

October 22, 2008

Mr. Paresh Khatri  
Hazardous Materials Specialist  
Alameda County Environmental Health Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

**RE: Summary of Subsurface Investigation Activities  
1685 24<sup>th</sup> Street, Oakland, CA  
ACEH Fuel Leak Case Number RO0002568  
ACC Project Numbers 6871-001.00 & .01**

Dear Mr. Khatri,

On behalf of Mr. Jabari Herbert of the Capital Stone Group, LLC, owner of the referenced site, ACC Environmental Consultants, Inc. (ACC) has prepared the following summary of subsurface investigations at the referenced site. The purpose of the summary is to clarify the chronology for the various investigations and present key information, as well as analytical data collected between June 2004 and July 2008 in one reference document so that continued discussion of subsequent activities related to the soil and groundwater impacts present at the property may occur with all parties “on the same page.” This document will also address some recent comment letters from ACEH related to site activities.

This document relies on several reports and other communications and are referenced by name of the electronic record and available through the Alameda County Environmental Health Services (ACEH) or attached as an appendix where noted. These attachments should be referenced if users of this summary need additional information. This document is not intended to provide technical and/or geologic evaluations or interpretations beyond what is included in the attached supporting reports and work plans.

The summary includes information pertaining to investigations ACC conducted at the property between August 2002 and July 2008. Additional subsurface investigations were conducted at the property as early as 1987, with those records available for review at various regulatory agencies (Oakland Fire Services and ACEH).

**1.0 Pertinent Chronology**

- 1966 to 1990 Property used as taxi maintenance facility.
- April 1987 Seven USTs removed from the site, including 3-1,000 gallon gasoline USTs, 2-8,000 gallon USTs, and 2-7,500 gallon USTs (unknown contents) were permitted for the site, but removal records indicate 2-7,500 gallon gasoline USTs, 2-10,000

gallon gasoline USTs, and one 550-gallon waste oil UST were removed from the site. Only approximate UST locations were indicated in the removal records.

- 1990 to Present Property used by Lee's Auto Shop, an automobile repair facility.
- August 2002 ACC conducted a Phase I ESA and limited soil boring investigation for a potential buyer of the property (not Capital Stone) in conjunction with proposed development of the subject property and neighboring properties. Field indications and sample analytical results indicated that gasoline and diesel fuel impact was evident in several soil and groundwater samples collected in these soil borings. The limited boring investigation report is available on the ACEH LOP online records system under file name "SWI R 2002-08-21."
- April 8, 2003 ACC prepares and submits to ACEH/OFS a Work Plan for an additional soil boring investigation for Pipeco Holding (Mr. Victor Ivry), understood by ACC to be the property owner during the August 2002 and April 2003 activities, to continue characterization of the site. The work plan is available on the ACEH LOP online records system under file name "WP R 2003-04-08."
- June 18, 2004 ACC conducted a second subsurface investigation to further characterize site conditions generally following the April 8, 2003 Work Plan. Work was requested by Skepner Development. Nine soil borings were advanced (TB-3 through TB-10 and SS-1), with soil and limited groundwater sampling conducted. According to project notes, proposed field boring locations were adjusted in location and number (9 vs. 12) due to site access/obstruction conditions.
- August 27, 2004 ACC issues the Additional Subsurface Investigation Report for the sampling conducted in June 2004. Results are summarized in the attached table with the report available on the ACEH LOP online records system under file name "SWI R 2004-08-27."
- May 2006 Capital Stone purchases property from Pacific Pipe/ Pipeco Holding
- June 20, 2006 ACC prepares Final (revised) Work Plan for Additional Subsurface Investigation for Capital Stone. The work plan proposes to advance an additional 10 soil borings with representative soil and groundwater sampling.
- September 1, 2006 Capital Stone/ACC submits the June 2006 Work Plan to ACEH for review and approval. The work plan is available on the ACEH LOP online records system under file name "SWI R 2006-06-20."
- December 2006 Capital Stone/ACC contact ACEH for status on the review and approval of the June 20, 2006 Work Plan. No response was received from ACEH. ACC proceeds with the Soil Boring investigation. Six of the proposed 10 borings were advanced due to site access/utility conditions.
- April 27, 2007 ACC issues the Additional Subsurface Investigation Report for the sampling conducted in December 2006 (attached as Appendix A).
- April 23, 2008 ACEH issues review and technical comments for the June 20, 2006 Work Plan, including comments on the August 27, 2004 Report, requesting completion of the

remaining borings not completed in the June 20, 2006 Work Plan/December 2006 investigation, additional analysis, and information.

- July 15, 2008 ACC conducts a third subsurface investigation to address comments from the April 23, 2008 ACEH review and advances the remaining four borings not installed from the December 2006 investigation.
- July 28, 2008 ACC issues the Results of Additional Subsurface Investigation Report for the sampling conducted on July 15, 2008. The limited boring investigation report is available on the ACEH LOP online records system under file name "SWI R 2008-07-28."
- August 21, 2008 ACEH issues review comments related to the July 28, 2008 Report requesting additional information, clarification to the 2004 site investigation.

## 2.0 Summary of Soil Boring Investigation Results

The attached table and corresponding Soil Boring Location Figure summarize analytical results from site investigations conducted between August 2002 and July 2008. Furthermore, Figure 3 from the July 28, 2008.

## 3.0 Response to ACEH Comments

Investigations at the property have been influenced by a variety of factors, including changes in property owner representatives, property ownership, site access issues, changes in regulatory lead agencies/case workers, etc. The ACEH issued two recent comment letters by your office, dated April 23, 2008 and August 21, 2008 respectively. ACC will attempt to address comments from each letter below.

### 3.1 ACEH April 23, 2008 Comments

**Technical Comment 1:** "...Please provide rationale for why the proposed [April 8, 2008] scope of work was not completed and provide a detailed discussion in the subsurface investigation report due by the date requested below [July 15, 2008]." The comment also refers to the August 27, 2004 report issued as a result of the April 8, 2003 Work Plan.

**Response Comment 1:** We believe the ACEH is referring to the April 8, 2003 (not 2008) Work Plan and will address comments as such.

ACHCSA reference to the incomplete work include advancing only nine of the 12 proposed soil borings in the work plan during the June 2004 investigation as well as omitting the human health risk assessment portion of the report.

Field notes indicate that only nine of the 12 borings were advanced due to obstructions at the site, including utility clearance issues and much of the property was covered with car parts, debris, and non-working automobiles. For a number of reasons, additional work was not authorized by the client (not Capital Stone) at the time, including completion of the human health risk assessment portion of the report.

Given that there have been additional investigations (2006 & 2008) at the property, completion of the borings proposed in the April 8, 2003 Work Plan would be redundant.

**Technical Comment 2:** Analyses of all groundwater samples should include lead scavengers ethylene dibromide and 1,2-dichloroethane.

**Response Comment 2:** All future groundwater samples will be analyzed for ethylene dibromide and 1,2-dichloroethane. There was a misunderstanding between ACC and ACEH given the complex history of the project related to the July 2008 investigation which resulted in the groundwater samples not being analyzed for ethylene dibromide and 1,2-dichloroethane. The samples were later reanalyzed (although slightly past the 2-week acceptable hold time) once this oversight was identified by ACEH and included in the attached Summary Table. Even though the samples were reanalyzed past the hold time, no change in analytical results for the samples were present. A copy of the Laboratory Reanalysis Report is included in Appendix B.

**Technical Comment 3:** Develop a Conceptual Site Model (CSM) and address any data gaps or deficiencies.

**Response Comment 3:** According to a summary narrative prepared by Mr. Dave Dement, P.G., ACC's Principal Geologist assigned to the site through June 2008, an updated CSM was included in the April 27, 2007 *Additional Subsurface Investigation Report*. Mr. Dement stated "Based on the findings of completed soil and groundwater investigations, available groundwater monitoring results, acceptable informal risk assessment evaluations, the minimal possibility of downgradient wells, and relatively simple hydrogeological conditions at the Site, the conceptual site model is known with a high degree of confidence. The Site is located in a commercial district in West Oakland is surrounded by commercial/industrial properties on all sides a minimum of 0.4 miles. The Site was formerly a taxicab maintenance operation from approximately 1966 to 1990 and has been an automotive repair facility since 1990. In April 1987, seven USTs were reportedly removed from the Site but site plans were unscaled so the former UST locations are estimated. The release scenario is unknown but soil sample analytical results suggest the release occurred from the USTs, product piping, or product dispensers located on the pump island inside the facility, or a combination of these.

There is one reasonable complete onsite exposure scenario and no known sensitive receptors in the downgradient direction. Concentrations of residual petroleum hydrocarbons have been identified in subsurface soil and groundwater and remedial soil excavation may be required to develop the property for residential use. The primary environmental concern is residual petroleum hydrocarbon impacts in subsurface soil and groundwater from the former USTs and/or product deliver equipment. Sample analytical results indicate that gasoline, diesel fuel, and motor oil were released from the former USTs and residual TPH is degrading and naturally attenuating."

### 3.1 ACEH August 21, 2008 Comments

**Comment 1:** "...TB-11 through TB-16 appear to have been installed on December 15, 2006, based on a review of Figure 3, prior to regulatory approval. Additionally, laboratory analytical data sheets and boring logs were not included."

**Response Comment 1:** The installation of borings TB-11 through TB-16 were in accordance with guidelines for agency review and comment periods. The June 30, 2006 Work Plan was issued to ACEH for review on September 1, 2006 and with appropriate notification to ACEH, work proceeded after the required 90-day comment period allowed for review by a lead agency.

**Comment 2:** "ACEH's approval of the scope of work stipulated that ACC discuss or provide rationale for the incomplete scope of work conducted in the 2004 subsurface investigation, analyze groundwater samples for lead scavengers..., submit a site conceptual model, and comply with the Landowner Notification Requirements."

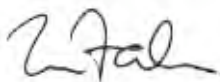
**Response Comment 2:** As stated in the discussion of the April 23, 2008 ACEH comment letter, there was a misunderstanding between ACC and ACEH after the transition in project teams and the information is discussed as requested above. Capital Stone representatives are preparing the required Landowner Notification documents. Furthermore, an update to the CSM information contained within the April 27, 2007 Report will be prepared upon authorization from Capital Stone.

ACC will also incorporate technical comments 1 and 2 related to proposed clean-up goals and groundwater plume stability/migration in subsequent documentation as appropriate and where authorized by Capital Stone.

In summary, it is our hope that this document will bring all parties onto the same page regarding the complex history of the investigations conducted at 1685 24<sup>th</sup> Street. We have also included the April 27, 2007 Subsurface Investigation Report for ACEH's review as it does not appear to be available in the online LOP records.

We look forward to moving forward towards achieving closure at the property. Capital Stone and/or ACC will be in contact with you to address outstanding items and develop a plan for subsequent activities at the property.

Sincerely,



Tim Fallin  
Vice President

Attachments

**Summary of Soil Boring Investigation Results (8/02 to 7/08)**

**1685 24th Street, Oakland, CA**

October 2008

ACC Project Number: 6871-001.02

Boring ID & Depth (feet bgs)	Sampling Date	Matrix	Constituents & Concentrations											
			Soil concentrations in mg/kg; Water concentrations in µg/l											
			TPHg	TPHd	TEPH-d	TEPH-mo	MTBE	Benzene	Toluene	Ethylbenzene	Xylene	Total Lead	1,2-Dibromoethane (EDB)	1,2-Dichloroethane
TB-1-7.5	August, 2002	Soil	<1.0				<0.005	<0.005	<0.005	<0.005	<0.005			
TB-1-W	August, 2002	Water	5000		2000	<560	72	150	6.7	10	13			<0.50
TB-2-8.0	August, 2002	Soil	<1.0				<0.005	<0.005	<0.005	<0.005	<0.005			
TB-2-W	August, 2002	Water	<50				<5.0	<0.5	<0.5	<0.5	<0.5			
B25-4.0	August, 2002	Soil	<1.0				<0.005	<0.005	<0.005	<0.005	<0.005	3.2		
B25-8.0	August, 2002	Soil	170				0.62	4.6	17	3.8	16			
B25-W	August, 2002	Water	2100000				<25000	51000	160000	31000	130000			
B26-W	August, 2002	Water	970				<5.0	3.7	32	18	100			
B27-7.5	August, 2002	Soil	<1.0				<0.005	<0.005	<0.005	<0.005	<0.005			
B27-W	August, 2002	Water	870				<5.0	4.8	2.8	1.8	7.2			
B28-4.0	August, 2002	Soil	<1.0				<0.005	<0.005	<0.005	<0.005	<0.005	39		
B28-7.5	August, 2002	Soil	36				<0.62	0.87	<0.62	<0.62	<0.62			
B28-W	August, 2002	Water	4600		760	<570	<50	180	<5.0	14	91			
B29-8.0	August, 2002	Soil	190				<0.62	<0.62	1.6	0.79	3.11			
SS-1-2.0'	June, 2004	Soil	4.3				<0.005	0.01	<0.005	0.017	0.013	44		
SS-1-7.5'	June, 2004	Soil	120		68	62	<0.50	<0.50	<0.50	0.99	<0.50			
SS-1-W	June, 2004	Water	7700		2700	4600	33	1100	12	170	29			
TB3-7.5'	June, 2004	Soil	<1.0		5.8	<50	<0.005	<0.005	<0.005	<0.005	<0.005	4.2		
TB3-W	June, 2004	Water	69				4.2	8.4	<0.50	1.3	<1.0			
TB4-7.5'	June, 2004	Soil	2.5				0.0072	0.11	<0.005	0.24	0.29			
TB-4-9.0'	June, 2004	Soil	3.5		140	600	<0.005	0.09	0.011	0.0074	0.037			
TB5-9.0'	June, 2004	Soil	1700		140	82	<0.50	<0.50	<0.50	<0.50	<0.50	8.2		
TB5	June, 2004	Water	3600				20	1.4	1.5	1.7	4.2			
TB6-11.0'	June, 2004	Soil	<1.0				<0.005	<0.005	<0.005	<0.005	<0.0084			

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October 2008

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Boring ID & Depth (feet bgs)	Sampling Date	Matrix	Constituents & Concentrations											
			Soil concentrations in mg/kg; Water concentrations in µg/l											
			TPHg	TPHd	TEPH-d	TEPH-mo	MTBE	Benzene	Toluene	Ethylbenzene	Xylene	Total Lead	1,2-Dibromoethane (EDB)	1,2-Dichloroethane
TB6W	June, 2004	Water	1300		680	<500	0.57	19	2.4	13	8.9			
TB7W	June, 2004	Water	13000				<2.5	31	3.8	8.7	13			
TB8-8.0'	June, 2004	Soil	14		15	<50	<0.022	<0.022	<0.022	<0.022	<0.022			
TB8-W	June, 2004	Water	1400				<0.50	16	0.91	0.57	2.8			
TB9-8.0'	June, 2004	Soil	470		60	420	0.54	<0.50	<0.50	<0.50	<0.50			
TB9-W	June, 2004	Water	3200				<0.50	<0.50	6.2	8.8	<10			
TB10-8.0'	June, 2004	Soil	220				<0.50	0.88	2.6	4.2	11			
TB10-12.0'	June, 2004	Soil	<1.0				<0.005	<0.005	<0.005	<0.005	<0.005			
TB10-W	June, 2004	Water	20000		770	7600	<100	8800	310	760	530			
TB11-4.0'	December, 2006	Soil	16		28	22	<0.0048	0.0085	<0.0048	0.027	0.0044			
TB-11	December, 2006	Water	9400		8100	13000	29	84	15	27	37.5			
TB12-4.0'	December, 2006	Soil	<1.0		9.5	79	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047			
TB12-8.5'	December, 2006	Soil	<1.0		7.9	29	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049			
TB-12	December, 2006	Water	0.55		540	410	<0.50	0.55	<0.50	<0.50	1.2			
TB13-2.0'	December, 2006	Soil			2.5	<5.0								
TB13-8.5'	December, 2006	Soil	<1.0				<0.0048	<0.0048	<0.0048	<0.0048	<0.0048			
TB13	December, 2006	Water	640		720	370	<0.50	0.85	<0.50	<0.50	0.55			
TB14-4.0'	December, 2006	Soil	<0.97		40	160	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046			
TB14	December, 2006	Water	9400		4100	2900	35	170	4.4	11	9.4			
TB15-8.5'	December, 2006	Soil	<0.95		25	170	<0.005	<0.005	<0.005	0.46	0.03			
TB-15	December, 2006	Water	10000		9500	11000	<2.0	22	3.9	310	18.3			
TB16	December, 2006	Water	1500		1600	300	<0.50	1.8	<0.50	<0.50	<0.50			
TB17-7.5'	July, 2008	Soil	<0.50	<0.50			<0.020	<0.005	<0.005	<0.005	<0.010			
TB17-7.5'-R	July, 2008	Soil	<0.50	<0.50			<0.020	<0.005	<0.005	<0.005	<0.010			

**Summary of Soil Boring Investigation Results (8/02 to 7/08)**

**1685 24th Street, Oakland, CA**

October 2008

ACC Project Number: 6871-001.02

Boring ID & Depth (feet bgs)	Sampling Date	Matrix	Constituents & Concentrations											
			Soil concentrations in mg/kg; Water concentrations in µg/l											
			TPHg	TPHd	TEPH-d	TEPH-mo	MTBE	Benzene	Toluene	Ethylbenzene	Xylene	Total Lead	1,2-Dibromoethane (EDB)	1,2-Dichloroethane
TB-17-11.5'	July, 2008	Soil	1.2	10			<0.020	0.47	0.007	0.0093	0.02			
TB-17-11.5'-R	July, 2008	Soil	1.2	10			<0.020	0.47	0.007	0.0093	0.02			
TB17-S (9' bgs)	July, 2008	Water	3100	800			<4.0	0.028	<1.0	<1.0	<2.0			
TB17-S-R (9' bgs)	July, 2008	Water	3100	800			<4.0	0.028	<1.0	<1.0	<2.0		<1.0	<0.50
TB17-D (25' bgs)	July, 2008	Water	<50	<500			<4.0	<1.0	<1.0	<1.0	<2.0			
TB17-D-R (25' bgs)	July, 2008	Water	<50	<500			<4.0	<1.0	<1.0	<1.0	<2.0		<1.0	<0.50
TB18-7.5'	July, 2008	Soil	4.6	<5.0			<0.020	0.022	0.014	0.022	0.054			
TB18-7.5'-R	July, 2008	Soil	4.6	<5.0			<0.020	0.022	0.014	0.022	0.054			
TB18-11.5'	July, 2008	Soil	8	15			<0.020	<0.005	0.018	<0.005	<0.010			
TB18-11.5'-R	July, 2008	Soil	8	15			<0.020	<0.005	0.018	<0.005	<0.010			
TB18-GW (9' bgs)	July, 2008	Water	2900	1000			0.012	4.5	<1.0	<1.0	5.8			
TB18-GW-R (9' bgs)	July, 2008	Water	2900	1000			0.012	4.5	<1.0	<1.0	5.8		<1.0	<0.50
TB19-4.5'	July, 2008	Soil	2000	870			<0.020	<0.005	1.1	34	0.038			
TB19-4.5'-R	July, 2008	Soil	2000	870			<0.020	<0.005	1.1	34	0.038			
TB19-7.5	July, 2008	Soil	2.1	<0.50			0.24	0.05	0.0071	0.19	0.56			
TB19-7.5-R	July, 2008	Soil	2.1	<0.50			0.24	0.05	0.0071	0.19	0.56			
TB19-S (9' bgs)	July, 2008	Water	38000	24000			250	78	<1.0	3800	43			
TB19-S-R (9' bgs)	July, 2008	Water	38000	24000			250	78	<1.0	3800	43		<1.0	<0.50
TB19-D (25' bgs)	July, 2008	Water	<50	<500			<4.0	<1.0	<1.0	<1.0	<2.0			
TB19-D-R (25' bgs)	July, 2008	Water	<50	<500			<4.0	<1.0	<1.0	<1.0	<2.0		<1.0	<0.50
TB20-3.5'	July, 2008	Soil	17	5.6			<0.020	0.042	0.029	0.24	0.022			
TB20-3.5'-R	July, 2008	Soil	17	5.6			<0.020	0.042	0.029	0.24	0.022			
TB20-7.5'	July, 2008	Soil	<0.50	11			<0.020	<0.005	<0.005	<0.005	<0.010			
TB20-7.5'-R*	July, 2008	Soil	<0.50	11			<0.020	<0.005	<0.005	<0.005	<0.010			



**Summary of Soil Boring Investigation Results (8/02 to 7/08)**

**1685 24th Street, Oakland, CA**

October 2008

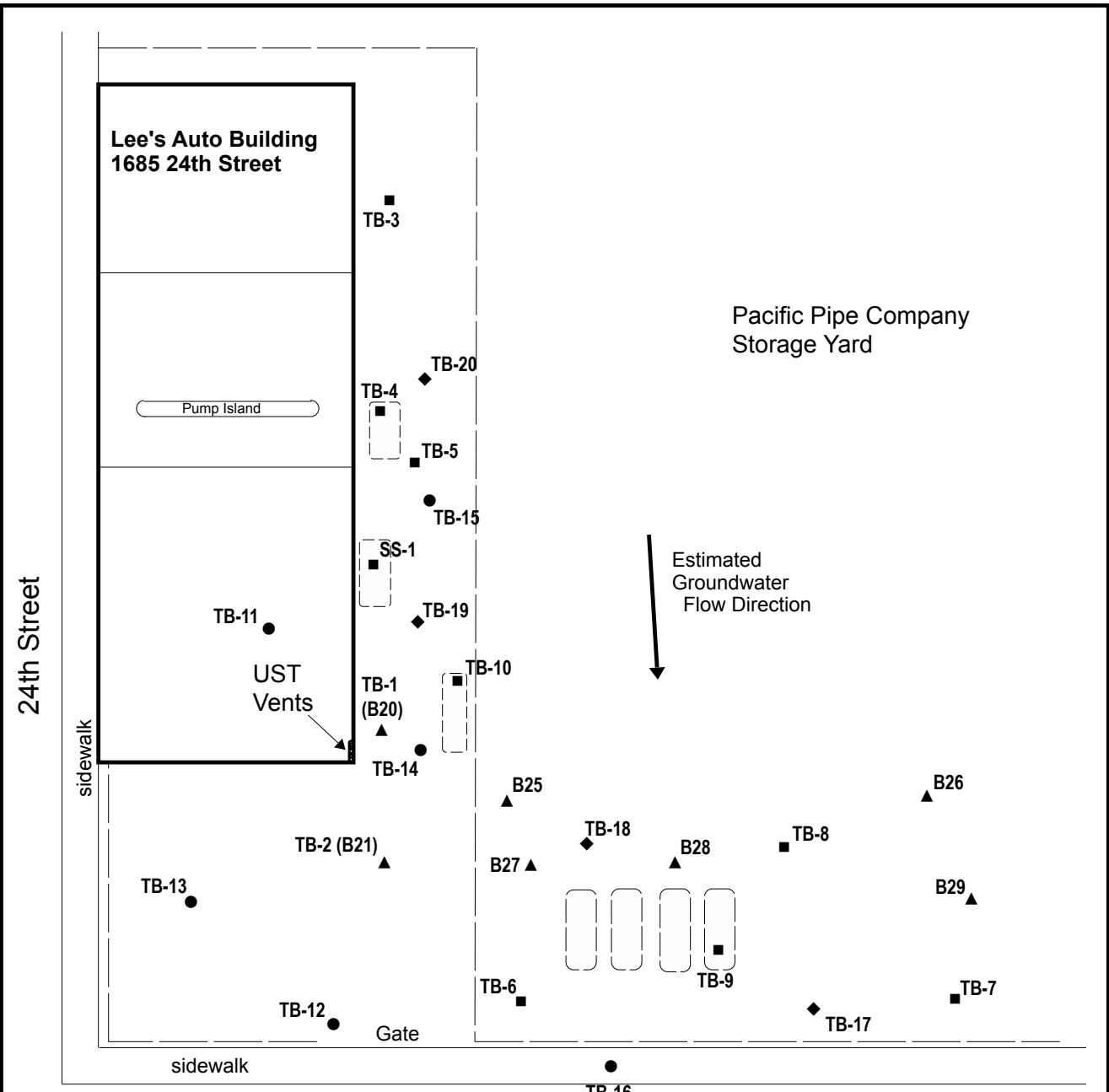
ACC Project Number: 6871-001.02

Boring ID & Depth (feet bgs)	Sampling Date	Matrix	Constituents & Concentrations											
			Soil concentrations in mg/kg; Water concentrations in µg/l											
			TPH <sub>g</sub>	TPH <sub>d</sub>	TEPH <sub>d</sub>	TEPH <sub>no</sub>	MTBE	Benzene	Toluene	Ethylbenzene	Xylene	Total Lead	1,2 Dibromoethane (EDB)	1,2 Dichloroethane
TB20-GW (9' bgs)	July, 2008	Water	3300	1800			4.8	<1.0	4	51	<2.0			
TB20-GW (9' bgs)-R*	July, 2008	Water	3300	1800			4.8	<1.0	4	51	<2.0	<1.0	<0.50	
**ESLs - Residential (unrestricted site usage)	Shallow Soil (< 3 m)	Soil (mg/kg)	100	100	100	370	8.4	0.12	9.3	2.3	11	200	0.019	0.22
	Deep Soil (>3 m)	Soil (mg/kg)	180	180	180	5000	8.4	2	9.3	43	11	750	1	1.8
	Non Drinking Water Source	Water (µg/l)	210	210	210	210	1800	46	130	43	100	2.5	150	200
**ESLs - Commercial site usage	Shallow Soil (< 3 m)	Soil (mg/kg)	180	180	180	2500	8.4	0.270	9.3	4.7	11	750	0.044	0.480
	Deep Soil (>3 m)	Soil (mg/kg)	180	180	180	5000	8.4	2.0	9.3	4.7	11	750	1.0	1.8
	Non Drinking Water Source	Water (µg/l)	210	210	210	210	1800	46	130	43	100	2.5	510	690
ESLs - Drinking Water Source		Water (µg/l)	100	100	100	100	5	1	40	30	20	2.5	0.05	0.5

Notes

\*July 2008 laboratory analysis was reanalyzed to quantify lead scavengers (1,2 Dibromoethane & 1,2 Dichloroethane). Reanalysis was conducted after the 14-day hold time; Comparison of pre- & post-hold time analyses indicate no change in detectable concentrations. Reanalysis results italicized and indicated by "R" after Boring ID.

\*\*ESLs = Bay Area Regional Water Quality Control Board Environmental Screening Levels (Interim Final May 2008), where groundwater is NOT a source of Drinking Water



**Legend**

▲	8/02 Boring Locations
■	6/04 Boring Locations
●	12/06 Boring Locations
◆	7/08 Boring Locations
⬜ (dashed)	Approximate Former UST Locations
⋯	Fence Line

Map Source: Winter Construction Inc.

Title: **Soil Boring Locations (6/04 to 7/08)**  
**1685 24th Street**  
**Oakland, California**

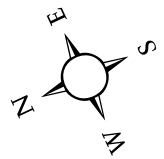
Approximate Scale: 1" = 30'      Figure #: 1

Project No.: 6871-001.01      Drawn By: JS

Date: 09/21/09



7977 Capwell Drive, Suite 100  
 Oakland, California 94621  
 (510) 638-8400 Fax: (510) 638-8404



## **Appendix A**



April 27, 2007

Mr. Jabari Herbert  
Capital Stone Group LLC  
1485 8<sup>th</sup> Street  
Oakland, CA 94607

RE: Additional Subsurface Investigation Report  
1685 24<sup>th</sup> Street, Oakland, California  
*ACC Project Number: 6871-001.00*

Dear Mr. Herbert:

Please find the enclosed two copies of the Subsurface Investigation Report for 1685 24<sup>th</sup> Street, Oakland, California (Site). This additional subsurface characterization work was conducted to: 1) further characterize suspect petroleum hydrocarbon impacts in soil and groundwater in the vicinity of seven former underground storage tanks (USTs) identified at the Site; and 2) obtain additional data to confirm the preliminary Conceptual Site Model (CSM). Groundwater was encountered at 10 feet below ground surface (bgs) during this investigation.

If you have any questions regarding the report, please contact me at (510) 638-8400, ext. 109 or email me at [ddement@accenv.com](mailto:ddement@accenv.com).

Sincerely,

A handwritten signature in black ink that reads 'David R. DeMent'.

David R. DeMent, PG, REA II  
Environmental Division Manager



/krb:drd

Enclosures



**SUBSURFACE INVESTIGATION REPORT**

**1685 24<sup>th</sup> Street  
Oakland, California**

*ACC Project Number: 6892-001-01*

Prepared for:

Mr. Jabari Herbert  
Capital Stone Group LLC  
1485 8<sup>th</sup> Street  
Oakland, CA 94607

April 27, 2007

Prepared By:

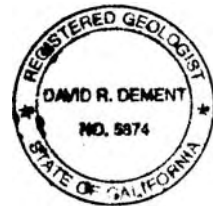
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**ADDITIONAL SUBSURFACE INVESTIGATION REPORT**  
**1685 24<sup>th</sup> Street**  
**Oakland, California**

## **1.0 INTRODUCTION**

At the request of the Capital Stone Group LLC (Client), ACC Environmental Consultants Inc., (ACC), has prepared this Additional Subsurface Investigation Report summarizing additional subsurface investigation and soil characterization work performed at 1685 24<sup>th</sup> Street (Site) located in Oakland, California (Site). The primary goal of this investigation was to further characterize suspect petroleum hydrocarbon impacts in soil and groundwater in the vicinity of seven former underground storage tanks (USTs) identified at the Site and to obtain additional data to confirm the preliminary Site Conceptual Model (SCM).

## **2.0 BACKGROUND**

The subject property is bound by 24th Street to the north, Willow Street to the west, and the Pacific Pipe Company (PPC) pipe storage yards to the east and south (Figure 1). Circa 1966 to 1990, the subject property was utilized as a taxicab maintenance facility. From 1990 to the present, automotive repair operations have been conducted at the site by Lee's Auto Shop. In April 1987, seven underground storage tanks (USTs) were reportedly removed from the Site. According to records obtained at the OFD Office of Emergency Services, three 1,000 gallon gasoline USTs, two 8,000-gallon USTs, and two 7,500-gallon USTs were permitted for the Site. UST removal records obtained during the Phase I Environmental Site Assessment indicate that two 7,500-gallon gasoline USTs, two 10,000-gallon gasoline USTs, and one 550-gallon waste oil tank were removed.

The site plan generated during UST removal was not scaled so exact former UST locations are unknown. Estimated former UST locations are illustrated on Figure 2. Specifically, the USTs illustrated at soil boring locations TB-4, SS-1, and TB-10 are known due to the observation of gasoline-discolored soil and obvious backfill materials as sand and pea gravel at these three locations. The four suspect USTs depicted in the vicinity of soil borings TB-6 through TB-9 are known with less confidence but are estimated based on the depicted locations on the unscaled site plan. Product dispenser locations are unknown but seven holes for seven vent lines are located in the southwest corner of the building.

ACC conducted an initial subsurface investigation at the Site in August 2002 for a prospective buyer. Subsurface soil and groundwater characterization was requested by the prospective buyer for due diligence purposes due to historical site use and documented USTs at the Site. In order to confirm suspect soil and groundwater impacts from the former USTs, ACC located and advanced seven exploratory soil borings to collect representative soil and grab groundwater samples. Soil boring TB-1 and TB-2 were advanced on August 2, 2002 and "step-out" soil borings B25 through B29 were advanced on August 12, 2002. The soil boring designations used reflect the fact that the soil borings advanced at the Site were part of a much larger comprehensive subsurface investigation at a number of properties. Field indications and sample analytical results indicated that gasoline and diesel fuel impact was evident in several soil and groundwater samples collected in these soil borings.

TPHg was reported in the grab groundwater sample from soil boring TB-1 at 5,000 micrograms per Liter ( $\mu\text{g/L}$ ) with relatively minor associated BTEX. TEPH was reported in sample TB-1-W at a concentration of 2,000  $\mu\text{g/L}$ . TPHg was reported in soil in soil borings B25, B28, and B29 at concentrations ranging from 36 to 190 milligrams per kilogram ( $\text{mg/kg}$ ). Traces of emulsified free-phase floating product (free product) were observed on groundwater in soil boring B25, as evidenced by grab groundwater sample analytical results reported in grab groundwater sample B25-W. Some reported concentrations of TPHg and BTEX were significant but appeared localized. Groundwater was generally encountered at approximately 9 feet below ground surface (bgs) perched above a silty clay aquitard approximately 10 feet thick. Analytical results from the 2004 subsurface investigation are summarized in Table 1 and Table 2.

**TABLE 1 – 2004 TPHg/BTEX/MTBE ANALYTICAL RESULTS**

Sample ID	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylene	MTBE
<b>SOIL</b>						
TB3-7.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
TB4-7.5	2.5	0.11	<0.005	0.24	0.29	0.0072
TB4-9.0	3.5	0.09	0.011	0.0074	0.037	<0.005
TB5-9.0	1,700	<0.50	<0.50	<0.50	<0.50	<0.50
TB6-11.0	<1.0	<0.005	<0.005	<0.005	0.0084	<0.005
TB8-8.0	14	<0.022	<0.022	<0.022	<0.022	<0.022
TB9-8.0	470	<0.50	<0.50	<0.50	<0.50	0.54
TB10-8.0	220	0.88	2.6	4.2	11	<0.50
TB10-12.0	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
SS-1-2.0	4.3	0.01	<0.005	0.017	0.013	<0.005
SS-1-7.5	120	<0.50	<0.50	0.99	<0.50	<0.50
<b>WATER</b>						
TB3-W	69	8.4	<0.50	1.3	<1.0	4.2
TB5-W	3,600	20	1.4	1.5	1.7	4.2
TB6-W	1,300	19	2.4	13	8.9	0.57
TB7-W	13,000	31	3.8	8.7	13	<2.5
TB8-W	1,400	16	0.91	0.57	2.8	<0.50
TB9-W	3,200	<5.0	6.2	8.8	<10	<5.0
TB10-W	20,000	8,800	310	760	530	<100
SS-1-W	7,700	1,100	12	170	29	33

< = analytical results under laboratory reporting limit

N/A = samples were not analyzed for this constituent



**TABLE 2 – 2004 TEPH ANALYTICAL RESULTS**

Sample ID	TEPH as Diesel	TEPH as Motor Oil	Lab Notes
<b>SOIL</b>			
TB3-7.5	5.8	<50	ndp
TB4-9.0	140	600	ldr
TB5-9.0	140	82	edr
TB8-8.0	15	<50	edr
TB9-8.0	60	420	edr
SS-1-7.5	68	62	edr
<b>WATER</b>			
TB6-W	680	<500	edr
TB7-W	1,900	<500	edr
TB10-W	7,700	7,600	edr
SS-1-W	2,700	4,600	edr

*Notes:*

*Soil sample results are in milligrams per kilogram (mg/kg), approximately equal to parts per million (ppm). Water sample results are in micrograms per Litter (µg/L), approximately equal to parts per billion (ppb).*

*< = analytical results under laboratory reporting limit*

*N/A = samples were not analyzed for this constituent*

*n/a = not applicable*

*ldr= Hydrocarbon reported is in the late Diesel range, and does not match our Diesel standard*

*edr= Hydrocarbon reported is in the early Diesel range, and does not match our Diesel standard*

*ndp= Hydrocarbon reported does not match the pattern of the laboratory Diesel standard*

TPHg, BTEX, and TEPH as diesel were the primary constituents of concern identified in soil and groundwater. These constituents are likely the result of unauthorized releases from the former gasoline and diesel fuel USTs. Subsurface impacts were not entirely characterized but appear to be largely localized to the general vicinity of the former USTs and horizontal and vertical migration potential is estimated to be minimal due to the low permeability aquitard observed from approximately 9.5 to 20 feet bgs. TPHg and BTEX concentrations in select locations are above regulatory action levels and may represent an unacceptable human health risk and/or the necessity for land use restrictions and groundwater monitoring. In addition, halogenated volatile organic compounds (HVOCs) were reported in one groundwater sample.

### 3.0 FIELD PROCEDURES

In December 2006, ACC obtained a soil boring permit from the Alameda County Public Works Agency (ACPWA). A copy of the permit is included in Appendix 1. The location of the subsurface investigation was marked with white paint, and Underground Service Alert was notified 48 hours prior to commencing work.

ACC's Professional Geologist performed the soil borings and sampling, and the subsurface materials in the soil borings were identified, classified and logged. Soil borings were continuously cored using a combination truck-mounted hydraulic and pneumatic Geoprobe® sampling tool. ACC utilized a four-foot long, stainless steel Geoprobe® macro-core sampling tool equipped with 2-inch inside-diameter clear acetate liners. The sampling probe and rods were pre-cleaned prior to use and between sample drives by washing them with a trisodium phosphate and potable water solution and two potable water rinses. Upon removal from the sampler, each recovered soil core was visually inspected and screened with a ppbRAE® photo-ionization detector (PID). Subsurface materials in the soil borings were identified, classified and logged during drilling operations according to the Unified Soil Classification System (USCS). The sample intervals were primarily logged to determine relative permeability and evaluate mitigation potential at that soil boring location. The lithologic logs are included as Appendix 2.

Six exploratory soil borings were advanced on December 15, 2006 at select, representative locations at the Site. Approximate soil boring locations are illustrated on Figure 2. Each soil boring was continuously cored to facilitate logging and screening encountered soils and obtain soil sample intervals for potential laboratory analysis. Select soil sample intervals were cut from the acetate liners, capped, labeled, and stored in a pre-chilled, insulated container to be transported following chain of custody protocol to Curtis & Tompkins, Inc., a state-certified analytical laboratory. Discrete soil samples were analyzed for total extractable petroleum hydrocarbons (TEPH) by EPA Method 8015B, total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA Method 8260B, and total petroleum hydrocarbons as diesel (TPHd) by EPA Method 8015B.

Six grab groundwater samples were collected with the use of disposable poly-ethylene bailers and temporary 1-inch-diameter PVC casing installed into each respective open soil boring annulus. Upon collection, the groundwater was immediately transferred to laboratory-supplied 40 milliliter glass VOA vials without headspace and 1-liter amber bottles, and labeled. The grab groundwater samples were immediately placed in a pre-chilled, insulated container pending transport to the analytical laboratory. Samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA Method 8260B, total petroleum hydrocarbons as diesel (TPHd) by EPA Method 8015B, and halogenated volatile organic compounds (HVOCs) by EPA Method 8260B. Analytical results and chain of custody are included in Appendix 3.

Following drilling and sample collection, each soil boring location was abandoned with neat cement with the use of a tremie pipe to the surface and the site was later inspected by a representative of the Alameda County Public Works Agency.

## 4.0 FINDINGS

### 4.1 Subsurface Conditions

The surface of the Site in the area of the investigation is covered with three to four inches of concrete or asphalt pavement underlain by approximately three to six inches of baserock. Subsurface soil conditions vary somewhat across the Site. Soils consist of silty sand (SM) from the surface to approximately 6 to 10 feet bgs sand underlain by clay soils to a minimum of 20 feet bgs. The silty sands were medium to fine grained, moderately sorted, brown and olive brown, loose to medium dense, damp, and exhibited moderate estimated permeability. The deeper clays were dark olive gray, medium stiff, uniform, moderately to highly plastic and exhibited low estimated permeability. The first encountered saturated zone was generally observed at approximately eight to nine feet bgs and appeared to be water perched on the underlying clays. The clays were interpreted as “Bay Mud” and are shown on the geologic cross section, Figure 3.

ACC generally observed evidence of fill materials above the clays consisting of debris, ceramic fragments, slag, and decaying organic matter indicating the Site may have been a former “dump”, or poor quality fill may have been placed below the sand materials during reclamation of the area.

All soil borings were continuously cored to better characterize soils present at the site. Some elevated PID readings, characteristic odors, or soil discoloration were noted during sampling activities. Additional details are included in the soil boring lithologic logs (Appendix 1).

### 4.2 Analytical Results

No detectable concentrations of TPHg, BTEX, or MTBE were reported in four of the six samples analyzed. Reported concentrations of TPHg, BTEX, or MTBE were above the laboratory detectable limit, but below the residential Environmental Screening Levels (ESLs) for these constituents. Analytical results for soil samples analyzed for TPHg, BTEX and MTBE are summarized in Table 3.

TEPH-diesel range petroleum hydrocarbons were reported at concentrations ranging from the laboratory non-detectable limit of 1.0 milligrams per kilogram (mg/kg) to 40 mg/kg in soil boring TB14-4.0. TEPH-motor oil range petroleum hydrocarbons were reported at concentrations ranging from the laboratory non-detectable limit of 5.0 mg/kg to 170 mg/kg in soil boring TB15-8.5. Reported concentrations of TEPH-ranged petroleum hydrocarbons were below the Residential ESLs. TEPH analytical results for soil samples are summarized in Table 4.

All six grab groundwater samples analyzed reported TPHg concentrations above acceptable groundwater ESLs, ranging from 640 micrograms per Liter ( $\mu\text{g/L}$ ) to 10,000  $\mu\text{g/L}$ . Benzene concentrations range from 0.55  $\mu\text{g/L}$  to 84  $\mu\text{g/L}$ . Concentrations of MTBE range from the laboratory non-detectable limit of 0.50  $\mu\text{g/L}$  to 35  $\mu\text{g/L}$ . Reported MTBE concentrations were below the Groundwater ESL of 1,800  $\mu\text{g/L}$ . TEPH-diesel range petroleum hydrocarbons reported concentrations ranging from 540  $\mu\text{g/L}$  to 9,500  $\mu\text{g/L}$ , and TEPH-motor oil petroleum hydrocarbons range from 300  $\mu\text{g/L}$  to 13,000  $\mu\text{g/L}$ . Analytical results for grab groundwater samples are summarized in Table 5 and Table 6.

No detectable HVOCs were reported in the three analyzed grab groundwater samples collected from soil borings TB-12, TB-13, and TB-16. A copy of the analytical results and chain of custody record is included as Appendix 1.

**TABLE 3 – SOIL SAMPLE TPHg/BTEX/MTBE ANALYTICAL RESULTS**

Sample ID	Sample Depth (ft) bgs	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)
TB11-4.0	4.0	16 <sup>1</sup>	0.0085	<0.0048	0.027	0.0044	<0.0048
TB12-4.0	4.0	<1.0	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047
TB12-8.5	8.5	<1.0	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
TB13-8.5	8.5	<1.0	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
TB14-4.0	4.0	<0.97	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046
TB15-8.5	8.5	<0.95	<0.0050	<0.0050	0.46	0.030	<0.0500
<b>Residential ESL*</b>		<b>100</b>	<b>0.18</b>	<b>9.3</b>	<b>32.0</b>	<b>11.0</b>	<b>2.0</b>
<b>Commercial ESL*</b>		<b>400</b>	<b>0.38</b>	<b>9.3</b>	<b>32.0</b>	<b>11.0</b>	<b>5.6</b>

Notes: All soil results reported in micrograms per kilogram (mg/kg), **bolded** values exceed ESL  
 <Sample result less than the laboratory minimum detection limit indicated  
<sup>1</sup> Analytical result flagged by laboratory that heavier hydrocarbons contributed to the quantitation  
<sup>2</sup> Analytical result flagged by laboratory that lighter hydrocarbons contributed to the quantitation  
 \* SF Bay RWQCB, February 2005 ESLs are for Shallow Soils (Table B)

**TABLE 4 –SOIL SAMPLE TEPH ANALYTICAL RESULTS**

Sample ID	Sample Depth (ft) bgs	TEPH-diesel (mg/kg)	TEPH-Motor Oil (mg/kg)
TB11-4.0	4.0	28 <sup>1,2,3</sup>	22 <sup>1,2</sup>
TB12-4.0	4.0	9.5 <sup>1,3</sup>	79 <sup>1</sup>
TB12-8.5	8.5	7.9 <sup>1,2,3</sup>	29 <sup>1,2</sup>
TB13-2.0	2.0	2.5 <sup>3</sup>	<5.0
TB13-8.5	8.5	<1.0	<5.0
TB14-4.0	4.0	40 <sup>1,3</sup>	160 <sup>1</sup>
TB15-8.5	8.5	25 <sup>1,2</sup>	170 <sup>1,2</sup>
<b>Residential ESL*</b>		<b>100</b>	<b>500</b>
<b>Commercial ESL*</b>		<b>500</b>	<b>1000</b>

Notes: milligrams per kilogram (mg/kg) approximately equal to parts per million (ppm)  
<sup>1</sup> Analytical result flagged by laboratory that heavier hydrocarbons contributed to the quantitation, and sample chromatographic pattern did not resemble the laboratory standard  
<sup>2</sup> Analytical result flagged by laboratory that heavier hydrocarbons contributed to the quantitation, and sample chromatographic pattern did not resemble the laboratory standard  
<sup>3</sup> Sample chromatographic pattern did not resemble the laboratory standard  
 \* SF Bay RWCQB, February 2005 ESLs for groundwater (Table B), not to be used to assess health risk

**TABLE 5 – GROUNDWATER TPHg/BTEX/MTBE SAMPLE ANALYTICAL RESULTS**

Sample ID	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
TB11-W	9,400	84	15	27	37.5	29
TB12-W	1,600 <sup>Z</sup>	0.55	<0.50	<0.50	1.2	<0.50
TB13-W	640 <sup>Z</sup>	0.85	<0.50	<0.50	0.55	<0.50
TB14-W	9,400 <sup>Z</sup>	170	4.4	11	9.4	35
TB15-W	10,000 <sup>Z</sup>	22	3.9	310	18.3	<2.0
TB16-W	1,500 <sup>Y</sup>	1.8	<0.50	<0.50	<0.50	<0.50
<b>Groundwater ESL*</b>	<b>500</b>	<b>46</b>	<b>130</b>	<b>290</b>	<b>100</b>	<b>1,800</b>

Notes: All water results reported in micrograms per Liter (µg/L)  
 < Sample result less than the laboratory minimum detection limit indicated  
<sup>Y</sup> Sample exhibits chromatographic pattern which does not resemble standard  
<sup>Z</sup> Sample exhibits unknown single peak or peaks  
 \* SF Bay RWCQB, February 2005 ESLs for groundwater (Table B), not to be used to assess health risk

**TABLE 6 – GROUNDWATER SAMPLE TEPH ANALYTICAL RESULTS**

Sample ID	TEPH-diesel (µg/L)	TEPH-Motor Oil (µg/L)
TB11-W	8,100 <sup>1,2,3</sup>	13,000 <sup>2</sup>
TB12-W	540 <sup>1,2,3</sup>	410 <sup>2</sup>
TB13-W	720 <sup>1,2,3</sup>	370 <sup>2</sup>
TB14-W	4,100 <sup>1,2,3</sup>	2,900 <sup>1,2</sup>
TB15-W	9,500 <sup>1,2,3</sup>	11,000 <sup>2</sup>
TB16-W	1,600 <sup>1,2,3</sup>	300 <sup>2</sup>
<b>Groundwater ESL*</b>	<b>640</b>	<b>640</b>

Notes: milligrams per kilogram (mg/kg) approximately equal to parts per million (ppm)  
<sup>1</sup> Analytical result flagged by laboratory that heavier hydrocarbons contributed to the quantitation, and sample chromatographic pattern did not resemble the laboratory standard  
<sup>2</sup> Analytical result flagged by laboratory that lighter hydrocarbons contributed to the quantitation, and sample chromatographic pattern did not resemble the laboratory standard  
<sup>3</sup> Sample chromatographic pattern did not resemble the laboratory standard  
 \* SF Bay RWCQB, February 2005 ESLs for groundwater (Table B), not to be used to assess health risk

## 5.0 DISCUSSION

For purposes of due diligence for a previous prospective buyer, ACC prepared a Phase I Environmental Site Assessment (ESA) for this property and identified the former USTs as the primary environmental concern. In order to confirm suspect soil and groundwater impacts from the former USTs, ACC located and advanced seven exploratory soil borings in August 2002 to collect representative soil and grab groundwater samples in proximity to the estimated location of the former USTs (Figure 2). Field indications of gasoline impact and elevated PID readings were evident in soil in soil borings TB-1 (B20) but were not noted in soil boring TB-2 (B21). TPHg was reported in the grab groundwater sample from soil boring TB-1 at 5,000 µg/L with relatively minor associated BTEX. TEPH was reported in sample TB-1-W at 2,000 µg/L. Groundwater was generally encountered at approximately 7.5 feet bgs. Soil and grab groundwater samples collected in the other soil borings were relatively minor and indicative of degraded residual petroleum hydrocarbons from releases from the former USTs. Traces of free product were identified in groundwater at soil boring location B25.

Due to the initial subsurface findings, ACC conducted additional subsurface investigation in June 2004. Unlike during the August 2002 investigation, much of the area of investigation was accessible at this time, primarily inside the Lee’s Auto Yard extending from soil boring TB-3 to TB-10. Characteristic asphalt repairs indicative of a UST removal were observed at soil boring locations TB-4, SS-1, and TB-10. Originally, a former UST was suspected at soil boring TB-3 but direct observation and sample analytical results do not support this.

TPHg, BTEX, and TEPH as diesel were the primary constituents of concern identified in soil and groundwater. Subsurface impacts were not entirely characterized but appear to be localized to the general vicinity of each of the former USTs and horizontal and vertical migration potential is estimated

to be minimal. Field indications of impact and sample analytical results indicated that a release from the former USTs occurred. With the possible exception of grab groundwater sample TB10-W, sample analytical results and laboratory notes generally indicate the reported petroleum hydrocarbons were degraded and that significant natural attenuation likely occurred since April 1987.

In December 2006, ACC conducted additional subsurface characterization at the Site to further characterize suspect TPH impacts in soil and groundwater. Perched groundwater was encountered approximately 8.5 to 9 feet bgs in soil borings TB11 through TB15 and at approximately 5 feet bgs in soil boring TB16. Analytical results continue to indicate that TPH impacts appear to be primarily in groundwater. Petroleum hydrocarbons were reported in all six of the grab groundwater samples; however, BTEX concentrations are relatively low and reported TEPH concentrations are flagged as not resembling the laboratory standard. This type of laboratory flag typically indicates the hydrocarbons are weathered and being degraded by natural attenuation processes.

### **5.1 Informal Risk Evaluation**

ACC compared the reported concentrations of TPHg, BTEX, and TEPH to their applicable ESLs as summarized in Table B, California Regional Water Quality Control Board, San Francisco Bay Region, *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater*, Volume 1: Summary Tier 1 Lookup Tables, Interim Final – February 2005. This comparison constitutes a preliminary risk evaluation only.

None of the reported TPHg, BTEX, MTBE, or TEPH concentrations in soil exceeded their applicable residential ESL. Benzene exceeded its ESL of 46 µg/L in grab groundwater samples collected in soil boring TB11 and TB14 and ethylbenzene exceeded its ESL of 290 µg/L in the grab groundwater sample collected in soil boring TB15. Since most grab groundwater sample BTEX analytical results were significantly below their applicable ESLs, ACC evaluated benzene and ethylbenzene according to Table E-1a, Groundwater Screening Levels For Evaluation of Vapor Intrusion Concerns, California Regional Water Quality Control Board, San Francisco Bay Region, *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater*, Volume 1: Summary Tier 1 Lookup Tables, Interim Final – February 2005. For a residential scenario with high permeability soil, the benzene concentration in groundwater that might represent an indoor inhalation hazard is 540 µg/L, and similarly, 170,000 µg/L for ethylbenzene. Diesel and motor oil concentrations in grab groundwater samples exceed their ESL but do not pose a significant risk in the CSM.

In summary, the informal risk evaluation using a simple comparison of applicable ESLs to reported TPH concentrations indicates no soil sample analytical results exceeded their ESLs and very few grab groundwater sample analytical results exceeded their ESLs. A formal risk assessment would most likely come to the conclusion that residual petroleum hydrocarbon concentrations in soil and groundwater do not represent an unacceptable human health risk for future residential site use.

## **6.0 CONCEPTUAL SITE MODEL**

Based on the findings of completed soil and groundwater investigations, available groundwater monitoring results, acceptable informal risk assessment evaluations, the minimal possibility of downgradient wells, and relatively simple hydrogeological conditions at the Site, the conceptual site model is known with a high degree of confidence. There is one reasonable complete onsite exposure scenario and no known sensitive receptors in the downgradient direction. Concentrations of residual petroleum hydrocarbons have been identified in subsurface soil and groundwater and remedial soil excavation may be required to develop the property for residential use.

### **6.1 Potential Concerns**

The primary environmental concern is residual petroleum hydrocarbon impacts in subsurface soil and groundwater from the former underground storage tanks. Sample analytical results indicate gasoline and diesel fuel was released from the former USTs and residual TPH is naturally attenuating.

### **6.2 Site Conditions**

The subject property is approximately 42 feet above sea level and the surrounding area is relatively flat with a gentle slope towards the west. San Francisco Bay is approximately one mile northwest of the Site. The estimated groundwater gradient of 0.003 approximates the observed topographic gradient. Hills and areas of groundwater recharge exist to the east and southeast and regional groundwater movement and surface drainage trends to the west and northwest. Subsurface soil conditions vary somewhat across the Site. The area is reclaimed bay margin land with varying thicknesses of silty sand (SM) ranging from 5 to 10 feet overlying native Bay Mud clays to a minimum depth of 20 feet bgs. Just above the clays, ACC observed one to two feet of perched water in soils that exhibited evidence of fill, debris, and dumped waste materials. The depth to regional groundwater is unknown but greater than 20 feet bgs. Groundwater monitoring wells MW-4 and MW-6, installed in or adjacent to Willow Street as part of the UST investigation at Pacific Building Supply at 1735 24<sup>th</sup> Street, reported depths to groundwater ranging from 3.37 to 8.37 feet.

Generally, hydrogeological conditions are relatively simple: 1) moderately permeable silty sands are generally present to a depth of 10 feet and are then underlain by a minimum of 10 feet of highly plastic stiff “Bay Mud” clays; 2) varying amounts of perched water rest on the clay layer and the horizon represents a barrier to any additional vertical petroleum hydrocarbon migration; and 3) horizontal migration is primarily limited to this thin perched water zone at 10 feet bgs.

### **6.3 Exposure Assumptions**

Exposure to or contact with residual petroleum hydrocarbon concentrations in soil is not considered a potential exposure pathway. Exposure to or ingestion of groundwater containing residual petroleum hydrocarbon concentrations is not considered a potential exposure pathway. Reported concentrations of petroleum hydrocarbons in soil and groundwater suggest that indoor inhalation of petroleum hydrocarbons is a potentially complete exposure pathway.



Worker exposure to petroleum hydrocarbon-impacted soil at the Site during construction is unlikely, and based on the relatively low concentrations of benzene and BTEX in soil; this temporary exposure would likely not represent an unacceptable human health risk. If remedial soil excavation is performed prior to Site development, potential exposures would be even less.

#### **6.4 TPH Impacts in Soil**

Petroleum hydrocarbon impacts in soil primarily exist at 8 to 10 feet bgs, below tank bottom and above perched water observed at 9.5 feet bgs. Soil samples collected adjacent to the former USTs indicate the residual petroleum hydrocarbons are degraded and contain relatively low concentrations of BTEX and numerous soil samples did not report any detectable TPHg or BTEX. TPHg and benzene are not present at any significant concentrations in soil above approximately 8 feet bgs.

Soils at the Site to a depth of approximately 9 feet bgs appear to be primarily silty sands with low to moderate permeability. Based on estimated tank bottom depths of 6 to 8 feet bgs, any releases from the tanks would have likely impacted soil immediately beneath the tanks until water was encountered at 9.5 to 10 feet bgs. Currently, the degree and extent of petroleum hydrocarbon impact in soil is estimated to be minimal and confined between 6 to 9.5 feet bgs at each former UST location.

#### **6.5 TPH Impacts in Groundwater**

Petroleum hydrocarbon impacts in groundwater primarily exist at 9 to 10 feet bgs in plumes that surround the former USTs. A relatively thin perched water zone was observed on the Bay Mud clays at approximately 10 feet bgs and the thickness of this zone likely fluctuates during the calendar year due to precipitation rates. Grab groundwater samples collected adjacent to the former USTs generally indicate the residual dissolved petroleum hydrocarbons are degraded and contain relatively low concentrations of BTEX. Sample TB14-W, collected to further evaluate the elevated benzene reported in sample TB10-W in 2004, reported only 170 µg/L. Generally, reported BTEX in grab groundwater samples were relatively low and indicate that preferential attenuation has occurred.

Groundwater monitoring well MW-6, installed in Willow Street as part of the UST investigation at Pacific Building Supply at 1735 24<sup>th</sup> Street, reported TPHg concentrations ranging from 1.0 to 2.3 µg/L during periodic groundwater monitoring conducted between December 1989 and December 1995. This monitoring well was located approximately 15 feet from the gate leading into the Site and directly downgradient of the majority of the USTs formerly located at the Site. A copy of Brunsing Associates Site Map, Figure 2, and groundwater monitoring results from monitoring wells MW-4 and MW-6 is included in Appendix 4.

#### **6.6 TPH Impact in Soil Gas**

Potential TPH impacts in soil gas are unknown. Due to relatively low BTEX concentrations reported in soil and groundwater, and relatively small volumes of TPH-impacted soil at each UST location, the cumulative TPH impacts in soil gas should be minimal and readily disseminated in surface soils.

## 7.0 CONCLUSIONS

Based on previous investigation findings, additional sample analytical results, PID readings, and field observations, ACC concludes:

- ❑ Groundwater in the vicinity of the former USTs has been impacted by petroleum hydrocarbons related to a suspect release(s) from the former USTs prior to their removal in 1987;
- ❑ Grab groundwater analytical results reported elevated concentrations of gasoline and diesel fuel constituents and relatively low concentrations of BTEX constituents;
- ❑ Soil sample analytical results reported relatively minor concentrations of TPHg, BTEX, MTBE, and TEPH and further demonstrate TPH impacts in soil are relatively small;
- ❑ Soils at the Site are primarily fine-grained silts and clays with low to moderate estimated permeability which limit or prevent the vertical migration of dissolved-phase petroleum hydrocarbons;
- ❑ Encountered groundwater consisted of approximately 1 foot of perched water at the silty sand/clay interface and was observed in soils containing fill materials, decaying organic matter, and debris;
- ❑ HVOCs were not reported in groundwater in the three grab groundwater samples analyzed and further demonstrate that HVOCs are not constituents of concern at the Site;
- ❑ With minor exceptions, apparent human health risk from residual TPH in the subsurface is acceptable in a residential scenario.

## 8.0 RECOMMENDATIONS

Based on conclusions of this investigation and our understanding of enforced UST regulations in the City of Oakland and Alameda County, ACC recommends:

- ❑ Immediately pursuing regulatory review by the San Francisco Bay Regional Water Quality Control Board as the lead regulatory agency and determine the potential need to remediate petroleum hydrocarbon-impacted soil and groundwater during future Site development;
- ❑ Evaluate the need to perform remedial soil excavation in the vicinity of soil borings TB-5, SS-1, and TB-10 and pit dewatering for purposes of source removal to further decrease potential human health risk associated with residual petroleum hydrocarbons in subsurface soil and groundwater;
- ❑ Having a Contingency Plan in place during Site development to properly remove and handle petroleum hydrocarbon-impacted soil in a timely and cost effective manner; and
- ❑ Installing a vapor barrier under the building foundations during construction.

## **9.0 LIMITATIONS**

The service performed by ACC has been conducted in a manner consistent with the levels of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the area. No other warranty, expressed or implied, is made.

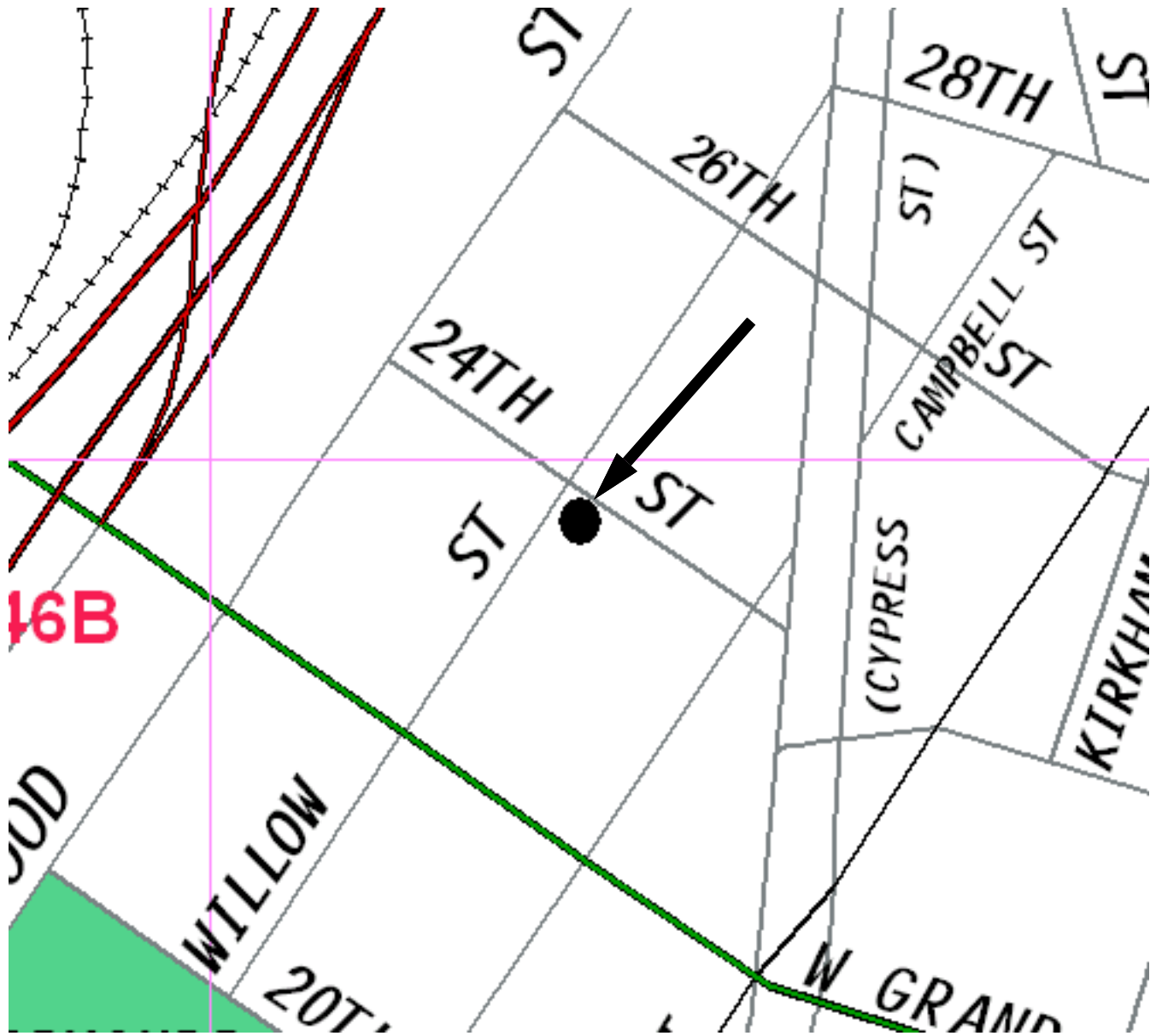
The conclusions presented in this report are professional opinions based on the indicated data described in this report and applicable regulations and guidelines currently in place. They are intended only for the purpose, site, and project indicated. Opinions and recommendations presented herein apply to site conditions existing at the time of our study.

ACC has included analytical results from a state-certified laboratory, which performs analyses according to procedures suggested by the U.S. Environmental Protection Agency and the State of California. ACC is not responsible for laboratory errors in procedure or result reporting.


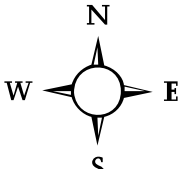
## FIGURES

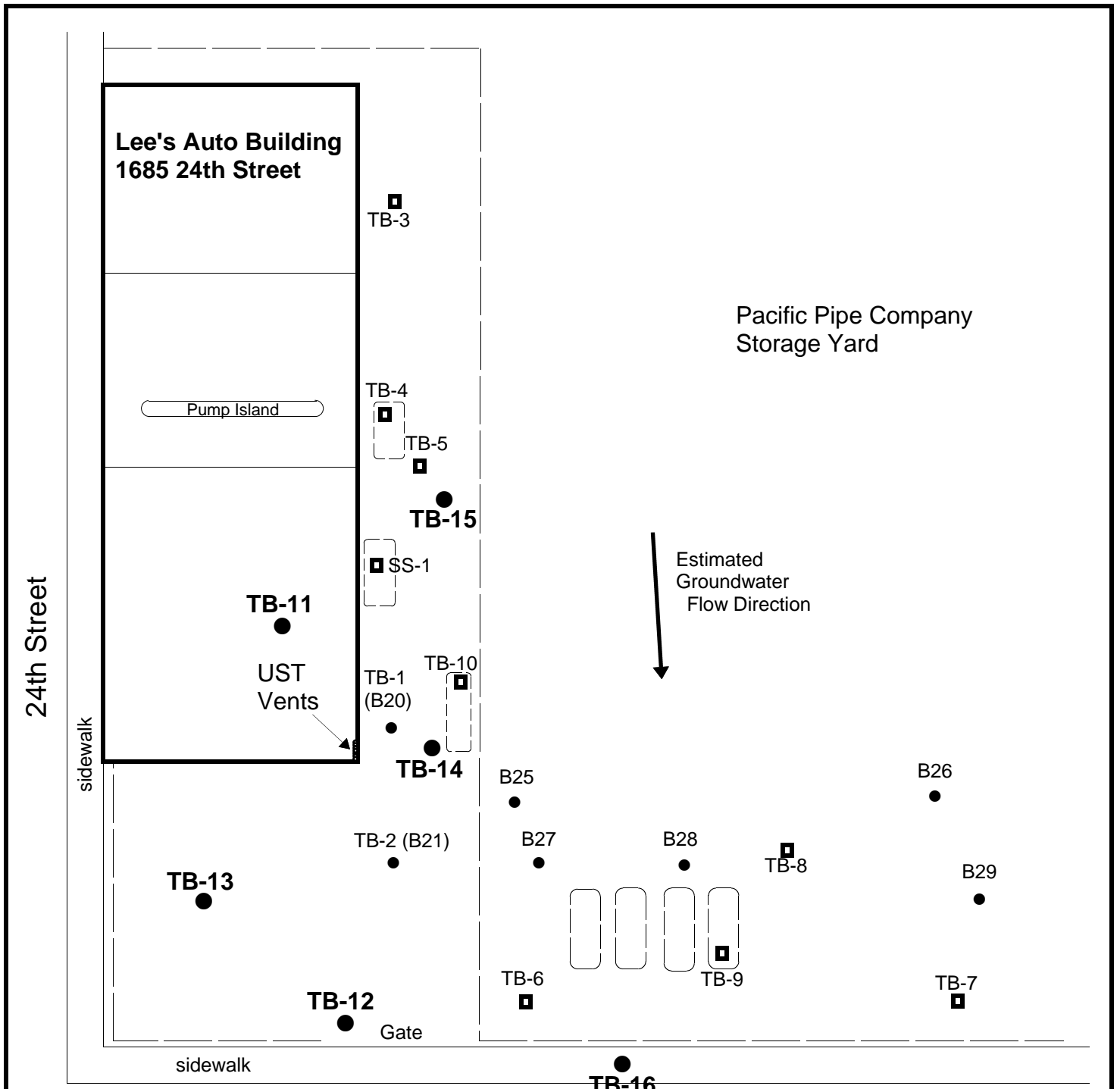
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Source: The Thomas Guide, Bay Area Metro 2004

Title: <b>Location Map</b> <b>1685 24th Street</b> <b>Oakland, California</b>	
Figure Number: 1	Scale: None
Project Number: 6871-001	Drawn By: TRB
 <b>Northern California</b> 7977 Capwell Drive, Suite 100 Oakland, CA 94621 (510) 638-8400	Date: 6/17/06
	



### Legend

- TB-11** ● 12/06 Boring Locations
- TB-10** □ 6/04 Boring Locations
- B 29** ● 8/02 Boring Locations
- (dashed) Approximate Former UST Locations
- (dashed) Fence Line

Map Source: Winter Construction Inc.

Title: Soil Boring Locations  
1685 24th Street  
Oakland, California

Figure Number: 2

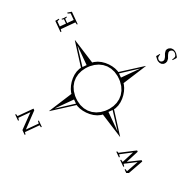
Scale: 1" = 30'

Project No.: 6871-001.00

Drawn By: KRB

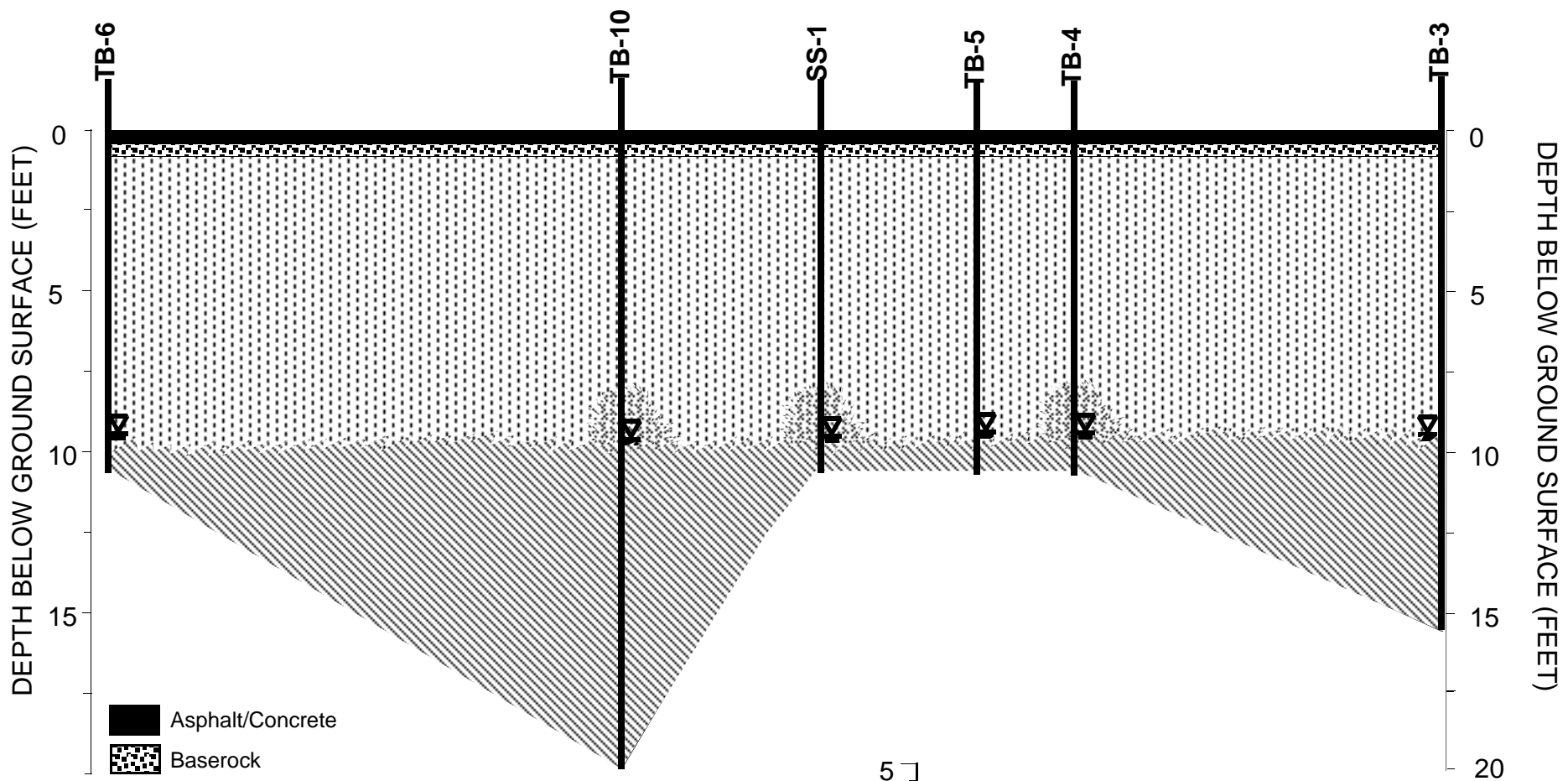








7977 Capwell Drive, Suite 100  
Oakland, California 94621  
(510) 638-8400 Fax: (510) 638-8404

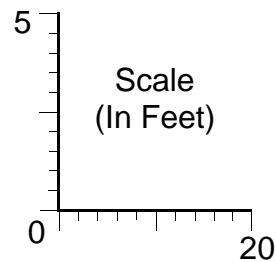


A West

A' East



-  Asphalt/Concrete
  -  Baserock
  -  Silty sand (SM), olive brown, poorly graded, loose, trace to 10% fines, grades to SP, uniform, damp, no gasoline odor or soil discoloration
  -  Silty Clay (CL), brown, slightly to mod. plastic, medium stiff, trace v fine grained sand, uniform, damp, no odor or discoloration noted
  -  Fill material, sand with silts, some brick fragments and other organic debris
- TB-10**  
Soil Boring Location
-  Depth of First-Encountered Groundwater



Title: <b>Geologic Cross Section</b> <b>1685 24th Street</b> <b>Oakland, California</b>	
Figure No. 3	Date: 06/16/05
Drawn By: DRD	Project 6871-001-00
ACC Environmental Consultants 7977 Capwell Drive, Suite 100 Oakland, California 94621 (510)638-8400 Fax: (510)638-8404	

## APPENDICES

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APPENDIX 1

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# Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street  
Hayward, CA 94544-1395  
Telephone: (510)670-6633 Fax:(510)782-1939

**Application Approved on: 12/01/2006 By jamesy**

**Permit Numbers: W2006-1011**  
**Permits Valid from 12/07/2006 to 12/15/2006**

**Application Id:** 1164928142690  
**Site Location:** 1685 24th St. Oakland, CA 94607  
**Project Start Date:** 12/07/2006

**City of Project Site:**Oakland

**Completion Date:**12/15/2006

**Applicant:** ACC Environmental Consultants - Kenneth Blume  
7977 Capwell Dr #100, Oakland, CA 94621

**Phone:** 510-638-8400

**Property Owner:** Capital Stone Group LLC  
1485 8th St., Oakland, CA 94607

**Phone:** 510-663-0363

**Client:** \*\* same as Property Owner \*\*

	<b>Total Due:</b>	\$200.00
<b>Receipt Number: WR2006-0532</b>	<b>Total Amount Paid:</b>	\$200.00
<b>Payer Name : AA Environmental</b>	<b>Paid By: CHECK</b>	<b>PAID IN FULL</b>

**Works Requesting Permits:**

Borehole(s) for Investigation-Geotechnical Study/CPT's - 10 Boreholes  
Driller: Environmental Control Associates - Lic #: 695970 - Method: other

**Work Total: \$200.00**

**Specifications**

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2006-1011	12/01/2006	03/07/2007	10	2.00 in.	35.00 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.
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. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
5. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

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

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.

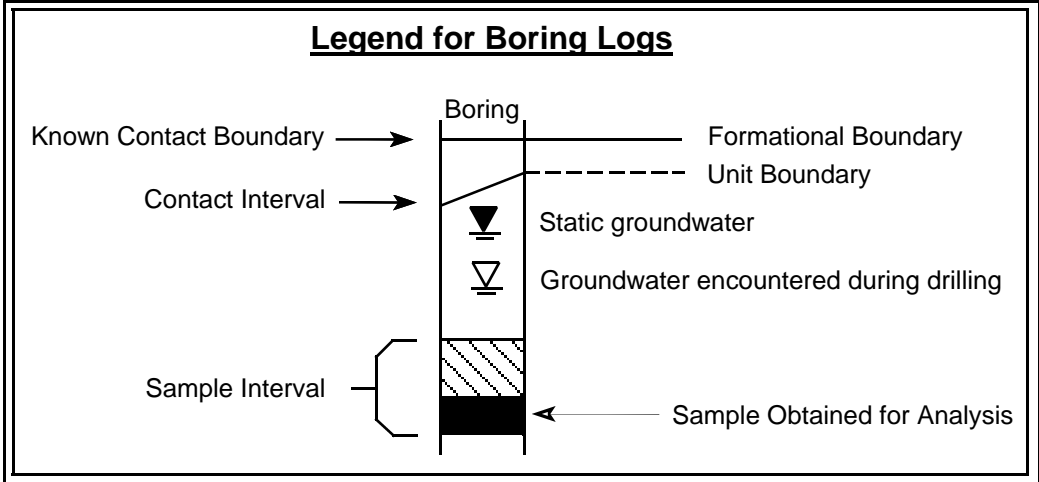
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## APPENDIX 2

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## UNIFIED SOIL CLASSIFICATION SYSTEM

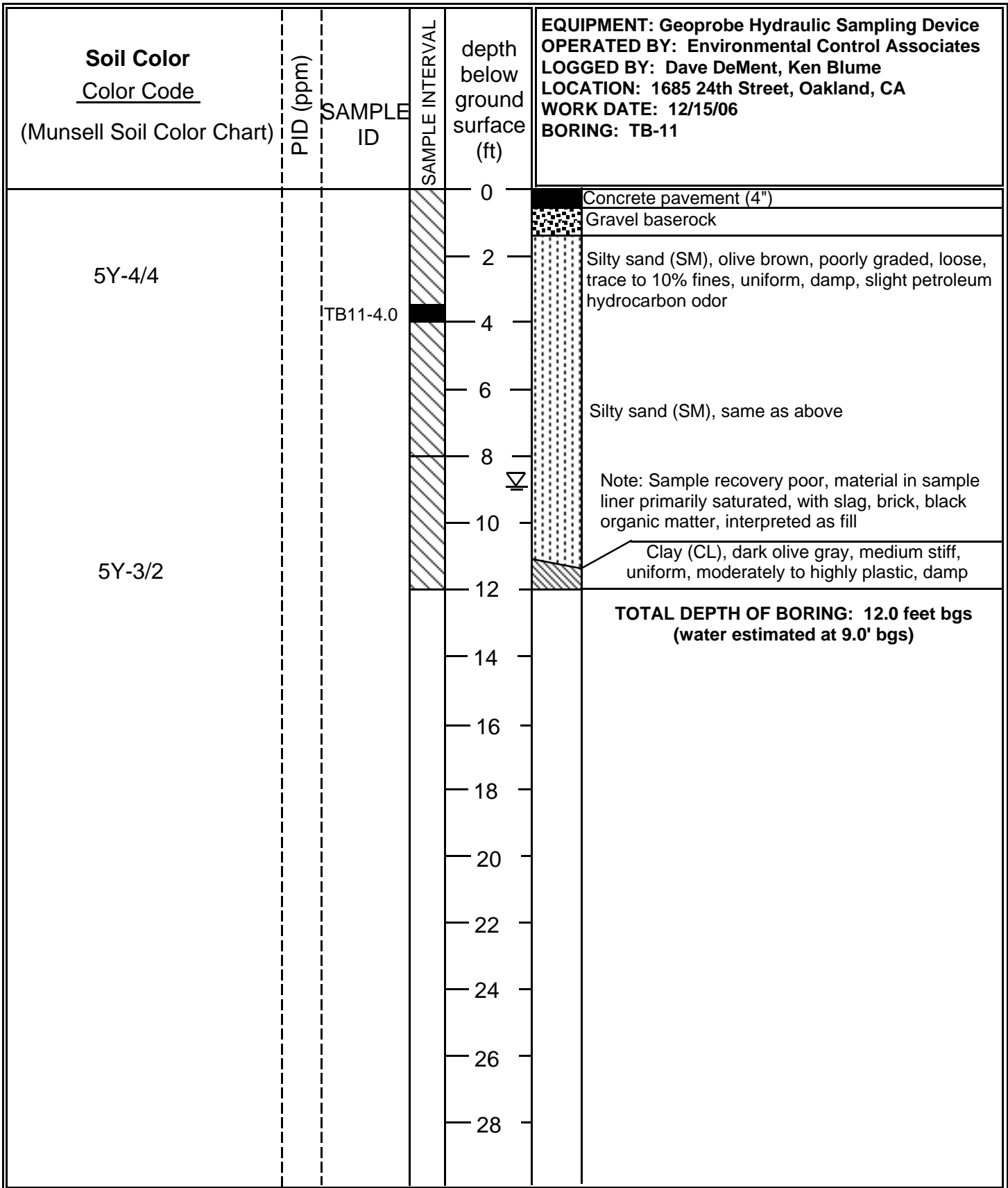
MAJOR DIVISIONS		TYPICAL NAMES	
COARSE GRAINED SOILS	<b>GRAVELS</b>  more than half coarse fraction is larger than Number 4 sieve	CLEAN GRAVELS WITH LITTLE OR NO FINES	<b>GW</b> well graded gravels, gravel-sand mixtures
		GRAVELS WITH OVER 12% FINES	<b>GP</b> poorly graded gravels, gravel-sand mixtures
		GRAVELS WITH OVER 12% FINES	<b>GM</b> silty gravels, poorly graded gravel-sand silt mixtures
		GRAVELS WITH OVER 12% FINES	<b>GC</b> clayey gravels, poorly graded gravel-sand clay mixtures
	<b>SANDS</b>  more than half coarse fraction is smaller than Number 4 sieve	CLEAN SANDS WITH LITTLE OR NO FINES	<b>SW</b> well graded sands, gravelly sands
		CLEAN SANDS WITH LITTLE OR NO FINES	<b>SP</b> poorly graded sands, gravelly sands
		SANDS WITH OVER 12% FINES	<b>SM</b> silty sands, poorly graded sand-silt mixtures
		SANDS WITH OVER 12% FINES	<b>SC</b> clayey sands, poorly graded sand-clay mixtures
FINE GRAINED SOILS	<b>SILTS AND CLAYS</b> liquid limit less than 50	<b>ML</b> inorg. silts and very fine sands, rock flour silty or clayey sands, or clayey silts w/ sl. plasticity	
		<b>CL</b> inorg. clays of low-med plasticity, gravelly clays, sandy clays, silty clays, lean clays	
		<b>OL</b> organic clays and organic silty clays of low plasticity	
	<b>SILTS AND CLAYS</b> liquid limit greater than 50	<b>MH</b> inorganic silty, micaceous or diatomaceous fine sandy or silty soils, elastic silts	
		<b>CH</b> inorganic clays of high plasticity, fat clays	
		<b>OH</b> organic clays of medium to high plasticity organic silts	
<b>HIGHLY ORGANIC SOILS</b>		<b>PT</b> peat and other highly organic soils	





**ACC Environmental Consultants, Inc.**  
 7977 Capwell Drive, Suite 100  
 Oakland, California 94621  
 (510) 638-8400 Fax: (510) 638-8404

Site: **SUBJECT SITE**  
**1685 24th Street**  
**Oakland, California**







Project Number: **6871-001.00**



<b>ACC Environmental Consultants, Inc.</b> 7977 Capwell Drive, Suite 100 Oakland, California 94621 (510)638-8400 FAX: (510)638-8404	Project Number 6871-001.00	Title: LOG OF BORING TB-11  1685 24th Street Oakland, California
	Date: 12/15/06	

<b>Soil Color</b> <u>Color Code</u> (Munsell Soil Color Chart)	PID (ppm)	SAMPLE ID	SAMPLE INTERVAL	depth below ground surface (ft)	<b>EQUIPMENT: Geoprobe Hydraulic Sampling Device</b> <b>OPERATED BY: Environmental Control Associates</b> <b>LOGGED BY: Dave DeMent, Ken Blume</b> <b>LOCATION: 1685 24th Street, Oakland, CA</b> <b>WORK DATE: 12/15/06</b> <b>BORING: TB-12</b>
10YR-5/4		TB12-4.0		0 2 4	Concrete pavement (4") Gravel baserock
		TB12-8.5		6 8 10 12 14 16 18 20 22 24 26 28	Silty sand (SM), yellow brown, poorly graded, loose, 10% fines, uniform, damp, no petroleum hydrocarbon odor or discoloration  Silty sand (SM), same as above, abundant black organics, ceramic fragments, slag, and debris, slight petroleum hydrocarbon odor  Note: Sample recovery poor, material in sample liner primarily saturated, fill materials noted
					<b>TOTAL DEPTH OF BORING: 11.0 feet bgs</b> <b>(water estimated at 9.0' bgs)</b>

<b>ACC Environmental Consultants, Inc.</b> 7977 Capwell Drive, Suite 100 Oakland, California 94621 (510)638-8400 FAX: (510)638-8404	Project Number 6871-001.00	Title: LOG OF BORING TB-12  1685 24th Street Oakland, California
<b>Date: 12/15/06</b>		

<b>Soil Color</b> <u>Color Code</u> (Munsell Soil Color Chart)	PID (ppm)	SAMPLE ID	SAMPLE INTERVAL	depth below ground surface (ft)	<b>EQUIPMENT: Geoprobe Hydraulic Sampling Device</b> <b>OPERATED BY: Environmental Control Associates</b> <b>LOGGED BY: Dave DeMent, Ken Blume</b> <b>LOCATION: 1685 24th Street, Oakland, CA</b> <b>WORK DATE: 12/15/06</b> <b>BORING: TB-13</b>
10YR-5/4		TB13-2.0		0	Asphalt pavement
				0	Gravel baserock
		TB13-8.5		2 4 6 8	Silty sand (SM), yellow brown, poorly graded, loose, 10% fines, uniform, damp, no petroleum hydrocarbon odor or discoloration
				8	Silty sand (SM), same as above, abundant black organics, ceramic fragments, slag, and debris, slight petroleum hydrocarbon odor
				8 10 12 14 16 18 20 22 24 26 28	Note: Sample recovery poor, material in sample liner primarily saturated, fill materials noted
				10	
					<b>TOTAL DEPTH OF BORING: 11.0 feet bgs</b> <b>(water estimated at 9.0' bgs)</b>

<b>ACC Environmental Consultants, Inc.</b> 7977 Capwell Drive, Suite 100 Oakland, California 94621 (510)638-8400 FAX: (510)638-8404	Project Number 6871-001.00	Title: LOG OF BORING TB-13  1685 24th Street Oakland, California
<b>Date: 12/15/06</b>		



<b>Soil Color</b> <u>Color Code</u> (Munsell Soil Color Chart)	PID (ppm)	SAMPLE ID	SAMPLE INTERVAL	depth below ground surface (ft)	<b>EQUIPMENT: Geoprobe Hydraulic Sampling Device</b> <b>OPERATED BY: Environmental Control Associates</b> <b>LOGGED BY: Dave DeMent, Ken Blume</b> <b>LOCATION: 1685 24th Street, Oakland, CA</b> <b>WORK DATE: 12/15/06</b> <b>BORING: TB-14</b>
				0	Asphalt pavement
					Gravel baserock
10YR-5/4		TB14-4.0		2	Silty sand (SM), yellow brown, poorly graded, loose, 10% fines, uniform, damp, olive green at 3.5 feet (possible soil discoloration), brick noted, no petroleum hydrocarbon, interpreted as FILL
				4	
2.5Y-4/4				6	Silty sand (SM), olive green, predominantly fine to medium grain sand, 5-20% disseminated fines, moist, slight petroleum hydrocarbon odor
				8	
5Y-3/2				10	Clay (CL), dark olive gray, medium stiff, uniform, moderately to highly plastic, damp
					<b>TOTAL DEPTH OF BORING: 11.0 feet bgs</b> <b>(water estimated at 8.5' bgs)</b>
					12
					14
					16
					18
					20
					22
					24
					26
					28
<b>ACC Environmental Consultants, Inc.</b> 7977 Capwell Drive, Suite 100 Oakland, California 94621 (510)638-8400 FAX: (510)638-8404			Project Number 6871-001.00		Title: LOG OF BORING TB-14  1685 24th Street Oakland, California
			<b>Date: 12/15/06</b>		

Soil Color Color Code (Munsell Soil Color Chart)	PID (ppm)	SAMPLE ID	SAMPLE INTERVAL	depth below ground surface (ft)	<b>EQUIPMENT: Geoprobe Hydraulic Sampling Device</b> <b>OPERATED BY: Environmental Control Associates</b> <b>LOGGED BY: Dave DeMent, Ken Blume</b> <b>LOCATION: 1685 24th Street, Oakland, CA</b> <b>WORK DATE: 12/15/06</b> <b>BORING: TB-15</b>
10YR-5/4		TB15-8.5		0 2 4 6 8 10 12 14 16 18 20 22 24 26 28	Asphalt pavement Gravel baserock Silty sand (SM), yellow brown, poorly graded, loose-medium dense, 5-15% fines, uniform, damp, loose and 1-5% fines from 3.5-4.0' Silty sand (SM), yellow brown, predominantly fine to medium grain sand, 5-15% disseminated fines, moist Clay (CL), dark olive gray, medium stiff, uniform, moderately to highly plastic, damp <b>TOTAL DEPTH OF BORING: 11.0 feet bgs</b> <b>(water estimated at 8.75' bgs)</b>
<b>ACC Environmental Consultants, Inc.</b> 7977 Capwell Drive, Suite 100 Oakland, California 94621 (510)638-8400 FAX: (510)638-8404	Project Number 6871-001.00 <hr/> <b>Date: 12/15/06</b>		Title: LOG OF BORING TB-15  1685 24th Street Oakland, California		

Soil Color Color Code (Munsell Soil Color Chart)	PID (ppm)	SAMPLE ID	SAMPLE INTERVAL	depth below ground surface (ft)	<b>EQUIPMENT: Geoprobe Hydraulic Sampling Device</b> <b>OPERATED BY: Environmental Control Associates</b> <b>LOGGED BY: Dave DeMent, Ken Blume</b> <b>LOCATION: 1685 24th Street, Oakland, CA</b> <b>WORK DATE: 12/15/06</b> <b>BORING: TB-16</b>
10YR-5/4			[Hatched pattern]	0	Silt (ML), brown to dark brown, medium stiff, uniform, moderately plastic, damp
				2	Silty sand (SM), yellow brown, poorly graded, medium to fine grain, loose-medium dense, 5-15% fines, uniform, damp
5Y-3/2					4 6 8
					<b>TOTAL DEPTH OF BORING: 9.0 feet bgs</b> <b>(water estimated at 5.25' bgs)</b>
<b>ACC Environmental Consultants, Inc.</b> 7977 Capwell Drive, Suite 100 Oakland, California 94621 (510)638-8400 FAX: (510)638-8404			<b>Project Number</b> 6871-001.00  <b>Date: 12/15/06</b>		<b>Title: LOG OF BORING TB-16</b>  1685 24th Street Oakland, California

## APPENDIX 3

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### Total Volatile Hydrocarbons

Lab #: 191564	Location: 1685 24th Street
Client: ACC Environmental Consultants	Prep: EPA 5030B
Project#: STANDARD	Analysis: EPA 8015B
Matrix: Soil	Batch#: 120492
Units: mg/Kg	Sampled: 12/15/06
Basis: as received	Received: 12/18/06
Diln Fac: 1.000	

Field ID: TB11-4.0	Lab ID: 191564-001
Type: SAMPLE	Analyzed: 12/19/06

Analyte	Result	RL
Gasoline C7-C12	16 H	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	114	62-137
Bromofluorobenzene (FID)	105	60-148

Field ID: TB12-4.0	Lab ID: 191564-002
Type: SAMPLE	Analyzed: 12/19/06

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	101	62-137
Bromofluorobenzene (FID)	99	60-148

Field ID: TB12-8.5	Lab ID: 191564-003
Type: SAMPLE	Analyzed: 12/20/06

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	100	62-137
Bromofluorobenzene (FID)	97	60-148

Field ID: TB13-8.5	Lab ID: 191564-005
Type: SAMPLE	Analyzed: 12/20/06

Analyte	Result	RL
Gasoline C7-C12	ND	0.97

Surrogate	%REC	Limits
Trifluorotoluene (FID)	103	62-137
Bromofluorobenzene (FID)	103	60-148

H= Heavier hydrocarbons contributed to the quantitation  
 ND= Not Detected  
 RL= Reporting Limit

### Total Volatile Hydrocarbons

Lab #: 191564	Location: 1685 24th Street
Client: ACC Environmental Consultants	Prep: EPA 5030B
Project#: STANDARD	Analysis: EPA 8015B
Matrix: Soil	Batch#: 120492
Units: mg/Kg	Sampled: 12/15/06
Basis: as received	Received: 12/18/06
Diln Fac: 1.000	

Field ID: TB14-4.0	Lab ID: 191564-006
Type: SAMPLE	Analyzed: 12/20/06

Analyte	Result	RL
Gasoline C7-C12	ND	0.97

Surrogate	%REC	Limits
Trifluorotoluene (FID)	105	62-137
Bromofluorobenzene (FID)	98	60-148

Field ID: TB15-8.5	Lab ID: 191564-007
Type: SAMPLE	Analyzed: 12/20/06

Analyte	Result	RL
Gasoline C7-C12	ND	0.95

Surrogate	%REC	Limits
Trifluorotoluene (FID)	101	62-137
Bromofluorobenzene (FID)	99	60-148

Type: BLANK	Analyzed: 12/19/06
Lab ID: QC368815	

Analyte	Result	RL
Gasoline C7-C12	ND	0.20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	97	62-137
Bromofluorobenzene (FID)	99	60-148

H= Heavier hydrocarbons contributed to the quantitation  
 ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8015B
Type:	LCS	Basis:	as received
Lab ID:	QC368816	Diln Fac:	1.000
Matrix:	Soil	Batch#:	120492
Units:	mg/Kg	Analyzed:	12/19/06

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	10.00	9.864	99	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	115	62-137
Bromofluorobenzene (FID)	103	60-148

## Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
MSS Lab ID:	191578-001	Batch#:	120492
Matrix:	Miscell.	Sampled:	12/18/06
Units:	mg/Kg	Received:	12/18/06
Basis:	as received	Analyzed:	12/19/06

Type: MS Lab ID: QC368817

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.1061	9.901	9.281	93	38-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	110	62-137
Bromofluorobenzene (FID)	106	60-148

Type: MSD Lab ID: QC368818

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	9.709	8.452	86	38-120	7	26

Surrogate	%REC	Limits
Trifluorotoluene (FID)	103	62-137
Bromofluorobenzene (FID)	99	60-148

RPD= Relative Percent Difference



### Total Extractable Hydrocarbons

Lab #: 191564	Location: 1685 24th Street
Client: ACC Environmental Consultants	Prep: EPA 3520C
Project#: STANDARD	Analysis: EPA 8015B
Matrix: Water	Sampled: 12/15/06
Units: ug/L	Received: 12/18/06
Diln Fac: 1.000	

Field ID: TB11-W	Prepared: 12/19/06
Type: SAMPLE	Analyzed: 12/21/06
Lab ID: 191564-008	Cleanup Method: EPA 3630C
Batch#: 120518	

Analyte	Result	RL
Diesel C10-C24	8,100 H L Y	50
Motor Oil C24-C36	13,000 L	300

Surrogate	%REC	Limits
Hexacosane	92	65-130

Field ID: TB12-W	Prepared: 12/19/06
Type: SAMPLE	Analyzed: 12/21/06
Lab ID: 191564-009	Cleanup Method: EPA 3630C
Batch#: 120518	

Analyte	Result	RL
Diesel C10-C24	540 H L Y	50
Motor Oil C24-C36	410 L	300

Surrogate	%REC	Limits
Hexacosane	110	65-130

Field ID: TB13-W	Prepared: 12/19/06
Type: SAMPLE	Analyzed: 12/21/06
Lab ID: 191564-010	Cleanup Method: EPA 3630C
Batch#: 120518	

Analyte	Result	RL
Diesel C10-C24	720 H L Y	50
Motor Oil C24-C36	370 L	300

Surrogate	%REC	Limits
Hexacosane	90	65-130

H= Heavier hydrocarbons contributed to the quantitation  
 L= Lighter hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

### Total Extractable Hydrocarbons

Lab #: 191564	Location: 1685 24th Street
Client: ACC Environmental Consultants	Prep: EPA 3520C
Project#: STANDARD	Analysis: EPA 8015B
Matrix: Water	Sampled: 12/15/06
Units: ug/L	Received: 12/18/06
Diln Fac: 1.000	

Field ID: TB14-W	Prepared: 12/22/06
Type: SAMPLE	Analyzed: 12/27/06
Lab ID: 191564-011	Cleanup Method: EPA 3630C
Batch#: 120670	

Analyte	Result	RL
Diesel C10-C24	4,100 H L Y	50
Motor Oil C24-C36	2,900 H L	300

Surrogate	%REC	Limits
Hexacosane	69	65-130

Field ID: TB15-W	Prepared: 12/19/06
Type: SAMPLE	Analyzed: 12/21/06
Lab ID: 191564-012	Cleanup Method: EPA 3630C
Batch#: 120518	

Analyte	Result	RL
Diesel C10-C24	9,500 H L Y	50
Motor Oil C24-C36	11,000 L	300

Surrogate	%REC	Limits
Hexacosane	90	65-130

Field ID: TB16-W	Prepared: 12/19/06
Type: SAMPLE	Analyzed: 12/21/06
Lab ID: 191564-013	Cleanup Method: EPA 3630C
Batch#: 120518	

Analyte	Result	RL
Diesel C10-C24	1,600 H L Y	50
Motor Oil C24-C36	300 L	300

Surrogate	%REC	Limits
Hexacosane	97	65-130

Type: BLANK	Prepared: 12/19/06
Lab ID: QC368938	Analyzed: 12/21/06
Batch#: 120518	Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	108	65-130

H= Heavier hydrocarbons contributed to the quantitation  
 L= Lighter hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

### Total Extractable Hydrocarbons

Lab #: 191564	Location: 1685 24th Street
Client: ACC Environmental Consultants	Prep: EPA 3520C
Project#: STANDARD	Analysis: EPA 8015B
Matrix: Water	Sampled: 12/15/06
Units: ug/L	Received: 12/18/06
Diln Fac: 1.000	

Type: BLANK	Prepared: 12/22/06
Lab ID: QC369528	Analyzed: 12/27/06
Batch#: 120670	Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	98	65-130

H= Heavier hydrocarbons contributed to the quantitation  
 L= Lighter hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 3520C
Project#:	STANDARD	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	120518
Units:	ug/L	Prepared:	12/19/06
Diln Fac:	1.000	Analyzed:	12/22/06

Type: BS Cleanup Method: EPA 3630C  
 Lab ID: QC368939

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,657	106	61-133

Surrogate	%REC	Limits
Hexacosane	93	65-130

Type: BSD Cleanup Method: EPA 3630C  
 Lab ID: QC368940

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,716	109	61-133	2	31

Surrogate	%REC	Limits
Hexacosane	105	65-130

RPD= Relative Percent Difference

## Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 3520C
Project#:	STANDARD	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC369529	Batch#:	120670
Matrix:	Water	Prepared:	12/22/06
Units:	ug/L	Analyzed:	12/27/06

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,303	92	61-133

Surrogate	%REC	Limits
Hexacosane	83	65-130

### Total Extractable Hydrocarbons

Lab #: 191564	Location: 1685 24th Street
Client: ACC Environmental Consultants	Prep: SHAKER TABLE
Project#: STANDARD	Analysis: EPA 8015B
Matrix: Soil	Sampled: 12/15/06
Units: mg/Kg	Received: 12/18/06
Basis: as received	Prepared: 12/19/06
Batch#: 120496	Analyzed: 12/20/06

Field ID: TB12-8.5	Diln Fac: 1.000
Type: SAMPLE	Cleanup Method: EPA 3630C
Lab ID: 191564-003	

Analyte	Result	RL
Diesel C10-C24	7.9 H L Y	1.0
Motor Oil C24-C36	29 H L	5.0

Surrogate	%REC	Limits
Hexacosane	87	48-130

Field ID: TB13-8.5	Diln Fac: 1.000
Type: SAMPLE	Cleanup Method: EPA 3630C
Lab ID: 191564-005	

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	81	48-130

Field ID: TB15-8.5	Diln Fac: 5.000
Type: SAMPLE	Cleanup Method: EPA 3630C
Lab ID: 191564-007	

Analyte	Result	RL
Diesel C10-C24	25 H Y	5.0
Motor Oil C24-C36	170 H L	25

Surrogate	%REC	Limits
Hexacosane	69	48-130

Type: BLANK	Diln Fac: 1.000
Lab ID: QC368841	Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	89	48-130

H= Heavier hydrocarbons contributed to the quantitation  
 L= Lighter hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	SHAKER TABLE
Project#:	STANDARD	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC368842	Batch#:	120496
Matrix:	Soil	Prepared:	12/19/06
Units:	mg/Kg	Analyzed:	12/20/06
Basis:	as received		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.92	44.91	90	59-133

Surrogate	%REC	Limits
Hexacosane	94	48-130

## Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	SHAKER TABLE
Project#:	STANDARD	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	120496
MSS Lab ID:	191543-001	Sampled:	12/15/06
Matrix:	Soil	Received:	12/15/06
Units:	mg/Kg	Prepared:	12/19/06
Basis:	as received	Analyzed:	12/22/06
Diln Fac:	5.000		

Type: MS Lab ID: QC368843

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	49.89	49.90	105.4	111	37-153

Surrogate	%REC	Limits
Hexacosane	94	48-130

Type: MSD Lab ID: QC368844

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.86	97.15	95	37-153	8	43

Surrogate	%REC	Limits
Hexacosane	89	48-130

RPD= Relative Percent Difference



### Total Extractable Hydrocarbons

Lab #: 191564	Location: 1685 24th Street
Client: ACC Environmental Consultants	Prep: SHAKER TABLE
Project#: STANDARD	Analysis: EPA 8015B
Matrix: Soil	Sampled: 12/15/06
Units: mg/Kg	Received: 12/18/06
Basis: as received	Prepared: 12/19/06
Batch#: 120496	

Field ID: TB11-4.0	Diln Fac: 1.000
Type: SAMPLE	Analyzed: 12/21/06
Lab ID: 191564-001	

Analyte	Result	RL
Diesel C10-C24	28 H L Y	1.0
Motor Oil C24-C36	22 H L	5.0

Surrogate	%REC	Limits
Hexacosane	101	48-130

Field ID: TB12-4.0	Diln Fac: 5.000
Type: SAMPLE	Analyzed: 12/20/06
Lab ID: 191564-002	

Analyte	Result	RL
Diesel C10-C24	9.5 H Y	5.0
Motor Oil C24-C36	79 H	25

Surrogate	%REC	Limits
Hexacosane	76	48-130

Field ID: TB13-2.0	Diln Fac: 1.000
Type: SAMPLE	Analyzed: 12/21/06
Lab ID: 191564-004	

Analyte	Result	RL
Diesel C10-C24	2.5 Y	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	85	48-130

Field ID: TB14-4.0	Diln Fac: 5.000
Type: SAMPLE	Analyzed: 12/20/06
Lab ID: 191564-006	

Analyte	Result	RL
Diesel C10-C24	40 H Y	5.0
Motor Oil C24-C36	160 H	25

Surrogate	%REC	Limits
Hexacosane	91	48-130

H= Heavier hydrocarbons contributed to the quantitation  
 L= Lighter hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

### Total Extractable Hydrocarbons

Lab #: 191564	Location: 1685 24th Street
Client: ACC Environmental Consultants	Prep: SHAKER TABLE
Project#: STANDARD	Analysis: EPA 8015B
Matrix: Soil	Sampled: 12/15/06
Units: mg/Kg	Received: 12/18/06
Basis: as received	Prepared: 12/19/06
Batch#: 120496	

Type: BLANK	Diln Fac: 1.000
Lab ID: QC368841	Analyzed: 12/20/06

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	%REC	Limits
Hexacosane	104	48-130

H= Heavier hydrocarbons contributed to the quantitation  
 L= Lighter hydrocarbons contributed to the quantitation  
 Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	SHAKER TABLE
Project#:	STANDARD	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC368842	Batch#:	120496
Matrix:	Soil	Prepared:	12/19/06
Units:	mg/Kg	Analyzed:	12/20/06
Basis:	as received		

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.92	44.91	90	59-133

Surrogate	%REC	Limits
Hexacosane	94	48-130

## Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	SHAKER TABLE
Project#:	STANDARD	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	120496
MSS Lab ID:	191543-001	Sampled:	12/15/06
Matrix:	Soil	Received:	12/15/06
Units:	mg/Kg	Prepared:	12/19/06
Basis:	as received	Analyzed:	12/22/06
Diln Fac:	5.000		

Type: MS Lab ID: QC368843

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	49.89	49.90	105.4	111	37-153

Surrogate	%REC	Limits
Hexacosane	94	48-130

Type: MSD Lab ID: QC368844

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.86	97.15	95	37-153	8	43

Surrogate	%REC	Limits
Hexacosane	89	48-130

**Purgeable Halocarbons by GC/MS**

Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	TB12-W	Batch#:	120691
Lab ID:	191564-009	Sampled:	12/15/06
Matrix:	Water	Received:	12/18/06
Units:	ug/L	Analyzed:	12/27/06
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	80-130
Toluene-d8	102	80-120
Bromofluorobenzene	105	80-122

ND= Not Detected

RL= Reporting Limit

### Purgeable Halocarbons by GC/MS

Lab #: 191564	Location: 1685 24th Street
Client: ACC Environmental Consultants	Prep: EPA 5030B
Project#: STANDARD	Analysis: EPA 8260B
Field ID: TB13-W	Batch#: 120691
Lab ID: 191564-010	Sampled: 12/15/06
Matrix: Water	Received: 12/18/06
Units: ug/L	Analyzed: 12/27/06
Diln Fac: 1.000	

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	80-130
Toluene-d8	98	80-120
Bromofluorobenzene	106	80-122

ND= Not Detected

RL= Reporting Limit

### Purgeable Halocarbons by GC/MS

Lab #: 191564	Location: 1685 24th Street
Client: ACC Environmental Consultants	Prep: EPA 5030B
Project#: STANDARD	Analysis: EPA 8260B
Field ID: TB16-W	Batch#: 120691
Lab ID: 191564-013	Sampled: 12/15/06
Matrix: Water	Received: 12/18/06
Units: ug/L	Analyzed: 12/27/06
Diln Fac: 1.000	

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	96	80-130
Toluene-d8	98	80-120
Bromofluorobenzene	101	80-122

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

Purgeable Halocarbons by GC/MS			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	120691
Units:	ug/L	Analyzed:	12/27/06
Diln Fac:	1.000		

Type: BS Lab ID: QC369604

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	22.40	90	77-128
Trichloroethene	25.00	22.52	90	80-120
Chlorobenzene	25.00	24.80	99	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	98	80-130
Toluene-d8	97	80-120
Bromofluorobenzene	101	80-122

Type: BSD Lab ID: QC369605

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	25.63	103	77-128	13	20
Trichloroethene	25.00	24.20	97	80-120	7	20
Chlorobenzene	25.00	25.61	102	80-120	3	20

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	95	80-130
Toluene-d8	98	80-120
Bromofluorobenzene	100	80-122

RPD= Relative Percent Difference



## Batch QC Report

Purgeable Halocarbons by GC/MS			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC369606	Batch#:	120691
Matrix:	Water	Analyzed:	12/27/06
Units:	ug/L		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	0.5
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	104	80-130
Toluene-d8	100	80-120
Bromofluorobenzene	106	80-122

ND= Not Detected

RL= Reporting Limit

### Gasoline by GC/MS

Lab #: 191564	Location: 1685 24th Street
Client: ACC Environmental Consultants	Prep: EPA 5030B
Project#: STANDARD	Analysis: EPA 8260B
Matrix: Water	Sampled: 12/15/06
Units: ug/L	Received: 12/18/06

Field ID: TB11-W	Diln Fac: 4.000
Type: SAMPLE	Analyzed: 12/23/06
Lab ID: 191564-008	

Analyte	Result	RL	Batch#
Gasoline C7-C12	9,400	200	120679
MTBE	29	2.0	120680
Benzene	84	2.0	120680
Toluene	15	2.0	120680
Ethylbenzene	27	2.0	120680
m,p-Xylenes	31	2.0	120680
o-Xylene	6.5	2.0	120680

Surrogate	%REC	Limits	Batch#
Dibromofluoromethane	103	80-120	120680
1,2-Dichloroethane-d4	103	80-130	120680
Toluene-d8	102	80-120	120680
Bromofluorobenzene	99	80-122	120680

Field ID: TB12-W	Lab ID: 191564-009
Type: SAMPLE	Diln Fac: 1.000

Analyte	Result	RL	Batch#	Analyzed
Gasoline C7-C12	1,600 Z	50	120679	12/23/06
MTBE	ND	0.50	120691	12/27/06
Benzene	0.55	0.50	120691	12/27/06
Toluene	ND	0.50	120691	12/27/06
Ethylbenzene	ND	0.50	120691	12/27/06
m,p-Xylenes	1.2	0.50	120691	12/27/06
o-Xylene	ND	0.50	120691	12/27/06

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	108	80-120	120691	12/27/06
1,2-Dichloroethane-d4	108	80-130	120691	12/27/06
Toluene-d8	102	80-120	120691	12/27/06
Bromofluorobenzene	105	80-122	120691	12/27/06

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 Z= Sample exhibits unknown single peak or peaks  
 NA= Not Analyzed  
 ND= Not Detected  
 RL= Reporting Limit







Gasoline by GC/MS			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Sampled:	12/15/06
Units:	ug/L	Received:	12/18/06

Type:	BLANK	Batch#:	120691
Lab ID:	QC369606	Analyzed:	12/27/06
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	NA	
MTBE	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-120
1,2-Dichloroethane-d4	104	80-130
Toluene-d8	100	80-120
Bromofluorobenzene	106	80-122

Y= Sample exhibits chromatographic pattern which does not resemble standard

Z= Sample exhibits unknown single peak or peaks

NA= Not Analyzed

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

Gasoline by GC/MS			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	120679
Units:	ug/L	Analyzed:	12/23/06
Diln Fac:	1.000		

Type: BS Lab ID: QC369563

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	2,174	109	70-130

Surrogate	%REC	Limits
Dibromofluoromethane	113	80-120
1,2-Dichloroethane-d4	97	80-130
Toluene-d8	113	80-120
Bromofluorobenzene	94	80-122

Type: BSD Lab ID: QC369564

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,121	106	70-130	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	113	80-120
1,2-Dichloroethane-d4	92	80-130
Toluene-d8	111	80-120
Bromofluorobenzene	95	80-122

RPD= Relative Percent Difference

## Batch QC Report

Gasoline by GC/MS			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	120680
Units:	ug/L	Analyzed:	12/23/06
Diln Fac:	1.000		

Type: BS Lab ID: QC369566

Analyte	Spiked	Result	%REC	Limits
MTBE	25.00	23.42	94	72-120
Benzene	25.00	25.52	102	80-120
Toluene	25.00	25.89	104	80-120
Ethylbenzene	25.00	27.36	109	80-120
m,p-Xylenes	50.00	55.47	111	80-121
o-Xylene	25.00	26.37	105	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-120
1,2-Dichloroethane-d4	101	80-130
Toluene-d8	100	80-120
Bromofluorobenzene	100	80-122

Type: BSD Lab ID: QC369567

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	25.00	24.47	98	72-120	4	20
Benzene	25.00	26.16	105	80-120	2	20
Toluene	25.00	26.64	107	80-120	3	20
Ethylbenzene	25.00	27.66	111	80-120	1	20
m,p-Xylenes	50.00	56.36	113	80-121	2	20
o-Xylene	25.00	26.60	106	80-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-120
1,2-Dichloroethane-d4	101	80-130
Toluene-d8	101	80-120
Bromofluorobenzene	101	80-122

RPD= Relative Percent Difference



## Batch QC Report

Gasoline by GC/MS			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	120691
Units:	ug/L	Analyzed:	12/27/06
Diln Fac:	1.000		

Type: BS Lab ID: QC369604

Analyte	Spiked	Result	%REC	Limits
MTBE	25.00	22.05	88	72-120
Benzene	25.00	22.78	91	80-120
Toluene	25.00	24.67	99	80-120
Ethylbenzene	25.00	26.90	108	80-120
m,p-Xylenes	50.00	55.93	112	80-121
o-Xylene	25.00	29.10	116	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-120
1,2-Dichloroethane-d4	98	80-130
Toluene-d8	97	80-120
Bromofluorobenzene	101	80-122

Type: BSD Lab ID: QC369605

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	25.00	23.07	92	72-120	4	20
Benzene	25.00	23.51	94	80-120	3	20
Toluene	25.00	26.00	104	80-120	5	20
Ethylbenzene	25.00	28.10	112	80-120	4	20
m,p-Xylenes	50.00	60.24	120	80-121	7	20
o-Xylene	25.00	28.88	116	80-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-120
1,2-Dichloroethane-d4	95	80-130
Toluene-d8	98	80-120
Bromofluorobenzene	100	80-122

RPD= Relative Percent Difference

**Purgeable Aromatics by GC/MS**

Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	TB11-4.0	Diln Fac:	0.9615
Lab ID:	191564-001	Batch#:	120738
Matrix:	Soil	Sampled:	12/15/06
Units:	ug/Kg	Received:	12/18/06
Basis:	as received	Analyzed:	12/27/06

Analyte	Result	RL
MTBE	ND	4.8
Benzene	8.5	4.8
Toluene	ND	4.8
Chlorobenzene	ND	4.8
Ethylbenzene	27	4.8
m,p-Xylenes	44	4.8
o-Xylene	ND	4.8
1,3-Dichlorobenzene	ND	4.8
1,4-Dichlorobenzene	ND	4.8
1,2-Dichlorobenzene	ND	4.8

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	76-130
Toluene-d8	102	80-120
Bromofluorobenzene	99	80-126

ND= Not Detected  
 RL= Reporting Limit

**Purgeable Aromatics by GC/MS**

Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	TB12-4.0	Diln Fac:	0.9434
Lab ID:	191564-002	Batch#:	120483
Matrix:	Soil	Sampled:	12/15/06
Units:	ug/Kg	Received:	12/18/06
Basis:	as received	Analyzed:	12/19/06

Analyte	Result	RL
MTBE	ND	4.7
Benzene	ND	4.7
Toluene	ND	4.7
Chlorobenzene	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
1,3-Dichlorobenzene	ND	4.7
1,4-Dichlorobenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	104	76-130
Toluene-d8	96	80-120
Bromofluorobenzene	110	80-126

ND= Not Detected  
 RL= Reporting Limit

**Purgeable Aromatics by GC/MS**

Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	TB12-8.5	Diln Fac:	0.9804
Lab ID:	191564-003	Batch#:	120530
Matrix:	Soil	Sampled:	12/15/06
Units:	ug/Kg	Received:	12/18/06
Basis:	as received	Analyzed:	12/20/06

Analyte	Result	RL
MTBE	ND	4.9
Benzene	ND	4.9
Toluene	ND	4.9
Chlorobenzene	ND	4.9
Ethylbenzene	ND	4.9
m,p-Xylenes	ND	4.9
o-Xylene	ND	4.9
1,3-Dichlorobenzene	ND	4.9
1,4-Dichlorobenzene	ND	4.9
1,2-Dichlorobenzene	ND	4.9

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	101	76-130
Toluene-d8	94	80-120
Bromofluorobenzene	122	80-126

ND= Not Detected  
 RL= Reporting Limit

**Purgeable Aromatics by GC/MS**

Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	TB13-8.5	Diln Fac:	0.9615
Lab ID:	191564-005	Batch#:	120483
Matrix:	Soil	Sampled:	12/15/06
Units:	ug/Kg	Received:	12/18/06
Basis:	as received	Analyzed:	12/19/06

Analyte	Result	RL
MTBE	ND	4.8
Benzene	ND	4.8
Toluene	ND	4.8
Chlorobenzene	ND	4.8
Ethylbenzene	ND	4.8
m,p-Xylenes	ND	4.8
o-Xylene	ND	4.8
1,3-Dichlorobenzene	ND	4.8
1,4-Dichlorobenzene	ND	4.8
1,2-Dichlorobenzene	ND	4.8

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	101	76-130
Toluene-d8	99	80-120
Bromofluorobenzene	102	80-126

ND= Not Detected  
 RL= Reporting Limit

**Purgeable Aromatics by GC/MS**

Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	TB14-4.0	Diln Fac:	0.9259
Lab ID:	191564-006	Batch#:	120483
Matrix:	Soil	Sampled:	12/15/06
Units:	ug/Kg	Received:	12/18/06
Basis:	as received	Analyzed:	12/19/06

Analyte	Result	RL
MTBE	ND	4.6
Benzene	ND	4.6
Toluene	ND	4.6
Chlorobenzene	ND	4.6
Ethylbenzene	ND	4.6
m,p-Xylenes	ND	4.6
o-Xylene	ND	4.6
1,3-Dichlorobenzene	ND	4.6
1,4-Dichlorobenzene	ND	4.6
1,2-Dichlorobenzene	ND	4.6

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	104	76-130
Toluene-d8	100	80-120
Bromofluorobenzene	103	80-126

ND= Not Detected  
 RL= Reporting Limit

**Purgeable Aromatics by GC/MS**

Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	TB15-8.5	Basis:	as received
Lab ID:	191564-007	Sampled:	12/15/06
Matrix:	Soil	Received:	12/18/06
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
MTBE	ND	25	5.000	120483	12/19/06
Benzene	ND	25	5.000	120483	12/19/06
Toluene	ND	25	5.000	120483	12/19/06
Chlorobenzene	ND	25	5.000	120483	12/19/06
Ethylbenzene	460	250	50.00	120530	12/20/06
m,p-Xylenes	30	25	5.000	120483	12/19/06
o-Xylene	ND	25	5.000	120483	12/19/06
1,3-Dichlorobenzene	ND	25	5.000	120483	12/19/06
1,4-Dichlorobenzene	ND	25	5.000	120483	12/19/06
1,2-Dichlorobenzene	ND	25	5.000	120483	12/19/06

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
1,2-Dichloroethane-d4	124	76-130	5.000	120483	12/19/06
Toluene-d8	95	80-120	5.000	120483	12/19/06
Bromofluorobenzene	118	80-126	5.000	120483	12/19/06
Trifluorotoluene (MeOH)	90	53-133	50.00	120530	12/20/06

ND= Not Detected  
 RL= Reporting Limit

## Batch QC Report

Purgeable Aromatics by GC/MS			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	LCS	Basis:	as received
Lab ID:	QC368786	Diln Fac:	1.000
Matrix:	Soil	Batch#:	120483
Units:	ug/Kg	Analyzed:	12/19/06

Analyte	Spiked	Result	%REC	Limits
MTBE	25.00	21.70	87	69-120
Benzene	25.00	25.08	100	80-120
Toluene	25.00	25.68	103	80-120
Chlorobenzene	25.00	26.97	108	80-120
Ethylbenzene	25.00	27.24	109	80-120
m,p-Xylenes	50.00	53.22	106	80-120
o-Xylene	25.00	25.85	103	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	119	76-130
Toluene-d8	102	80-120
Bromofluorobenzene	102	80-126



## Batch QC Report

Purgeable Aromatics by GC/MS			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	BLANK	Basis:	as received
Lab ID:	QC368787	Diln Fac:	1.000
Matrix:	Soil	Batch#:	120483
Units:	ug/Kg	Analyzed:	12/19/06

Analyte	Result	RL
MTBE	ND	5.0
Benzene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	120	76-130
Toluene-d8	98	80-120
Bromofluorobenzene	103	80-126

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

Purgeable Aromatics by GC/MS			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	TB13-8.5	Diln Fac:	0.9615
MSS Lab ID:	191564-005	Batch#:	120483
Matrix:	Soil	Sampled:	12/15/06
Units:	ug/Kg	Received:	12/18/06
Basis:	as received	Analyzed:	12/19/06

Type: MS Lab ID: QC368890

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.1843	48.08	42.30	88	56-120
Benzene	<0.1325	48.08	42.08	88	67-120
Toluene	<0.5313	48.08	43.02	89	62-120
Chlorobenzene	<0.4972	48.08	41.49	86	59-120
Ethylbenzene	<0.5605	48.08	44.50	93	60-120
m,p-Xylenes	<1.257	96.15	85.28	89	58-120
o-Xylene	<0.4957	48.08	43.56	91	58-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	92	76-130
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-126

Type: MSD Lab ID: QC368891

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	48.08	38.97	81	56-120	8	23
Benzene	48.08	37.91	79	67-120	10	20
Toluene	48.08	38.82	81	62-120	10	20
Chlorobenzene	48.08	36.37	76	59-120	13	21
Ethylbenzene	48.08	39.06	81	60-120	13	21
m,p-Xylenes	96.15	74.98	78	58-120	13	22
o-Xylene	48.08	38.34	80	58-120	13	22

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	93	76-130
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-126

RPD= Relative Percent Difference

## Batch QC Report

Purgeable Aromatics by GC/MS			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	LCS	Basis:	as received
Lab ID:	QC368985	Diln Fac:	1.000
Matrix:	Soil	Batch#:	120530
Units:	ug/Kg	Analyzed:	12/20/06

Analyte	Spiked	Result	%REC	Limits
MTBE	25.00	22.34	89	69-120
Benzene	25.00	23.98	96	80-120
Toluene	25.00	23.92	96	80-120
Chlorobenzene	25.00	24.78	99	80-120
Ethylbenzene	25.00	25.77	103	80-120
m,p-Xylenes	50.00	50.04	100	80-120
o-Xylene	25.00	25.39	102	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	76-130
Toluene-d8	99	80-120
Bromofluorobenzene	102	80-126

## Batch QC Report

Purgeable Aromatics by GC/MS			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	BLANK	Basis:	as received
Lab ID:	QC368986	Diln Fac:	1.000
Matrix:	Soil	Batch#:	120530
Units:	ug/Kg	Analyzed:	12/20/06

Analyte	Result	RL
MTBE	ND	5.0
Benzene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	76-130
Toluene-d8	96	80-120
Bromofluorobenzene	99	80-126

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

Purgeable Aromatics by GC/MS			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Diln Fac:	0.9434
MSS Lab ID:	191549-004	Batch#:	120530
Matrix:	Miscell.	Sampled:	12/15/06
Units:	ug/Kg	Received:	12/15/06
Basis:	as received	Analyzed:	12/20/06

Type: MS Lab ID: QC369101

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.1808	47.17	36.83	78	56-120
Benzene	0.5121	47.17	34.79	73	67-120
Toluene	2.372	47.17	34.61	68	62-120
Chlorobenzene	<0.4878	47.17	30.57	65	59-120
Ethylbenzene	6.211	47.17	37.72	67	60-120
m,p-Xylenes	19.79	94.34	81.03	65	58-120
o-Xylene	13.55	47.17	45.11	67	58-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	76-130
Toluene-d8	98	80-120
Bromofluorobenzene	107	80-126

Type: MSD Lab ID: QC369102

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	47.17	35.67	76	56-120	3	23
Benzene	47.17	34.92	73	67-120	0	20
Toluene	47.17	34.85	69	62-120	1	20
Chlorobenzene	47.17	30.36	64	59-120	1	21
Ethylbenzene	47.17	37.07	65	60-120	2	21
m,p-Xylenes	94.34	78.59	62	58-120	3	22
o-Xylene	47.17	43.99	65	58-120	2	22

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	76-130
Toluene-d8	98	80-120
Bromofluorobenzene	106	80-126

RPD= Relative Percent Difference

## Batch QC Report

Purgeable Aromatics by GC/MS			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	BLANK	Basis:	as received
Lab ID:	QC369788	Diln Fac:	1.000
Matrix:	Soil	Batch#:	120738
Units:	ug/Kg	Analyzed:	12/27/06

Analyte	Result	RL
MTBE	ND	5.0
Benzene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	98	76-130
Toluene-d8	100	80-120
Bromofluorobenzene	103	80-126

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

Purgeable Aromatics by GC/MS			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	LCS	Basis:	as received
Lab ID:	QC369789	Diln Fac:	1.000
Matrix:	Soil	Batch#:	120738
Units:	ug/Kg	Analyzed:	12/27/06

Analyte	Spiked	Result	%REC	Limits
MTBE	50.00	54.18	108	69-120
Benzene	50.00	47.09	94	80-120
Toluene	50.00	49.13	98	80-120
Chlorobenzene	50.00	47.02	94	80-120
Ethylbenzene	50.00	49.76	100	80-120
m,p-Xylenes	100.0	99.83	100	80-120
o-Xylene	50.00	48.60	97	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	103	76-130
Toluene-d8	101	80-120
Bromofluorobenzene	99	80-126

## Batch QC Report

Purgeable Aromatics by GC/MS			
Lab #:	191564	Location:	1685 24th Street
Client:	ACC Environmental Consultants	Prep:	EPA 5030B
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Diln Fac:	0.8772
MSS Lab ID:	191645-001	Batch#:	120738
Matrix:	Soil	Sampled:	12/20/06
Units:	ug/Kg	Received:	12/20/06
Basis:	as received	Analyzed:	12/28/06

Type: MS Lab ID: QC369790

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.1039	43.86	40.20	92	56-120
Benzene	<0.1723	43.86	34.96	80	67-120
Toluene	<0.2258	43.86	35.42	81	62-120
Chlorobenzene	<0.3205	43.86	32.02	73	59-120
Ethylbenzene	<0.3186	43.86	33.72	77	60-120
m,p-Xylenes	<0.5238	87.72	66.05	75	58-120
o-Xylene	<0.1561	43.86	32.86	75	58-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	106	76-130
Toluene-d8	103	80-120
Bromofluorobenzene	99	80-126

Type: MSD Lab ID: QC369791

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	43.86	39.53	90	56-120	2	23
Benzene	43.86	36.45	83	67-120	4	20
Toluene	43.86	37.38	85	62-120	5	20
Chlorobenzene	43.86	33.88	77	59-120	6	21
Ethylbenzene	43.86	35.70	81	60-120	6	21
m,p-Xylenes	87.72	70.50	80	58-120	7	22
o-Xylene	43.86	34.98	80	58-120	6	22

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	105	76-130
Toluene-d8	103	80-120
Bromofluorobenzene	98	80-126

RPD= Relative Percent Difference



# CHAIN OF CUSTODY

## Curtis & Tompkins, Ltd.

Analytical Laboratory Since 1878  
2323 Fifth Street  
Berkeley, CA 94710  
(510)486-0900 Phone  
(510)486-0532 Fax

C&T LOGIN #

191564

Sampler: David DeMent (DRD)

Project Number: 6871-001.00

Report To: ddement@accenv.com

Project Name: 1685 24th Street

Company : ACC Environmental Consultants, Inc

Project P.O.:

Telephone: (510) 638-8400 ext. 109

Turnaround Time: Standard 5 Working Days

Fax: (510) 638-8404

Lab No.	Sample Identity	Sampling Date Time		Matrix				# of Containers	Preservative									
				Soil	Water	Waste			HCL	H2SO4	HNO3	ICE						
-1	TB11-4.0	12/15/06	9:10	x				1				x						
-2	TB12-4.0	"	9:40	x				1				x						
-3	TB12-8.5	"	9:40	x				1				x						
-4	TB13-2.0	"	10:10	x				1				x						
-5	TB13-8.5	"	10:15	x				1				x						
-6	TB14-4.0	"	11:10	x				1				x						
-7	TB15-8.5	"	11:40	x				1				x						
-8	TB11-W	"	9:25	x				4	x			x						
-9	TB12-W	"	10:30	x				6	x			x						
-10	TB13-W		10:50	x				4	x			x						
-11	TB14-W		11:40	x				4	x			x						
-12	TB15-W		12:00	x				4	x			x						
-13	TB16-W		12:05	x				4	x			x						

TPHg, BTEX, MTBE w/ 8260B	TPHd by 8015M + Silica Gel Cleanup	TEPH as diesel and motor oil 8015	HVOCs 8260B (8010 List)								
x		x									
x		x									
x	x										
		x									
x	x										
x		x									
x	x										
x	x										
x	x		x								
x	x		x								
x	x										
x	x		x								

Notes:

Most samples have gasoline or petroleum odor!

Global ID

RELINQUISHED BY:

David DeMent 12/18/06  
DATE/TIME

DATE/TIME

DATE/TIME

RECEIVED BY:

Lucy 12/18/06 1350  
DATE/TIME

DATE/TIME

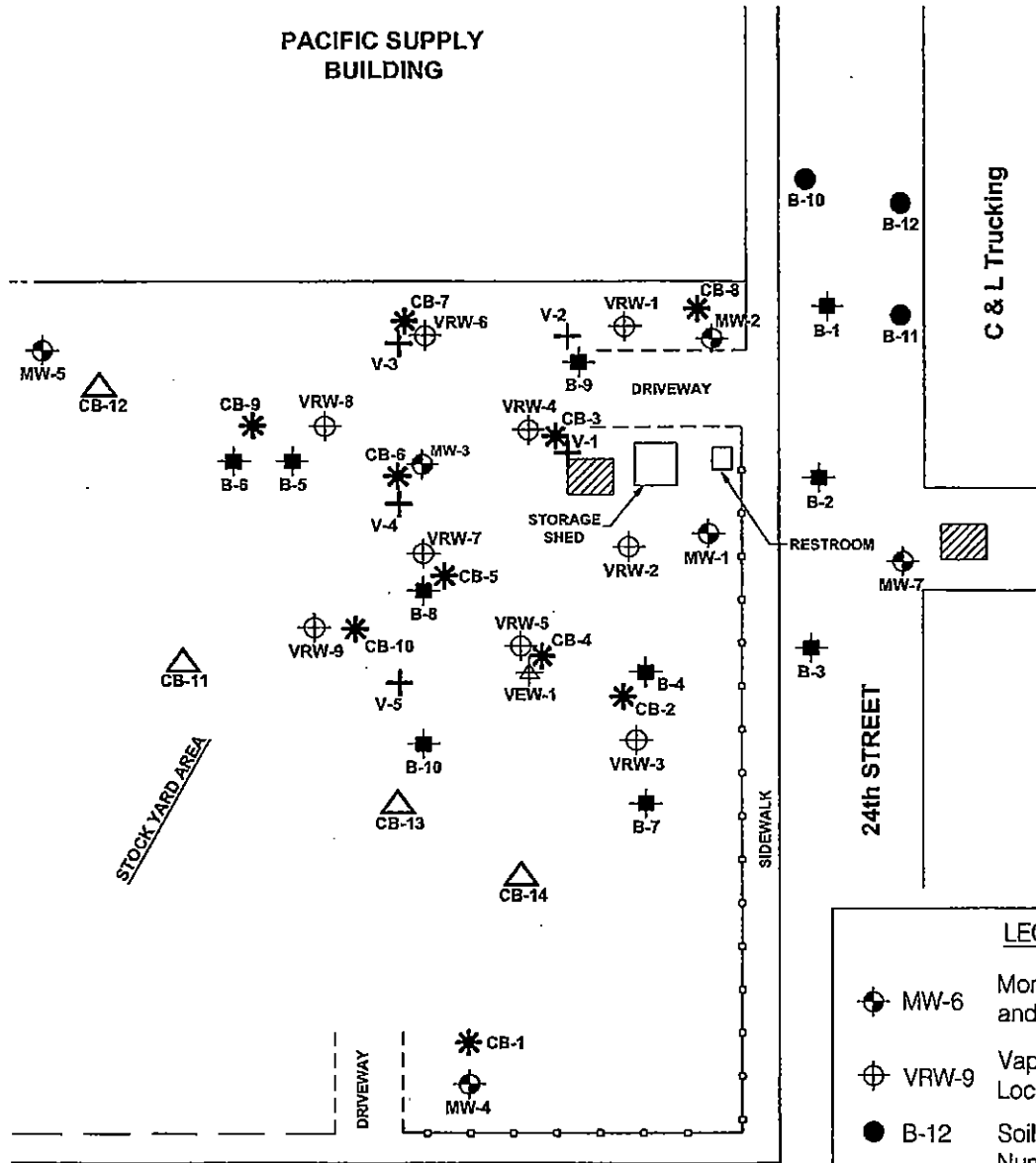
DATE/TIME

intact cold RG

## APPENDIX 4

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**PACIFIC SUPPLY BUILDING**



**LEGEND**

- MW-6 Monitoring Well Location and Number
- VRW-9 Vapor Recovery Well Location and Number
- B-12 Soil Boring Location and Number (August 2000)
- B-10 Soil Boring Location and Number (March 1993)
- VEW-1 Vapor Extraction Well Location and Number
- V-5 Soil Gas Sampling Location and Number
- CB-10 Soil Confirmation Boring Location and Number (July 2004)
- CB-14 Soil Parameters Sample Location and Number (July 2004)
- Former UST Locations

**Yellow Cab**



APPROXIMATE SCALE (FEET)



**WILLOW STREET**



**Brunsing Associates, Inc.**  
 5803 Skylana Blvd., Suite A  
 Windsor, California 95492  
 Tel: (707) 838-3027

Job No.: 29

Appr. *[Signature]*

Date: 12/7/04

**SITE MAP**  
**PACIFIC SUPPLY COMPANY**  
 1734 24th Street  
 Oakland, California

PLATE

**2**

**TABLE 1. SUMMARY OF GROUNDWATER ANALYTICAL DATA FOR MONITORING WELLS**

Pacific Supply Company, 1735 24th Street, Oakland, California

Well Name	Depth to Groundwater Date	Depth to Groundwater (feet)	Groundwater Elevation (feet, MSL)	TPH as gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Lead (mg/L)	MTBE (µg/L)
MW-6	12/29/1989	5.02	1.11	1.1	5.4	4.5	ND	ND	ND (1)	-
MW-6	3/9/1993	5.10	1.03	2.3	2.3	2.8	ND	3.1	ND (1)	-
MW-6	7/21/1993	5.23	0.90	0.59	ND	7.6	ND	ND	ND(1)	-
MW-6	11/4/1993	5.25	0.88	1.5	ND	1.2	ND	0.7	ND(1)	-
MW-6	2/1/1994	5.05	1.08	1.9	2.5	3.9	1.6	1.1	ND(1)	-
MW-6	6/2/1994	4.49	1.64	1.3	ND	1	ND	ND	ND(1)	-
MW-6	9/1/1994	4.53	1.60	2.2	ND	1.7	ND	ND	ND(1)	-
MW-6	12/13/1994	4.27	1.86	0.66 (3)	ND	ND	ND	ND	-	-
MW-6	3/8/1995	3.37	2.76	1.0 (3)	ND	ND	ND	ND	-	-
MW-6	6/9/1995	4.40	1.73	1.5	ND	3.3	ND	ND	-	-
MW-6	9/21/1995	4.69	1.44	0.28	ND	ND	ND	ND	-	-
MW-6	12/18/1995	4.42	1.71	-	-	-	-	-	-	-



**TABLE 1. SUMMARY OF GROUNDWATER ANALYTICAL DATA FOR MONITORING WELLS**

Pacific Supply Company, 1735 24th Street, Oakland, California

Well Name	Depth to Groundwater Date	Depth to Groundwater (feet)	Groundwater Elevation (feet, MSL)	TPH as gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Lead (mg/L)	MTBE (µg/L)
MW-4	10/14/1988	8.33	0.74	4.6	1.2	ND	-	2.2	-	-
MW-4	12/29/1989	8.08	0.99	0.5	0.7	ND	ND	ND	ND (1)	-
MW-4	5/28/1992	8.19	0.88	0.27	8.8	1	ND	3.2	0.030 (2)	-
MW-4	9/3/1992	8.37	0.70	0.20	4.5	4.4	ND	1.9	0.022 (2)	-
MW-4	11/24/1992	8.28	0.79	0.14	3.2	3.2	ND	1.0	0.005 (2)	-
MW-4	3/9/1993	7.98	1.09	0.47	10	ND	ND	2.5	ND (1)	-
MW-4	7/21/1993	8.17	0.90	0.28	4.4	5.9	ND	ND	ND(1)	-
MW-4	11/4/1993	8.14	0.93	0.08	1.3	1.6	ND	ND	ND(1)	-
MW-4	2/1/1994	7.79	1.28	0.08	ND	ND	ND	ND	ND(1)	-
MW-4	6/2/1994	7.53	1.54	0.30	3.1	2.9	ND	0.8	ND(1)	-
MW-4	9/1/1994	7.69	1.38	0.12	1.6	ND	ND	ND	ND(1)	-
MW-4	12/13/1994	6.70	2.37	ND	ND	ND	ND	ND	-	-
MW-4	3/8/1995	6.83	2.24	0.09	ND	ND	ND	ND	-	-
MW-4	6/9/1995	7.66	1.41	0.19	ND	ND	ND	ND	-	-
MW-4	9/21/1995	7.93	1.14	0.09	ND	ND	ND	ND	-	-
MW-4	12/18/1995	6.98	2.09	-	-	-	-	-	-	-
MW-4	2/29/1996	6.54	2.53	0.14	1.6	1.0	ND	0.6	-	-
MW-4	7/15/1996	7.74	1.33	-	-	-	-	-	-	-
MW-4	1/7/1997	6.46	2.61	0.09	1.0	0.5	<0.5	<0.5	-	-
MW-4	7/12/1997	7.82	1.25	-	-	-	-	-	-	-
MW-4	1/26/1998	6.67	2.40	0.09	1.1	0.8	<0.5	<0.5	-	-
MW-4	7/3/1998	7.45	1.62	-	-	-	-	-	-	-
MW-4	1/13/1999	7.51	1.56	0.12	1.1	0.62	<0.5	0.57	-	-
MW-4	9/27/1999	7.88	1.19	-	-	-	-	-	-	-
MW-4	1/28/2000	6.73	2.34	0.072	<0.5	<0.5	<0.5	<0.5	-	<5.0



## **Appendix B**

Gribi Associates  
1090 Adam Street, Suite K  
Benicia CA, 94510

Project: ACC-24th Street  
Project Number: [none]  
Project Manager: Jim Gribi

**Reported:**  
08/29/08 16:25

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-18-7.5'	T800924-02	Soil	07/15/08 08:55	07/16/08 10:00
TB-18-11.5'	T800924-03	Soil	07/15/08 09:00	07/16/08 10:00
TB-17-7.5'	T800924-05	Soil	07/15/08 09:25	07/16/08 10:00
TB-17-11.5'	T800924-06	Soil	07/15/08 09:30	07/16/08 10:00
TB-20-3.5'	T800924-08	Soil	07/15/08 10:55	07/16/08 10:00
TB-20-7.5'	T800924-09	Soil	07/15/08 11:00	07/16/08 10:00
TB-19-4.5'	T800924-12	Soil	07/15/08 11:30	07/16/08 10:00
TB-19-7.5'	T800924-13	Soil	07/15/08 11:20	07/16/08 10:00
TB-18-GW	T800924-15	Water	07/15/08 09:10	07/16/08 10:00
TB-17-S	T800924-16	Water	07/15/08 09:40	07/16/08 10:00
TB-17-D	T800924-17	Water	07/15/08 10:20	07/16/08 10:00
TB-19-D	T800924-18	Water	07/15/08 11:50	07/16/08 10:00
TB-19-S	T800924-19	Water	07/15/08 12:30	07/16/08 10:00
TB-20-GW	T800924-20	Water	07/15/08 12:40	07/16/08 10:00

SunStar Laboratories, Inc.



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Albert Vargas, Senior Project Coordinator

Gribi Associates  
 1090 Adam Street, Suite K  
 Benicia CA, 94510

Project: ACC-24th Street  
 Project Number: [none]  
 Project Manager: Jim Gribi

**Reported:**  
 08/29/08 16:25

**TB-18-7.5'**  
**T800924-02 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Purgeable Petroleum Hydrocarbons by EPA 8015C**

<b>C6-C12 (GRO)</b>	<b>4600</b>	500	ug/kg	1	8071609	07/16/08	07/16/08	EPA 8015C	
<i>Surrogate: 4-Bromofluorobenzene</i>		142 %	72.6-146		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015C**

Diesel Range Hydrocarbons	ND	5.0	mg/kg	1	8071606	07/16/08	07/17/08	EPA 8015C	
<i>Surrogate: p-Terphenyl</i>		110 %	65-135		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8021B**

Methyl tert-butyl ether	ND	20	ug/kg	1	8071608	07/16/08	07/16/08	EPA 8021B	
<b>Benzene</b>	<b>22</b>	5.0	"	"	"	"	"	"	
<b>Toluene</b>	<b>14</b>	5.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>22</b>	5.0	"	"	"	"	"	"	
<b>m,p-Xylene</b>	<b>54</b>	10	"	"	"	"	"	"	
<b>o-Xylene</b>	<b>ND</b>	5.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		147 %	73.5-148		"	"	"	"	

SunStar Laboratories, Inc.

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Albert Vargas, Senior Project Coordinator



Gribi Associates  
 1090 Adam Street, Suite K  
 Benicia CA, 94510

Project: ACC-24th Street  
 Project Number: [none]  
 Project Manager: Jim Gribi

**Reported:**  
 08/29/08 16:25

**TB-18-11.5'**  
**T800924-03 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Purgeable Petroleum Hydrocarbons by EPA 8015C**

<b>C6-C12 (GRO)</b>	<b>8000</b>	500	ug/kg	1	8071609	07/16/08	07/16/08	EPA 8015C	
<i>Surrogate: 4-Bromofluorobenzene</i>		146 %	72.6-146		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015C**

<b>Diesel Range Hydrocarbons</b>	<b>15</b>	5.0	mg/kg	1	8071606	07/16/08	07/17/08	EPA 8015C	D-02
<i>Surrogate: p-Terphenyl</i>		109 %	65-135		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8021B**

Methyl tert-butyl ether	ND	20	ug/kg	1	8071608	07/16/08	07/16/08	EPA 8021B	
Benzene	ND	5.0	"	"	"	"	"	"	
<b>Toluene</b>	<b>18</b>	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		147 %	73.5-148		"	"	"	"	

SunStar Laboratories, Inc.

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Albert Vargas, Senior Project Coordinator

Gribi Associates  
 1090 Adam Street, Suite K  
 Benicia CA, 94510

Project: ACC-24th Street  
 Project Number: [none]  
 Project Manager: Jim Gribi

**Reported:**  
 08/29/08 16:25

**TB-17-7.5'**  
**T800924-05 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Purgeable Petroleum Hydrocarbons by EPA 8015C**

C6-C12 (GRO)	ND	500	ug/kg	1	8071609	07/16/08	07/16/08	EPA 8015C	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>146 %</i>	<i>72.6-146</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	

**Extractable Petroleum Hydrocarbons by 8015C**

Diesel Range Hydrocarbons	ND	5.0	mg/kg	1	8071606	07/16/08	07/17/08	EPA 8015C	
<i>Surrogate: p-Terphenyl</i>		<i>108 %</i>	<i>65-135</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	

**Volatile Organic Compounds by EPA Method 8021B**

Methyl tert-butyl ether	ND	20	ug/kg	1	8071608	07/16/08	07/16/08	EPA 8021B	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>146 %</i>	<i>73.5-148</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	

SunStar Laboratories, Inc.

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Albert Vargas, Senior Project Coordinator

Gribi Associates  
 1090 Adam Street, Suite K  
 Benicia CA, 94510

Project: ACC-24th Street  
 Project Number: [none]  
 Project Manager: Jim Gribi

**Reported:**  
 08/29/08 16:25

**TB-17-11.5'**  
**T800924-06 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Purgeable Petroleum Hydrocarbons by EPA 8015C**

<b>C6-C12 (GRO)</b>	<b>1200</b>	500	ug/kg	1	8071609	07/16/08	07/17/08	EPA 8015C	
<i>Surrogate: 4-Bromofluorobenzene</i>		139 %	72.6-146		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015C**

<b>Diesel Range Hydrocarbons</b>	<b>10</b>	5.0	mg/kg	1	8071606	07/16/08	07/17/08	EPA 8015C	D-02
<i>Surrogate: p-Terphenyl</i>		110 %	65-135		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8021B**

Methyl tert-butyl ether	ND	20	ug/kg	1	8071608	07/16/08	07/17/08	EPA 8021B	
<b>Benzene</b>	<b>470</b>	5.0	"	"	"	"	"	"	
<b>Toluene</b>	<b>7.0</b>	5.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>9.3</b>	5.0	"	"	"	"	"	"	
<b>m,p-Xylene</b>	<b>20</b>	10	"	"	"	"	"	"	
<b>o-Xylene</b>	<b>ND</b>	5.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		134 %	73.5-148		"	"	"	"	

SunStar Laboratories, Inc.

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Albert Vargas, Senior Project Coordinator

Gribi Associates  
 1090 Adam Street, Suite K  
 Benicia CA, 94510

Project: ACC-24th Street  
 Project Number: [none]  
 Project Manager: Jim Gribi

**Reported:**  
 08/29/08 16:25

**TB-20-3.5'**  
**T800924-08 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Purgeable Petroleum Hydrocarbons by EPA 8015C**

<b>C6-C12 (GRO)</b>	<b>17000</b>	500	ug/kg	1	8071609	07/16/08	07/17/08	EPA 8015C	
<i>Surrogate: 4-Bromofluorobenzene</i>		133 %	72.6-146		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015C**

<b>Diesel Range Hydrocarbons</b>	<b>5.6</b>	5.0	mg/kg	1	8071606	07/16/08	07/17/08	EPA 8015C	D-02
<i>Surrogate: p-Terphenyl</i>		110 %	65-135		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8021B**

Methyl tert-butyl ether	ND	20	ug/kg	1	8071608	07/16/08	07/17/08	EPA 8021B	
<b>Benzene</b>	<b>42</b>	5.0	"	"	"	"	"	"	
<b>Toluene</b>	<b>29</b>	5.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>240</b>	5.0	"	"	"	"	"	"	
<b>m,p-Xylene</b>	<b>22</b>	10	"	"	"	"	"	"	
<b>o-Xylene</b>	<b>ND</b>	5.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		129 %	73.5-148		"	"	"	"	

SunStar Laboratories, Inc.

*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.*



Albert Vargas, Senior Project Coordinator

Gribi Associates  
 1090 Adam Street, Suite K  
 Benicia CA, 94510

Project: ACC-24th Street  
 Project Number: [none]  
 Project Manager: Jim Gribi

**Reported:**  
 08/29/08 16:25

**TB-20-7.5'**  
**T800924-09 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Purgeable Petroleum Hydrocarbons by EPA 8015C**

C6-C12 (GRO)	ND	500	ug/kg	1	8071609	07/16/08	07/17/08	EPA 8015C	
<i>Surrogate: 4-Bromofluorobenzene</i>		135 %	72.6-146		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015C**

<b>Diesel Range Hydrocarbons</b>	<b>11</b>	5.0	mg/kg	1	8071606	07/16/08	07/17/08	EPA 8015C	D-02
<i>Surrogate: p-Terphenyl</i>		110 %	65-135		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8021B**

Methyl tert-butyl ether	ND	20	ug/kg	1	8071608	07/16/08	07/17/08	EPA 8021B	
Benzene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		130 %	73.5-148		"	"	"	"	

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Albert Vargas, Senior Project Coordinator

Gribi Associates  
 1090 Adam Street, Suite K  
 Benicia CA, 94510

Project: ACC-24th Street  
 Project Number: [none]  
 Project Manager: Jim Gribi

**Reported:**  
 08/29/08 16:25

**TB-19-4.5'**  
**T800924-12 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Purgeable Petroleum Hydrocarbons by EPA 8015C**

<b>C6-C12 (GRO)</b>	<b>200000</b>	120000	ug/kg	250	8071609	07/16/08	07/18/08	EPA 8015C	
<i>Surrogate: 4-Bromofluorobenzene</i>		102 %	72.6-146		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015C**

<b>Diesel Range Hydrocarbons</b>	<b>870</b>	5.0	mg/kg	1	8071606	07/16/08	07/17/08	EPA 8015C	
<i>Surrogate: p-Terphenyl</i>		109 %	65-135		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8021B**

Methyl tert-butyl ether	ND	20	ug/kg	1	8071608	07/16/08	07/17/08	EPA 8021B	
Benzene	ND	5.0	"	"	"	"	"	"	
<b>Toluene</b>	<b>1100</b>	5.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>34000</b>	1200	"	250	"	"	07/18/08	"	
m,p-Xylene	ND	10	"	1	"	"	07/17/08	"	
<b>o-Xylene</b>	<b>380</b>	5.0	"	"	"	"	07/17/08	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		81.2 %	73.5-148		"	"	"	"	

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Albert Vargas, Senior Project Coordinator

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Project: ACC-24th Street  
 Project Number: [none]  
 Project Manager: Jim Gribi

**Reported:**  
 08/29/08 16:25

**TB-19-7.5'**  
**T800924-13 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Purgeable Petroleum Hydrocarbons by EPA 8015C**

<b>C6-C12 (GRO)</b>	<b>2100</b>	500	ug/kg	1	8071609	07/16/08	07/17/08	EPA 8015C	
<i>Surrogate: 4-Bromofluorobenzene</i>		128 %	72.6-146		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015C**

Diesel Range Hydrocarbons	ND	5.0	mg/kg	1	8071606	07/16/08	07/17/08	EPA 8015C	
<i>Surrogate: p-Terphenyl</i>		112 %	65-135		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8021B**

Methyl tert-butyl ether	ND	20	ug/kg	1	8071608	07/16/08	07/17/08	EPA 8021B	
<b>Benzene</b>	<b>50</b>	5.0	"	"	"	"	"	"	
<b>Toluene</b>	<b>7.1</b>	5.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>190</b>	5.0	"	"	"	"	"	"	
<b>m,p-Xylene</b>	<b>310</b>	10	"	"	"	"	"	"	
<b>o-Xylene</b>	<b>240</b>	5.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		122 %	73.5-148		"	"	"	"	

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Albert Vargas, Senior Project Coordinator

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Project: ACC-24th Street  
Project Number: [none]  
Project Manager: Jim Gribi

**Reported:**  
08/29/08 16:25

**TB-18-GW**  
**T800924-15 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Purgeable Petroleum Hydrocarbons by EPA 8015C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C6-C12 (GRO)</b>	<b>2900</b>	50	ug/l	1	8071610	07/16/08	07/16/08	EPA 8015C	
<i>Surrogate: 4-Bromofluorobenzene</i>		142 %	72.6-146		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015C**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Diesel Range Hydrocarbons</b>	<b>1.0</b>	0.50	mg/l	1	8071612	07/16/08	07/17/08	EPA 8015C	D-08
<i>Surrogate: p-Terphenyl</i>		77.3 %	65-135		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8021B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Methyl tert-butyl ether</b>	<b>12</b>	4.0	ug/l	1	8071611	07/16/08	07/16/08	EPA 8021B	
<b>Benzene</b>	<b>4.5</b>	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
<b>m,p-Xylene</b>	<b>5.8</b>	2.0	"	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		139 %	73.5-148		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

**I-02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,2-Dibromoethane (EDB)	ND	1.0	ug/l	1	8082502	08/25/08	08/27/08	EPA 8260B	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	10	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
<b>C6-C12 (GRO)</b>	<b>1300</b>	50	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		94.1 %	77.1-110		"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		84.8 %	66.3-111		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		101 %	84.7-109		"	"	"	"	

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Albert Vargas, Senior Project Coordinator



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 Benicia CA, 94510

Project: ACC-24th Street  
 Project Number: [none]  
 Project Manager: Jim Gribi

**Reported:**  
 08/29/08 16:25

**TB-17-S**  
**T800924-16 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Purgeable Petroleum Hydrocarbons by EPA 8015C**

<b>C6-C12 (GRO)</b>	<b>3100</b>	50	ug/l	1	8071610	07/16/08	07/16/08	EPA 8015C	
<i>Surrogate: 4-Bromofluorobenzene</i>		143 %	72.6-146		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015C**

<b>Diesel Range Hydrocarbons</b>	<b>0.80</b>	0.50	mg/l	1	8071612	07/16/08	07/17/08	EPA 8015C	D-08
<i>Surrogate: p-Terphenyl</i>		94.6 %	65-135		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8021B**

Methyl tert-butyl ether	ND	4.0	ug/l	1	8071611	07/16/08	07/16/08	EPA 8021B	
<b>Benzene</b>	<b>28</b>	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
m,p-Xylene	ND	2.0	"	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		142 %	73.5-148		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

**I-02**

1,2-Dibromoethane (EDB)	ND	1.0	ug/l	1	8082502	08/25/08	08/27/08	EPA 8260B	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
<b>Benzene</b>	<b>21</b>	0.50	"	"	"	"	"	"	
<b>Toluene</b>	<b>0.63</b>	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
<b>m,p-Xylene</b>	<b>2.6</b>	1.0	"	"	"	"	"	"	
<b>o-Xylene</b>	<b>1.2</b>	0.50	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	10	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
<b>C6-C12 (GRO)</b>	<b>1200</b>	50	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		93.2 %	77.1-110		"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		80.1 %	66.3-111		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.0 %	84.7-109		"	"	"	"	

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Albert Vargas, Senior Project Coordinator

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Project: ACC-24th Street  
 Project Number: [none]  
 Project Manager: Jim Gribi

**Reported:**  
 08/29/08 16:25

**TB-17-D**  
**T800924-17 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Purgeable Petroleum Hydrocarbons by EPA 8015C**

C6-C12 (GRO)	ND	50	ug/l	1	8071610	07/16/08	07/17/08	EPA 8015C	
<i>Surrogate: 4-Bromofluorobenzene</i>		131 %	72.6-146		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015C**

Diesel Range Hydrocarbons	ND	0.50	mg/l	1	8071612	07/16/08	07/17/08	EPA 8015C	
<i>Surrogate: p-Terphenyl</i>		80.0 %	65-135		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8021B**

Methyl tert-butyl ether	ND	4.0	ug/l	1	8071611	07/16/08	07/16/08	EPA 8021B	
Benzene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
m,p-Xylene	ND	2.0	"	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		145 %	73.5-148		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

**I-02**

1,2-Dibromoethane (EDB)	ND	1.0	ug/l	1	8082502	08/25/08	08/28/08	EPA 8260B	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	10	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
C6-C12 (GRO)	ND	50	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		97.6 %	77.1-110		"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		93.5 %	66.3-111		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		101 %	84.7-109		"	"	"	"	

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Albert Vargas, Senior Project Coordinator

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Project: ACC-24th Street  
 Project Number: [none]  
 Project Manager: Jim Gribi

**Reported:**  
 08/29/08 16:25

**TB-19-D**  
**T800924-18 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Purgeable Petroleum Hydrocarbons by EPA 8015C**

C6-C12 (GRO)	ND	50	ug/l	1	8071610	07/16/08	07/17/08	EPA 8015C	
<i>Surrogate: 4-Bromofluorobenzene</i>		137 %	72.6-146		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015C**

Diesel Range Hydrocarbons	ND	0.50	mg/l	1	8071612	07/16/08	07/17/08	EPA 8015C	
<i>Surrogate: p-Terphenyl</i>		85.5 %	65-135		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8021B**

Methyl tert-butyl ether	ND	4.0	ug/l	1	8071611	07/16/08	07/16/08	EPA 8021B	
Benzene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
m,p-Xylene	ND	2.0	"	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		147 %	73.5-148		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

**I-02**

1,2-Dibromoethane (EDB)	ND	1.0	ug/l	1	8082502	08/25/08	08/28/08	EPA 8260B	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	10	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
C6-C12 (GRO)	ND	50	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		90.8 %	77.1-110		"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		78.6 %	66.3-111		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		98.5 %	84.7-109		"	"	"	"	

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Albert Vargas, Senior Project Coordinator

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Project: ACC-24th Street  
 Project Number: [none]  
 Project Manager: Jim Gribi

**Reported:**  
 08/29/08 16:25

**TB-19-S**  
**T800924-19 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Purgeable Petroleum Hydrocarbons by EPA 8015C**

<b>C6-C12 (GRO)</b>	<b>38000</b>	1200	ug/l	25	8071610	07/16/08	07/17/08	EPA 8015C	
<i>Surrogate: 4-Bromofluorobenzene</i>		106 %	72.6-146		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015C**

<b>Diesel Range Hydrocarbons</b>	<b>24</b>	0.50	mg/l	1	8071612	07/16/08	07/17/08	EPA 8015C	D-08
<i>Surrogate: p-Terphenyl</i>		78.5 %	65-135		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8021B**

<b>Methyl tert-butyl ether</b>	<b>250</b>	4.0	ug/l	1	8071611	07/16/08	07/16/08	EPA 8021B	
<b>Benzene</b>	<b>78</b>	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>3800</b>	25	"	25	"	"	07/17/08	"	
<b>m,p-Xylene</b>	<b>43</b>	2.0	"	1	"	"	07/16/08	"	
<b>o-Xylene</b>	<b>ND</b>	1.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		147 %	73.5-148		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

**I-02**

1,2-Dibromoethane (EDB)	ND	1.0	ug/l	1	8082502	08/25/08	08/27/08	EPA 8260B	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
<b>Benzene</b>	<b>70</b>	0.50	"	"	"	"	"	"	
<b>Toluene</b>	<b>5.1</b>	0.50	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>970</b>	25	"	50	"	"	08/28/08	"	
<b>m,p-Xylene</b>	<b>2.9</b>	1.0	"	1	"	"	"	"	
<b>o-Xylene</b>	<b>4.0</b>	0.50	"	"	"	"	08/27/08	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	10	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
<b>C6-C12 (GRO)</b>	<b>29000</b>	50	"	"	"	"	08/28/08	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		39.1 %	77.1-110		"	"	08/27/08	"	
<i>Surrogate: Dibromofluoromethane</i>		78.8 %	66.3-111		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		99.2 %	84.7-109		"	"	"	"	

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Albert Vargas, Senior Project Coordinator

Gribi Associates  
 1090 Adam Street, Suite K  
 Benicia CA, 94510

Project: ACC-24th Street  
 Project Number: [none]  
 Project Manager: Jim Gribi

**Reported:**  
 08/29/08 16:25

**TB-20-GW**  
**T800924-20 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**Purgeable Petroleum Hydrocarbons by EPA 8015C**

<b>C6-C12 (GRO)</b>	<b>3300</b>	50	ug/l	1	8071610	07/16/08	07/16/08	EPA 8015C	
<i>Surrogate: 4-Bromofluorobenzene</i>		146 %	72.6-146		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015C**

<b>Diesel Range Hydrocarbons</b>	<b>1.8</b>	0.50	mg/l	1	8071612	07/16/08	07/17/08	EPA 8015C	D-08
<i>Surrogate: p-Terphenyl</i>		90.1 %	65-135		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8021B**

<b>Methyl tert-butyl ether</b>	<b>4.8</b>	4.0	ug/l	1	8071611	07/16/08	07/16/08	EPA 8021B	
Benzene	ND	1.0	"	"	"	"	"	"	
<b>Toluene</b>	<b>4.0</b>	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>51</b>	1.0	"	"	"	"	"	"	
m,p-Xylene	ND	2.0	"	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		147 %	73.5-148		"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

**I-02**

1,2-Dibromoethane (EDB)	ND	1.0	ug/l	1	8082502	08/25/08	08/27/08	EPA 8260B	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
<b>m,p-Xylene</b>	<b>1.4</b>	1.0	"	"	"	"	"	"	
<b>o-Xylene</b>	<b>1.0</b>	0.50	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	10	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
<b>C6-C12 (GRO)</b>	<b>1900</b>	50	"	"	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		85.8 %	77.1-110		"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		82.0 %	66.3-111		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		101 %	84.7-109		"	"	"	"	

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Albert Vargas, Senior Project Coordinator

Gribi Associates  
 1090 Adam Street, Suite K  
 Benicia CA, 94510

Project: ACC-24th Street  
 Project Number: [none]  
 Project Manager: Jim Gribi

**Reported:**  
 08/29/08 16:25

**Purgeable Petroleum Hydrocarbons by EPA 8015C - Quality Control**  
**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 8071609 - EPA 5030 GC**

**Blank (8071609-BLK1)**

Prepared & Analyzed: 07/16/08

Surrogate: 4-Bromofluorobenzene	706		ug/kg	500		141	72.6-146			
C6-C12 (GRO)	ND	500	"							

**LCS (8071609-BS1)**

Prepared: 07/16/08 Analyzed: 07/17/08

Surrogate: 4-Bromofluorobenzene	725		ug/kg	500		145	72.6-146			
C6-C12 (GRO)	16300	500	"	13800		118	75-125			

**Matrix Spike (8071609-MS1)**

Source: T800924-03

Prepared: 07/16/08 Analyzed: 07/17/08

Surrogate: 4-Bromofluorobenzene	719		ug/kg	500		144	72.6-146			
C6-C12 (GRO)	22400	500	"	13800	8040	104	65-135			

**Matrix Spike Dup (8071609-MSD1)**

Source: T800924-03

Prepared: 07/16/08 Analyzed: 07/17/08

Surrogate: 4-Bromofluorobenzene	729		ug/kg	500		146	72.6-146			
C6-C12 (GRO)	21600	500	"	13800	8040	98.5	65-135	3.63	20	

**Batch 8071610 - EPA 5030 GC**

**Blank (8071610-BLK1)**

Prepared & Analyzed: 07/16/08

Surrogate: 4-Bromofluorobenzene	231		ug/l	200		116	72.6-146			
C6-C12 (GRO)	ND	50	"							

**LCS (8071610-BS1)**

Prepared & Analyzed: 07/16/08

Surrogate: 4-Bromofluorobenzene	264		ug/l	200		132	72.6-146			
C6-C12 (GRO)	6710	50	"	5500		122	75-125			

**LCS Dup (8071610-BSD1)**

Prepared & Analyzed: 07/16/08

Surrogate: 4-Bromofluorobenzene	272		ug/l	200		136	72.6-146			
C6-C12 (GRO)	6550	50	"	5500		119	75-125	2.37	20	

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Albert Vargas, Senior Project Coordinator

Gribi Associates  
 1090 Adam Street, Suite K  
 Benicia CA, 94510

Project: ACC-24th Street  
 Project Number: [none]  
 Project Manager: Jim Gribi

**Reported:**  
 08/29/08 16:25

**Extractable Petroleum Hydrocarbons by 8015C - Quality Control**  
**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 8071606 - EPA 3550B GC**

**Blank (8071606-BLK1)**

Prepared & Analyzed: 07/16/08

Surrogate: <i>p</i> -Terphenyl	94.3		mg/kg	100		94.3	65-135			
Diesel Range Hydrocarbons	ND	5.0	"							

**LCS (8071606-BS1)**

Prepared: 07/16/08 Analyzed: 07/17/08

Surrogate: <i>p</i> -Terphenyl	110		mg/kg	100		110	65-135			
Diesel Range Hydrocarbons	510	5.0	"	500		101	75-125			

**Matrix Spike (8071606-MS1)**

Source: T800924-02

Prepared: 07/16/08 Analyzed: 07/17/08

Surrogate: <i>p</i> -Terphenyl	115		mg/kg	100		115	65-135			
Diesel Range Hydrocarbons	510	5.0	"	500	ND	102	75-125			

**Matrix Spike Dup (8071606-MSD1)**

Source: T800924-02

Prepared: 07/16/08 Analyzed: 07/17/08

Surrogate: <i>p</i> -Terphenyl	111		mg/kg	100		111	65-135			
Diesel Range Hydrocarbons	520	5.0	"	500	ND	103	75-125	1.12	20	

**Batch 8071612 - EPA 3510C GC**

**Blank (8071612-BLK1)**

Prepared: 07/16/08 Analyzed: 07/17/08

Surrogate: <i>p</i> -Terphenyl	3.50		mg/l	4.00		87.6	65-135			
Diesel Range Hydrocarbons	ND	0.50	"							

**LCS (8071612-BS1)**

Prepared: 07/16/08 Analyzed: 07/17/08

Surrogate: <i>p</i> -Terphenyl	3.38		mg/l	4.00		84.4	65-135			
Diesel Range Hydrocarbons	15.6	0.50	"	20.0		78.0	75-125			

**LCS Dup (8071612-BSD1)**

Prepared: 07/16/08 Analyzed: 07/17/08

Surrogate: <i>p</i> -Terphenyl	3.56		mg/l	4.00		89.1	65-135			
Diesel Range Hydrocarbons	16.4	0.50	"	20.0		82.1	75-125	5.11	20	

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Albert Vargas, Senior Project Coordinator

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 Benicia CA, 94510

Project: ACC-24th Street  
 Project Number: [none]  
 Project Manager: Jim Gribi

**Reported:**  
 08/29/08 16:25

**Volatile Organic Compounds by EPA Method 8021B - Quality Control**  
**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 8071608 - EPA 5030 GC**

**Blank (8071608-BLK1)**

Prepared & Analyzed: 07/16/08

<i>Surrogate: 4-Bromofluorobenzene</i>	687		ug/kg	500		137	73.5-148			
Methyl tert-butyl ether	ND	20	"							
Benzene	ND	5.0	"							
Toluene	ND	5.0	"							
Ethylbenzene	ND	5.0	"							
m,p-Xylene	ND	10	"							
o-Xylene	ND	5.0	"							

**LCS (8071608-BS1)**

Prepared: 07/16/08 Analyzed: 07/17/08

<i>Surrogate: 4-Bromofluorobenzene</i>	539		ug/kg	500		108	73.5-148			
Benzene	286	5.0	"	250		114	70-130			
Toluene	281	5.0	"	250		112	70-130			
Ethylbenzene	286	5.0	"	250		114	70-130			
m,p-Xylene	578	10	"	500		116	70-130			
o-Xylene	286	5.0	"	250		114	70-130			

**Matrix Spike (8071608-MS1)**

Source: T800924-03

Prepared: 07/16/08 Analyzed: 07/17/08

<i>Surrogate: 4-Bromofluorobenzene</i>	634		ug/kg	500		127	73.5-148			
Benzene	320	5.0	"	250	ND	128	70-130			
Toluene	312	5.0	"	250	17.7	118	70-130			
Ethylbenzene	297	5.0	"	250	ND	119	70-130			
m,p-Xylene	582	10	"	500	ND	116	70-130			
o-Xylene	303	5.0	"	250	ND	121	70-130			

**Matrix Spike Dup (8071608-MSD1)**

Source: T800924-03

Prepared: 07/16/08 Analyzed: 07/17/08

<i>Surrogate: 4-Bromofluorobenzene</i>	627		ug/kg	500		125	73.5-148			
Benzene	308	5.0	"	250	ND	123	70-130	3.76	20	
Toluene	306	5.0	"	250	17.7	115	70-130	1.97	20	
Ethylbenzene	291	5.0	"	250	ND	117	70-130	2.01	20	
m,p-Xylene	579	10	"	500	ND	116	70-130	0.509	20	
o-Xylene	300	5.0	"	250	ND	120	70-130	1.17	20	

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Albert Vargas, Senior Project Coordinator



Gribi Associates  
 1090 Adam Street, Suite K  
 Benicia CA, 94510

Project: ACC-24th Street  
 Project Number: [none]  
 Project Manager: Jim Gribi

**Reported:**  
 08/29/08 16:25

**Volatile Organic Compounds by EPA Method 8021B - Quality Control**  
**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 8071611 - EPA 5030 GC**

**Blank (8071611-BLK1)**

Prepared & Analyzed: 07/16/08

<i>Surrogate: 4-Bromofluorobenzene</i>	257		ug/l	200		129	73.5-148			
Methyl tert-butyl ether	ND	4.0	"							
Benzene	ND	1.0	"							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
m,p-Xylene	ND	2.0	"							
o-Xylene	ND	1.0	"							

**LCS (8071611-BS1)**

Prepared & Analyzed: 07/16/08

<i>Surrogate: 4-Bromofluorobenzene</i>	292		ug/l	200		146	73.5-148			
Benzene	126	1.0	"	100		126	70-130			
Toluene	123	1.0	"	100		123	70-130			
Ethylbenzene	125	1.0	"	100		125	70-130			
m,p-Xylene	253	2.0	"	200		127	70-130			
o-Xylene	129	1.0	"	100		129	70-130			

**LCS Dup (8071611-BSD1)**

Prepared & Analyzed: 07/16/08

<i>Surrogate: 4-Bromofluorobenzene</i>	278		ug/l	200		139	73.5-148			
Benzene	126	1.0	"	100		126	70-130	0.239	20	
Toluene	125	1.0	"	100		125	70-130	1.71	20	
Ethylbenzene	125	1.0	"	100		125	70-130	0.0987	20	
m,p-Xylene	252	2.0	"	200		126	70-130	0.346	20	
o-Xylene	129	1.0	"	100		129	70-130	0.237	20	

SunStar Laboratories, Inc.

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Albert Vargas, Senior Project Coordinator

Gribi Associates  
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Project: ACC-24th Street  
 Project Number: [none]  
 Project Manager: Jim Gribi

**Reported:**  
 08/29/08 16:25

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 8082502 - EPA 5030 GCMS**

**Blank (8082502-BLK1)**

Prepared: 08/25/08 Analyzed: 08/27/08

Surrogate: 4-Bromofluorobenzene	7.24		ug/l	8.00		90.5	77.1-110			
Surrogate: Dibromofluoromethane	6.42		"	8.00		80.2	66.3-111			
Surrogate: Toluene-d8	7.86		"	8.00		98.2	84.7-109			
Chlorobenzene	ND	1.0	"							
1,2-Dibromoethane (EDB)	ND	1.0	"							
1,2-Dichloroethane	ND	0.50	"							
Trichloroethene	ND	1.0	"							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
m,p-Xylene	ND	1.0	"							
o-Xylene	ND	0.50	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	10	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Methyl tert-butyl ether	ND	1.0	"							
C6-C12 (GRO)	ND	50	"							

**LCS (8082502-BS1)**

Prepared: 08/25/08 Analyzed: 08/28/08

Surrogate: 4-Bromofluorobenzene	7.49		ug/l	8.00		93.6	77.1-110			
Surrogate: Dibromofluoromethane	6.05		"	8.00		75.6	66.3-111			
Surrogate: Toluene-d8	7.79		"	8.00		97.4	84.7-109			
Chlorobenzene	21.5	1.0	"	20.0		108	75-125			
Trichloroethene	20.9	1.0	"	20.0		105	75-125			
Benzene	19.6	0.50	"	20.0		98.2	75-125			
Toluene	19.9	0.50	"	20.0		99.6	75-125			

SunStar Laboratories, Inc.

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Albert Vargas, Senior Project Coordinator

Gribi Associates  
1090 Adam Street, Suite K  
Benicia CA, 94510

Project: ACC-24th Street  
Project Number: [none]  
Project Manager: Jim Gribi

**Reported:**  
08/29/08 16:25

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 8082502 - EPA 5030 GCMS**

**LCS Dup (8082502-BSD1)**

Prepared: 08/25/08 Analyzed: 08/28/08

Surrogate: 4-Bromofluorobenzene	7.22		ug/l	8.00		90.2	77.1-110			
Surrogate: Dibromofluoromethane	8.51		"	8.00		106	66.3-111			
Surrogate: Toluene-d8	7.99		"	8.00		99.9	84.7-109			
Chlorobenzene	17.9	1.0	"	20.0		89.4	75-125	18.5	20	
Trichloroethene	18.6	1.0	"	20.0		93.0	75-125	11.7	20	
Benzene	16.9	0.50	"	20.0		84.7	75-125	14.8	20	
Toluene	17.3	0.50	"	20.0		86.6	75-125	14.0	20	

SunStar Laboratories, Inc.

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Albert Vargas, Senior Project Coordinator

Gribi Associates  
1090 Adam Street, Suite K  
Benicia CA, 94510

Project: ACC-24th Street  
Project Number: [none]  
Project Manager: Jim Gribi

**Reported:**  
08/29/08 16:25

### Notes and Definitions

- I-02 This result was analyzed outside of the EPA recommended holding time.
- D-08 Results in the diesel organics range are primarily due to overlap from a gasoline range product.
- D-02 Hydrocarbon pattern present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

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Albert Vargas, Senior Project Coordinator