, mobile oxygen injection events in the shallow water-bearing zone near the USTs would be expected to accelerate the rate of naturally-occurring degradation without the risk of damaging the USTs. Remediation of the remaining portion of the dissolved-phase plume utilizing ISCO would still be feasible. The movement of groundwater at this site could assist in the distribution of dissolved oxygen introduced into the subsurface through both ISCO and mobile oxygen injection events.

The costs associated with installation of the required oxygen sparge wells and ISCO injection wells, performing six months of semi-monthly mobile oxygen injection events, 3.5 years of monthly oxygen injection events, and three months of monthly ISCO injection events, along with six years of groundwater monitoring and sampling have been included in Table 4. For the purpose of cost estimation, a conservative ROI of 20 feet was used for the sparge wells and

injection wells. Since two water-bearing zones appear to be present, shallow-screened oxygen sparge wells and deep-screened ISCO injection wells would be installed in the vicinity of the USTs, while shallow- and deep-screened ISCO wells would be installed down-gradient of the USTs. The layout of the proposed sparge wells and injection wells are outlined in Figure 6.

## 5.6 SELECTED REMEDIAL ALTERNATIVE

A comparison of the advantages and disadvantages of the proposed alternatives deemed feasible (Alternatives 1, 3, and 4) is provided in Table 3. After comparing the three alternatives, it appears that all three of the proposed alternatives would result in an adequate level of longterm protection of human health and the environment. Each alternative would effectively reduce the remaining hydrocarbons in the subsurface over time, and each alternative is possible to implement. Performing long-term groundwater monitoring while dissolved-phase contamination beneath the site naturally attenuates (Alternative 1) would be the easiest option to implement. Performing mobile oxygen injection events (Alternative 3) would result in groundwater conditions meeting applicable clean-up goals in a shorter time frame, but would be more difficult to implement than Alternative 1. Performing mobile oxygen injection and ISCO injection events (Alternative 4) would be slightly more difficult to implement than mobile oxygen injection events alone (Alternative 3), but is expected to result in a more rapid remediation of the down-gradient impact (the source-area impact would still take an equal amount of time to remediate). Most other factors in the matrix are nearly equal in terms of long-term effectiveness of remediation and impact to the surrounding community. Based on cost considerations (Table 3, line 5), natural attenuation with long-term groundwater monitoring is the preferred remedial alternative for the remaining hydrocarbon impact at the site.

#### 5.6.1 Conceptual Remedial Alternative Design

Based on a review of historical groundwater analytical data, an adequate number of groundwater monitoring points are present to effectively monitor groundwater concentrations at the site. Semi-annual groundwater monitoring and sampling activities would continue; once dissolved-phase petroleum hydrocarbon concentrations meet their respective ESLs, the site would be recommended for case closure.

## 5.7 CORRECTIVE ACTION PLAN IMPLEMENTATION

#### 5.7.1 Natural Attenuation with Long-Term Groundwater Monitoring

Stantec recommends that natural attenuation with long-term groundwater monitoring be the selected remedial approach to address contamination observed beneath the site. Semi-annual groundwater monitoring and sampling of the monitoring wells will continue. The monitoring and sampling results will be summarized into reports which include the field notes, copies of the analytical lab results, tables summarizing the field and analytical data, and maps showing the groundwater gradient and chemical concentration results. Future groundwater concentrations will be tracked to determine if the rate of attenuation is changing. Once dissolved concentrations attenuate sufficiently, case closure will be requested.

#### 6.0 LIMITATIONS

This report has been prepared for the exclusive use of ConocoPhillips and its representatives as it pertains to the property located at 376 Lewelling Boulevard, San Lorenzo, California. The evaluation of subsurface conditions at the site for the purpose of this investigation is inherently limited due to the number of points of investigation. There are no representations, warranties, or guarantees that the results are representative of the entire site. Data from this report reflects the conditions at locations at a specified time. No other interpretation, representations, warranties, guarantees, express or implied, are included or intended in the report findings. Stantec makes no warranties or guarantees for exploratory borings or data provided or reported by other consultants or contractors.

If you have any questions regarding this report, please feel free to contact Benjamin Chevlen at (805) 230-1266 extension 293.

Sincerely,

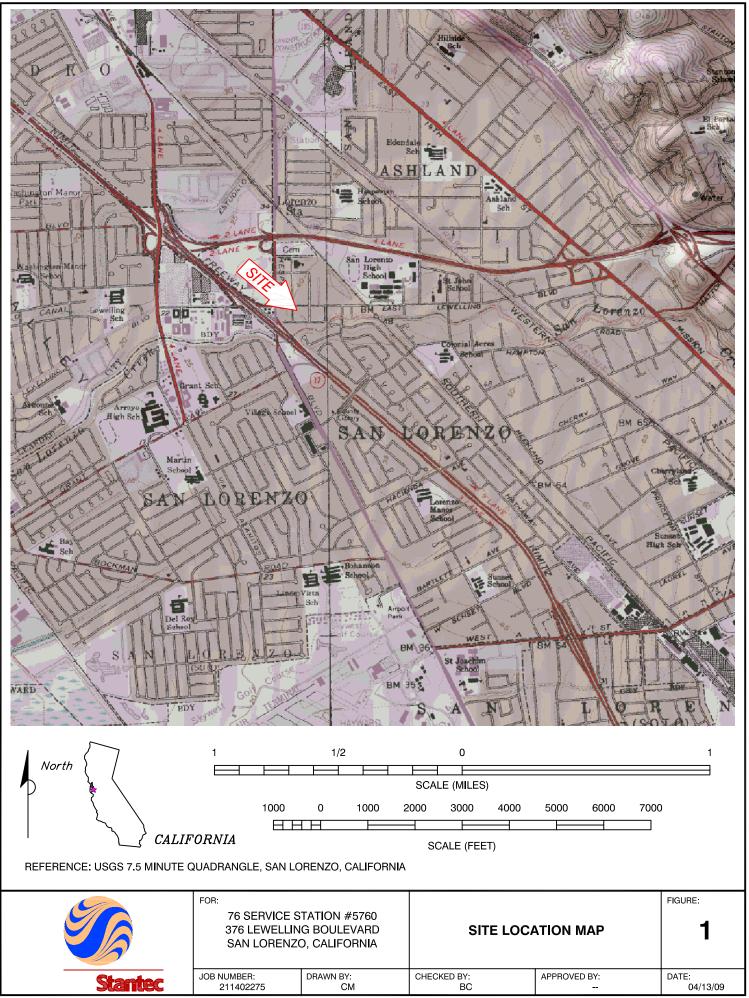
#### Stantec Consulting Corporation

Benjamin Chevlen, P.G. Senior Geologist

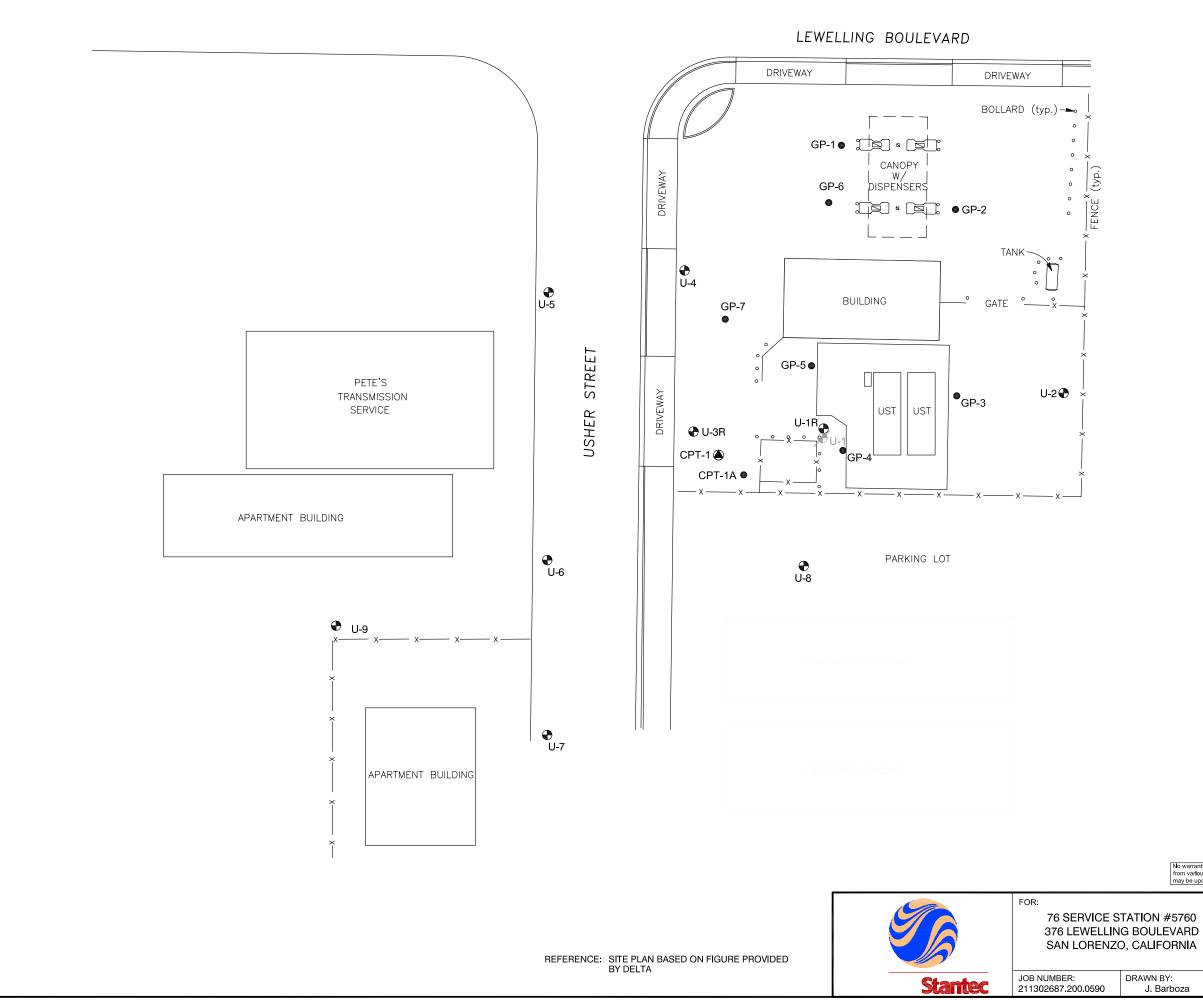
cc: Mr. Bill Borgh, ConocoPhillips (via Livelink)

CHEVLEN No. 3471 Exp. 05/304 12 MP CALIFORN

FIGURES

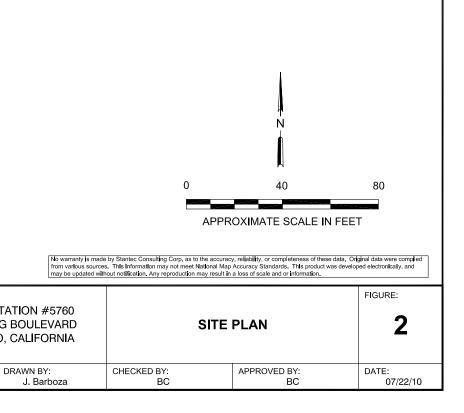


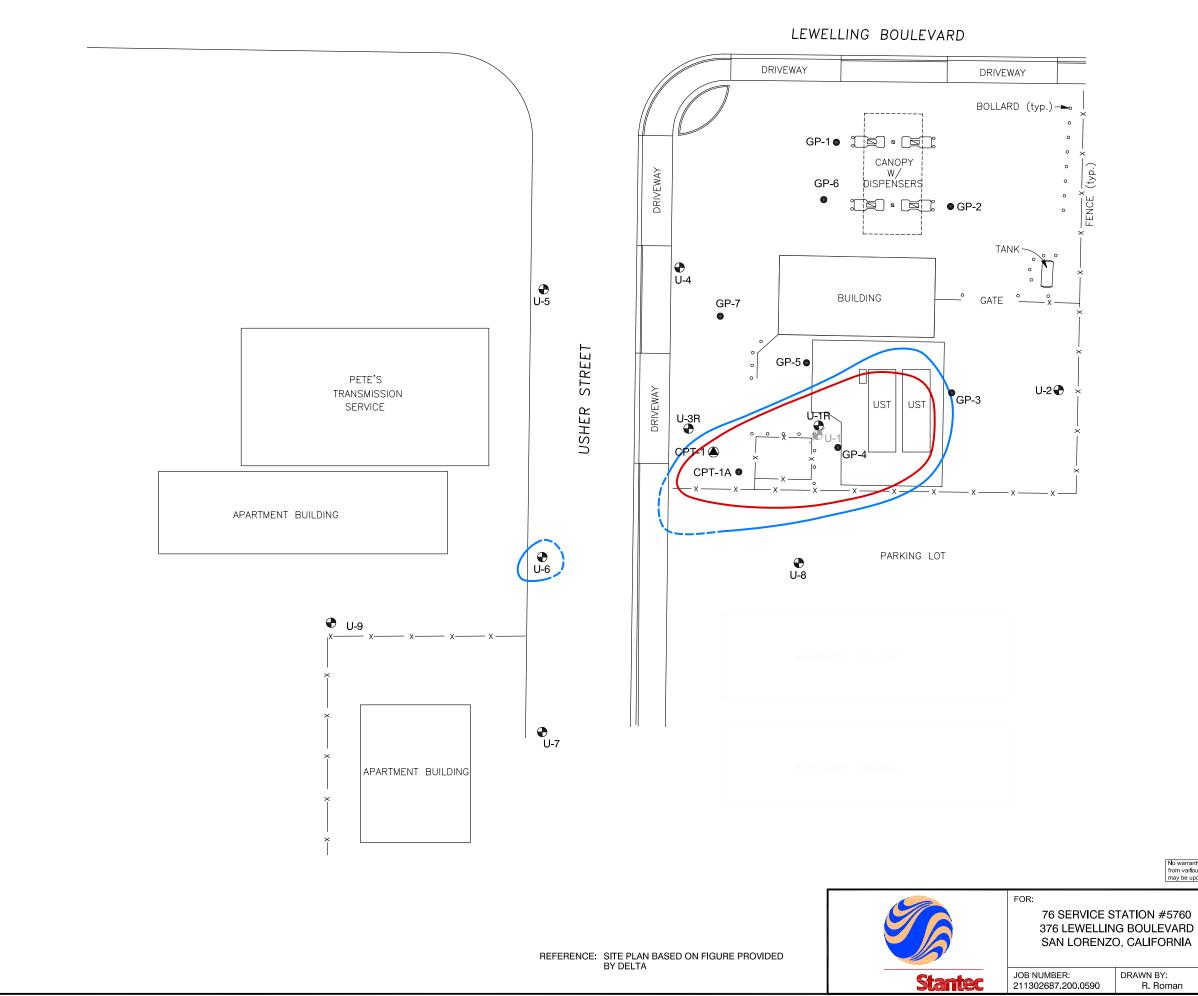
FILEPATH:M:\ConocoPhillips\5760\FIG1-TOPO5760.dwg | Layout Tab: Layout1 | Drafter: cfmiller | Apr 13, 2009 at 12:49



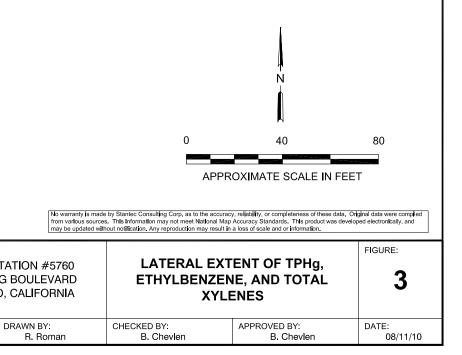
LEGEND:

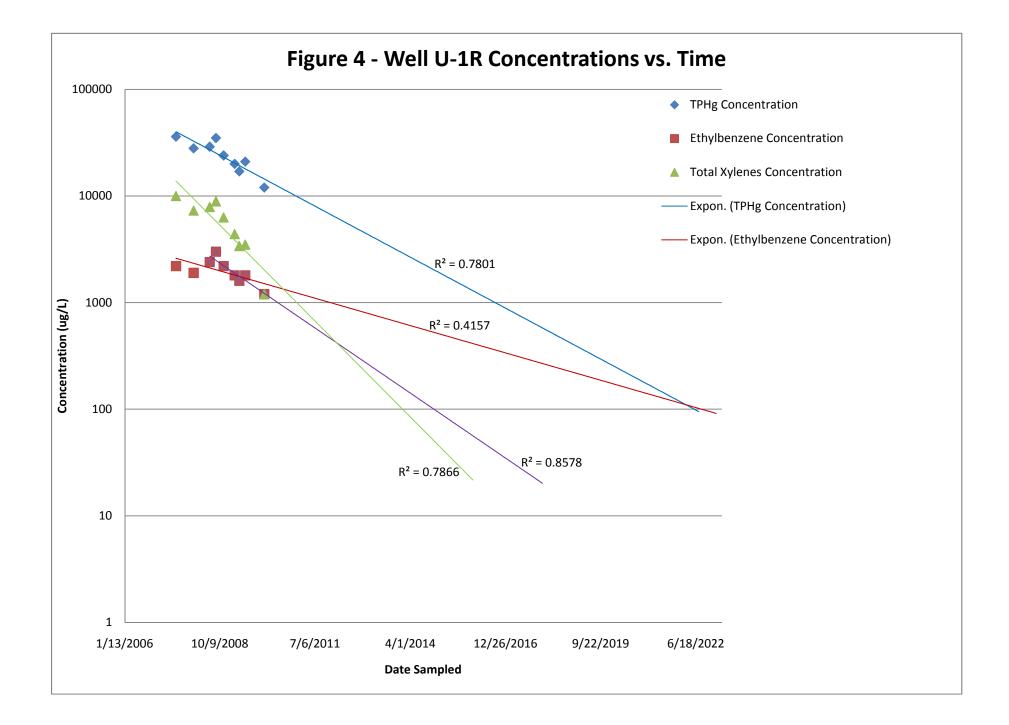
- GP-1 GEOPROBE SOIL BORING LOCATION
- CPT-1 ( CPT LOCATION

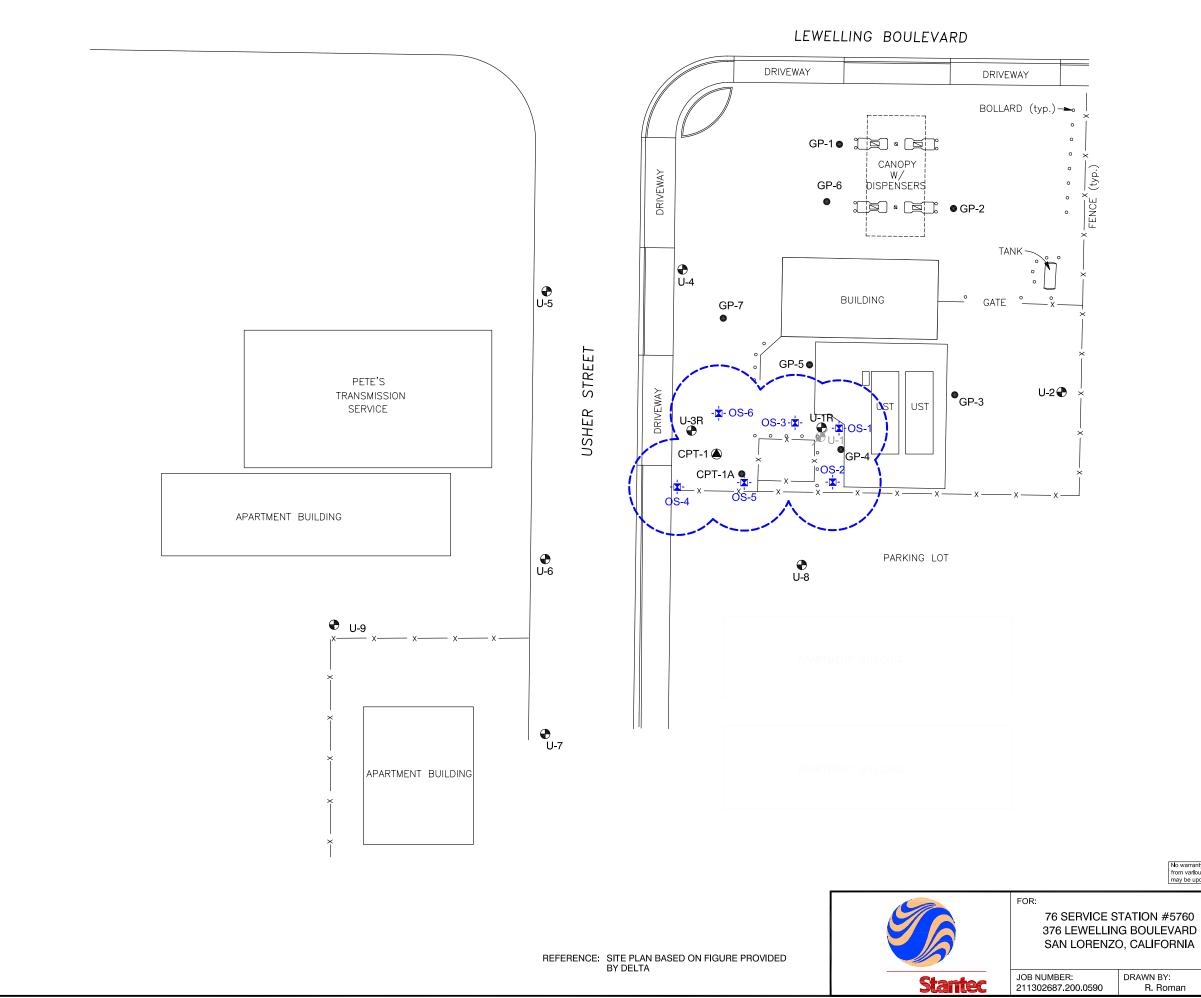




LEGEND:	
U-2	GROUNDWATER MONITORING WELL LOCATION
U-1 Ø	DESTROYED MONITORING WELL LOCATION
GP-1 •	GEOPROBE SOIL BORING LOCATION
CPT-1 🌰	CPT LOCATION
	APPROXIMATE LATERAL EXTENT OF TPHg IMPACT TO GROUNDWATER
	APPROXIMATE LATERAL EXTENT OF ETHYLBENZENE AND TOTAL XYLENES IMPACT TO GROUNDWATER







LEGEND:	
U-2 🕀	GROUNDWATER MONITORING WELL LOCATION
U-1 Ø	DESTROYED MONITORING WELL LOCATION
GP-1 ●	GEOPROBE SOIL BORING LOCATION
CPT-1 🌰	CPT LOCATION
OS-1-🗖-	PROPOSED SPARGE WELL
	ESTIMATED LATERAL EXTENT OF OXYGEN INJECTION TREATMENT ZONE

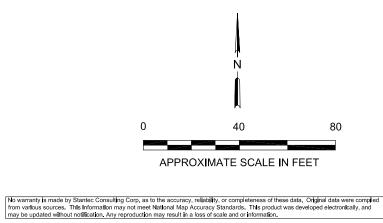


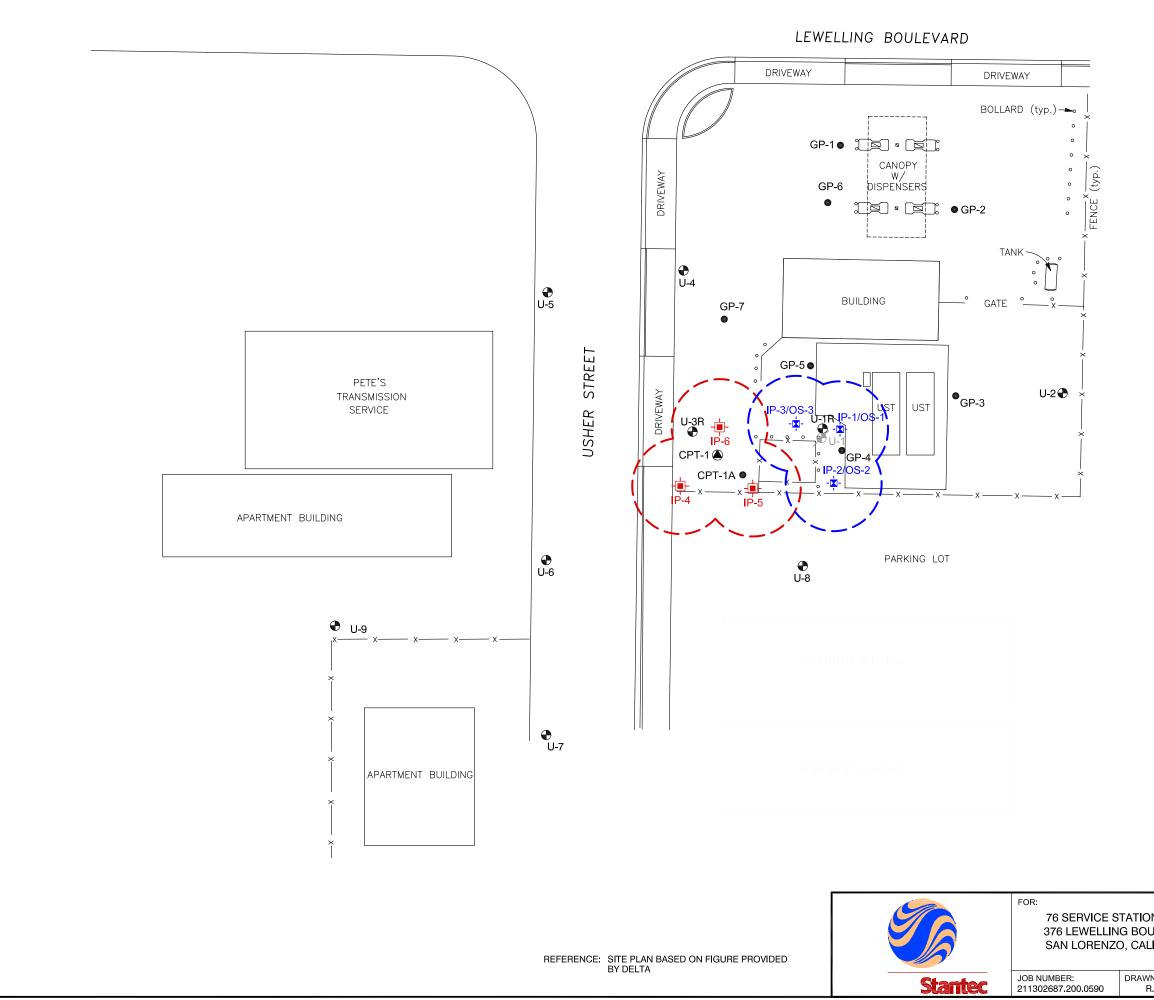
 Image by a updated without notification. Any reproduction may result in a loss of scale and or information.
 FIGURE:

 TATION #5760
 LAYOUT OF PROPOSED
 5

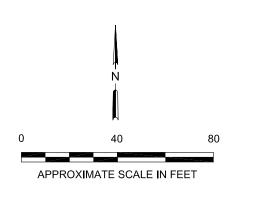
 G BOULEVARD
 SPARGE WELLS
 5

 Dr. CALIFORNIA
 CHECKED BY:
 APPROVED BY:
 DATE:

 R. Roman
 B. Chevlen
 B. Chevlen
 08/11/10



LEGEND:	
U-2	GROUNDWATER MONITORING WELL LOCATION
U-1 Ø	DESTROYED MONITORING WELL LOCATION
GP-1 ●	GEOPROBE SOIL BORING LOCATION
CPT-1 🌢	CPT LOCATION
IP-3/OS-3 -丼-	PROPOSED SHALLOW-SCREENED SPARGE WELL AND DEEP-SCREENED INJECTION WELL
IP-6 -	PROPOSED INJECTION WELL (DUAL-SCREENED)
	ESTIMATED LATERAL EXTENT OF ISCO AND OXYGEN INJECTION TREATMENT ZONE
	ESTIMATED LATERAL EXTENT OF ISCO INJECTION TREATMENT ZONE



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

TATION #5760 G BOULEVARD D, CALIFORNIA	LAYOUT OF SPARGE W INJECTIO	FIGURE: 6	
DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
R. Roman	B. Chevlen	B. Chevlen	08/11/10

TABLES

#### Table 1 **Soil Analytical Results**

Sample Name	Sample Depth (feet)	Date Sampled	TPPH (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	MTBE* (mg/kg)
GP-6	6	7/8/10	<0.20	0.0025	0.0026	<0.0050	<0.010	<0.0050
GP-6	21.5	7/8/10	<0.20	<0.0050	<0.0050	<0.0050	<0.010	<0.0050
GP-6	24	7/8/10	<0.20	<0.0050	<0.0050	<0.0050	<0.010	<0.0050
GP-7	15	7/8/10	<0.20	<0.0050	<0.0050	<0.0050	<0.010	<0.0050
GP-7	20	7/8/10	<0.20	<0.0050	<0.0050	<0.0050	<0.010	<0.0050
GP-7	22.5	7/8/10	<0.20	<0.0050	<0.0050	<0.0050	<0.010	<0.0050
CPT-1	9.5	7/9/10	<2.0	<0.050	<0.050	<0.050	<0.10	<0.050
CPT-1	19.5	7/9/10	470	<0.12	<0.12	0.75	1.6	<0.12
CPT-1	29.5	7/9/10	53	<0.0050	<0.0050	0.76	1.5	<0.0050
CPT-1	39.5	7/9/10	<0.50	< 0.012	< 0.012	< 0.012	< 0.025	0.0032
CPT-1	49.5	7/9/10	0.26	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.0050
	1010							
CRWQC	B-SFBR ESL	S	83	0.044	29	3.3	2.3	0.0023

#### 76 Service Station No. 5760 376 Lewelling Boulevard San Lorenzo, California

Explanations:

TPPH = Total purgeable petroleum hydrocarbons (gasoline)

MTBE = Methyl tert-butyl ether mg/kg = Milligrams per kilogram

< = Not detected at or above laboratory reporting limits

\* = Analyzed for fuel oxygenates TBA, DIPE, TAME, ETBE, and ethanol, lead scavengers EDB and 1,2-DCA and were reported as not detected.

CRWQCB-SFBR ESL = California Regional Water Quality Control Board - San Francisco Bay Region Environmental Screening Levels for soil where groundwater is a current or potential source of drinking water (residential land use scenario)

#### Table 2 Groundwater Analytical Results

76 Service Station No. 5760
376 Lewelling Boulevard
San Lorenzo, California

Sample Name	Sample Depth (feet)	Date Sampled	TPPH (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE* (ug/L)
GP-6	24-28	7/8/10	<50	<0.50	<0.50	<0.50	<1.0	<0.50
GP-7	25-29	7/8/10	<50	<0.50	<0.50	<0.50	<1.0	<0.50
CPT-1 DUP-1 (Duplicate) CPT-1 CPT-1	19-22 19-22 30-34 41-45	7/9/10 7/9/10 7/9/10 7/9/10	<b>3,100</b> <b>2,600</b> 83 <b>870</b>	<1.0 <2.5 <0.50 0.31	<1.0 <2.5 <0.50 0.40	<b>150</b> <b>160</b> 4.3 29	<b>130</b> <b>120</b> 2.8 <b>46</b>	<1.0 <2.5 <0.50 <0.50
CRWQCB	-SFBR ESL	6	100	1.0	40	30	20	5.0

#### Explanations:

TPPH = Total purgeable petroleum hydrocarbons (gasoline)

MTBE = Methyl tert-butyl ether

ug/L = Micrograms per liter

< = Not detected at or above laboratory reporting limits

\* = Analyzed for fuel oxygenates TBA, DIPE, TAME, ETBE, and ethanol, lead scavengers EDB and 1,2-DCA and were reported as not detected.

CRWQCB-SFBR ESL = California Regional Water Quality Control Board - San Francisco Bay Region Environmental Screening Levels for for groundwater that is a current or potential source of drinking water (residential land use scenario)

# TABLE 3 EVALUATION MATRIX FOR REMEDIAL ALTERNATIVES

76 Station No. 5760 376 Lewelling Boulevard San Lorenzo, California

Evaluation Criteria	Alternative 1 – Natural Attenuation with Long Term Groundwater Monitoring	Alternative 3 – Mobile Oxygen Injection Events	Alternative 4
1. Description of Alternative	Remediation by Natural Attenuation (RNA) is not a "technology", per se. It generally describes a range of physical and biological processes, which, unaided by deliberate human intervention, reduce the concentration,	Six sparge wells will be installed on-site; the wells will be dual-screened.	Three shallow screened inje wells will be ir
	toxicity, or mobility of contaminants in soil and/or groundwater. These processes take place whether or not other active cleanup measures are in place.	During the mobile remedial events, remedial equipment will be connected above-ground to the appropriate wells. The oxygen injection will increase dissolved oxygen levels to promote biodegradation.	During the mo will be connect The oxygen in to promote bio directly oxidiz dissolved oxy
2. Level of Protection of Human Health, the Environment, and Beneficial	This alternative provides an adequate level of protection of human health, the environment.	This alternative provides an adequate level of protection of human health, the environment.	This alternative human health
Uses of Ground and Surface Waters	Implementation will slightly increase the potential exposure of humans and the environment through the limited down-gradient migration of dissolved-phase petroleum hydrocarbons which may volatilize into vadose zone soil.	Implementation is not expected to increase the potential exposure of humans and the environment through the injection of oxygen into the subsurface.	Implementation exposure of h injection of ch resulting in ind concentration
3. Reduction of Hydrocarbons	This alternative reduces the concentration of contaminants dissolved in groundwater; it is Stantec's opinion that additional remediation of contaminants adsorbed to soil is not warranted.	This alternative reduces the concentration of contaminants dissolved in groundwater; it is Stantec's opinion that additional remediation of contaminants adsorbed to soil is not warranted.	This alternative dissolved in g additional rem not warranted
4. Implementation and Operation	Easy to implement. Requires semi-annual access to the site for the next 13 years.	Slightly difficult to implement. Requires permitting, well drilling, and routine O&M. Minor disruption to business operations for the site and neighboring sites during drilling and construction.	Slightly difficu drilling, and ro operations for and construct
5. Cost Effectiveness	Cost Estimate = \$231,000	Cost Estimate = \$390,000	Cost Estimate
6. Compliance with Regulatory Guidelines	This alternative can be implemented within regulatory guidelines.	This alternative can be implemented within regulatory guidelines	This alternativ guidelines
7. Short Term Effectiveness	This alternative is less effective in the short term; current site conditions and site use suggest, however, that the on-site contamination is not expected to pose a risk to human health in the short term.	This alternative is effective in the short term.	This alternativ
8. Long Term Effectiveness	This alternative is effective in the long term.	This alternative is effective in the long term.	This alternativ
9. Community Acceptance	No community acceptance problems anticipated for this alternative.	No community acceptance problems anticipated for this alternative.	No communit
10. Impacts on Water Conservation	This alternative would not impact water conservation either negatively or positively.	This alternative would not impact water conservation either negatively or positively.	This alternativness of the second sec

#### 4 – Mobile ISCO Injection and Oxygen Injection Events

ow-screened sparge wells, three deepijection wells, and three dual-screened injection e installed..

mobile remedial events, remedial equipment nected above-ground to the appropriate wells. In injection will increase dissolved oxygen levels biodegradation, while ISCO injections will dize dissolved-phase hydrocarbon and increase xygen levels to promote biodegradation. ative provides an adequate level of protection of lth, the environment.

ation may slightly increase the potential f humans and the environment through the chemical oxidants into the groundwater increased petroleum hydrocarbon ons in vadose zone soil vapor.

tive reduces the concentration of contaminants groundwater; it is Stantec's opinion that emediation of contaminants adsorbed to soil is ed.

icult to implement. Requires permitting, well routine O&M. Minor disruption to business for the site and neighboring sites during drilling uction.

ate = \$323,000

ative can be implemented within regulatory

tive is effective in the short term.

tive is effective in the long term.

nity acceptance problems anticipated for this

ative would not impact water conservation either or positively.

#### Table 4 Remedial Cost Estimate

76 Service Staton No. 5760 376 Lewelling Boulevard San Lorenzo, California

uration of mediation	Task	Cost	Number of Events	Total Cost	Option Feasible?	Comments
mediation	Natural Attenuation with Long-Term Ground			COSI	reasible	Comments
13 years	Semi-Annual Monitoring and Sampling	\$12,000	13	\$156,000	Yes	This option will address remaining dissolved-phase impact.
To yours	Serii Annual Montoning and Sampling	φ12,000	10	φ100,000	105	
	Site Closure Costs					
1 event	Well Destruction	\$75,000	1	\$75,000		
				\$231,000		
	Mobile Oxygen Injection (six months of sem	ni-monthly a	nd 3.5 years of	monthly)		
6 years	Semi-Annual Monitoring and Sampling	\$12,000	6	\$72,000	Yes	This option will address remaining dissolved-phase impact.
	Installation Costs for Oxygen Injection Wells					Well installation costs are for the installation of six dual-completion
1 event	Design & Permit	\$10,000	1	\$10,000		sparge wells.
6 wells	Well Installation	\$7,000	6	\$42,000		
	Mobile Oxygen Injection Event Costs (6 months	of semi-mont	hly and 12 month	s of monthly)		
54 event	Operations and Maintenance	\$4,000	54	\$216,000		
	Site Closure Costs					
1 event	Well Destruction	\$50,000	1	\$50,000		
				\$390,000		
					_	
	Mobile In-Situ Chemical Oxidant Injection E	vents (3 ev	ents) and Mobil	e Oxygen Inje	ection Ever	nts (4 years)
6 years	Mobile In-Situ Chemical Oxidant Injection E Semi-Annual Monitoring and Sampling	<b>vents (3 ev</b> \$12,000	ents) and Mobil 6	e Oxygen Inje \$72,000	ection Ever Yes	nts (4 years) This option will address remaining dissolved-phase impact.
6 years	Semi-Annual Monitoring and Sampling		,			
6 years 1 event			,			This option will address remaining dissolved-phase impact. Well installation costs are for the installation of three dual- completion injection wells, three shallow-screened single-
	Semi-Annual Monitoring and Sampling	\$12,000	6	\$72,000		This option will address remaining dissolved-phase impact. Well installation costs are for the installation of three dual- completion injection wells, three shallow-screened single- completion sparge wells, and three deep-screened single-
1 event	Semi-Annual Monitoring and Sampling Installation Costs for Oxygen Injection Wells Design & Permit	\$12,000 \$15,000 \$7,000	6	\$72,000 \$15,000 \$42,000		This option will address remaining dissolved-phase impact. Well installation costs are for the installation of three dual- completion injection wells, three shallow-screened single-
1 event	Semi-Annual Monitoring and Sampling Installation Costs for Oxygen Injection Wells Design & Permit Well Installation	\$12,000 \$15,000 \$7,000	6	\$72,000 \$15,000 \$42,000		This option will address remaining dissolved-phase impact. Well installation costs are for the installation of three dual- completion injection wells, three shallow-screened single- completion sparge wells, and three deep-screened single-
1 event 6 wells	Semi-Annual Monitoring and Sampling Installation Costs for Oxygen Injection Wells Design & Permit Well Installation Mobile Oxygen Injection Event Costs (6 months of	\$12,000 \$15,000 \$7,000 <b>of semi-mont</b> \$2,000	6 1 6 hly and 12 month 54	\$72,000 \$15,000 \$42,000 s of monthly)		This option will address remaining dissolved-phase impact. Well installation costs are for the installation of three dual- completion injection wells, three shallow-screened single- completion sparge wells, and three deep-screened single-
1 event 6 wells	Semi-Annual Monitoring and Sampling Installation Costs for Oxygen Injection Wells Design & Permit Well Installation Mobile Oxygen Injection Event Costs (6 months of Operations and Maintenance	\$12,000 \$15,000 \$7,000 <b>of semi-mont</b> \$2,000	6 1 6 hly and 12 month 54	\$72,000 \$15,000 \$42,000 s of monthly)		This option will address remaining dissolved-phase impact. Well installation costs are for the installation of three dual- completion injection wells, three shallow-screened single- completion sparge wells, and three deep-screened single-
1 event 6 wells 54 event	Semi-Annual Monitoring and Sampling Installation Costs for Oxygen Injection Wells Design & Permit Well Installation Mobile Oxygen Injection Event Costs (6 months of Operations and Maintenance Mobile Hydrogen Peroxide Injection Event Costs	\$12,000 \$15,000 \$7,000 <u>of semi-mont</u> \$2,000 (6 monthly e	6 1 hly and 12 month 54 vents)	\$72,000 \$15,000 \$42,000 <u>\$ of monthly)</u> \$108,000		This option will address remaining dissolved-phase impact. Well installation costs are for the installation of three dual- completion injection wells, three shallow-screened single- completion sparge wells, and three deep-screened single-
1 event 6 wells 54 event 6 event	Semi-Annual Monitoring and Sampling Installation Costs for Oxygen Injection Wells Design & Permit Well Installation Mobile Oxygen Injection Event Costs (6 months of Operations and Maintenance Mobile Hydrogen Peroxide Injection Event Costs Operations and Maintenance	\$12,000 \$15,000 \$7,000 <u>of semi-mont</u> \$2,000 (6 monthly e	6 1 hly and 12 month 54 vents)	\$72,000 \$15,000 \$42,000 <u>\$ of monthly)</u> \$108,000		This option will address remaining dissolved-phase impact. Well installation costs are for the installation of three dual- completion injection wells, three shallow-screened single- completion sparge wells, and three deep-screened single-

## APPENDIX A SOIL BORING PERMIT

Additional Assessment Report and Remedial Action Plan 76 Service Station No. 5760 376 Lewelling Boulevard San Lorenzo, California

#### Alameda County Public Works Agency - Water Resources Well Permit

PUBLIC	5 0)782-1939			
Application Approved	d on: 06/10/2010 By jamesy	Permit Numbers: W2010-0409 Permits Valid from 07/07/2010 to 07/09/2010		
Application Id:	1276191940433	City of Project Site:San Lorenzo		
Site Location: Project Start Date: Assigned Inspector:	376 Lewelling Blvd, San Lorenzo, CA 07/07/2010 Contact John Shouldice at (510) 670-5424 or joh	Completion Date:07/09/2010 or johns@acpwa.org		
Applicant:	Stantec Consultants - Benjamin Chevlen	Phone: 805-230-1266		
Property Owner:	290 Conejo Rideg Ave., Thousand Oaks, CA 91 Conoco Philipps Terry Grayson	<b>Phone:</b> 916-558-7666		
Client:	76 Broadway, Sacramento, CA 95818 ** same as Property Owner **			
	Receipt Number: WR2010-0202 Payer Name : Stantec	Total Due:\$265.00Total Amount Paid:\$265.00Paid By: CHECKPAID IN FULL		

#### Works Requesting Permits:

Borehole(s) for Investigation-Contamination Study - 4 Boreholes Driller: WDC - Lic #: 283326 - Method: DP

#### Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2010- 0409	06/10/2010	10/05/2010	4	2.00 in.	50.00 ft

#### **Specific Work Permit Conditions**

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

4. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

5. Applicant shall contact John Shouldice for an inspection time at 510-670-5424 at least five (5) working days prior to

Work Total: \$265.00

## Alameda County Public Works Agency - Water Resources Well Permit

starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

6. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

7. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

## APPENDIX B FIELD PROCEDURES

Additional Assessment Report and Remedial Action Plan 76 Service Station No. 5760 376 Lewelling Boulevard San Lorenzo, California

## APPENDIX B FIELD PROCEDURES

#### STANTEC CONSULTING CORPORATION STANDARD PROCEDURE FOR DIRECT-PUSH DRILLING

Prior to drilling, boring locations were marked with white paint and cleared for underground utilities through Underground Service Alert (USA). In addition, the first five feet of each borehole was hand augered to evaluate the presence of underground structures or utilities.

Once pre-drilling efforts to identify subsurface structures was complete, pre-cleaned directpush drill rods were advanced using a drill rig for the purpose of collecting samples and evaluating subsurface conditions. Upon completion of drilling and sampling, the drill rods were retracted, and the boreholes were backfilled to ground surface with cement grout using a tremmie pipe.

During the drilling process, a physical description of the encountered soil characteristics (i.e. moisture content, consistency, odor, color, etc.), drilling difficulty, and soil type as a function of depth was described on boring logs. The soil cuttings were classified in accordance with the Unified Soil Classification System (USCS).

Soil cuttings were temporarily stored on-site in 55-gallon DOT approved drums pending laboratory analysis, waste profiling, and proper disposal. Labels were affixed to the drums indicating the contents of the drums, date of drilling, and location of site.

#### STANDARD PROCEDURE FOR EQUIPMENT DECONTAMINATION

Equipment that could potentially contact subsurface media and compromise the integrity of the samples was carefully decontaminated prior to drilling and sampling. Drill rods and other large pieces of equipment were decontaminated using high pressure hot water spray. Samplers, groundwater pumps, liners and other equipment were decontaminated in an Alconox scrub solution and double rinsed in clean tap water rinse followed by a final distilled water rinse.

The rinsate and other wastewater were contained in 55-gallon DOT-approved drums, labeled (to identify the contents, generation date and project) and stored on-site pending waste profiling and disposal.

## APPENDIX C BORE LOGS

Additional Assessment Report and Remedial Action Plan 76 Service Station No. 5760 376 Lewelling Boulevard San Lorenzo, California

PROJECT: ConocoPhillips 76 Station No. 5760         LOCATION: 376 Lewelling Blvd, San Lorenzo, California         PROJECT NUMBER: 211302687         DATE: STARTED 7/8/2010       COMPLETED: 7/8/2010         TIME: STARTED       COMPLETED:         DRILLING COMPANY: WDC Drilling         DRILLING EQUIPMENT: Geoprobe Rig         DRILLING METHOD: Direct Push (Dual Wall)         SAMPLING EQUIPMENT: Acetate Tubing		WELL / PROBEHOLE / BOREHOLE NO: GP-6 PAGE 1 OF 1						
		NORTHING (ft): LATITUDE: GROUND ELEV (ft): INITIAL DTW (ft): <b>N/A</b> STATIC DTW (ft): <b>17 7/8/10</b> WELL CASING DIAM. (in): LOGGED BY: <b>K.Chuop</b>					LONGI TOC E BOREI WELL BOREI <u>CHECI</u>	NG (ft): TUDE: LEV (ft): HOLE DEPTH (ft): <b>25.0</b> DEPTH (ft): <b>NA</b> HOLE DIAM. (in): <b>3.5</b> KED BY: <b>B. Chevlen</b>
Time & Depth (feet) Graphic Log	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (ppm)	Depth (feet)	Borehole Backfill
	<ul> <li>4-inch asphalt layer</li> <li>SAND ; SP; (10YR3/3) dark brown; fine to medium-grained; loose; moist</li> <li>2-inch layer of fine gravel</li> <li>S.A.A. color changes to (2.5Y4/3) olive brown; fine-grained</li> <li>SAND SOME GRAVEL ; SW; (10YR5/3) brown; fine to coarse-grained; loose; moist; gravel up to 1-inch in diameter</li> <li>SAND ; SP; (10YR5/3) brown; fine to medium-grained; loose; moist No recovery from 10 to 12 feet</li> <li>SANDY CLAY WITH SILT ; CL; (10YR5/3) brown; medium plasticity; soft; moist; 30% sand; 50% clay; 20%silt</li> <li>CLAY : CL: (10YR3/2) very dark gravish</li> </ul>		 0830 GP-6, 6' 0835  0845   0845   0845 	Me: R		11.6 1.0 0.2 0.0 0.2 0.0 0.2 0.0 0.2		- Neat Bentonite Cement
STANTEC037 GP-6, GP-7, A	SP SAND ; SP; (2.5Y4/3) olive brown; fine to medium-grained; loose; moist Hole terminated at 25 feet.		0915 GP-6, 245' 1055 GP-6 (water)			0.0	- 25	
GEO FORM 304							-	

GEO FORM 304\_STANTEC037 GP-6, GP-7, AND CPT-1A 2010.GPJ SECOR037.GDT 7/27/10

	376	Lew	Phillips 76 Station No. 5760 elling Blvd, San Lorenzo, California 11302687	WEL	L/PROBEHC <b>P-7</b>	DLE / B	OREH	OLE N		E 1 OF 1 Startec
DRILLING E	RTEI OMP QUIP 1ETH	) ANY: MEN <sup>-</sup> OD: <b>D</b>	3/2010 COMPLETED: 7/8/2010 COMPLETED: WDC Drilling T: Geoprobe Rig Direct Push (Dual Wall) NT: Acetate Tubing	LATI GRO INITI STA WEL	THING (ft): TUDE: UND ELEV (f AL DTW (ft): I FIC DTW (ft): L CASING DI GED BY: <b>K.C</b>	<b>Ń/A</b> 17 7, AM. (in	): D		LONGI TOC E BOREI WELL BOREI <u>CHECI</u>	NG (ft): TUDE: LEV (ft): HOLE DEPTH (ft): <b>25.0</b> DEPTH (ft): <b>NA</b> HOLE DIAM. (in): <b>3.5</b> KED BY: <b>B. Chevlen</b>
Time & Depth (feet)	Graphic Log	NSCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (ppm)	Depth (feet)	Borehole Backfill
		SP SM ML	brown and 2-inch thick well-graded sand with fine gravel layer No recovery from 10 to 12 feet SILT WITH CLAY LITTLE SAND ; ML; (10YR4/3) brown; low plasticity; soft; moist; 10% sand; 20% clay; 70%silt		   1245 	2		<u>Ť</u> 0.9 0.3 0.0 0.0 1.4		- Concrete patch
15-			grayish brown; medium plasticity No recovery from 15 to 17 feet Very stiff from 18 to 22 feet At 19 feet, 2-inch thick gravel and coarse sand layer		1250 GP-7, 15' 			1.6 0.1	15- - ⊻ - - -	
		SP SC CH	SAND LITTLE CLAY ; SP; (10YR4/2) dark grayish brown; loose; moist; little clay SAND WITH GRAVEL ; SC; (2.4Y4/3) olive		1305 GP-7, 20' 1310 GP-7, 22.5' 			0.0	20 - - 25- -	
GEO FORM 304_51					GP-7 (water)				-	

GEO FORM 304\_STANTEC037 GP-6, GP-7, AND CPT-1A 2010.GPJ SECOR037.GDT 7/27/10

		CF	L/PROBEH	OLE / B	OREH	OLE N		E 1 OF 2	Stantec
DRILLING METHOD	COMPLETED:	LAT GRO INIT STA WEL	RTHING (ft): ITUDE: DUND ELEV ( IAL DTW (ft): TIC DTW (ft): LL CASING D GGED BY: <b>K.(</b>	25 7, N/A IAM. (in Chuoj	i): D		WELL BORE CHEC	TH (ft): <b>50.0</b> : <b>NA</b> Λ. (in): <b>3.5</b> . Chevlen	
Time & Depth (feet) Graphic Log USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (ppm)	Depth (feet)		Borehole Backfill
	<ul> <li>4-inch asphalt layer</li> <li>CPT-1A was not logged, for subsurface lithology, see CPT log for location CPT-1.</li> <li>NOTES:         <ul> <li>Static groundwater estimated to be at 17 feet based on a pore pressure dissipation test at Location CPT-1 by the CPT rig.</li> <li>During backfilling with bentonite neat cement using a tremmie pipe, groundwater came to the surface and a petroleum sheen was observed along with a hydrocarbon odor.</li> </ul> </li> </ul>		1105 CPT-1A, 9.5' 1105 CPT-1A,19.5' 1125 PT-1A-W-19-2			0.0	5- 5- 10- 15- 15- 15- 15- 15- 15- 15- 15- 15- 15		<ul> <li>Concrete patch</li> <li>Neat Bentonite Cement</li> </ul>
			1105			0.0			

LOCATION: <b>376 Lewell</b> PROJECT NUMBER: <b>211</b> DATE: STARTED <b>7/9/20</b> TIME: STARTED DRILLING COMPANY: <b>WI</b> DRILLING EQUIPMENT: <b>G</b> DRILLING METHOD: <b>Dire</b> SAMPLING EQUIPMENT:	010 COMPLETED: 7/9/2010 COMPLETED: DC Drilling Geoprobe Rig ect Push (Dual Wall) Acetate Tubing	CF NOF LAT GRC INIT STA WEL LOG	L / PROBEHO PT-1A RTHING (ft): ITUDE: DUND ELEV (ft): IAL DTW (ft): ITIC DTW (ft): L CASING DI GED BY: K.(	ft): 25 7/ N/A IAM. (in Chuor	<b>/9/10</b> ):		PAGI EASTII LONGI TOC E BOREI WELL BOREI <u>CHECI</u>	<u>Stantec</u> NG (ft): TUDE: LEV (ft): HOLE DEPTH (ft): <b>50.0</b> DEPTH (ft): <b>NA</b> HOLE DIAM. (in): <b>3.5</b> KED BY: <b>B. Chevlen</b>
GEO FORM 304_STANTEC037 GPT, AND CPT-1A 2010.GPU SECOR037.GDT 7/27/10	Description		Sample ID CPT-1A, 29.5' 1220 PT-1A-W-30-3 CPT-1A, 39.5' 1415 PT-1A-W-41-4 PT-1A-W-41-4		Blow	PID PID 0.0		Backfill

		CF	L/PROBEH	OLE / B	OREH	OLE N		E 1 OF 2	Stantec
DRILLING METHOD	COMPLETED:	LAT GRO INIT STA WEL	RTHING (ft): ITUDE: DUND ELEV ( IAL DTW (ft): TIC DTW (ft): LL CASING D GGED BY: <b>K.(</b>	25 7, N/A IAM. (in Chuoj	i): D		WELL BORE CHEC	TH (ft): <b>50.0</b> : <b>NA</b> Λ. (in): <b>3.5</b> . Chevlen	
Time & Depth (feet) Graphic Log USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (ppm)	Depth (feet)		Borehole Backfill
	<ul> <li>4-inch asphalt layer</li> <li>CPT-1A was not logged, for subsurface lithology, see CPT log for location CPT-1.</li> <li>NOTES:         <ul> <li>Static groundwater estimated to be at 17 feet based on a pore pressure dissipation test at Location CPT-1 by the CPT rig.</li> <li>During backfilling with bentonite neat cement using a tremmie pipe, groundwater came to the surface and a petroleum sheen was observed along with a hydrocarbon odor.</li> </ul> </li> </ul>		1105 CPT-1A, 9.5' 1105 CPT-1A,19.5' 1125 PT-1A-W-19-2			0.0	5- 5- 10- 15- 15- 15- 15- 15- 15- 15- 15- 15- 15		<ul> <li>Concrete patch</li> <li>Neat Bentonite Cement</li> </ul>
			1105			0.0			

LOCATION: <b>376 Lewell</b> PROJECT NUMBER: <b>211</b> DATE: STARTED <b>7/9/20</b> TIME: STARTED DRILLING COMPANY: <b>WI</b> DRILLING EQUIPMENT: <b>G</b> DRILLING METHOD: <b>Dire</b> SAMPLING EQUIPMENT:	010 COMPLETED: 7/9/2010 COMPLETED: DC Drilling Geoprobe Rig ect Push (Dual Wall) Acetate Tubing	CF NOF LAT GRC INIT STA WEL LOG	L / PROBEHO PT-1A RTHING (ft): ITUDE: DUND ELEV (ft): IAL DTW (ft): ITIC DTW (ft): L CASING DI GED BY: K.(	ft): 25 7/ N/A IAM. (in Chuor	<b>/9/10</b> ):		PAGI EASTII LONGI TOC E BOREI WELL BOREI <u>CHECI</u>	<u>Stantec</u> NG (ft): TUDE: LEV (ft): HOLE DEPTH (ft): <b>50.0</b> DEPTH (ft): <b>NA</b> HOLE DIAM. (in): <b>3.5</b> KED BY: <b>B. Chevlen</b>
GEO FORM 304_STANTEC037 GPT, AND CPT-1A 2010.GPU SECOR037.GDT 7/27/10	Description		Sample ID CPT-1A, 29.5' 1220 PT-1A-W-30-3 CPT-1A, 39.5' 1415 PT-1A-W-41-4 PT-1A-W-41-4		Blow	PID PID 0.0		Backfill

LOCATION: 37 PROJECT NUM	6 Lew		GF	L/PROBEHO <b>Р-6</b>	E 1 OF 1 Stantec				
DRILLING EQU DRILLING MET	ED IPANY: IPMEN HOD: <b>[</b>	B/2010 COMPLETED: 7/8/2010 COMPLETED: WDC Drilling T: Geoprobe Rig Direct Push (Dual Wall) NT: Acetate Tubing	LATI GRC INITI STA <sup>-</sup> WEL	THING (ft): TUDE: DUND ELEV (f AL DTW (ft): TIC DTW (ft): L CASING DI GED BY: <b>K.(</b>	<b>Ń/A</b> 17 7, AM. (in	): D		LONGI TOC E BOREI WELL BOREI <u>CHECI</u>	NG (ft): TUDE: LEV (ft): HOLE DEPTH (ft): <b>25.0</b> DEPTH (ft): <b>NA</b> HOLE DIAM. (in): <b>3.5</b> KED BY: <b>B. Chevlen</b>
Time & Depth (feet) Graphic	nscs	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (ppm)	Depth (feet)	Borehole Backfill
	SP SP CL CL	<ul> <li>SAND ; SP; (10YR5/3) brown; fine to medium-grained; loose; moist</li> <li>No recovery from 10 to 12 feet</li> <li>SANDY CLAY WITH SILT ; CL; (10YR5/3) brown; medium plasticity; soft; moist; 30% sand; 50% clay; 20%silt</li> <li>CLAY ; CL; (10YR3/2) very dark gravish</li> </ul>		 0830 GP-6, 6' 0835   0845      0845    0845 	Mer Re (1		11.6 1.0 0.2 0.0 0.2 0.0 0.2 0.0		- Neat Bentonite Cement
L STANTEC037 GP.6, GP.7, /	SP	SAND ; SP; (2.5Y4/3) olive brown; fine to medium-grained; loose; moist Hole terminated at 25 feet.		0915 GP-6, 245' 1055 GP-6 (water)			0.0	- 25	
GEO FORM 302								-	

GEO FORM 304\_STANTEC037 GP-6, GP-7, AND CPT-1A 2010.GPJ SECOR037.GDT 7/27/10

	376	Lew	Phillips 76 Station No. 5760 elling Blvd, San Lorenzo, California 11302687	WEL	L/PROBEHC <b>P-7</b>	DLE / B	OREH	OLE N		E 1 OF 1 Startec
DRILLING E	RTEI OMP QUIP 1ETH	) ANY: MEN <sup>-</sup> OD: <b>D</b>	3/2010 COMPLETED: 7/8/2010 COMPLETED: WDC Drilling T: Geoprobe Rig Direct Push (Dual Wall) NT: Acetate Tubing	LATI GRO INITI STA WEL	THING (ft): TUDE: UND ELEV (f AL DTW (ft): I FIC DTW (ft): L CASING DI GED BY: <b>K.C</b>	<b>Ń/A</b> 17 7, AM. (in	): D		LONGI TOC E BOREI WELL BOREI <u>CHECI</u>	NG (ft): TUDE: LEV (ft): HOLE DEPTH (ft): <b>25.0</b> DEPTH (ft): <b>NA</b> HOLE DIAM. (in): <b>3.5</b> KED BY: <b>B. Chevlen</b>
Time & Depth (feet)	Graphic Log	NSCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (ppm)	Depth (feet)	Borehole Backfill
		SP SM ML	brown and 2-inch thick well-graded sand with fine gravel layer No recovery from 10 to 12 feet SILT WITH CLAY LITTLE SAND ; ML; (10YR4/3) brown; low plasticity; soft; moist; 10% sand; 20% clay; 70%silt		   1245 	2		<u>Ť</u> 0.9 0.3 0.0 0.0 1.4		- Concrete patch
15-			grayish brown; medium plasticity No recovery from 15 to 17 feet Very stiff from 18 to 22 feet At 19 feet, 2-inch thick gravel and coarse sand layer		1250 GP-7, 15' 			1.6	15- - ⊻ - - -	
		SP SC CH	SAND LITTLE CLAY ; SP; (10YR4/2) dark grayish brown; loose; moist; little clay SAND WITH GRAVEL ; SC; (2.4Y4/3) olive		1305 GP-7, 20' 1310 GP-7, 22.5' 			0.0	20 - - 25- -	
GEO FORM 304_51					GP-7 (water)				-	

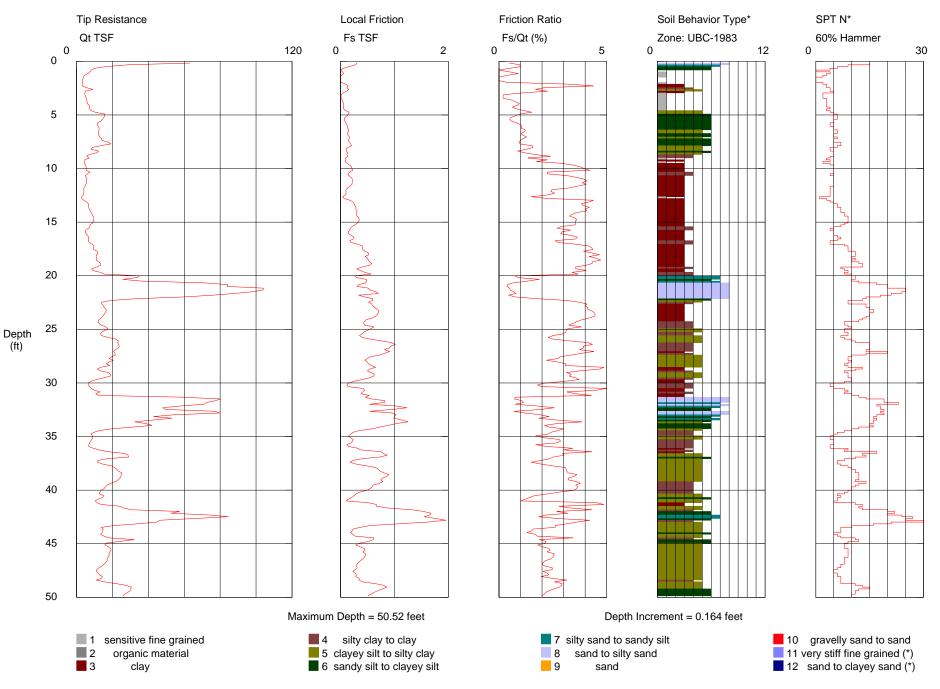
GEO FORM 304\_STANTEC037 GP-6, GP-7, AND CPT-1A 2010.GPJ SECOR037.GDT 7/27/10

## APPENDIX D CPT ELECTRONIC LOG

Additional Assessment Report and Remedial Action Plan 76 Service Station No. 5760 376 Lewelling Boulevard San Lorenzo, California

# Stantec

Operator: BH-ML Sounding: CPT-01 Cone Used: DSG0786 CPT Date/Time: 7/9/2010 8:30:39 AM Location: Conoco Phillips San Lorenzo Job Number: 211302687-200-1300



## APPENDIX E CERTIFIED LABORATORY ANALYTICAL DATA AND CHAIN-OF-CUSTODY DOCUMENTATION

Additional Assessment Report and Remedial Action Plan 76 Service Station No. 5760 376 Lewelling Boulevard San Lorenzo, California



Date of Report: 07/22/2010

Ben Chevlen

Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361

 RE:
 2505760

 BC Work Order:
 1009685

 Invoice ID:
 B083907

Enclosed are the results of analyses for samples received by the laboratory on 7/14/2010. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Molly Meyers

Contact Person: Molly Meyers Client Service Rep

Authorized Signature

Certifications: CA ELAP #1186; NV #CA00014

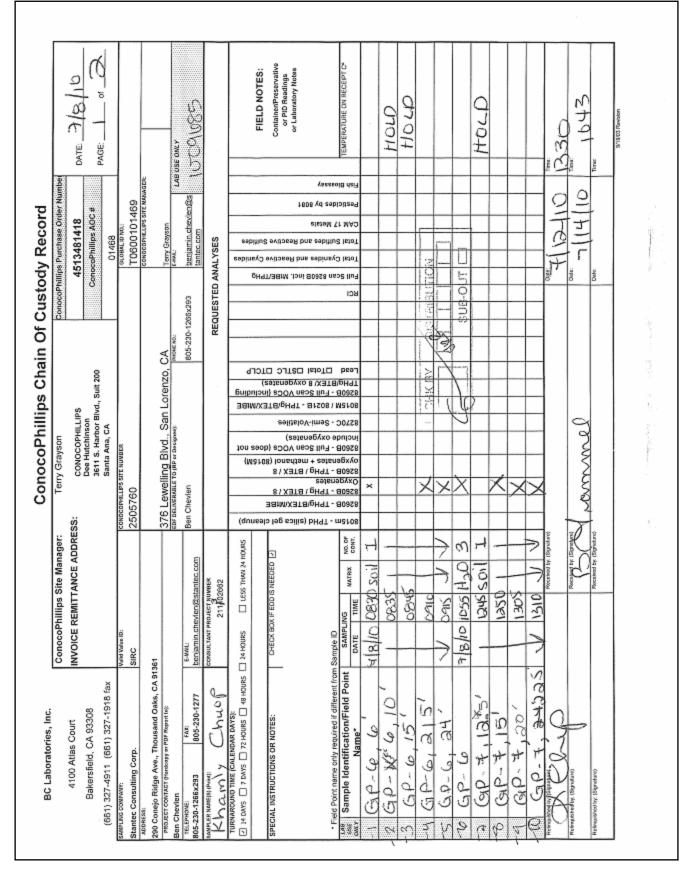


## **Table of Contents**

Sample Information	
Chain of Custody and Cooler Receipt form	3
Laboratory / Client Sample Cross Reference	7
Sample Results	
1009685-01 - GP-6,6'	
Volatile Organic Analysis (EPA Method 8260)	12
1009685-04 - GP-6,21.5'	
Volatile Organic Analysis (EPA Method 8260)	13
1009685-05 - GP-6,24'	
Volatile Organic Analysis (EPA Method 8260)	14
1009685-06 - GP-6	
Volatile Organic Analysis (EPA Method 8260)	15
1009685-08 - GP-7,15'	
Volatile Organic Analysis (EPA Method 8260)	16
1009685-09 - GP-7,20'	
Volatile Organic Analysis (EPA Method 8260)	17
1009685-10 - GP-7,22.5'	
Volatile Organic Analysis (EPA Method 8260)	
1009685-11 - GP-7	
Volatile Organic Analysis (EPA Method 8260)	19
1009685-12 - CPT-1A,9.5'	00
Volatile Organic Analysis (EPA Method 8260)	20
1009685-13 - CPT-1A,19.5'	04
Volatile Organic Analysis (EPA Method 8260) 1009685-14 - CPT-1A-W-19-22'	
Volatile Organic Analysis (EPA Method 8260)	22
1009685-15 - CPT-1A,29.5'	22
Volatile Organic Analysis (EPA Method 8260)	23
1009685-16 - CPT-1A-W-30-34'	
Volatile Organic Analysis (EPA Method 8260)	24
1009685-17 - CPT-1A,39.5'	
Volatile Organic Analysis (EPA Method 8260)	
1009685-18 - CPT-1A-W-41-45'	
Volatile Organic Analysis (EPA Method 8260)	
1009685-19 - CPT-1A,49.5'	
Volatile Organic Analysis (EPA Method 8260)	27
1009685-20 - Dup-1	
Volatile Organic Analysis (EPA Method 8260)	
Quality Control Reports	
Volatile Organic Analysis (EPA Method 8260)	
Method Blank Analysis	
Laboratory Control Sample	
Precision and Accuracy	
Notes	
Notes and Definitions	



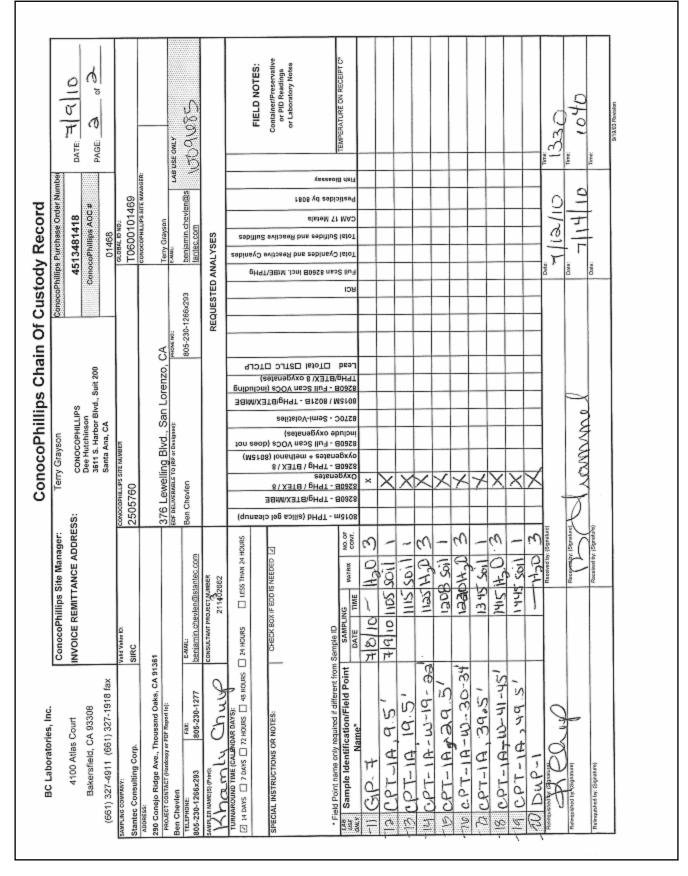
Chain of Custody and Cooler Receipt Form for 1009685 Page 1 of 4



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation. 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com



Chain of Custody and Cooler Receipt Form for 1009685 Page 2 of 4



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation. 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com



#### Chain of Custody and Cooler Receipt Form for 1009685 Page 3 of 4

Submission #: 1009085 SHIPPING INFOR Federal Express & UPS 0	Hand Deliv	ery O		SHIPPING CONTAINER Ice Chest L None D Box D Other D (Specify)								
3C Lab Field Service D Other D	□(Specify)			Box D Other D (Specify)								
Refrigerant: Ice 🗗 Blue Ice 🗆	) None (	) Oth	er 🗆 🛛 🔾	omment	5:							
	Container	NeD		e 🌾 Comments:								
Il samples received? Yes No D	Alisamples	containers	intact? Ye	se No⊡		Descriptio	n(s) mate	h COC? Y	es & No [	3		
COC Received Er	ontainer: P	lastie <u>steeve</u> ⊤ c i c	Spil hermometr 4. D	Descriptio er 1D: <u># [ *</u> *C	17		<u>= - ( 14   1</u> nii <u>Bi</u>	°,043				
					SAMPLE N							
SAMPLE CONTAINERS	1 1	2	3	د	٤	<u>6</u>			9	10		
T GENERAL MINERALI GENERAL PHYSICAL T PEUNPRESERVED												
	-											
T INORGANIC CHEMICAL METALS												
									1			
T CYANIDE T NITROGEN FORMS	1											
T TOTAL SULFIDE						× .						
ez. NITRATE / NITRITE												
T TOTAL ORGANIC CARBON												
T TOX												
T CHEMICAL OXYGEN DEMAND												
IA PHENOLICS												
OMI VOA VLAL TRAVEL BLANK									ļ			
Omi VOA VLAL	'		( )		1.7	A.B	11	4	) 4	· · ·		
QT EPA 413.3, 413.3, 418.1												
PT OBOR	-											
CADIOLOGICAL				1								
ACTERIOLOGICAL			1									
0 ml V0A V1AL- 504	-					· · · ·						
DT EPA 508/603/8050	8				1				1	1		
27 EPA 515.1/8150	-									1		
OT EPA 515 DT EPA 515 TRAVEL BLANK	1		-	1								
100mi EPA 547	1					1			1			
100ml EPA 531.1									1	1		
QT EPA 548	-	-										
OT EPA 549										1		
Q'T EPA 633												
QT EPA 8015M								1		1		
OT AMBER												
8 O2. JAR												
33 OZ. JAR												
SOIL SLEEVE PC	A	A	A	A	A-		n.	1 Pr	A	A		
PCB VIAL												
PLASTIC BAG					1							
EERROUS IRON												
ENCORE	1	1	1	1	1			1		1		

٦



### Chain of Custody and Cooler Receipt Form for 1009685 Page 4 of 4

CLABORATORIES INC.						1		Pag∈ 2		
SHIPPING INFOR	MATION		1			SHIPPIN	G CONT	AINER		
≂ederalExpress≫d UPSD ⊦	and Delive	ery 🗆		le	e Chest 🕽		None	e 🖸		
BC Lab Field Service D Other D	(Specify)_				Box (	2	Othe	r 🗆 (Speci	fy)	
		000200000000000		aurice construction of						
Refrigerant: Ice 🛱 Blue Ice 🗘	None C	O OI	ier 🗆 🔾	comment	s:					
Custody Seals Ice Chest	Container	sO	None 🖗	Comme	nts:					
	ntact? Yes [	No D								
	al samples o	optainers	intact2 V		1	Descriptio	oo/st mate	h COC? Ye	6 No 1	-
All samples received? Yes NOD /	an samplee t	é .o	õ	IASTEC	Soil	beautiping in				
COC Received En	nissivity: _	issivity: .98 Container: Sleeve Thermometer ID: #177 Date/Time -114 10								
YES DNO	mperature:	, 3	9.	C 1 C	4.0	10		Analyst In	BIT	
Te	mperature.						the second s	Contractor of the local		
					SAMPLEN					1
SAMPLE CONTAINERS	11	1.2	13	14	( i	1.6	1)	61	(9	20
OT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UMPRESERVED										
O'T INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE				1						
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
201. NITRATE / NITRITÉ				<u> </u>						+
PT TOTAL ORGANIC CARBON						1				
PTTOX			<u>+</u>							
PT CHEMICAL OXYGEN DEMAND								1		
PIA PHENOLICS										1
40ml VOA VLAL TRAVEL BLANK 40ml VOA VLAL	A.3	4	λ τ.	A.2	÷	A 31	1	AB	1	A3
QT EPA 413.3, 413.7, 418.1	-					1.0				
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL							L			1
40 m) Y0A V1AL 504										
QT EPA 508/608/8080								<u> </u>		
QT EPA \$15.1/8150	1100								ļ	ļ
OT EPA 525				<u> </u>						
QT EPA 325 TRAVEL BLANK	-									
100ml EPA 547				-				_		
100ml EPA 533.1										
QT EPA 548										
OT EPA 549									<u> </u>	
QT E74632						1				
QT EPA8015M										
OT AMIER	1									
8 O2 JAR			_							-
32 OZ JAR									-	
SOILSLEEVE PC		A	A		A		A		R	
PCBVIAL		-							1	
PLASTIC BAG	_			-		-				
FERROUS IRON								1		
ENCORI		-								
C ommente:			Time: 9							

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation. 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com



### Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361

### Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

Laboratory	Client Sample Informati	on		
1009685-01	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 2505760  GP-6,6' SITO	Receive Date:07/14/201010Sampling Date:07/08/201008Sample Depth:Sample Matrix:SolidsDelivery Work Order:Global ID:T0600101469Location ID (FieldPoint):GP-6Matrix:SOSample QC Type (SACode):CSCooler ID:	
1009685-02	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 2505760  GP-6,10' SITO	Receive Date:07/14/2010 10Sampling Date:07/08/2010 08Sample Depth:Sample Matrix:SolidsDelivery Work Order:Global ID: T0600101469Location ID (FieldPoint):GP-6Matrix:SOSample QC Type (SACode):CSCooler ID:	
1009685-03	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 2505760  GP-6,15' SITO	Receive Date:07/14/201010Sampling Date:07/08/201008Sample Depth:Sample Matrix:SolidsDelivery Work Order:Global ID:T0600101469Location ID (FieldPoint):GP-6Matrix:SOSample QC Type (SACode):CSCooler ID:	
1009685-04	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 2505760  GP-6,21.5' SITO	Receive Date:07/14/201010Sampling Date:07/08/201009Sample Depth:Sample Matrix:SolidsDelivery Work Order:Global ID:T0600101469Location ID (FieldPoint):GP-6Matrix:SOSample QC Type (SACode):CSCooler ID:	



#### Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361

### Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

Laboratory	Client Sample Informati	on	
1009685-05	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 2505760  GP-6,24' SITO	Receive Date:07/14/201010:43Sampling Date:07/08/201009:15Sample Depth:Sample Matrix:SolidsDelivery Work Order:SolidsGlobal ID:T0600101469Location ID (FieldPoint):GP-6Matrix:SOSample QC Type (SACode):CSCooler ID:
1009685-06	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 2505760  GP-6 SITO	Receive Date:07/14/201010:43Sampling Date:07/08/201010:55Sample Depth:Sample Matrix:WaterDelivery Work Order:Global ID:T0600101469Location ID (FieldPoint):GP-6Matrix:WSample QC Type (SACode):CSCooler ID:
1009685-07	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 2505760  GP-7,12.5' SITO	Receive Date:07/14/201010:43Sampling Date:07/08/201012:45Sample Depth:SolidsDelivery Work Order:SolidsDelivery Work Order:Global ID:T0600101469Location ID (FieldPoint):GP-7Matrix:SOSample QC Type (SACode):CSCooler ID:Cooler ID:Cooler ID:
1009685-08	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 2505760  GP-7,15' SITO	Receive Date:07/14/201010:43Sampling Date:07/08/201012:50Sample Depth:Sample Matrix:SolidsDelivery Work Order:Global ID:T0600101469Location ID (FieldPoint):GP-7Matrix:SOSample QC Type (SACode):CSCooler ID:



### Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361

#### Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

Laboratory	Client Sample Informati	on	
1009685-09	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 2505760  GP-7,20' SITO	Receive Date:07/14/201010:43Sampling Date:07/08/201013:05Sample Depth:Sample Matrix:SolidsDelivery Work Order:Global ID:T0600101469Location ID (FieldPoint):GP-7Matrix:SOSample QC Type (SACode):CSCooler ID:
1009685-10	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 2505760  GP-7,22.5' SITO	Receive Date:07/14/201010:43Sampling Date:07/08/201013:10Sample Depth:Sample Matrix:SolidsDelivery Work Order:Global ID:T0600101469Location ID (FieldPoint):GP-7Matrix:SOSample QC Type (SACode):CSCooler ID:
1009685-11	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 2505760  GP-7 SITO	Receive Date:07/14/201010:43Sampling Date:07/08/201000:00Sample Depth:Sample Matrix:WaterDelivery Work Order:Global ID:T0600101469Location ID (FieldPoint):GP-7Matrix:WSample QC Type (SACode):CSCooler ID:
1009685-12	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 2505760  CPT-1A,9.5' SITO	Receive Date:07/14/201010:43Sampling Date:07/09/201011:05Sample Depth:Sample Matrix:SolidsDelivery Work Order:Global ID:T0600101469Location ID (FieldPoint):CPT-1AMatrix:SOSample QC Type (SACode):CSCooler ID:



### Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361 Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

Laboratory	Client Sample Informatio	n	
1009685-13	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 2505760  CPT-1A,19.5' SITO	Receive Date:07/14/201010:43Sampling Date:07/09/201011:15Sample Depth:Sample Matrix:SolidsDelivery Work Order:SolidsGlobal ID:T0600101469Location ID (FieldPoint):CPT-1AMatrix:SOSample QC Type (SACode):CSCooler ID:
1009685-14	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 2505760  CPT-1A-W-19-22' SITO	Receive Date:07/14/201010:43Sampling Date:07/09/201011:25Sample Depth:Sample Matrix:WaterDelivery Work Order:Global ID:T0600101469Location ID (FieldPoint):CPT-1AMatrix:WSample QC Type (SACode):CSCooler ID:
1009685-15	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 2505760  CPT-1A,29.5' SITO	Receive Date:07/14/201010:43Sampling Date:07/09/201012:08Sample Depth:Sample Matrix:SolidsDelivery Work Order:SolidsGlobal ID:T060010Location ID (FieldPoint):CPT-1AMatrix:SOSample QC Type (SACode):CSCooler ID:
1009685-16	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 2505760  CPT-1A-W-30-34' SITO	Receive Date:07/14/201010:43Sampling Date:07/09/201012:20Sample Depth:Sample Matrix:WaterDelivery Work Order:Global ID:T0600101469Location ID (FieldPoint):CPT-1AMatrix:WSample QC Type (SACode):CSCooler ID:



### Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361 Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

Laboratory	Client Sample Informatio	)n	
1009685-17	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 2505760  CPT-1A,39.5' SITO	Receive Date:07/14/2010 10:43Sampling Date:07/09/2010 13:45Sample Depth:Sample Matrix:SolidsDelivery Work Order:Global ID: T0600101469Location ID (FieldPoint):CPT-1AMatrix:SOSample QC Type (SACode):CSCooler ID:
1009685-18	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 2505760  CPT-1A-W-41-45' SITO	Receive Date:07/14/2010 10:43Sampling Date:07/09/2010 14:15Sample Depth:Sample Matrix:WaterDelivery Work Order:Global ID: T0600101469Location ID (FieldPoint):CPT-1AMatrix:WSample QC Type (SACode):CSCooler ID:
1009685-19	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 2505760  CPT-1A,49.5' SITO	Receive Date:07/14/201010:43Sampling Date:07/09/201014:45Sample Depth:Sample Matrix:SolidsDelivery Work Order:SolidsGlobal ID:T0600101469Location ID (FieldPoint):CPT-1AMatrix:SOSample QC Type (SACode):CSCooler ID:
1009685-20	COC Number: Project Number: Sampling Location: Sampling Point: Sampled By:	 2505760  Dup-1 SITO	Receive Date:07/14/201010:43Sampling Date:07/09/201000:00Sample Depth:Sample Matrix:WaterDelivery Work Order:Global ID:T0600101469Location ID (FieldPoint):Dup-1Matrix:WSample QC Type (SACode):CSCooler ID:



Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361

Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

BCL Sample ID: 100	9685-01	Client Sampl	e Name:	2505760,	GP-6,6', 7/	8/2010 8:30:00/	۹M		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene		0.0025	mg/kg	0.0050	0.0013	EPA-8260	ND	J,S08,Z1b	1
1,2-Dibromoethane		ND	mg/kg	0.0050	0.0010	EPA-8260	ND	S08,Z1b	1
1,2-Dichloroethane		ND	mg/kg	0.0050	0.00085	EPA-8260	ND	S08,Z1b	1
Ethylbenzene		ND	mg/kg	0.0050	0.0015	EPA-8260	ND	S08,Z1b	1
Methyl t-butyl ether		ND	mg/kg	0.0050	0.00050	EPA-8260	ND	S08,Z1b	1
Toluene		0.0026	mg/kg	0.0050	0.0012	EPA-8260	ND	J,S08,Z1b	1
Total Xylenes		ND	mg/kg	0.010	0.0034	EPA-8260	ND	S08,Z1b	1
t-Amyl Methyl ether		ND	mg/kg	0.0050	0.00056	EPA-8260	ND	S08,Z1b	1
t-Butyl alcohol		ND	mg/kg	0.050	0.017	EPA-8260	ND	S08,Z1b	1
Diisopropyl ether		ND	mg/kg	0.0050	0.00080	EPA-8260	ND	S08,Z1b	1
Ethanol		ND	mg/kg	1.0	0.066	EPA-8260	ND	S08,Z1b	1
Ethyl t-butyl ether		ND	mg/kg	0.0050	0.00022	EPA-8260	ND	S08,Z1b	1
Total Purgeable Petroleum Hydrocarbons		ND	mg/kg	0.20	0.020	Luft-GC/MS	ND	S08,Z1b	1
1,2-Dichloroethane-d4 (Surrog	ate)	114	%	70 - 121 (LC	L - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)		98.5	%	81 - 117 (LC	L - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrog	gate)	85.7	%	74 - 121 (LC	L - UCL)	EPA-8260			1

			Run				QC
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-8260	07/15/10	07/15/10 14:39	MCQ	MS-V3	1	BTG0770



Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361

Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

BCL Sample ID: 10	09685-04	Client Sampl	e Name:	2505760,	GP-6,21.5'	, 7/8/2010 9:10	:00AM		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene		ND	mg/kg	0.0050	0.0013	EPA-8260	ND		1
1,2-Dibromoethane		ND	mg/kg	0.0050	0.0010	EPA-8260	ND		1
1,2-Dichloroethane		ND	mg/kg	0.0050	0.00085	EPA-8260	ND		1
Ethylbenzene		ND	mg/kg	0.0050	0.0015	EPA-8260	ND		1
Methyl t-butyl ether		ND	mg/kg	0.0050	0.00050	EPA-8260	ND		1
Toluene		ND	mg/kg	0.0050	0.0012	EPA-8260	ND		1
Total Xylenes		ND	mg/kg	0.010	0.0034	EPA-8260	ND		1
t-Amyl Methyl ether		ND	mg/kg	0.0050	0.00056	EPA-8260	ND		1
t-Butyl alcohol		ND	mg/kg	0.050	0.017	EPA-8260	ND		1
Diisopropyl ether		ND	mg/kg	0.0050	0.00080	EPA-8260	ND		1
Ethanol		ND	mg/kg	1.0	0.066	EPA-8260	ND		1
Ethyl t-butyl ether		ND	mg/kg	0.0050	0.00022	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons		ND	mg/kg	0.20	0.020	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surro	ogate)	103	%	70 - 121 (LC	L - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)		98.3	%	81 - 117 (LC	L - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surr	ogate)	94.1	%	74 - 121 (LC	L - UCL)	EPA-8260			1

			Run				QC
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-8260	07/15/10	07/15/10 15:57	MCQ	MS-V3	1	BTG0770



Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361

Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

BCL Sample ID: 10	09685-05	Client Sampl	e Name:	2505760,	GP-6,24', 7	7/8/2010 9:15:0	0AM		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene		ND	mg/kg	0.0050	0.0013	EPA-8260	ND		1
1,2-Dibromoethane		ND	mg/kg	0.0050	0.0010	EPA-8260	ND		1
1,2-Dichloroethane		ND	mg/kg	0.0050	0.00085	EPA-8260	ND		1
Ethylbenzene		ND	mg/kg	0.0050	0.0015	EPA-8260	ND		1
Methyl t-butyl ether		ND	mg/kg	0.0050	0.00050	EPA-8260	ND		1
Toluene		ND	mg/kg	0.0050	0.0012	EPA-8260	ND		1
Total Xylenes		ND	mg/kg	0.010	0.0034	EPA-8260	ND		1
t-Amyl Methyl ether		ND	mg/kg	0.0050	0.00056	EPA-8260	ND		1
t-Butyl alcohol		ND	mg/kg	0.050	0.017	EPA-8260	ND		1
Diisopropyl ether		ND	mg/kg	0.0050	0.00080	EPA-8260	ND		1
Ethanol		ND	mg/kg	1.0	0.066	EPA-8260	ND		1
Ethyl t-butyl ether		ND	mg/kg	0.0050	0.00022	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons		ND	mg/kg	0.20	0.020	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surro	gate)	101	%	70 - 121 (LC	L - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)		101	%	81 - 117 (LC	L - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surro	ogate)	101	%	74 - 121 (LC	L - UCL)	EPA-8260			1

			Run				QC
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-8260	07/15/10	07/15/10 16:23	MCQ	MS-V3	1	BTG0770



Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361

Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

BCL Sample ID: 10	09685-06	Client Sampl	e Name:	2505760,	GP-6, 7/8/	2010 10:55:00AI	N		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene		ND	ug/L	0.50	0.083	EPA-8260	ND		1
1,2-Dibromoethane		ND	ug/L	0.50	0.16	EPA-8260	ND		1
1,2-Dichloroethane		ND	ug/L	0.50	0.17	EPA-8260	ND		1
Ethylbenzene		ND	ug/L	0.50	0.098	EPA-8260	ND		1
Methyl t-butyl ether		ND	ug/L	0.50	0.11	EPA-8260	ND		1
Toluene		ND	ug/L	0.50	0.093	EPA-8260	ND		1
Total Xylenes		ND	ug/L	1.0	0.36	EPA-8260	ND		1
t-Amyl Methyl ether		ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol		ND	ug/L	10	9.4	EPA-8260	ND		1
Diisopropyl ether		ND	ug/L	0.50	0.23	EPA-8260	ND		1
Ethanol		ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether		ND	ug/L	0.50	0.18	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons		ND	ug/L	50	7.2	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surro	gate)	98.4	%	76 - 114 (LC	L - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)		95.0	%	88 - 110 (LC	L - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surr	ogate)	95.1	%	86 - 115 (LC	L - UCL)	EPA-8260			1

			Run				QC
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-8260	07/21/10	07/21/10 16:40	KEA	MS-V12	1	BTG0585



Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361

Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

BCL Sample ID: 10	09685-08	Client Sampl	e Name:	2505760,	GP-7,15', 7	7/8/2010 12:50:0	0PM		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene		ND	mg/kg	0.0050	0.0013	EPA-8260	ND		1
1,2-Dibromoethane		ND	mg/kg	0.0050	0.0010	EPA-8260	ND		1
1,2-Dichloroethane		ND	mg/kg	0.0050	0.00085	EPA-8260	ND		1
Ethylbenzene		ND	mg/kg	0.0050	0.0015	EPA-8260	ND		1
Methyl t-butyl ether		ND	mg/kg	0.0050	0.00050	EPA-8260	ND		1
Toluene		ND	mg/kg	0.0050	0.0012	EPA-8260	ND		1
Total Xylenes		ND	mg/kg	0.010	0.0034	EPA-8260	ND		1
t-Amyl Methyl ether		ND	mg/kg	0.0050	0.00056	EPA-8260	ND		1
t-Butyl alcohol		ND	mg/kg	0.050	0.017	EPA-8260	ND		1
Diisopropyl ether		ND	mg/kg	0.0050	0.00080	EPA-8260	ND		1
Ethanol		ND	mg/kg	1.0	0.066	EPA-8260	ND		1
Ethyl t-butyl ether		ND	mg/kg	0.0050	0.00022	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons		ND	mg/kg	0.20	0.020	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surro	gate)	99.7	%	70 - 121 (LC	L - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)		99.2	%	81 - 117 (LC	L - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surro	ogate)	96.3	%	74 - 121 (LC	L - UCL)	EPA-8260			1

			Run				QC
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-8260	07/15/10	07/15/10 17:36	MCQ	MS-V3	1	BTG0770



Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361

Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

BCL Sample ID: 10	09685-09	Client Sampl	e Name:	2505760,	GP-7,20', 7	7/8/2010 1:05:0	0PM		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene		ND	mg/kg	0.0050	0.0013	EPA-8260	ND		1
1,2-Dibromoethane		ND	mg/kg	0.0050	0.0010	EPA-8260	ND		1
1,2-Dichloroethane		ND	mg/kg	0.0050	0.00085	EPA-8260	ND		1
Ethylbenzene		ND	mg/kg	0.0050	0.0015	EPA-8260	ND		1
Methyl t-butyl ether		ND	mg/kg	0.0050	0.00050	EPA-8260	ND		1
Toluene		ND	mg/kg	0.0050	0.0012	EPA-8260	ND		1
Total Xylenes		ND	mg/kg	0.010	0.0034	EPA-8260	ND		1
t-Amyl Methyl ether		ND	mg/kg	0.0050	0.00056	EPA-8260	ND		1
t-Butyl alcohol		ND	mg/kg	0.050	0.017	EPA-8260	ND		1
Diisopropyl ether		ND	mg/kg	0.0050	0.00080	EPA-8260	ND		1
Ethanol		ND	mg/kg	1.0	0.066	EPA-8260	ND		1
Ethyl t-butyl ether		ND	mg/kg	0.0050	0.00022	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons		ND	mg/kg	0.20	0.020	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surro	gate)	96.6	%	70 - 121 (LC	L - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)		97.8	%	81 - 117 (LC	L - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surro	ogate)	91.6	%	74 - 121 (LC	L - UCL)	EPA-8260			1

			Run				QC
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-8260	07/15/10	07/15/10 18:01	MCQ	MS-V3	1	BTG0770



Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361

Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

BCL Sample ID: 10	09685-10	Client Sampl	e Name:	2505760,	GP-7,22.5'	, 7/8/2010 1:10	:00PM		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene		ND	mg/kg	0.0050	0.0013	EPA-8260	ND		1
1,2-Dibromoethane		ND	mg/kg	0.0050	0.0010	EPA-8260	ND		1
1,2-Dichloroethane		ND	mg/kg	0.0050	0.00085	EPA-8260	ND		1
Ethylbenzene		ND	mg/kg	0.0050	0.0015	EPA-8260	ND		1
Methyl t-butyl ether		ND	mg/kg	0.0050	0.00050	EPA-8260	ND		1
Toluene		ND	mg/kg	0.0050	0.0012	EPA-8260	ND		1
Total Xylenes		ND	mg/kg	0.010	0.0034	EPA-8260	ND		1
t-Amyl Methyl ether		ND	mg/kg	0.0050	0.00056	EPA-8260	ND		1
t-Butyl alcohol		ND	mg/kg	0.050	0.017	EPA-8260	ND		1
Diisopropyl ether		ND	mg/kg	0.0050	0.00080	EPA-8260	ND		1
Ethanol		ND	mg/kg	1.0	0.066	EPA-8260	ND		1
Ethyl t-butyl ether		ND	mg/kg	0.0050	0.00022	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons		ND	mg/kg	0.20	0.020	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surro	gate)	96.6	%	70 - 121 (LC	L - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)		101	%	81 - 117 (LC	L - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surro	ogate)	102	%	74 - 121 (LC	L - UCL)	EPA-8260			1

			Run				QC
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-8260	07/15/10	07/15/10 18:27	MCQ	MS-V3	1	BTG0770



Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361

Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

BCL Sample ID: 10	09685-11	Client Sampl	e Name:	2505760,	GP-7, 7/8/	2010 12:00:00AI	N		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene		ND	ug/L	0.50	0.083	EPA-8260	ND		1
1,2-Dibromoethane		ND	ug/L	0.50	0.16	EPA-8260	ND		1
1,2-Dichloroethane		ND	ug/L	0.50	0.17	EPA-8260	ND		1
Ethylbenzene		ND	ug/L	0.50	0.098	EPA-8260	ND		1
Methyl t-butyl ether		ND	ug/L	0.50	0.11	EPA-8260	ND		1
Toluene		ND	ug/L	0.50	0.093	EPA-8260	ND		1
Total Xylenes		ND	ug/L	1.0	0.36	EPA-8260	ND		1
t-Amyl Methyl ether		ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol		ND	ug/L	10	9.4	EPA-8260	ND		1
Diisopropyl ether		ND	ug/L	0.50	0.23	EPA-8260	ND		1
Ethanol		ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether		ND	ug/L	0.50	0.18	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons		ND	ug/L	50	7.2	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surro	gate)	97.2	%	76 - 114 (LC	L - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)		94.3	%	88 - 110 (LC	L - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surro	ogate)	94.9	%	86 - 115 (LC	L - UCL)	EPA-8260			1

			Run	QC				
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	
1	EPA-8260	07/21/10	07/21/10 16:22	KEA	MS-V12	1	BTG0585	



Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361

Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

BCL Sample ID: 100	)9685-12	Client Sampl	e Name:	2505760,	CPT-1A,9.	5', 7/9/2010 11:0	5:00AM		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene		ND	mg/kg	0.050	0.013	EPA-8260	ND	A10,Z1a	1
1,2-Dibromoethane		ND	mg/kg	0.050	0.010	EPA-8260	ND	A10,Z1a	1
1,2-Dichloroethane		ND	mg/kg	0.050	0.0085	EPA-8260	ND	A10,Z1a	1
Ethylbenzene		ND	mg/kg	0.050	0.015	EPA-8260	ND	A10,Z1a	1
Methyl t-butyl ether		ND	mg/kg	0.050	0.0050	EPA-8260	ND	A10,Z1a	1
Toluene		ND	mg/kg	0.050	0.012	EPA-8260	ND	A10,Z1a	1
Total Xylenes		ND	mg/kg	0.10	0.034	EPA-8260	ND	A10,Z1a	1
t-Amyl Methyl ether		ND	mg/kg	0.050	0.0056	EPA-8260	ND	A10,Z1a	1
t-Butyl alcohol		ND	mg/kg	0.50	0.17	EPA-8260	ND	A10,Z1a	1
Diisopropyl ether		ND	mg/kg	0.050	0.0080	EPA-8260	ND	A10,Z1a	1
Ethanol		ND	mg/kg	10	0.66	EPA-8260	ND	A10,Z1a	1
Ethyl t-butyl ether		ND	mg/kg	0.050	0.0022	EPA-8260	ND	A10,Z1a	1
Total Purgeable Petroleum Hydrocarbons		ND	mg/kg	2.0	0.20	Luft-GC/MS	ND	A10,Z1a	1
1,2-Dichloroethane-d4 (Surrog	jate)	101	%	70 - 121 (LC	L - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)		99.6	%	81 - 117 (LC	L - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surro	gate)	98.7	%	74 - 121 (LC	L - UCL)	EPA-8260			1

			Run		QC				
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID		
1	EPA-8260	07/15/10	07/19/10 19:23	MCQ	MS-V3	10	BTG0770		



Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361

Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

BCL Sample ID: 10	09685-13	Client Sampl	e Name:	2505760	, CPT-1A,19	0.5', 7/9/2010 11	:15:00AM		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene		ND	mg/kg	0.12	0.032	EPA-8260	ND	A01	1
1,2-Dibromoethane		ND	mg/kg	0.12	0.025	EPA-8260	ND	A01	1
1,2-Dichloroethane		ND	mg/kg	0.12	0.021	EPA-8260	ND	A01	1
Ethylbenzene		0.75	mg/kg	0.12	0.038	EPA-8260	ND	A01	1
Methyl t-butyl ether		ND	mg/kg	0.12	0.012	EPA-8260	ND	A01	1
Toluene		ND	mg/kg	0.12	0.030	EPA-8260	ND	A01	1
Total Xylenes		1.6	mg/kg	0.25	0.085	EPA-8260	ND	A01	1
t-Amyl Methyl ether		ND	mg/kg	0.12	0.014	EPA-8260	ND	A01	1
t-Butyl alcohol		ND	mg/kg	1.2	0.42	EPA-8260	ND	A01	1
Diisopropyl ether		ND	mg/kg	0.12	0.020	EPA-8260	ND	A01	1
Ethanol		ND	mg/kg	25	1.6	EPA-8260	ND	A01	1
Ethyl t-butyl ether		ND	mg/kg	0.12	0.0055	EPA-8260	ND	A01	1
Total Purgeable Petroleum Hydrocarbons		470	mg/kg	40	4.0	Luft-GC/MS	ND	A01	2
1,2-Dichloroethane-d4 (Surro	ogate)	82.4	%	70 - 121 (L	CL - UCL)	EPA-8260			1
1,2-Dichloroethane-d4 (Surro	ogate)	94.9	%	70 - 121 (L	CL - UCL)	EPA-8260			2
Toluene-d8 (Surrogate)		98.3	%	81 - 117 (L	CL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)		102	%	81 - 117 (L	CL - UCL)	EPA-8260			2
4-Bromofluorobenzene (Surr	ogate)	97.3	%	74 - 121 (L	CL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surr	ogate)	103	%	74 - 121 (L	CL - UCL)	EPA-8260			2

			Run		QC				
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID		
1	EPA-8260	07/15/10	07/16/10 21:39	MCQ	MS-V3	25	BTG0770		
2	EPA-8260	07/15/10	07/21/10 15:41	MCQ	MS-V3	200	BTG0770		



Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361

Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

BCL Sample ID: 10	09685-14	Client Sampl	e Name:	2505760,	CPT-1A-W	/-19-22', 7/9/2010	) 11:25:00AN	1	
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene		ND	ug/L	1.0	0.17	EPA-8260	ND	A01	1
1,2-Dibromoethane		ND	ug/L	1.0	0.32	EPA-8260	ND	A01	1
1,2-Dichloroethane		ND	ug/L	1.0	0.34	EPA-8260	ND	A01	1
Ethylbenzene		150	ug/L	1.0	0.20	EPA-8260	ND	A01	1
Methyl t-butyl ether		ND	ug/L	1.0	0.22	EPA-8260	ND	A01	1
Toluene		ND	ug/L	1.0	0.19	EPA-8260	ND	A01	1
Total Xylenes		130	ug/L	2.0	0.72	EPA-8260	ND	A01	1
t-Amyl Methyl ether		ND	ug/L	1.0	0.50	EPA-8260	ND	A01	1
t-Butyl alcohol		ND	ug/L	20	19	EPA-8260	ND	A01	1
Diisopropyl ether		ND	ug/L	1.0	0.46	EPA-8260	ND	A01	1
Ethanol		ND	ug/L	500	100	EPA-8260	ND	A01	1
Ethyl t-butyl ether		ND	ug/L	1.0	0.36	EPA-8260	ND	A01	1
Total Purgeable Petroleum Hydrocarbons		3100	ug/L	100	14	Luft-GC/MS	ND	A01	1
1,2-Dichloroethane-d4 (Surro	gate)	101	%	76 - 114 (LC	L - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)		92.1	%	88 - 110 (LC	L - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surro	ogate)	103	%	86 - 115 (LC	L - UCL)	EPA-8260			1

				QC			
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-8260	07/21/10	07/21/10 17:16	KEA	MS-V12	2	BTG0585



Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361

Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

BCL Sample ID: 10	009685-15	Client Sampl	e Name:	2505760,	CPT-1A,29	0.5', 7/9/2010 12	:08:00PM		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene		ND	mg/kg	0.0050	0.0013	EPA-8260	ND	Quais	1
1,2-Dibromoethane		ND	mg/kg	0.0050	0.0010	EPA-8260	ND		1
1,2-Dichloroethane		ND	mg/kg	0.0050	0.00085	EPA-8260	ND		1
Ethylbenzene		0.76	mg/kg	0.12	0.038	EPA-8260	ND	A01	2
Methyl t-butyl ether		ND	mg/kg	0.0050	0.00050	EPA-8260	ND		1
Toluene		ND	mg/kg	0.0050	0.0012	EPA-8260	ND		1
Total Xylenes		1.5	mg/kg	0.25	0.085	EPA-8260	ND	A01	2
t-Amyl Methyl ether		ND	mg/kg	0.0050	0.00056	EPA-8260	ND		1
t-Butyl alcohol		ND	mg/kg	0.050	0.017	EPA-8260	ND		1
Diisopropyl ether		ND	mg/kg	0.0050	0.00080	EPA-8260	ND		1
Ethanol		ND	mg/kg	1.0	0.066	EPA-8260	ND		1
Ethyl t-butyl ether		ND	mg/kg	0.0050	0.00022	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons		53	mg/kg	5.0	0.50	Luft-GC/MS	ND	A01	2
1,2-Dichloroethane-d4 (Surr	ogate)	99.2	%	70 - 121 (LC	CL - UCL)	EPA-8260			1
1,2-Dichloroethane-d4 (Surr	ogate)	87.1	%	70 - 121 (LC	CL - UCL)	EPA-8260			2
Toluene-d8 (Surrogate)		108	%	81 - 117 (LC	CL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)		102	%	81 - 117 (LC	CL - UCL)	EPA-8260			2
4-Bromofluorobenzene (Sur	rogate)	99.0	%	74 - 121 (LC	CL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Sur	rogate)	100	%	74 - 121 (LC	CL - UCL)	EPA-8260			2

				QC				
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	
1	EPA-8260	07/15/10	07/15/10 19:45	MCQ	MS-V3	1	BTG0770	
2	EPA-8260	07/15/10	07/16/10 22:05	MCQ	MS-V3	25	BTG0770	



Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361

Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

BCL Sample ID: 10	09685-16	Client Sampl	e Name:	2505760,	CPT-1A-W	/-30-34', 7/9/2010	) 12:20:00PM	l	
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene		ND	ug/L	0.50	0.083	EPA-8260	ND		1
1,2-Dibromoethane		ND	ug/L	0.50	0.16	EPA-8260	ND		1
1,2-Dichloroethane		ND	ug/L	0.50	0.17	EPA-8260	ND		1
Ethylbenzene		4.3	ug/L	0.50	0.098	EPA-8260	ND		1
Methyl t-butyl ether		ND	ug/L	0.50	0.11	EPA-8260	ND		1
Toluene		ND	ug/L	0.50	0.093	EPA-8260	ND		1
Total Xylenes		2.8	ug/L	1.0	0.36	EPA-8260	ND		1
t-Amyl Methyl ether		ND	ug/L	0.50	0.25	EPA-8260	ND		1
t-Butyl alcohol		ND	ug/L	10	9.4	EPA-8260	ND		1
Diisopropyl ether		ND	ug/L	0.50	0.23	EPA-8260	ND		1
Ethanol		ND	ug/L	250	50	EPA-8260	ND		1
Ethyl t-butyl ether		ND	ug/L	0.50	0.18	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons		83	ug/L	50	7.2	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surro	gate)	104	%	76 - 114 (LC	L - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)		96.2	%	88 - 110 (LC	L - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surro	ogate)	91.4	%	86 - 115 (LC	L - UCL)	EPA-8260			1

					QC		
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-8260	07/16/10	07/17/10 01:50	KEA	MS-V10	1	BTG0801



Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361

Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

BCL Sample ID: 10	09685-17	Client Sampl	e Name:	2505760,	CPT-1A,39	.5', 7/9/2010 1:	45:00PM		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene		ND	mg/kg	0.012	0.0032	EPA-8260	ND	A10,Z1a	1
1,2-Dibromoethane		ND	mg/kg	0.012	0.0025	EPA-8260	ND	A10,Z1a	1
1,2-Dichloroethane		ND	mg/kg	0.012	0.0021	EPA-8260	ND	A10,Z1a	1
Ethylbenzene		ND	mg/kg	0.012	0.0038	EPA-8260	ND	A10,Z1a	1
Methyl t-butyl ether		0.0032	mg/kg	0.012	0.0012	EPA-8260	ND	J,A10,Z1a	1
Toluene		ND	mg/kg	0.012	0.0030	EPA-8260	ND	A10,Z1a	1
Total Xylenes		ND	mg/kg	0.025	0.0085	EPA-8260	ND	A10,Z1a	1
t-Amyl Methyl ether		ND	mg/kg	0.012	0.0014	EPA-8260	ND	A10,Z1a	1
t-Butyl alcohol		ND	mg/kg	0.12	0.042	EPA-8260	ND	A10,Z1a	1
Diisopropyl ether		ND	mg/kg	0.012	0.0020	EPA-8260	ND	A10,Z1a	1
Ethanol		ND	mg/kg	2.5	0.16	EPA-8260	ND	A10,Z1a	1
Ethyl t-butyl ether		ND	mg/kg	0.012	0.00055	EPA-8260	ND	A10,Z1a	1
Total Purgeable Petroleum Hydrocarbons		ND	mg/kg	0.50	0.050	Luft-GC/MS	ND	A10,Z1a	1
1,2-Dichloroethane-d4 (Surro	gate)	102	%	70 - 121 (LC	CL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)		102	%	81 - 117 (LC	L - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surro	ogate)	102	%	74 - 121 (LC	L - UCL)	EPA-8260			1

				QC			
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-8260	07/15/10	07/19/10 17:40	MCQ	MS-V3	2.500	BTG0836



Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361

Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

BCL Sample ID: 10	09685-18	Client Sampl	e Name:	2505760,	CPT-1A-W	/-41-45', 7/9/2010	2:15:00PM		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene		0.31	ug/L	0.50	0.083	EPA-8260	ND	J,Z1	1
1,2-Dibromoethane		ND	ug/L	0.50	0.16	EPA-8260	ND	Z1	1
1,2-Dichloroethane		ND	ug/L	0.50	0.17	EPA-8260	ND	Z1	1
Ethylbenzene		29	ug/L	0.50	0.098	EPA-8260	ND	Z1	1
Methyl t-butyl ether		ND	ug/L	0.50	0.11	EPA-8260	ND	Z1	1
Toluene		0.40	ug/L	0.50	0.093	EPA-8260	ND	J,Z1	1
Total Xylenes		46	ug/L	1.0	0.36	EPA-8260	ND	Z1	1
t-Amyl Methyl ether		ND	ug/L	0.50	0.25	EPA-8260	ND	Z1	1
t-Butyl alcohol		ND	ug/L	10	9.4	EPA-8260	ND	Z1	1
Diisopropyl ether		ND	ug/L	0.50	0.23	EPA-8260	ND	Z1	1
Ethanol		ND	ug/L	250	50	EPA-8260	ND	Z1	1
Ethyl t-butyl ether		ND	ug/L	0.50	0.18	EPA-8260	ND	Z1	1
Total Purgeable Petroleum Hydrocarbons		870	ug/L	50	7.2	Luft-GC/MS	ND	<b>Z</b> 1	1
1,2-Dichloroethane-d4 (Surro	gate)	98.3	%	76 - 114 (LC	L - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)		99.5	%	88 - 110 (LC	L - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surro	ogate)	100	%	86 - 115 (LC	L - UCL)	EPA-8260			1

				QC			
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID
1	EPA-8260	07/21/10	07/21/10 16:04	KEA	MS-V12	1	BTG0585



Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361

Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

### Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 10	09685-19	Client Sampl	e Name:	2505760,	CPT-1A,49	0.5', 7/9/2010 2	:45:00PM		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene		ND	mg/kg	0.0050	0.0013	EPA-8260	ND		1
1,2-Dibromoethane		ND	mg/kg	0.0050	0.0010	EPA-8260	ND		1
1,2-Dichloroethane		ND	mg/kg	0.0050	0.00085	EPA-8260	ND		1
Ethylbenzene		ND	mg/kg	0.0050	0.0015	EPA-8260	ND		1
Methyl t-butyl ether		ND	mg/kg	0.0050	0.00050	EPA-8260	ND		1
Toluene		ND	mg/kg	0.0050	0.0012	EPA-8260	ND		1
Total Xylenes		ND	mg/kg	0.010	0.0034	EPA-8260	ND		1
t-Amyl Methyl ether		ND	mg/kg	0.0050	0.00056	EPA-8260	ND		1
t-Butyl alcohol		ND	mg/kg	0.050	0.017	EPA-8260	ND		1
Diisopropyl ether		ND	mg/kg	0.0050	0.00080	EPA-8260	ND		1
Ethanol		ND	mg/kg	1.0	0.066	EPA-8260	ND		1
Ethyl t-butyl ether		ND	mg/kg	0.0050	0.00022	EPA-8260	ND		1
Total Purgeable Petroleum Hydrocarbons		0.26	mg/kg	0.20	0.020	Luft-GC/MS	ND		1
1,2-Dichloroethane-d4 (Surro	gate)	96.2	%	70 - 121 (LC	L - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)		100	%	81 - 117 (LC	L - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surro	ogate)	101	%	74 - 121 (LC	L - UCL)	EPA-8260			1

			Run QC						
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID		
1	EPA-8260	07/15/10	07/15/10 20:36	MCQ	MS-V3	1	BTG0836		



Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361

Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

### Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 10	09685-20	Client Sampl	e Name:	2505760,	Dup-1, 7/9	/2010 12:00:00A	M		
Constituent		Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzene		ND	ug/L	2.5	0.42	EPA-8260	ND	A01	1
1,2-Dibromoethane		ND	ug/L	2.5	0.80	EPA-8260	ND	A01	1
1,2-Dichloroethane		ND	ug/L	2.5	0.85	EPA-8260	ND	A01	1
Ethylbenzene		160	ug/L	2.5	0.49	EPA-8260	ND	A01	1
Methyl t-butyl ether		ND	ug/L	2.5	0.55	EPA-8260	ND	A01	1
Toluene		ND	ug/L	2.5	0.46	EPA-8260	ND	A01	1
Total Xylenes		120	ug/L	5.0	1.8	EPA-8260	ND	A01	1
t-Amyl Methyl ether		ND	ug/L	2.5	1.2	EPA-8260	ND	A01	1
t-Butyl alcohol		ND	ug/L	50	47	EPA-8260	ND	A01	1
Diisopropyl ether		ND	ug/L	2.5	1.2	EPA-8260	ND	A01	1
Ethanol		ND	ug/L	1200	250	EPA-8260	ND	A01	1
Ethyl t-butyl ether		ND	ug/L	2.5	0.90	EPA-8260	ND	A01	1
Total Purgeable Petroleum Hydrocarbons		2600	ug/L	250	36	Luft-GC/MS	ND	A01	1
1,2-Dichloroethane-d4 (Surro	ogate)	102	%	76 - 114 (LC	L - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)		88.3	%	88 - 110 (LC	L - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surr	ogate)	102	%	86 - 115 (LC	L - UCL)	EPA-8260			1

			Run QC						
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID		
1	EPA-8260	07/21/10	07/21/10 16:58	KEA	MS-V12	5	BTG0585		



Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361 Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

### Volatile Organic Analysis (EPA Method 8260)

#### **Quality Control Report - Method Blank Analysis**

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BTG0585						
Benzene	BTG0585-BLK1	ND	ug/L	0.50	0.083	
1,2-Dibromoethane	BTG0585-BLK1	ND	ug/L	0.50	0.16	
1,2-Dichloroethane	BTG0585-BLK1	ND	ug/L	0.50	0.17	
Ethylbenzene	BTG0585-BLK1	ND	ug/L	0.50	0.098	
Methyl t-butyl ether	BTG0585-BLK1	ND	ug/L	0.50	0.11	
Toluene	BTG0585-BLK1	ND	ug/L	0.50	0.093	
Total Xylenes	BTG0585-BLK1	ND	ug/L	1.0	0.36	
t-Amyl Methyl ether	BTG0585-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BTG0585-BLK1	ND	ug/L	10	9.4	
Diisopropyl ether	BTG0585-BLK1	ND	ug/L	0.50	0.23	
Ethanol	BTG0585-BLK1	ND	ug/L	250	50	
Ethyl t-butyl ether	BTG0585-BLK1	ND	ug/L	0.50	0.18	
Total Purgeable Petroleum Hydrocarbons	BTG0585-BLK1	ND	ug/L	50	7.2	
1,2-Dichloroethane-d4 (Surrogate)	BTG0585-BLK1	104	%	76 - 114	4 (LCL - UCL)	
Toluene-d8 (Surrogate)	BTG0585-BLK1	99.5	%	88 - 110	) (LCL - UCL)	
4-Bromofluorobenzene (Surrogate)	BTG0585-BLK1	93.9	%	86 - 115	5 (LCL - UCL)	
QC Batch ID: BTG0770						
Benzene	BTG0770-BLK1	ND	mg/kg	0.0050	0.0013	
1,2-Dibromoethane	BTG0770-BLK1	ND	mg/kg	0.0050	0.0010	
1,2-Dichloroethane	BTG0770-BLK1	ND	mg/kg	0.0050	0.00085	
Ethylbenzene	BTG0770-BLK1	ND	mg/kg	0.0050	0.0015	
Methyl t-butyl ether	BTG0770-BLK1	ND	mg/kg	0.0050	0.00050	
Toluene	BTG0770-BLK1	ND	mg/kg	0.0050	0.0012	
Total Xylenes	BTG0770-BLK1	ND	mg/kg	0.010	0.0034	
t-Amyl Methyl ether	BTG0770-BLK1	ND	mg/kg	0.0050	0.00056	
t-Butyl alcohol	BTG0770-BLK1	ND	mg/kg	0.050	0.017	
Diisopropyl ether	BTG0770-BLK1	ND	mg/kg	0.0050	0.00080	
Ethanol	BTG0770-BLK1	ND	mg/kg	1.0	0.066	
Ethyl t-butyl ether	BTG0770-BLK1	ND	mg/kg	0.0050	0.00022	
Total Purgeable Petroleum Hydrocarbons	BTG0770-BLK1	ND	mg/kg	0.20	0.020	
1,2-Dichloroethane-d4 (Surrogate)	BTG0770-BLK1	98.5	%	70 - 12	1 (LCL - UCL)	
Toluene-d8 (Surrogate)	BTG0770-BLK1	102	%	81 - 117	7 (LCL - UCL)	
4-Bromofluorobenzene (Surrogate)	BTG0770-BLK1	103	%	74 - 12	1 (LCL - UCL)	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation. 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com



Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361 Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

### Volatile Organic Analysis (EPA Method 8260)

#### **Quality Control Report - Method Blank Analysis**

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BTG0801						
Benzene	BTG0801-BLK1	ND	ug/L	0.50	0.083	
1,2-Dibromoethane	BTG0801-BLK1	ND	ug/L	0.50	0.16	
1,2-Dichloroethane	BTG0801-BLK1	ND	ug/L	0.50	0.17	
Ethylbenzene	BTG0801-BLK1	ND	ug/L	0.50	0.098	
Methyl t-butyl ether	BTG0801-BLK1	ND	ug/L	0.50	0.11	
Toluene	BTG0801-BLK1	ND	ug/L	0.50	0.093	
Total Xylenes	BTG0801-BLK1	ND	ug/L	1.0	0.36	
t-Amyl Methyl ether	BTG0801-BLK1	ND	ug/L	0.50	0.25	
t-Butyl alcohol	BTG0801-BLK1	ND	ug/L	10	9.4	
Diisopropyl ether	BTG0801-BLK1	ND	ug/L	0.50	0.23	
Ethanol	BTG0801-BLK1	ND	ug/L	250	50	
Ethyl t-butyl ether	BTG0801-BLK1	ND	ug/L	0.50	0.18	
Total Purgeable Petroleum Hydrocarbons	BTG0801-BLK1	ND	ug/L	50	7.2	
1,2-Dichloroethane-d4 (Surrogate)	BTG0801-BLK1	104	%	76 - 114	4 (LCL - UCL)	
Toluene-d8 (Surrogate)	BTG0801-BLK1	99.4	%	88 - 110	) (LCL - UCL)	
4-Bromofluorobenzene (Surrogate)	BTG0801-BLK1	94.4	%	86 - 115	5 (LCL - UCL)	
QC Batch ID: BTG0836						
Benzene	BTG0836-BLK1	ND	mg/kg	0.0050	0.0013	
1,2-Dibromoethane	BTG0836-BLK1	ND	mg/kg	0.0050	0.0010	
1,2-Dichloroethane	BTG0836-BLK1	ND	mg/kg	0.0050	0.00085	
Ethylbenzene	BTG0836-BLK1	ND	mg/kg	0.0050	0.0015	
Methyl t-butyl ether	BTG0836-BLK1	ND	mg/kg	0.0050	0.00050	
Toluene	BTG0836-BLK1	ND	mg/kg	0.0050	0.0012	
Total Xylenes	BTG0836-BLK1	ND	mg/kg	0.010	0.0034	
t-Amyl Methyl ether	BTG0836-BLK1	ND	mg/kg	0.0050	0.00056	
t-Butyl alcohol	BTG0836-BLK1	ND	mg/kg	0.050	0.017	
Diisopropyl ether	BTG0836-BLK1	ND	mg/kg	0.0050	0.00080	
Ethanol	BTG0836-BLK1	ND	mg/kg	1.0	0.066	
Ethyl t-butyl ether	BTG0836-BLK1	ND	mg/kg	0.0050	0.00022	
Total Purgeable Petroleum Hydrocarbons	BTG0836-BLK1	ND	mg/kg	0.20	0.020	
1,2-Dichloroethane-d4 (Surrogate)	BTG0836-BLK1	96.4	%	70 - 12	1 (LCL - UCL)	
Toluene-d8 (Surrogate)	BTG0836-BLK1	99.6	%	81 - 117	7 (LCL - UCL)	
4-Bromofluorobenzene (Surrogate)	BTG0836-BLK1	105	%	74 - 12	1 (LCL - UCL)	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation. 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com



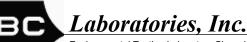
Stantec

290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361 Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

### Volatile Organic Analysis (EPA Method 8260)

#### **Quality Control Report - Laboratory Control Sample**

								Control L	Control Limits		
		_		Spike		Percent		Percent			
Constituent	QC Sample ID	Туре	Result	Level	Units	Recovery	RPD	Recovery	RPD	Lab Quals	
QC Batch ID: BTG0585											
Benzene	BTG0585-BS1	LCS	27.850	25.000	ug/L	111		70 - 130			
Toluene	BTG0585-BS1	LCS	28.450	25.000	ug/L	114		70 - 130			
1,2-Dichloroethane-d4 (Surrogate)	BTG0585-BS1	LCS	9.6700	10.000	ug/L	96.7		76 - 114			
Toluene-d8 (Surrogate)	BTG0585-BS1	LCS	10.130	10.000	ug/L	101		88 - 110			
4-Bromofluorobenzene (Surrogate)	BTG0585-BS1	LCS	9.8300	10.000	ug/L	98.3		86 - 115			
QC Batch ID: BTG0770											
Benzene	BTG0770-BS1	LCS	0.13851	0.12500	mg/kg	111		70 - 130			
Toluene	BTG0770-BS1	LCS	0.13942	0.12500	mg/kg	112		70 - 130			
1,2-Dichloroethane-d4 (Surrogate)	BTG0770-BS1	LCS	0.048132	0.050000	mg/kg	96.3		70 - 121			
Toluene-d8 (Surrogate)	BTG0770-BS1	LCS	0.049357	0.050000	mg/kg	98.7		81 - 117			
4-Bromofluorobenzene (Surrogate)	BTG0770-BS1	LCS	0.050136	0.050000	mg/kg	100		74 - 121			
QC Batch ID: BTG0801											
Benzene	BTG0801-BS1	LCS	22.530	25.000	ug/L	90.1		70 - 130			
Toluene	BTG0801-BS1	LCS	23.330	25.000	ug/L	93.3		70 - 130			
1,2-Dichloroethane-d4 (Surrogate)	BTG0801-BS1	LCS	10.320	10.000	ug/L	103		76 - 114			
Toluene-d8 (Surrogate)	BTG0801-BS1	LCS	9.8100	10.000	ug/L	98.1		88 - 110			
4-Bromofluorobenzene (Surrogate)	BTG0801-BS1	LCS	10.310	10.000	ug/L	103		86 - 115			
QC Batch ID: BTG0836											
Benzene	BTG0836-BS1	LCS	0.13862	0.12500	mg/kg	111		70 - 130			
Toluene	BTG0836-BS1	LCS	0.13252	0.12500	mg/kg	106		70 - 130			
1,2-Dichloroethane-d4 (Surrogate)	BTG0836-BS1	LCS	0.050519	0.050000	mg/kg	101		70 - 121			
Toluene-d8 (Surrogate)	BTG0836-BS1	LCS	0.049786	0.050000	mg/kg	99.6		81 - 117			
4-Bromofluorobenzene (Surrogate)	BTG0836-BS1	LCS	0.050890	0.050000	mg/kg	102		74 - 121			



Stantec 290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361 Reported: 07/22/2010 15:32 Project: 2505760 Project Number: 4513481418 Project Manager: Ben Chevlen

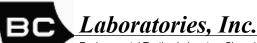
### Volatile Organic Analysis (EPA Method 8260)

#### **Quality Control Report - Precision & Accuracy**

										rol Limits	
		Source	Source		Spike			Percent		Percent	Lab
Constituent	Туре	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery	Quals
QC Batch ID: BTG0585	Used	client sample	: N								
Benzene	MS	1009676-16	ND	25.870	25.000	ug/L		103		70 - 130	
	MSD	1009676-16	ND	26.880	25.000	ug/L	3.8	108	20	70 - 130	
Toluene	MS	1009676-16	ND	27.110	25.000	ug/L		108		70 - 130	
	MSD	1009676-16	ND	27.270	25.000	ug/L	0.6	109	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1009676-16	ND	10.160	10.000	ug/L		102		76 - 114	
	MSD	1009676-16	ND	9.8300	10.000	ug/L		98.3		76 - 114	
Toluene-d8 (Surrogate)	MS	1009676-16	ND	10.270	10.000	ug/L		103		88 - 110	
	MSD	1009676-16	ND	9.9900	10.000	ug/L		99.9		88 - 110	
4-Bromofluorobenzene (Surrogate)	MS	1009676-16	ND	10.010	10.000	ug/L		100		86 - 115	
	MSD	1009676-16	ND	10.120	10.000	ug/L		101		86 - 115	
QC Batch ID: BTG0770	Used	client sample	: N								
Benzene	MS	1007897-82	ND	0.13817	0.12500	mg/kg		111		70 - 130	
	MSD	1007897-82	ND	0.13736	0.12500	mg/kg	0.6	110	20	70 - 130	
Toluene	MS	1007897-82	ND	0.13834	0.12500	mg/kg		111		70 - 130	
	MSD	1007897-82	ND	0.13461	0.12500	mg/kg	2.7	108	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1007897-82	ND	0.049499	0.050000	mg/kg		99.0		70 - 121	
	MSD	1007897-82	ND	0.048874	0.050000	mg/kg		97.7		70 - 121	
Toluene-d8 (Surrogate)	MS	1007897-82	ND	0.049609	0.050000	mg/kg		99.2		81 - 117	
	MSD	1007897-82	ND	0.051390	0.050000	mg/kg		103		81 - 117	
4-Bromofluorobenzene (Surrogate)	MS	1007897-82	ND	0.050670	0.050000	mg/kg		101		74 - 121	
	MSD	1007897-82	ND	0.052232	0.050000	mg/kg		104		74 - 121	
QC Batch ID: BTG0801	Used	client sample	: N								
Benzene	MS	1009676-03	ND	24.750	25.000	ug/L		99.0		70 - 130	
	MSD	1009676-03	ND	25.740	25.000	ug/L	3.9	103	20	70 - 130	
Toluene	MS	1009676-03	ND	24.040	25.000	ug/L		96.2		70 - 130	
	MSD	1009676-03	ND	26.650	25.000	ug/L	10.3	107	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1009676-03	ND	10.480	10.000	ug/L		105		76 - 114	
	MSD	1009676-03	ND	10.450	10.000	ug/L		104		76 - 114	
Toluene-d8 (Surrogate)	MS	1009676-03	ND	10.040	10.000	ug/L		100		88 - 110	
	MSD	1009676-03	ND	9.7900	10.000	ug/L		97.9		88 - 110	
4-Bromofluorobenzene (Surrogate)	MS	1009676-03	ND	9.2200	10.000	ug/L		92.2		86 - 115	
	MSD	1009676-03	ND	9.0600	10.000	ug/L		90.6		86 - 115	
QC Batch ID: BTG0836	Used	client sample	: N								
Benzene	MS	1009676-07	ND	0.13910	0.12500	mg/kg		111		70 - 130	
	MSD	1009676-07	ND	0.14163	0.12500	mg/kg	1.8	113	20	70 - 130	
Toluene	MS	1009676-07	ND	0.13206	0.12500	mg/kg		106		70 - 130	
	MSD	1009676-07	ND	0.13012	0.12500	mg/kg	1.5	104	20	70 - 130	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation. 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com



Stantec 290 Conejo Ridge Ave, Suite 200 Thousand Oaks, CA 91361 Reported:07/22/201015:32Project:2505760Project Number:4513481418Project Manager:Ben Chevlen

### Volatile Organic Analysis (EPA Method 8260)

#### **Quality Control Report - Precision & Accuracy**

									Control Limits		
		Source	Source		Spike			Percent		Percent	Lab
Constituent	Туре	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery	Quals
QC Batch ID: BTG0836	Used	client sample	: N								
1,2-Dichloroethane-d4 (Surrogate)	MS	1009676-07	ND	0.051156	0.050000	mg/kg		102		70 - 121	
	MSD	1009676-07	ND	0.047928	0.050000	mg/kg		95.9		70 - 121	
Toluene-d8 (Surrogate)	MS	1009676-07	ND	0.050027	0.050000	mg/kg		100		81 - 117	
	MSD	1009676-07	ND	0.049595	0.050000	mg/kg		99.2		81 - 117	
4-Bromofluorobenzene (Surrogate)	MS	1009676-07	ND	0.051157	0.050000	mg/kg		102		74 - 121	
	MSD	1009676-07	ND	0.053324	0.050000	mg/kg		107		74 - 121	



Stantec	Reported: 07/2	22/2010 15:32
290 Conejo Ridge Ave, Suite 200	Project: 250	5760
Thousand Oaks, CA 91361	Project Number: 451	3481418
	Project Manager: Ben	ı Chevlen

#### **Notes And Definitions**

J	Estimated Value (CLP Flag)
MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A01	PQL's and MDL's are raised due to sample dilution.
A10	PQL's and MDL's were raised due to matrix interference.
S08	The internal standard on the sample was not within the control limits.
Z1	Combined two VOAs for a complete sample.
Z1a	Sample plugged twice at 5.0g.
Z1b	Sample was analysed twice and both times internal standards were low.

### APPENDIX F HISTORICAL GROUNDWATER ANALYTICAL RESULTS

Additional Assessment Report and Remedial Action Plan 76 Service Station No. 5760 376 Lewelling Boulevard San Lorenzo, California

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	water	Change in Elevation	TPH-G	TPH-G			Ethyl-	Total	MTBE	MTBE	Comments
				Elevation	L	8015	(GC/MS)	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)								
U-1			(Scre	en Interva	l in feet: 10.	5-30.5)								
2/9/88						93000		3600	11000		20000			
3/20/9	0					36000		2100	5500	1900	9300			
6/5/90	)					46000		2300	5500	2500	11000			
8/24/9	0					27000		1200	1800	1400	5500			
12/5/9	0													Not sampled due to free product
3/4/91														Not sampled due to free product
6/3/91														Not sampled due to free product
9/19/9	1													Not sampled due to free product
12/4/9	1													Not sampled due to free product
3/5/92	2													Not sampled due to free product
4/7/92	2													Not sampled due to free product
8/6/92	2													Not sampled due to free product
11/20/9														Not sampled due to free product
2/12/9	3					70000		2200	8400	3100	18000			
6/4/93	40.51	16.72	0.00	23.79		35000		1300	5700	900	9200			
9/9/93	40.51	17.77	0.00	22.74	-1.05	67000		2900	18000	6200	32000			

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G 8015	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
U-1 co	ontinued													
12/2/93	3 40.20	18.36	0.01	21.85	-0.89									Not sampled due to free product
3/9/94	40.20	17.20	0.00	23.00	1.15	45000		930	4100	2000	11000			
6/9/94	40.20	17.42	0.00	22.78	-0.22	59000		5200	1300	5200	15000			
9/7/94	40.20	18.17	0.00	22.03	-0.75	41000		1600	6200	3100	16000			
12/5/94	4 40.20	16.67	0.00	23.53	1.50	1300		55	20	16	330			
3/9/95	40.20	15.82	0.00	24.38	0.85	49000		860	3200	1900	10000	1500		
6/13/9	5 40.20	14.70	0.00	25.50	1.12	53000		1400	5000	2500	14000	2800		
9/12/9	5 40.01	16.77	0.00	23.24	-2.26	43000		910	2700	1700	9600	1400		
12/14/9	40.20													Inaccessible; system not running
3/20/90	6 40.20													Inaccessible; system not running
3/22/90	6 40.20					13000		200	590	640	4000	790		
9/24/90	6 40.20													Inaccessible; system not running
3/27/97	7 40.20	15.29	0.00	24.91		1300		8	ND	ND	400	ND		
9/23/97	7 40.20	17.20	0.00	23.00	-1.91	2000		15	ND	ND	530	ND		
3/10/98	8 40.20	12.68	0.00	27.52	4.52	2200		19	4.8	ND	980	38		
9/4/98	40.20	16.84	0.00	23.36	-4.16	5300		53	ND	410	620	ND		
3/4/99	40.20	13.04	0.00	27.16	3.80	1500		19	ND	56	110	310		
9/13/99	9 40.20	17.14	0.00	23.06	-4.10	5850		32.7	ND	520	925	ND		
3/21/00	0 40.20	14.36	0.00	25.84	2.78	4820		17.4	7.74	297	1370	ND		
9/18/00	0 40.20	16.72	0.00	23.48	-2.36	647		6.44	ND	22.3	6.86	22.2		

	Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation	TPH-G	TPH-G			Ethyl-	Total	MTBE	MTBE	Comments
					Elevation	l	8015	(GC/MS)	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
		(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
	U-1 co	ontinued													
	10/13/0	00 40.20	16.85	0.00	23.35	-0.13								29	
	3/16/0	40.20	15.84	0.00	24.36	1.01	4950		1.73	1.77	429	536	613		
	9/4/01	1 40.20	17.16	0.00	23.04	-1.32	11000		25	ND<10	1100	1800	370		
	3/18/0	40.20	15.60		24.60	1.56	8100		ND<20	ND<20	740	1300	ND<200		
	9/17/0	40.20	17.35	0.00	22.85	-1.75		4200	ND<2.5	ND<2.5	120	43		280	
	3/28/0	40.20	15.72	0.00	24.48	1.63		560	ND<0.50	ND<0.50	0.96	ND<1.0		69	
	9/5/03	3 40.20	16.77		23.43	-1.05		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2	
	3/4/04	4 40.20	14.64	0.00	25.56	2.13		20000	ND<20	ND<20	1900	8300		ND<80	
	9/9/04	4 40.20	16.64	0.00	23.56	-2.00		22000	ND<20	ND<20	1800	6100		ND<20	
	3/1/05	5 40.20	14.70	0.00	25.50	1.94		25000	ND<13	ND<13	1900	6800		ND<13	
	8/2/05	5 40.20	15.44	0.00	24.76	-0.74		11000	ND<10	ND<10	780	2600		ND<10	
	1/20/0	6 40.20	14.66	0.00	25.54	0.78		65000	5.0	ND<0.50	5000	18000		2.6	
	7/11/0	6 40.20	15.01	0.00	25.19	-0.35		9200	ND<50	ND<50	680	2400		ND<50	
	3/9/07	7 40.20	15.52	0.00	24.68	-0.51		15000	6.7	ND<5.0	890	3200		ND<5.0	
	7/6/07	7 40.20													Abandoned on 7/18/07
U	-1R			(Scre	en Interva	l in feet: 10-	-25)								
	7/6/07	7 42.65	17.24	0.00	25.41			36000	7.2	8.3	2200	10000		ND<0.50	Gauged and sampled on 8/10/07
	1/7/08	8 42.65	16.51	0.00	26.14	0.73		28000	ND<12	ND<12	1900	7300		ND<12	
	6/24/0	42.65	17.56	0.00	25.09	-1.05		29000	ND<25	ND<25	2400	7900		ND<25	
	8/29/0	42.65	17.68	0.00	24.97	-0.12		35000	ND<25	ND<25	3000	8900		ND<25	
	11/17/0	08 42.65	18.10	0.00	24.55	-0.42		24000	ND<25	ND<25	2200	6300		ND<25	
	3/13/0	9 42.65	16.40	0.00	26.25	1.70		20000	ND<12	ND<12	1800	4400		ND<12	



Date	TOC	Depth to	LPH		Change in									Comments
Sampled	Elevation	Water	Thickness	water Elevation	Elevation	TPH-G	TPH-G			Ethyl-	Total	MTBE	MTBE	
						8015	(GC/MS)	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)								
	continued													
5/1/09				25.76	-0.49		17000	ND<12	ND<12	1600	3400		ND<12	
7/2/09		17.35		25.30	-0.46		21000	ND<25	ND<25	1800	3500		ND<25	
1/18/1	0 42.65	17.48	0.00	25.17	-0.13		12000	ND<12	ND<12	1200	1200		ND<12	
U-2			(Scre	en Interva	l in feet: 15.	0-30.0)								
8/23/9	00					ND		ND	ND	ND	ND			
12/5/9	00					ND		ND	ND	ND	ND			
3/4/9	1					ND		ND	0.9	ND	2.6			
6/3/9	1					ND		ND	ND	ND	ND			
9/19/9	1					ND		ND	ND	ND	ND			
12/4/9	1					ND		ND	ND	ND	ND			
3/5/92	2					ND		ND	0.36	ND	ND			
4/7/92	2					ND		ND	ND	ND	ND			
8/6/92	2					ND		ND	ND	ND	ND			
11/20/9	92					ND		ND	ND	ND	ND			
2/12/9						ND		ND	ND	ND	ND			
6/4/93	3 41.62	17.59	0.00	24.03		ND		ND	ND	ND	ND			
9/9/93	3 41.62	18.68	0.00	22.94	-1.09	ND		ND	ND	ND	ND			
12/2/9	41.26	19.23	0.00	22.03	-0.91	ND		ND	ND	ND	ND			
3/9/94	4 41.26	18.05	0.00	23.21	1.18	62		1.1	5.4	1.1	9.7			
4/13/9				23.08	-0.13	ND		ND	ND	ND	ND			
6/9/94				23.00	-0.08	ND		ND	ND	ND	ND			
9/7/94				21.98	-1.02	ND		ND	0.63	ND	0.61			
12/5/9				22.44	0.46	ND		ND	ND	ND	ND			

Date Sampled		Depth to Water	LPH Thickness		Change in Elevation	TPH-G 8015	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
U-2 co	ontinued													
3/9/95	41.26	16.96	0.00	24.30	1.86	ND		ND	ND	ND	ND	ND		
6/13/9	5 41.26	16.71	0.00	24.55	0.25	ND		ND	ND	ND	ND	ND		
9/12/9	5 41.26	17.80	0.00	23.46	-1.09	ND		ND	ND	ND	ND	ND		
12/14/9	41.26	18.18	0.00	23.08	-0.38	ND		ND	ND	ND	ND	ND		
3/20/9	6 41.26	15.02	0.00	26.24	3.16									
9/24/9	6 41.26	17.90	0.00	23.36	-2.88									
3/27/9	7 41.26	16.45	0.00	24.81	1.45	ND		ND	ND	ND	ND	ND		
9/23/9	7 41.26	18.40	0.00	22.86	-1.95									
3/10/9	8 41.26	13.79	0.00	27.47	4.61	ND		ND	ND	ND	ND	ND		
9/4/98	41.26	17.98	0.00	23.28	-4.19									
3/4/99	41.26	14.96	0.00	26.30	3.02	ND		ND	ND	ND	ND	ND		
9/13/9	9 41.26	18.25	0.00	23.01	-3.29									
3/21/0	0 41.26	15.54	0.00	25.72	2.71	ND		ND	ND	ND	ND	ND		
9/18/0	0 41.26	17.55	0.00	23.71	-2.01									
3/16/0	1 41.26	17.06	0.00	24.20	0.49									
9/4/01	41.26	18.39	0.00	22.87	-1.33									
3/18/0	2 41.26	16.87		24.39	1.52									
9/17/0	2 41.26	18.33	0.00	22.93	-1.46									
3/28/0	3 41.26	16.95	0.00	24.31	1.38									
9/5/03	41.26	18.00	0.00	23.26	-1.05									Monitored Only
3/4/04	41.26	16.17	0.00	25.09	1.83									Monitored Only
9/9/04	41.26													Inaccessible-car parked on well



Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G 8015	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
_	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
U-2 co	ontinued													
3/1/05	41.26													Car parked on well
8/2/05	41.26	16.62	0.00	24.64										Monitored only
1/20/0	6 41.26	16.24	0.00	25.02	0.38									Monitored only
7/11/0	6 41.26	16.15	0.00	25.11	0.09									Monitored Only
3/9/07	41.26	16.71	0.00	24.55	-0.56									Monitored Only
7/6/07	43.65	17.80	0.00	25.85	1.30									Monitored Only
1/7/08	43.65	17.73	0.00	25.92	0.07									Monitored Only
6/24/08	8 43.65	18.00	0.00	25.65	-0.27									Monitored Only
8/29/08	8 43.65	17.93	0.00	25.72	0.07									Monitored only
11/17/0	43.65	18.85	0.00	24.80	-0.92									Monitored only
3/13/0	9 43.65	17.20	0.00	26.45	1.65									Monitored only
5/1/09	43.65	17.57	0.00	26.08	-0.37									Monitored only
7/2/09	43.65	18.08	0.00	25.57	-0.51									Monitored only
1/18/1	0 43.65	18.24	0.00	25.41	-0.16									Gauged only
U-3			(Scre	en Interva	l in feet: 15.	0-25.0)								
8/23/9	0					110000		4400	13000	2800	17000			
12/5/9	0					69000		1900	3500	1600	9800			
1/18/9	1					51000		1700	3100	1500	7500			
3/4/91						84000		1400	10000	2900	17000			
6/3/91						130000		5800	19000	4600	24000			
9/19/9	1					61000		3300	9700	2800	15000			
12/4/9	1					75000		2500	6100	1900	11000			
3/5/92						160000		5300	15000	5400	26000			



Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation	TPH-G 8015	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
U-3 c	ontinued													
4/7/9						97000		6100	16000	5400	28000			
8/6/9	2					140000		5100	13000	5000	23000			
11/20/	92					50000		3200	4700	1900	10000			
2/12/9						80000		3700	9400	3700	18000			
6/4/9	3 39.64	15.48	0.00	24.16		92000		2900	8700	4300	20000			
9/9/9	3 39.64	17.04	0.00	22.60	-1.56	110000		2800	10000	6500	31000			
12/2/9	39.26	17.55	0.00	21.71	-0.89	110000		3200	7700	5600	26000			
3/9/94	4 39.26	16.35	0.00	22.91	1.20	120000		4500	8300	5600	28000			
6/9/94	4 39.26	16.60	0.00	22.66	-0.25	120000		3300	6100	5200	26000			
9/7/94	4 39.26	17.61	0.00	21.65	-1.01	100000		2400	4900	4200	21000			
12/5/9	94 39.26	17.08	0.00	22.18	0.53	140000		3100	5100	4900	21000			
3/9/9	5 39.26	15.20	0.00	24.06	1.88	100000		2300	3300	4800	21000	54000		
6/13/9	39.26	15.11	0.00	24.15	0.09	64000		1700	1500	3800	18000	900		
9/12/9	39.26	16.11	0.00	23.15	-1.00	69000		1700	820	4000	19000	29000		
12/14/	95 39.26													Inaccessible; system not running
3/20/9	96 39.26													Inaccessible; system not running
3/22/9	39.26					15000		150	490	480	3100	400		
9/24/9	96 39.26													Inaccessible; system not running
3/27/9	39.26	14.77	0.00	24.49		110		ND	ND	ND	0.62	9.6		
9/23/9	97 39.26	16.74	0.00	22.52	-1.97	ND		ND	ND	ND	ND	ND		
3/10/9	98 39.26	12.18	0.00	27.08	4.56	ND		ND	ND	ND	3.1	ND		



Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	water	Change in Elevation	TPH-G	TPH-G			Ethyl-	Total	MTBE	MTBE	Comments
				Elevation		8015	(GC/MS)	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	$(\mu g/l)$	(µg/l)	(µg/l)	
U-3 co	ontinued													
9/4/98	39.26	16.46	0.00	22.80	-4.28	ND		ND	ND	1.2	2.3	ND		
3/4/99	39.26	13.48	0.00	25.78	2.98	ND		ND	ND	ND	ND	ND		
9/13/99	9 39.26	16.71	0.00	22.55	-3.23	ND		ND	1.77	ND	1.06	9.08		
3/21/00	0 39.26	13.87		25.39	2.84	18700		ND	ND	1290	4770	ND		
9/18/00	0 39.26	16.12	0.00	23.14	-2.25	ND		ND	ND	ND	ND	ND		
3/16/0	1 39.26	15.35	0.00	23.91	0.77	2310		ND	ND	184	618	ND		
9/4/01	39.26	16.71	0.00	22.55	-1.36	340		0.95	ND<0.50	8.1	18	ND<5.0		
3/18/02	2 39.26	15.11		24.15	1.60	6500		ND<10	ND<10	390	1400	ND<100		
9/17/02	2 39.26	17.67	0.00	21.59	-2.56		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		2.0	
3/28/03	3 39.26	15.25	0.00	24.01	2.42		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
9/5/03	39.26	16.30	0.00	22.96	-1.05		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
3/4/04	39.26	14.11	0.00	25.15	2.19		14000	ND<10	ND<10	940	3500		ND<40	
9/9/04	39.26	16.22	0.00	23.04	-2.11		1300	ND<2.5	ND<2.5	66	160		ND<2.5	
3/1/05	39.26	14.18	0.00	25.08	2.04		14000	ND<5.0	ND<5.0	690	2000		ND<5.0	
8/2/05	39.26	14.93	0.00	24.33	-0.75		6300	ND<2.5	ND<2.5	320	970		ND<2.5	
1/20/00	6 39.26	14.14	0.00	25.12	0.79		7600	ND<0.50	ND<0.50	390	890		ND<0.50	
7/11/00	6 39.26	14.52	0.00	24.74	-0.38		3800	ND<5.0	ND<5.0	190	420		ND<5.0	
3/9/07	39.26	15.05	0.00	24.21	-0.53		3800	ND<2.5	ND<2.5	130	240		ND<2.5	
7/6/07	39.26	16.17	0.00	23.09	-1.12		390	ND<0.50	ND<0.50	11	16		ND<0.50	Abandoned on 7/19/07
U-3R			(Scre	en Interva	l in feet: 10-	-25)								
7/6/07	41.58	16.29		25.29			290	ND<0.50	ND<0.50	ND<0.50	0.99		ND<0.50	Gauged and sampled on 8/10/07
1/7/08	41.58	15.46	0.00	26.12	0.83		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	



Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G 8015	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(μg/l)	(θC/MB) (μg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(8021B) (µg/l)	(8200B) (µg/l)	
U-3R	continued													
6/24/0		16.30	0.00	25.28	-0.84		99	ND<0.50	ND<0.50	11	2.5		ND<0.50	
8/29/0	8 41.58	16.74	0.00	24.84	-0.44		1500	ND<0.50	ND<0.50	100	51		ND<0.50	
11/17/0	41.58	17.13	0.00	24.45	-0.39		740	ND<0.50	ND<0.50	67	17		ND<0.50	
3/13/0	9 41.58	15.40	0.00	26.18	1.73		1300	ND<0.50	ND<0.50	100	22		ND<0.50	
5/1/09	41.58	15.81	0.00	25.77	-0.41		290	ND<0.50	ND<0.50	26	2.6		ND<0.50	
7/2/09	41.58	16.35	0.00	25.23	-0.54		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
1/18/1	0 41.58	16.50	0.00	25.08	-0.15		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
<b>U-4</b>			(Scre	en Interva	l in feet: 15.	0-28.0)								
8/23/9	0					ND		ND	1.0	ND	1.8			
12/5/9	0					ND		ND	ND	ND	ND			
1/18/9	1					ND		ND	ND	ND	ND			
3/4/91						ND		ND	ND	ND	ND			
6/3/91						ND		ND	ND	ND	ND			
9/19/9	1					ND		ND	ND	ND	ND			
12/4/9	1					ND		ND	ND	ND	ND			
3/5/92						ND		ND	ND	ND	ND			
4/7/92						ND		ND	ND	ND	ND			
8/6/92						ND		ND	ND	ND	ND			
11/20/9						ND		ND	2.5	ND	ND			
2/12/9	3					ND		ND	ND	ND	ND			
6/4/93	40.53	16.73		23.80		ND		ND	ND	ND	ND			
9/9/93	40.53	16.89	0.00	23.64	-0.16	ND		ND	ND	ND	ND			
12/2/9	3 40.25	18.46	0.00	21.79	-1.85	ND		ND	ND	ND	2.6			

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation	TPH-G 8015	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
U-4 co	ontinued													
3/9/94	40.25	17.30	0.00	22.95	1.16	ND		1.4	4.7	1.1	8.1			
4/13/94	4 40.25	17.44	0.00	22.81	-0.14	ND		ND	ND	ND	ND			
6/9/94	40.25	17.53	0.00	22.72	-0.09	ND		ND	ND	ND	ND			
9/7/94	40.28	18.52	0.00	21.76	-0.96	ND		ND	1.1	ND	1.0			
12/5/94	4 40.28	18.08	0.00	22.20	0.44	ND		ND	ND	ND	ND			
3/9/95	40.28	16.16	0.00	24.12	1.92	ND		ND	ND	ND	ND	ND		
6/13/9	5 40.25	15.95	0.00	24.30	0.18	ND		ND	ND	ND	ND	2.7		
9/12/9	5 40.25	17.10	0.00	23.15	-1.15	ND		ND	ND	ND	ND	ND		
12/14/9	40.25	17.43	0.00	22.82	-0.33	ND		ND	ND	ND	ND	1.3		
3/20/9	6 40.25	14.93	0.00	25.32	2.50									
9/24/9	6 40.25	17.19	0.00	23.06	-2.26									
3/27/9	7 40.25	15.66	0.00	24.59	1.53	ND		ND	ND	ND	ND	ND		
9/23/9	7 40.25	17.69	0.00	22.56	-2.03									
3/10/9	8 40.25	12.99	0.00	27.26	4.70	ND		ND	ND	ND	ND	ND		
9/4/98	40.25	17.28	0.00	22.97	-4.29									
3/4/99	40.25	14.17	0.00	26.08	3.11	ND		ND	ND	ND	ND	ND		
9/13/9	9 40.25	17.55	0.00	22.70	-3.38									
3/21/0	0 40.25	14.74	0.00	25.51	2.81	ND		ND	ND	ND	ND	ND		
9/18/0	0 40.25	16.88	0.00	23.37	-2.14									
3/16/0	1 40.25	16.32	0.00	23.93	0.56									
9/4/01	40.25	17.70	0.00	22.55	-1.38									
3/18/02	2 40.25	16.08		24.17	1.62									
9/17/0	2 40.25	16.56	0.00	23.69	-0.48									

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G	TPH-G	-		Ethyl-	Total	MTBE	MTBE	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	8015 (μg/l)	(GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	benzene (µg/l)	Xylenes (µg/l)	(8021B) (µg/l)	(8260B) (µg/l)	
U-4 co		(leet)	(leet)	(leet)	(leet)	(µg/1)	(µg/1)	(µg/1)	(µ8/1)	(µg/1)	(µg/1)	(µg/1)	(µg/1)	
3/28/0		16.15	0.00	24.10	0.41									
9/5/03		17.20	0.00	23.05	-1.05									Monitored Only
3/4/04	40.25	15.39	0.00	24.86	1.81									Monitored Only
9/9/04	40.25	16.98	0.00	23.27	-1.59									Monitored Only
3/1/05	40.25	14.97	0.00	25.28	2.01									Monitor Only
8/2/05	40.25	15.82	0.00	24.43	-0.85									Monitored Only
1/20/0	6 40.25	15.04	0.00	25.21	0.78									Monitored only
7/11/0	6 40.25	15.38	0.00	24.87	-0.34									Monitored Only
3/9/07	40.25	16.00	0.00	24.25	-0.62									Monitored Only
7/6/07	42.69	17.15	0.00	25.54	1.29									Monitored Only
1/7/08	42.69	16.65	0.00	26.04	0.50									Monitored Only
6/24/0	8 42.69	17.40	0.00	25.29	-0.75									Monitored Only
8/29/0	8 42.69	17.62	0.00	25.07	-0.22									Monitored only
11/17/0	42.69	18.20	0.00	24.49	-0.58									Monitored only
3/13/0	9 42.69	16.30	0.00	26.39	1.90									Monitored only
5/1/09	42.69	16.86	0.00	25.83	-0.56									Monitored only
7/2/09	42.69	17.20	0.00	25.49	-0.34									Monitored only
1/18/1	0 42.69	17.55	0.00	25.14	-0.35									Gauged only
-5			(Scre	en Interva	l in feet: 15.	0-30.0)								
4/7/92	2					ND		ND	ND	ND	ND			
8/6/92	2					ND		ND	ND	ND	ND			
11/20/9	02					ND		ND	ND	ND	ND			
2/12/9	3					ND		ND	ND	ND	ND			
								D 11	6.00					-



Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation	TPH-G	TPH-G			Ethyl-	Total	MTBE	MTBE	Comments
						8015	(GC/MS)	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
U-5 co			0.00											
6/4/93		16.05		23.56		ND		ND	ND	ND	ND			
9/9/93		16.90		22.71	-0.85	ND		ND	ND	ND	ND			
12/2/93		17.66		21.65	-1.06	ND		ND	ND	ND	ND			
3/9/94		16.45		22.86	1.21	71		1.7	6.3	1.5	10			
4/13/94		16.64	0.00	22.67	-0.19	ND		ND	ND	ND	ND			
6/9/94		16.70		22.61	-0.06	ND		ND	ND	ND	ND			
9/7/94		17.73	0.00	21.58	-1.03	ND		ND	0.73	ND	0.84			
12/5/94	4 39.31	17.23		22.08	0.50	ND		ND	ND	ND	ND			
3/9/95	39.31	15.35		23.96	1.88	ND		ND	ND	ND	ND	ND		
6/13/95	5 39.31	15.16	0.00	24.15	0.19	ND		ND	ND	ND	ND	0.87		
9/12/95	5 39.31	16.30	0.00	23.01	-1.14	ND		ND	ND	ND	ND	ND		
12/14/9	39.31	16.56	0.00	22.75	-0.26	ND		ND	ND	ND	ND	ND		
3/20/96	6 39.31	14.07	0.00	25.24	2.49									
9/24/96	6 39.31	16.55	0.00	22.76	-2.48									
3/27/97	7 39.31	14.85	0.00	24.46	1.70	ND		ND	ND	ND	ND	ND		
9/23/97	7 39.31	16.90	0.00	22.41	-2.05									Sampled annually
3/10/98	8 39.31	12.21	0.00	27.10	4.69	ND		ND	ND	ND	ND	ND		
9/4/98	39.31	16.57	0.00	22.74	-4.36									
3/4/99	39.31	13.42	0.00	25.89	3.15	ND		ND	0.67	ND	ND	ND		
9/13/99	9 39.31	17.02	0.00	22.29	-3.60									
3/21/00	0 39.31	13.93	0.00	25.38	3.09	ND		ND	ND	ND	ND	ND		
9/18/00	0 39.31	16.17	0.00	23.14	-2.24									
3/16/01	1 39.31	15.51	0.00	23.80	0.66	ND		ND	ND	ND	ND	ND		

Date Sampled I	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G 8015	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
U-5 con	ntinued													
9/4/01	39.31	16.88	0.00	22.43	-1.37									
3/18/02	39.31	15.25		24.06	1.63	ND<50		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0		
9/17/02	39.31	16.71	0.00	22.60	-1.46									Sampled annually
3/28/03	39.31	15.21	0.00	24.10	1.50		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
9/5/03	39.31	16.26	0.00	23.05	-1.05									Sampled annually
3/4/04	39.31	14.79	0.00	24.52	1.47		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
9/9/04	39.31	16.30	0.00	23.01	-1.51									Monitored Only
3/1/05	39.31	14.38	0.00	24.93	1.92		ND<50	ND<0.50	ND<0.50	0.53	2.0		ND<0.50	
8/2/05	39.31	15.02	0.00	24.29	-0.64									Sampled Annual
1/20/06	39.31	14.23	0.00	25.08	0.79		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
7/11/06	39.31	14.60	0.00	24.71	-0.37									Sampled Q1 only
3/9/07	39.31	15.10	0.00	24.21	-0.50		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
7/6/07	41.74	16.23	0.00	25.51	1.30									Sampled Q1 only
1/7/08	41.74	15.81	0.00	25.93	0.42		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
6/24/08	41.74	16.51	0.00	25.23	-0.70									Sampled Q1 only
8/29/08	41.74	16.98	0.00	24.76	-0.47									Sampled Q1 only
11/17/08	3 41.74	17.25	0.00	24.49	-0.27									Sampled Q1 only
3/13/09	41.74	15.78	0.00	25.96	1.47		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
5/1/09	41.74	16.04	0.00	25.70	-0.26									Sampled Q1 only
7/2/09	41.74	16.53	0.00	25.21	-0.49									Sampled Q1 only
1/18/10	41.74	16.73	0.00	25.01	-0.20		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
-6			(Scre	en Interva	l in feet: 13.	.0-28.0)								
4/7/92						6600		90	ND	820	1200			
60								Page 1	3 of 22					TPC

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	water Elevation		TPH-G 8015	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
U-6 co														
8/6/92						9200		160	ND	360	150			
11/20/9														Inaccessible
2/12/9	3					2600		27	ND	120	51			
6/4/93	37.94	14.45	0.00	23.49		13000		100	38	450	320			
9/9/93	37.94	15.56	0.00	22.38	-1.11	6300		29	ND	120	34			
12/2/9	3 37.68	16.08	0.00	21.60	-0.78	2100		12	1.6	21	1.1			
3/9/94	37.68	14.90	0.00	22.78	1.18	2200		11	8.2	24	16			
6/9/94	37.68	15.18	0.00	22.50	-0.28	2600		16	ND	29	ND			
9/7/94	37.68	16.20	0.00	21.48	-1.02	16004		ND	ND	ND	ND			
12/5/94	4 37.68	15.60	0.00	22.08	0.60	450		ND	ND	ND	ND			
3/9/95	37.68	13.74	0.00	23.94	1.86	2500		29	ND	70	120	320		
6/13/9	5 37.68	13.73	0.00	23.95	0.01	1300		ND	ND	20	46	5400		
9/12/9	5 37.68	14.85	0.00	22.83	-1.12	ND		ND	ND	ND	ND	6600		
12/14/9	95 37.68	14.89	0.00	22.79	-0.04	760		ND	ND	7	8.4	1100		
3/20/9	6 37.68	12.41	0.00	25.27	2.48	52		1.1	0.98	ND	0.75	1200		
9/24/9	6 37.68	15.06	0.00	22.62	-2.65	ND		ND	ND	ND	ND	750		
3/27/9	7 37.68	13.48	0.00	24.20	1.58	ND		ND	ND	ND	ND	150		
9/23/9	7 37.68	15.36	0.00	22.32	-1.88	66		0.81	ND	ND	ND	150		
3/10/9	8 37.68	10.90	0.00	26.78	4.46	ND		ND	ND	ND	ND	18		
9/4/98	37.68	14.85	0.00	22.83	-3.95	ND		ND	ND	ND	ND	ND		
3/4/99	37.68	12.10	0.00	25.58	2.75	ND		ND	ND	ND	ND	6.5		
9/13/9	9 37.68													Inaccessible covered with

asphalt



Date	TOC	Depth to	LPH		Change in									Comments
Sampled	Elevation	Water	Thickness	water Elevation	Elevation	TPH-G	TPH-G	_		Ethyl-	Total	MTBE	MTBE	
		(2)				8015	(GC/MS)	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
<b>U-6</b> co 3/21/0	ontinued 0 37.68													Inaccessible covered with asphalt
9/18/0	0 37.68													Inaccessible covered with asphalt
3/16/0	1 37.68													Inaccessible covered with asphalt
9/4/03	1 37.68													Inaccessible covered with asphalt
3/18/0	2 37.68													Inaccessible covered with asphalt
9/17/0	2 37.68													Inaccessible covered with asphalt
9/5/03	3 37.68													Covered with asphalt
3/4/04	4 37.68													Covered with asphalt
9/9/04	4 37.68													Covered with asphalt
3/1/05	5 37.68													Unable to locate-Paved over
9/8/05	5 37.68	13.98	0.00	23.70			ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	Paved over on 8/2/05
1/20/0	6 37.68	12.76	<b>0.00</b>	24.92	1.22		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
7/11/0	6 37.68	13.23	0.00	24.45	-0.47		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
3/9/07	7 37.68	13.67	0.00	24.01	-0.44		140	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
7/6/07	7 40.07	14.76	<b>5</b> 0.00	25.31	1.30		79	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
1/7/08	3 40.07	14.02	0.00	26.05	0.74		65	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
6/24/0	8 40.07	14.98	3 0.00	25.09	-0.96									Sampled Q1 and Q3 only
8/29/0	8 40.07	15.42	0.00	24.65	-0.44		120	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
11/17/0	08 40.07													Car parked over well



Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	water	Change in Elevation	TPH-G	TPH-G			Ethyl-	Total	MTBE	MTBE	Comments
				Elevation		8015	(GC/MS)	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)								
U-6 co	ontinued													
3/13/0		14.10	0.00	25.97			100	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
5/1/09	40.07	14.52	0.00	25.55	-0.42									Sampled Q1 and Q3 only
7/2/09	40.07	15.10	0.00	24.97	-0.58		110	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
1/18/10	0 40.07	15.14	0.00	24.93	-0.04		130	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
U-7			(Scre	en Interva	l in feet: 15.	0-35.0)								
4/7/92	2					ND		ND	ND	ND	ND			
8/6/92	2					ND		ND	ND	ND	ND			
11/20/9						ND		ND	ND	ND	ND			
2/12/93	3					ND		ND	ND	ND	ND			
6/4/93	37.49	14.17	0.00	23.32		ND		ND	ND	ND	ND			
9/9/93	37.49	15.23	0.00	22.26	-1.06	ND		ND	ND	ND	ND			
12/2/93	3 37.11	15.61	0.00	21.50	-0.76	ND		ND	ND	ND	ND			
3/9/94	37.11	14.45	0.00	22.66	1.16	ND		1.4	4.4	0.96	7.5			
4/13/94	4 37.11	14.63	0.00	22.48	-0.18	ND		ND	ND	ND	ND			
6/9/94	37.11	14.70	0.00	22.41	-0.07	ND		ND	ND	ND	ND			
9/7/94	37.11	15.72	0.00	21.39	-1.02	ND		ND	ND	ND	ND			
12/5/94	4 37.11	15.10	0.00	22.01	0.62	ND		ND	ND	ND	ND			
3/9/95	37.11	13.36	0.00	23.75	1.74	ND		ND	ND	ND	ND	ND		
6/13/9	5 37.11	13.33	0.00	23.78	0.03	ND		ND	ND	ND	ND	3.5		
9/12/9	5 37.11	14.40	0.00	22.71	-1.07	ND		ND	ND	ND	ND	ND		
12/14/9	95 37.11	14.39	0.00	22.72	0.01	ND		ND	ND	ND	ND	1.4		
3/20/9	6 37.11	11.96	0.00	25.15	2.43									
9/24/9	6 37.11	14.59	0.00	22.52	-2.63									

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness		Change in Elevation	TPH-G	TPH-G			Ethyl-	Total	MTBE	MTBE	Comments
•				Elevation		8015	(GC/MS)	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
U-7 c	ontinued													
3/27/9	37.11	13.08	0.00	24.03	1.51	ND		ND	ND	ND	ND	ND		
9/23/9	37.11	14.90	0.00	22.21	-1.82									
3/10/9	8 37.11	10.46	0.00	26.65	4.44	ND		ND	ND	ND	ND	ND		
9/4/98	37.11	14.42	0.00	22.69	-3.96									
3/4/99	9 37.11	11.64	0.00	25.47	2.78	ND		ND	ND	ND	ND	6.6		
9/13/9	9 37.11													Inaccessible covered with asphalt
3/21/0	0 37.11													Inaccessible covered with asphalt
9/18/0	0 37.11													Inaccessible covered with asphalt
3/16/0	37.11													Inaccessible covered with asphalt
9/4/01	1 37.11													Inaccessible covered with asphalt
9/17/0	37.11													Inaccessible covered with asphalt
9/5/03	3 37.11													Covered with asphalt
3/4/04	4 37.11													Covered with asphalt
9/9/04	4 37.11													Covered with asphalt
3/1/05	5 37.11													Unable to locate-Paved over
9/8/05	5 37.11	13.59	0.00	23.52			ND<50	ND<0.50	0.89	ND<0.50	1.7		ND<0.50	Paved over on 8/2/05
1/20/0	6 37.11	12.33	0.00	24.78	1.26		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
7/11/0	6 37.11	12.84	0.00	24.27	-0.51		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
3/9/07	7 37.11	13.25	0.00	23.86	-0.41		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	



Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G	TPH-G			Ethyl-	Total	MTBE	MTBE	Comments
	(ft)	(64)	(ft)			8015	(GC/MS)	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)								
	ntinued													Car over well
7/6/07														Car over wen
1/7/08			0.00	26.00			ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
6/24/08			0.00	25.45	-0.55									Sampled Q1 and Q3 only
8/29/08														Car parked over well
11/17/0	8 39.50													Car parked over well
3/13/09	39.50	13.60	0.00	25.90			ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
5/1/09	39.50	14.88	0.00	24.62	-1.28									Sampled Q1 and Q3 only
7/2/09	39.50													Car parked over well
1/18/10	39.50	14.45	0.00	25.05			ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
U-8			(Scre	en Interva	l in feet: 15.	0-30.0)								
4/7/92						ND		ND	ND	ND	ND			
8/6/92						ND		ND	ND	ND	ND			
2/12/93	3					ND		ND	ND	ND	ND			
6/4/93	38.94	15.26	0.00	23.68		ND		ND	ND	ND	ND			
9/9/93	38.94	16.38	0.00	22.56	-1.12	ND		ND	ND	ND	ND			
12/2/93	3 38.57	16.80	0.00	21.77	-0.79	ND		ND	ND	ND	ND			
3/9/94	38.57	15.62	0.00	22.95	1.18	ND		1.2	3.7	0.79	6.1			
4/13/94	4 38.57	15.80	0.00	22.77	-0.18	ND		ND	0.78	ND	0.98			
6/9/94		15.86	0.00	22.71	-0.06	ND		ND	ND	ND	ND			
9/7/94		16.87	0.00	21.70	-1.01	ND		ND	ND	ND	ND			
12/5/94		16.32		22.25	0.55	ND		ND	ND	ND	ND			
3/9/95		14.56		24.01	1.76	ND		ND	ND	ND	ND	ND		
6/13/95				24.01	0.16	ND		ND	ND	ND	ND	ND		
0/15/93	5 50.57	14.40	0.00	24.17	0.10	ND		ND	ND	ND	ND	ND		

	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G 8015	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
U-8 con	tinued													
9/12/95	38.57	15.50	0.00	23.07	-1.10	ND		ND	ND	ND	ND	ND		
12/14/95	38.57	15.67	0.00	22.90	-0.17	ND		ND	ND	ND	ND	ND		
3/20/96	38.57	13.25	0.00	25.32	2.42									
9/24/96	38.57	15.75	0.00	22.82	-2.50									
3/27/97	38.57	14.18	0.00	24.39	1.57	ND		ND	ND	ND	ND	ND		
9/23/97	38.57	16.05	0.00	22.52	-1.87									Sampled annually
3/10/98	38.57	11.63	0.00	26.94	4.42	ND		ND	ND	ND	ND	ND		
9/4/98	38.57	15.81	0.00	22.76	-4.18									
3/4/99	38.57	12.81	0.00	25.76	3.00	ND		ND	ND	ND	ND	ND		
9/13/99	38.57	16.37	0.00	22.20	-3.56									
3/21/00	38.57	13.25	0.00	25.32	3.12	ND		ND	ND	ND	ND	ND		
9/18/00	38.57	15.31	0.00	23.26	-2.06									
3/16/01	38.57	14.71	0.00	23.86	0.60	ND		ND	ND	ND	ND	ND		
9/4/01	38.57	16.01	0.00	22.56	-1.30									
3/18/02	38.57	14.46		24.11	1.55	ND<50		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0		
9/17/02	38.57	15.93	0.00	22.64	-1.47									Sampled annually
3/28/03	38.57	14.40	0.00	24.17	1.53		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
9/5/03	38.57	15.46	0.00	23.11	-1.06									Sampled annually
3/4/04	38.57	13.98	0.00	24.59	1.48		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
9/9/04	38.57	15.53	0.00	23.04	-1.55									Monitored Only
3/1/05	38.57	13.56	0.00	25.01	1.97		ND<50	ND<0.50	ND<0.50	0.80	2.8		ND<0.50	
8/2/05	38.57	14.31	0.00	24.26	-0.75									Sampled annually
1/20/06	38.57	13.51	0.00	25.06	0.80		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
50								Page 1	9 of 22					ATDO



Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G 8015	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
U-8 co	ontinued													
7/11/0	6 38.57	13.94	0.00	24.63	-0.43									Sampled Q1 only
3/9/07	38.57	14.40	0.00	24.17	-0.46		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
7/6/07	40.95	15.44	0.00	25.51	1.34		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
1/7/08	40.95	14.79	0.00	26.16	0.65		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
6/24/08	8 40.95	15.67	0.00	25.28	-0.88									Sampled Q1 and Q3 only
8/29/08	8 40.95	16.11	0.00	24.84	-0.44		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
11/17/0	40.95	16.48	0.00	24.47	-0.37									Sampled Q1 and Q3 only
3/13/0	9 40.95	14.78	0.00	26.17	1.70		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
5/1/09	40.95	15.20	0.00	25.75	-0.42									Sampled Q1 and Q3 only
7/2/09	40.95	15.75	0.00	25.20	-0.55		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
1/18/1	0 40.95	15.85	0.00	25.10	-0.10		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
U-9			(Scre	en Interva	l in feet: 13.	.0-28.0)								
6/4/93	37.88	14.67	0.00	23.21		2100		ND	ND	ND	ND			
9/9/93	37.88	15.79	0.00	22.09	-1.12	1200		ND	ND	ND	ND			
12/2/93	3 37.31	15.93	0.00	21.38	-0.71	ND		ND	ND	ND	ND			
3/9/94	37.31	14.74	0.00	22.57	1.19	5700		ND	ND	ND	ND			
4/13/94	4 37.31	14.96	0.00	22.35	-0.22	ND		ND	ND	ND	ND			
6/9/94	37.31	15.05	0.00	22.26	-0.09	2900		ND	ND	ND	ND			
9/7/94	37.31	16.06	0.00	21.25	-1.01	2700		ND	ND	ND	ND			
12/5/94	4 37.31	15.43	0.00	21.88	0.63	3700		ND	ND	ND	ND			
3/9/95	37.31	13.50	0.00	23.81	1.93	2500		ND	ND	ND	ND	5800		
6/13/9	5 37.31	13.63	0.00	23.68	-0.13	ND		ND	ND	ND	ND	1200		
9/12/9	5 37.31	14.73	0.00	22.58	-1.10	ND		ND	ND	ND	ND	1600		

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water	Change in Elevation	TPH-G	TPH-G			Ethyl-	Total	MTBE	MTBE	Comments
				Elevation	l	8015	(GC/MS)	Benzene	Toluene	benzene	Xylenes	(8021B)	(8260B)	
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
U-9 c	ontinued													
12/14/9	95 37.31	14.67	0.00	22.64	0.06	ND		ND	ND	ND	ND	4400		
3/20/9	6 37.31	12.27	0.00	25.04	2.40	ND		ND	ND	ND	ND	480		
9/24/9	6 37.31	14.92	0.00	22.39	-2.65	ND		ND	ND	ND	ND	ND		
3/27/9	37.31	13.36	0.00	23.95	1.56	ND		ND	ND	ND	ND	42		
9/23/9	37.31	15.28	0.00	22.03	-1.92	ND		ND	ND	ND	ND	ND		
3/10/9	8 37.31	10.86	0.00	26.45	4.42	ND		ND	ND	ND	3.1	ND		
9/4/98	8 37.31	15.03	0.00	22.28	-4.17	ND		ND	ND	ND	ND	ND		
3/4/99	9 37.31	11.95	0.00	25.36	3.08	ND		ND	ND	ND	ND	ND		
9/13/9	9 37.31	15.61	0.00	21.70	-3.66	ND		ND	1.67	ND	1.01	7.85		
3/21/0	0 37.31	12.38	0.00	24.93	3.23	ND		ND	ND	ND	ND	ND		
9/18/0	0 37.31	14.87	0.00	22.44	-2.49	ND		ND	1.42	ND	1.06	ND		
3/16/0	37.31	13.85	0.00	23.46	1.02	ND		ND	ND	ND	ND	ND		
9/4/01	1 37.31	15.22	0.00	22.09	-1.37									Sampled annually
3/18/0	37.31	13.56		23.75	1.66	ND<50		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0		
9/17/0	37.31	15.14	0.00	22.17	-1.58									Sampled annually
3/28/0	3 37.31	13.61	0.00	23.70	1.53		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
9/5/03	3 37.31	14.64	0.00	22.67	-1.03									Sampled annually
3/4/04	4 37.31	13.07	0.00	24.24	1.57		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<2.0	
9/9/04	4 37.31	14.75	0.00	22.56	-1.68									Monitored Only
3/1/05	5 37.31	12.68	0.00	24.63	2.07		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		4.1	
8/2/05	5 37.31	13.47	0.00	23.84	-0.79									Sampled annually
1/20/0	6 37.31	12.61	0.00	24.70	0.86		ND<50	ND<0.50	ND<0.50	0.78	2.8		ND<0.50	
7/11/0	6 37.31	13.10	0.00	24.21	-0.49									Sampled Q1 only
								D 0	1 6 0 0					

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	water Elevation		TPH-G 8015	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
U-9 c	ontinued													
3/9/07	7 37.31	13.55	0.00	23.76	-0.45		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50		ND<0.50	
7/6/07	7 39.72	2 14.63	0.00	25.09	1.33									Sampled Q1 only
1/7/08	39.72	13.85	0.00	25.87	0.78		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
6/24/0	8 39.72	14.89	0.00	24.83	-1.04									Sampled Q1 only
8/29/0	8 39.72	15.32	0.00	24.40	-0.43									Sampled Q1 only
11/17/0	08 39.72	15.70	0.00	24.02	-0.38									Sampled Q1 only
3/13/0	9 39.72	13.90	0.00	25.82	1.80		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	
5/1/09	9 39.72	14.37	0.00	25.35	-0.47									Sampled Q1 only
7/2/09	9 39.72	14.90	0.00	24.82	-0.53									Sampled Q1 only
1/18/1	0 39.72	2 14.97	0.00	24.75	-0.07		ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0		ND<0.50	



					76	Station 5760					
Date Sampled		Ethanol	Ethylene- dibromide	1,2-DCA					Post-purge Dissolved	Pre-purge Dissolved	
	TBA	(8260B)	(EDB)	(EDC)	DIPE	ETBE	TAME	1,1-DCA	Oxygen	Oxygen	
	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(mg/l)	(mg/l)	
U-1											
3/27/97									2.35	2.41	
10/13/00	ND	ND	ND		ND	ND	ND	ND			
9/17/02	ND<500	ND<2500	ND<10		ND<10	ND<10	ND<10	ND<10			
9/5/03		ND<500									
3/4/04		ND<20000									
9/9/04		ND<2000									
3/1/05		ND<1300									
8/2/05		ND<1000									
1/20/06		ND<250									
7/11/06		ND<25000									
3/9/07		ND<2500									
U-1R											
7/6/07		ND<250									
1/7/08		ND<6200									
6/24/08		ND<12000									
8/29/08	ND<500	ND<12000	ND<25	ND<25	ND<25	ND<25	ND<25				
11/17/08	ND<500	ND<12000	ND<25	ND<25	ND<25	ND<25	ND<25				
3/13/09	ND<250	ND<6200	ND<12	ND<12	ND<12	ND<12	ND<12				
5/1/09	ND<250		ND<12	ND<12	ND<12	ND<12	ND<12				
7/2/09	ND<500	ND<12000	ND<25	ND<25	ND<25	ND<25	ND<25				
1/18/10	ND<250	ND<6200	ND<12	ND<12	ND<12	ND<12	ND<12				
U <b>-2</b> 3/27/97									4.49	4.36	

U-3



					70	Station 5700				
Date Sampled	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME	1,1-DCA	Post-purge Dissolved Oxygen	Pre-purge Dissolved Oxygen
	(µg/l)	(8200B) (µg/l)	(μg/l)	(LDC) (µg/l)	μg/l)	(µg/l)	(µg/l)	(µg/l)	(mg/l)	(mg/l)
		(µg/1)	(µg/1)	(µg/1)	(μβ/1)	(µg/1)	(µg/1)	(µg/1)	(111g/1)	(IIIg/1)
<b>U-3 conti</b> 3/27/97	nuea								3.32	3.18
9/5/03		ND<500								
3/4/04		ND<10000								
9/9/04		ND<250								
3/1/05		ND<500								
8/2/05		ND<250								
1/20/06		ND<250								
7/11/06		ND<2500								
3/9/07		ND<1200								
7/6/07		ND<250								
U-3R										
7/6/07		ND<250								
1/7/08		ND<250								
6/24/08		ND<250								
8/29/08	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50			
11/17/08	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50			
3/13/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50			
5/1/09	ND<10		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50			
7/2/09	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50			
1/18/10	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50			
U-4										
3/27/97									3.26	3.32
U-5										
3/27/97									3.77	3.74

**CTRC** 

					76	5 Station 5760	)				
Date Sampled		Ethanol	Ethylene- dibromide	1,2-DCA					Post-purge Dissolved	Pre-purge Dissolved	
	TBA	(8260B)	(EDB)	(EDC)	DIPE	ETBE	TAME	1,1-DCA	Oxygen	Oxygen	
	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(mg/l)	(mg/l)	
U-5 cont	inued										
3/4/04		ND<500									
3/1/05		ND<50									
1/20/06		ND<250									
3/9/07		ND<250									
1/7/08		ND<250									
3/13/09	ND<10		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50				
1/18/10	ND<10		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50				
U-6											
3/20/96									3.89	3.85	
9/24/96									3.81	3.73	
3/27/97									4.36	4.43	
9/23/97									4.14		
3/10/98									3.95		
9/8/05		ND<1000									
1/20/06		ND<250									
7/11/06		ND<250									
3/9/07		ND<250									
7/6/07		ND<250									
1/7/08		ND<250									
8/29/08	ND<10		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50				
3/13/09	ND<10		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50				
7/2/09	ND<10		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50				
1/18/10	ND<10		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50				
U-7											
3/27/97									3.38	3.29	
5700						Page 3 of 5					0

Table 2
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 5760

					/0	5 Station 5700	•				
Date Sampled	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME	1,1-DCA	Post-purge Dissolved Oxygen	Pre-purge Dissolved Oxygen	
	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(mg/l)	(mg/l)	
<b>U-7 cont</b> 9/8/05		ND<1000									
1/20/06		ND<250									
7/11/06		ND<250									
3/9/07		ND<250									
1/7/08		ND<250									
3/13/09	 ND<10		 ND<0.50	 ND<0.50	 ND<0.50	 ND<0.50	 ND<0.50				
1/18/10	ND<10 ND<10		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50				
1/10/10	ND<10		ND<0.50	ND<0.50	110<0.50	ND<0.50	110<0.50				
<b>U-8</b>											
3/27/97									3.11	3.04	
3/4/04		ND<500									
3/1/05		ND<50									
1/20/06		ND<250									
3/9/07		ND<250									
7/6/07		ND<250									
1/7/08		ND<250									
8/29/08	ND<10		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50				
3/13/09	ND<10		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50				
7/2/09	ND<10		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50				
1/18/10	ND<10		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50				
U-9											
3/20/96									4	4.02	
9/24/96									3.98	3.85	
3/27/97									3.57	3.65	
9/23/97									3.8		
3/10/98									3.62		
5760						Page 4 of 5					OTRC.



Date Sampled	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME	1,1-DCA	Post-purge Dissolved Oxygen	Pre-purge Dissolved Oxygen
	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(mg/l)	(mg/l)
U-9 conti	nued									
3/4/04		ND<500								
3/1/05		ND<50								
1/20/06		ND<250								
3/9/07		ND<250								
1/7/08		ND<250								
3/13/09	ND<10		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50			
1/18/10	ND<10		ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50			



### APPENDIX G HISTORICAL SOIL ANALYTICAL RESULTS

Additional Assessment Report and Remedial Action Plan 76 Service Station No. 5760 376 Lewelling Boulevard San Lorenzo, California

*==************************************
SOIL ANALYSIS DATA

SAMPLE No	SAMPLE DATE	ANALYSIS	TPH (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)
u-2-15	06-Aug-90	16-Aug-90	<1	<0.005	<0.005	<0.005	0.006
U-2-20	06-Aug-90	16-Aug-90	<1	<0.005	<0.005	<0.005	0.006
U-3-15	06-Aug-90	16-Aug-90	2.9	<0.005	<0.005	0.29	<0.005
U-3-20	06-Aug-90	16-Aug-90	640	4.5	37	22	110
U-3-29	06-Aug-90	17-Aug-90	<1	<0.005	0.017	0.009	0.045
U-4-15	06-Aug-90	17-Aug-90	<1	<0.005	<0.005	<0.005	<0.005
U-4-20	06-Aug-90	17-Aug-90	<1	<0.005	<0.005	<0.005	<0.005

.

TPH = Total Petroleum Hydrocarbons as Gasoline PPM = Parts Per Million

Report No. 7809-3

•

1)

2222228			SOIL	ANALYSES D	======== A <b>ta</b>		
WELL 1.D.	SAMPLE DATE	ANALYZED DATE	TPH-G (PPM)	BENZENE (PPN)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)
	12-Mar-92	16-Mar-92	<1	<0.0050	<0.0050	<0.0050	<0.0050
V-6-16.5	13-Mar-92	13-Mar-92	<1	<0.0050	<0,0050	<0.0050	<0.0050
U-7-16.0	13-Mar-92	16-Kar-92	<1	<0.0050	<0.0050	<0.0050	<0.0050
U-8-16.5	12-Mar-92	16-Mar-92	<1	<0.0050	<0.0050	<0.0050	<0.0050

TPN-G = Total Petroleum Hydrocarbons calculated as Gasoline PPM = Parts Per Million

Note 1. All data shown as <x are reported as ND (none detected).

2. The last number of the sample 1.D. corresponds to the depth below grade the s

.

4

4

#### SOIL ANALYSES DATA

WELL I.D.	SAMPLE	ANALYZED DATE	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)
U-9 (4.5)	25-May-93	28-May-93	<.50	<.0050	<.0050	<.0050	<.0050
U-9 (11.5)	25-May-93	28-May-93	<.50	<.0050	<.0050	<.0050	<.0050

TPH-G = Total Petroleum Hydrocarbons calculated as Gasoline.

PPM = Parts Per Million.

Notes: 1. All data shown as <x are reported as ND (none detected).

2. The number in ( ) corresponds to the depth below grade.

780907-15

#### SUMMARY OF SOIL ANALYTICAL RESULTS CONOCOPHILLIPS SITE NO. 5760 376 LEWELLING BOULEVARD SAN LORENZO, CALIFORNIA

Soil Sample Location	Date	Sample Depth (ft)	Oil and Grease (Petroleum) (mg/kg)	TPPH (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	Ethanol (mg/kg)	TBA (mg/kg)	Lead (mg/kg)
87															
GP-1	11/7/2003	20	NA	ND <1.0	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.010	ND <0.005	ND <0.005	ND <0.10	ND <0.010	NA
GP-2	11/7/2003	19,5	NA	ND <1.0	ND < 0.005	ND <0,005	ND <0.005	ND <0.005	ND <0.005	ND <0.010	ND <0.005	ND <0.005	ND < 0.10	ND <0.010	NA
GP-3	11/7/2003	7	NA	ND <1.0	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.010	ND <0.005	ND <0.005	ND <0.10	ND <0.010	NA
GP-4	11/7/2003	12	NA	ND <1.0	ND < 0.005	ND <0.005	ND < 0.005	ND <0.005	ND <0.005	ND <0.010	ND <0.005	ND <0.005	ND < 0.10	ND < 0.010	NA
		19.5		1600	ND <1.3	ND <1.3	26	130	ND <1.3	ND <2.5	ND <1.3	ND <1.3	<63	<6.3	NA
GP-5	11/7/2003	11.5 19.5	NA ND <50	ND <1.0 ND <1.0	ND <0.005 ND <0.005	ND <0.005 ND <0.005	ND <0.005 ND <0.005	ND <0.005 ND <0.005	ND <0.005 ND <0.005	ND <0.010 ND <0.010	ND <0.005 ND <0.005	ND <0.005 ND <0.005		ND <0.010 ND <0.010	

Notes:

- EPA = Environmental Protection Agency
- mg/kg = Milligrams per kilogram
- TPPH = Total purgeable petroleum-hydrocarbons
- MTBE = Methyl tert-butyl ether
- DIPE = Di-isopropyl ether

- ETBE = Ethyl tertiary butyl ether
- TAME = Tertiary amyl methyl ether
- TBA = Tert-butyl alcohol
- NA = Not analyzed
- ND = Not detected, see CARS for method detection limits

#### Table 1 Soil Analytical Results

				ewelling Boulev .orenzo, Califor				
Sample Name	Sample Depth (feet)	Date Sampled	TPPH (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	1
GP-6	6	7/8/10	<0.20	0.0025	0.0026	<0.0050	<0.010	
GP-6	21.5	7/8/10	<0.20	<0.0050	<0.0050	<0.0050	<0.010	
GP-6	24	7/8/10	<0.20	<0.0050	<0.0050	<0.0050	<0.010	
GP-7	15	7/8/10	<0.20	<0.0050	<0.0050	<0.0050	<0.010	
GP-7	20	7/8/10	<0.20	<0.0050	<0.0050	<0.0050	<0.010	
GP-7	22.5	7/8/10	<0.20	<0.0050	<0.0050	<0.0050	<0.010	

76 Service Station No. 5760 ...

19.5 29.5 39.5 49.5	7/9/10 7/9/10 7/9/10 7/9/10	<b>470</b> 53 <0.50 0.26	<0.12 <0.0050 <0.012 <0.0050	<0.12 <0.0050 <0.012 <0.0050	0.75 0.76 <0.012 <0.0050	1.6 1.5 <0.025 <0.010	<0.12 <0.0050 <b>0.0032</b> <0.0050
29.5	7/9/10	53	<0.0050	<0.0050	0.76	1.5	<0.0050
and the second sec							
19.5	7/9/10	470	<0.1Z	<0.12	0.75	1.0	<0.12
	- 10 11 0	470	-0.40	-0.40	0.75	1 6	-0 40
9.5	7/9/10	<2.0	<0.050	<0.050	<0.050	<0.10	<0.050
22.5	7/8/10	<0.20	<0.0050	<0.0050	<0.0050	<0.010	<0.0050
20	7/8/10	<0.20	<0.0050	<0.0050	<0.0050	<0.010	<0.0050
15	7/8/10	<0.20	<0.0050	<0.0050	<0.0050	<0.010	<0.0050
24	7/8/10	<0.20	<0.0050	<0.0050	<0.0050	<0.010	<0.0050
21.5	7/8/10	<0.20	<0.0050	<0.0050	<0.0050	<0.010	<0.0050
6	7/8/10	<0.20	0.0025	0.0026	<0.0050	<0.010	<0.0050
	21.5 24 15 20	21.5 7/8/10 24 7/8/10 15 7/8/10 20 7/8/10	21.5         7/8/10         <0.20           24         7/8/10         <0.20	21.5         7/8/10         <0.20         <0.0050           24         7/8/10         <0.20	21.5         7/8/10         <0.20         <0.0050         <0.0050           24         7/8/10         <0.20	21.5         7/8/10         <0.20         <0.0050         <0.0050         <0.0050           24         7/8/10         <0.20	21.5         7/8/10         <0.20         <0.0050         <0.0050         <0.0050         <0.010           24         7/8/10         <0.20

#### Explanations:

TPPH = Total purgeable petroleum hydrocarbons (gasoline)

MTBE = Methyl tert-butyl ether

mg/kg = Milligrams per kilogram

< = Not detected at or above laboratory reporting limits

\* = Analyzed for fuel oxygenates TBA, DIPE, TAME, ETBE, and ethanol, lead scavengers EDB and 1,2-DCA and were reported as not detected.

CRWQCB-SFBR ESL = California Regional Water Quality Control Board - San Francisco Bay Region Environmental Screening Levels for soil where groundwater is a current or potential source of drinking water (residential land use scenario)

MTBE\*

(mg/kg)