R02523

PHASE II ENVIRONMENTAL SITE ASSESSMENT

SHELL OIL PRODUCTS US, SAP #135444

4530 LAS POSITAS ROAD
LIVERMORE, CALIFORNIA

DELTA PROJECT NO. CASHL-BADW-A-135444

Prepared for:

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October 29, 2008

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EXECUTIVE SUMMARY

Delta Consultants (Delta) on behalf of Shell Oil Products US has completed a Phase II Environmental Site Assessment (Phase II ESA) for Due Diligence at the Shell branded service station located at 4530 Las Positas Road, Livermore, Alameda County, California (Site).

- Prepared a site-specific Health & Safety Plan prior to the initiation of field activities.
- Notified USA-North to have public utilities in the area of the Site clearly marked.
- Contracted with a private underground utility locating firm (Cruz Brothers), in addition to the public locates, to clear each soil boring location.
- Cleared each soil boring location to 5-feet below ground surface (bgs) using air-knifing and vacuum truck equipment.
- Advanced six soil borings (B-1 through B-5 and B-7) to maximum depths ranging from 15 to 20 feet bgs using direct push probe drilling methods and equipment on August 19, 2008.
- Collected representative soil samples from continuously cored boreholes for logging and characterization of soil types, field screening, and potential analytical laboratory testing.
- Conducted headspace screening of the soil samples for volatile organic compound (VOC) vapors using a portable photo-ionization detector (PID).
- Collected one soil sample from each soil boring, the location of which was selected by the following ordered criteria:
    - The sample interval exhibiting the highest PID reading, or
    - In the event that impacts are not observed, the sample interval directly above the soil/groundwater interface, or
    - In the event that groundwater is not encountered in the boring, the termination point of the boring.
- Collected a groundwater sample from each boring in which groundwater was encountered.
- Submitted all samples to CalScience Environmental Laboratories (CalScience) in Garden Grove, California to be analyzed for:
    - Total petroleum hydrocarbons as gasoline (TPH-G) using US Environmental Protection Agency (EPA) Method 8260B.

- Select VOCs by EPA Method 8260B, including benzene, toluene, ethylbenzene, total xylenes (BTEX), 1,2-dibromoethane (EDB), 1,2-dichloroethane (EDC), methyl tert-butyl ether (MTBE), tertiary butyl alcohol (TBA), diisopropyl ether (DIPE), ethyl tert-butyl ether, (ETBE), tert amyl-butyl ether (TAME), and ethanol.

A summary of findings is as follows: All soil and groundwater analytical laboratory results were reviewed for detections of petroleum hydrocarbon constituents above the laboratory method reporting limits (MRLs) and compared to the California Regional Water Quality Control Board Environmental Screening Levels (ESLs)[1]. For comparison purposes the following assumptions were used in selecting the ESLs:

- Residential land use,
- Shallow soil (less than 3 meters) or Deep Soil (greater than 3 meters) as appropriate, and;
- Groundwater is a current or potential source of drinking water.

The appropriate ESLs were obtained from Summary Table A and Summary Table C in the document *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*[1]. Comparisons between the ESLs and laboratory results can be found in **Table 1** for soil samples and **Table 2** for groundwater samples.

- None of the soil samples collected and submitted for laboratory analysis during this investigation exhibited concentrations of any constituent in excess of the ESLs.
- None of the groundwater samples collected and submitted for laboratory analysis during this investigation exhibited concentrations of any constituent in excess of the ESLs.
- A release was not reported based on the findings of this Phase II investigation.
- Two water wells listed in the Federal US Geological Survey inventory are located within 1,000 feet to the northeast of the Site. Delta personnel attempted to field-verify the wells but were unable to locate them.

[1] California Regional Water Quality Board, San Francisco Bay Region. Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater. Interim Final – November 2007, revised May 2008.

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LIVERMORE, CALIFORNIA
DELTA PROJECT NO. CASHL-BADW-A-135444

1.0 INTRODUCTION

1.1 General

At the request of Shell Oil Products US (Shell), Delta Consultants (Delta) has conducted a Phase II Environmental Site Assessment (Phase II ESA) for Due Diligence at the Shell Retail Store located at 4530 Las Positas Road, Livermore, Alameda County, California (Site). This Site is an active Shell service station.

1.2 Purpose and Scope

In order to establish a baseline of environmental conditions, Delta conducted this Phase II ESA to assess subsurface conditions and potential hydrocarbon impacts through implementation of the following scope of work:

- Prepared a site-specific Health & Safety Plan prior to the initiation of field activities.
- Notified USA-North to have public utilities in the area of the Site clearly marked.
- Contracted with a private underground utility locating firm (Cruz Brothers), in addition to the public locates, to clear each soil boring location.
- Cleared each soil boring location to 5-feet below ground surface (bgs) using air-knifing and vacuum truck equipment.
- Advanced six soil borings (B-1 through B-5 and B-7) to maximum depths ranging from 15 to 20 feet bgs using direct push probe drilling methods and equipment on August 19, 2008. Borings were placed in the vicinity of the underground storage tank (UST) basin and in the vicinity of dispensers. The scope of work, as defined by Shell, limited drilling depth to 40 feet bgs around tank basins and 20 feet bgs near dispensers or other areas of interest; or to the depth of first encountered groundwater or drilling refusal, whichever was encountered first.
- Collected representative soil samples from continuously cored boreholes for logging and characterization of soil types, field screening, and potential laboratory analysis.
- Conducted headspace screening of the soil samples for volatile organic carbon VOC vapors using a portable photo-ionization detector PID.
- Collected one soil sample from each soil boring, the location of which was selected by the following ordered criteria:
    - The sample interval exhibiting the highest PID reading, or

  - In the event that impacts are not observed, the sample interval directly above the soil/groundwater interface, or
  - In the event that groundwater is not encountered in the boring, the termination point of the boring.
- Collected a groundwater sample from each boring in which groundwater was encountered.
- Submitted all samples to CalScience Environmental Laboratories (CalScience) in Garden Grove, California to be analyzed for:
  - Total petroleum hydrocarbons as gasoline (TPH-G) using US Environmental Protection Agency (EPA) Method 8260B.
  - Select VOCs by EPA Method 8260B, including benzene, toluene, ethylbenzene, total xylenes (BTEX), 1,2-dibromoethane (EDB), 1,2-dichloroethane (EDC), methyl tert-butyl ether (MTBE), tertiary butyl alcohol (TBA), diisopropyl ether (DIPE), ethyl tert-butyl ether, (ETBE), tert amyl-butyl ether (TAME), and ethanol.
- Evaluated and compiled field observations and laboratory analytical data into this report, documenting boring installations, soil and groundwater sampling, and analytical data.

1.3 Deviations

Air knifing activities revealed three buried utility lines in the vicinity of proposed soil boring location B-6, located on the southwest side of the dispenser area. Proposed boring location B-6 was unable to be moved an appropriate distance from the buried utility lines and was subsequently abandoned, patched, and grouted.

1.4 Background

The Site is an active retail gasoline station located in Almeda County at 4530 Las Positas Road in Livermore, California **(Figure 1)**. Above ground structures include a car wash building on the Site's northern side and a canopy structure covering the store building. Six dispenser islands are located centrally on Site (**Figure 2**). The Site is primarily covered with asphalt and concrete pavement. The USTs are located within a common excavation in the northeastern portion of the Site, between the canopy and the car wash building. Local access to the Site is gained from Las Positas Road to the south and North First Street to the east.

Two water wells listed in the Federal US Geological Surveyinventory are located within 1,000 feet to the northeast of the Site. The location of these wells is portrayed in the Environmental Data Resources well survey report included in **Appendix A,** in addition, Delta personnel attempted to verify the presence of these wells and were unable to locate them.

2.0 SOIL AND GROUNDWATER ENVIRONMENTAL ASSESSMENT

2.1 Drilling and Soil Sampling

Soil borings were advanced using a direct-push hydraulic drive point system to depths ranging from 15 to 20 feet bgs. Soil samples were collected continuously using a 5-foot macrocore sampler with a 1.5-inch inside diameter driven into undisturbed formation materials utilizing a hydraulic piston mechanism. The soils encountered were logged using the Unified Soil Classification System (USCS) and field screened using a PID by a Delta field technician working under the supervision of a California Professional Geologist. Field observations, including soil color, odor, and PID readings, were recorded on the soil boring logs, included as **Appendix B.**

One soil sample from the sample interval exhibiting the highest PID reading, or if no field indications of impacts were noted, the interval located directly above the soil/groundwater interface or at the termination point in each soil boring was submitted for laboratory analysis. Soil samples were either placed in laboratory prepared glass containers or the macrocore sample liner was cut into a 6-inch long section and sealed with Teflon tape and end caps. Soil samples were placed into ice-chilled coolers. Standard chain-of-custody (COC) protocol was followed for transporting soil samples to CalScience in Garden Grove, California. Soil analytical laboratory results are summarized in **Table 1** and shown spatially in **Figure 3**. The soil sample analytical laboratory report and COC records are included in **Appendix C**.

All soil borings were backfilled with bentonite grout and the ground surfaces were repaired to approximate original conditions.

2.2 Grab Groundwater Sampling

Following borehole advancement, groundwater samples were collected utilizing Hydropunch sampling techniques. Hyrdropunch sampling utilizes a probe rod with a retractable stainless steel screen with a steel drop-off tip. The probe rods are advanced a minimum of two feet into the water table, at which point the tip is released. The drill rods are then retracted to expose the disposable screen. Groundwater was collected from the screened interval using a peristaltic pump and disposable polyethylene tubing. Groundwater samples were decanted directly into laboratory prepared sample containers and placed in an iced cooler for transport to CalScience following standard COC protocols. Groundwater analytical laboratory results are summarized in **Table 2** and shown spatially in **Figure 4**. The analytical laboratory reports and COC records for the groundwater sampling event are included in **Appendix C**.

2.3 Investigation Derived Waste

All investigation derived waste generated during the investigation was stored in US Department of Transportation-approved 55-gallon drums for subsequent disposal following proper waste characterization. Decontamination wash water generated during the investigation was stored in a separate drum for subsequent recycling. Copies of waste disposal records are included as **Appendix D**, if they were available at the time this report was prepared.

2.4 Laboratory Analytical Results

All soil and groundwater analytical laboratory results were reviewed for detections of petroleum hydrocarbon constituents above the laboratory method reporting limits (MRLs) and compared to the California Regional Water Quality Control Board Environmental Screening Levels (ESLs)[1]. For comparison purposes the following assumptions were used in selecting the ESLs:

- Residential land use,
- Shallow Soil (less than 3 meters) or Deep Soil (greater than 3 meters) as appropriate, and;
- Groundwater is a current or potential source of drinking water.

The appropriate ESLs were obtained from Summary Table A and Summary Table C in the document *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*[1]. Comparisons between the ESLs and laboratory results can be found in **Table 1** for soil samples and **Table 2** for groundwater samples.

Soil analytical laboratory results are summarized in **Table 1**. Within the table, samples with concentrations that exceed the ESLs are bolded. The soil sample analytical laboratory report and COC records are included in **Appendix C**.

Groundwater analytical laboratory results are summarized in **Table 2**. Within the table, samples with concentrations that exceed the ESLs are bolded. The analytical laboratory reports and COC records for the groundwater event are included in **Appendix C**.

2.5 Release Notification

A release was not reported based on the findings of this Phase II ESA.

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[1] California Regional Water Quality Board, San Francisco Bay Region. Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater. Interim Final – November 2007, revised May 2008.

3.0 SUMMARY OF FINDINGS

Based on the scope of work performed, Delta presents the following summary of findings:

- Six soil exploration borings (B-1 through B-5 and B-7) were advanced on August 19, 2008, to a maximum depth of 20 feet bgs.
- All soil and groundwater laboratory results were reviewed for detections of petroleum constituents above the laboratory MRLs and compared to the California Regional Water Quality Control Board ESLs. Comparisons between the ESLs and laboratory results can be found in **Tables 1 and 2**.
- None of the soil samples collected and submitted for laboratory analysis during this investigation exhibited concentrations of any constituent in excess of the ESLs.
- None of the groundwater samples collected and submitted for laboratory analysis during this investigation exhibited concentrations of any constituent in excess of the ESLs.
- A release was not reported based on the findings of this Phase II ESA.
- According to the EDR well survey report, included in **Appendix A**, two water wells listed in the Federal USGS inventory are located within 1,000 feet to the northeast of the Site. Delta personnel attempted to field-verify the wells but were unable to locate them.

4.0 REMARKS

The recommendations contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Delta's Client and anyone else specifically listed on this report.

This report was prepared by **DELTA CONSULTANTS**

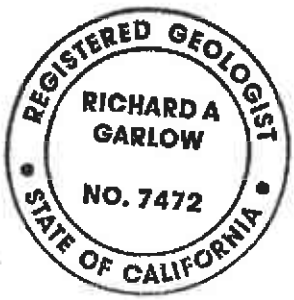
Chris Dowd
Staff Scientist

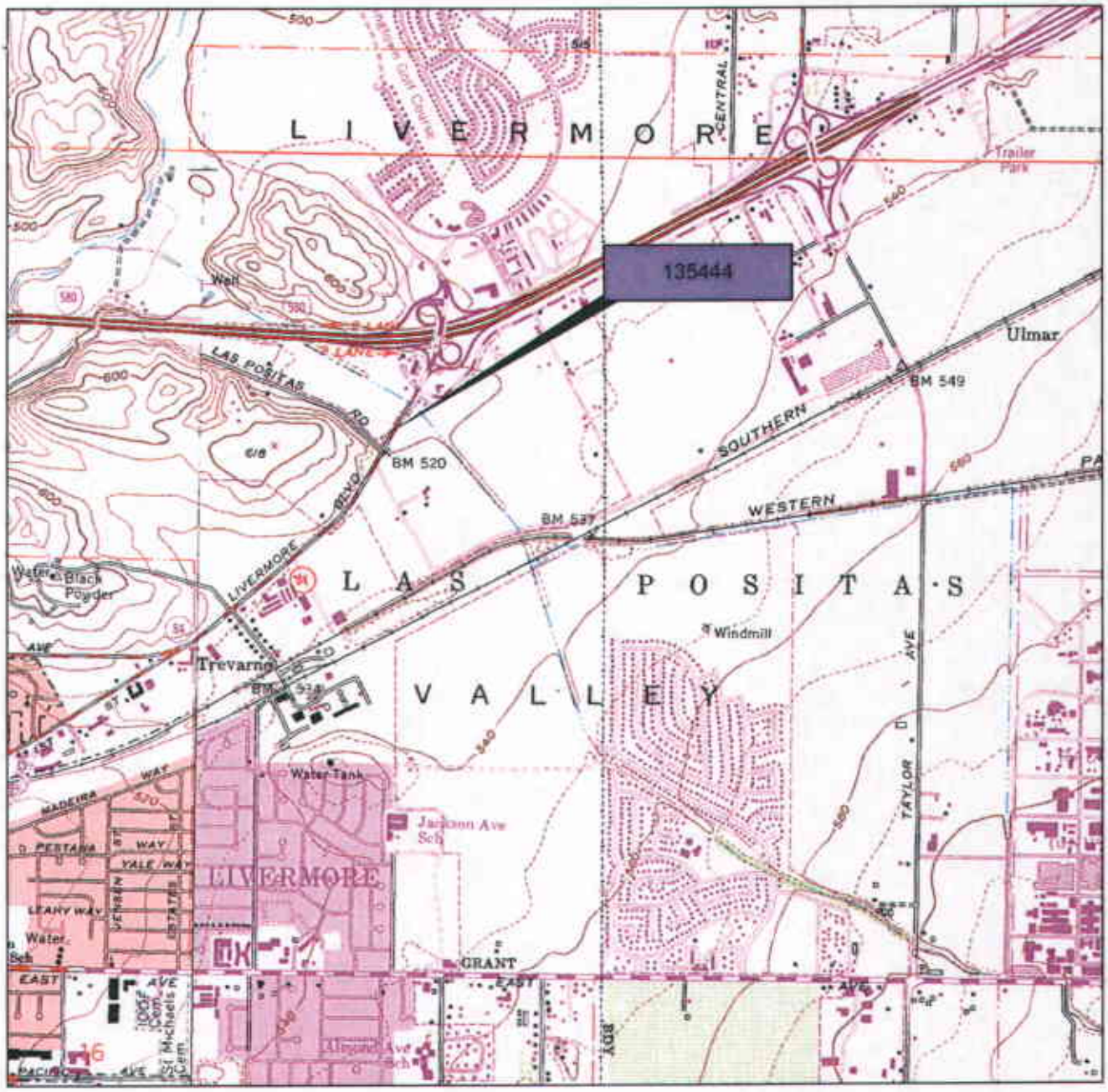
Date: 10/29/2008

Reviewed by:

Rich Garlow, P.G.
California Professional Geologist

Date: 10/31/08





N

Scale (miles)
0 0.1 0.2 0.3 0.4 0.5 0.75 1

0 1000 2000 3000 4000
Scale (feet)

from Alamont and Livermore 7.5 minute USGS Quadrangles

Projection: California State Plane Coordinate System, Zone 3, NAD83, U.S. Survey foot

Figure 1

SITE LOCATION MAP

Shell SAP 135444
4530 Las Positas Road
Livermore, California

Project No.	Prepared by	Drawn by	
CASHLBADWA	LNH	LNH	
Date	Reviewed by	Filename	
10/6/08		135444-SL	DELTA

LEGEND

- ● UNDERGROUND STORAGE TANK (UST) AREA SOIL BORING
- ○ DISPENSER AREA SOIL BORING

N

0 20 40

Scale (feet)
(GRID NORTH)

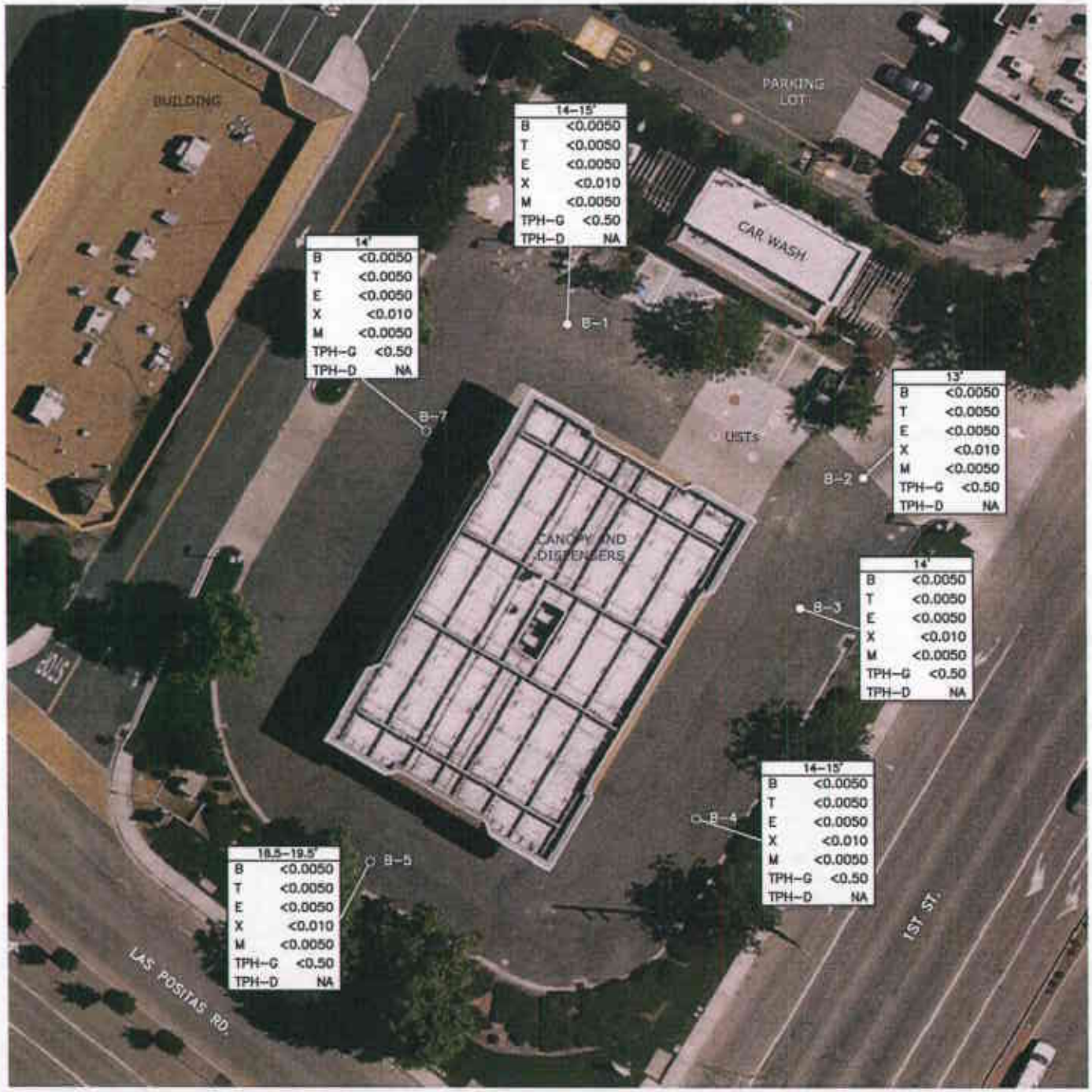
Projection: California State Plane Coordinate System, Zone 3, NAD83, U.S. Survey feet

• BORING LOCATIONS ARE APPROXIMATE

Figure 2
SITE PLAN

Shell SAP 135444
4530 Las Positas Road
Livermore, California

Project No.	Prepared by	Drawn by	
CASHLSADWA	LNH	LNH/JH	
Date	Reviewed by	Filename	
10/2/08		135444	DELTA



LEGEND

- UNDERGROUND STOR (UST) AREA SOIL BORING
- DISPENSER AREA SOIL BORING

6' SAMPLE DEPTH (bgs)
BENZENE (mg/kg)
TOLUENE (mg/kg)
ETHYL-BENZENE (mg/kg)
TOTAL XYLENES (mg/kg)
MTBE (mg/kg)
TOTAL PETROLEUM HYDROCARBONS GASOLINE RANGE ORGANICS (mg/kg)
TOTAL PETROLEUM HYDROCARBONS DIESEL RANGE ORGANICS (mg/kg)

NA NOT ANALYZED

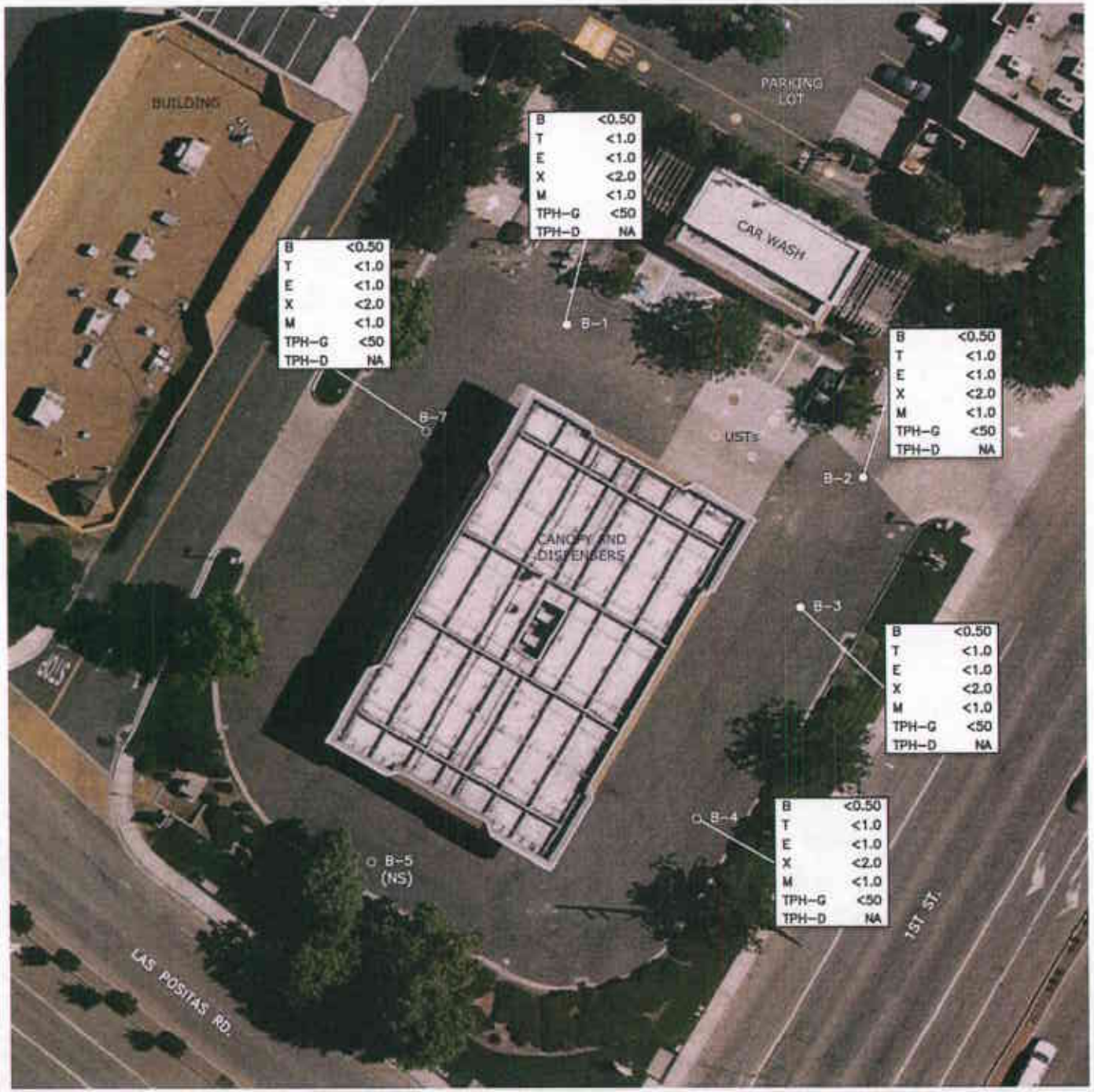
N

0 20 40
Scale (feet)
(GRID NORTH)

Projection: California State Plane Coordinate System, Zone 3, NAD83, U.S. Survey foot

Figure 3
SOIL CONCENTRATION MAP
AUGUST 19, 2008
Shell SAP 135444
4530 Las Positas Road
Livermore, California

Project No.	Prepared by	Drawn by	
CASHELBADWA	LNH	LNH/JH	DELTA
Date	Reviewed by	Filename	
10/2/08		135444	



* BORING LOCATIONS ARE APPROXIMATE

LEGEND

- ● UNDERGROUND STORAGE TANK (UST) AREA SOIL BORING
- ○ DISPENSER AREA SOIL BORING

B	<0.50	BENZENE (ug/L)
T	<1.0	TOLUENE (ug/L)
E	<1.0	ETHYL-BENZENE (ug/L)
X	<2.0	TOTAL XYLENES (ug/L)
M	5.8	MTBE (ug/L)
TPH-G	200	TOTAL PETROLEUM HYDROCARBONS GASOLINE RANGE ORGANICS (ug/L)
TPH-D	NA	TOTAL PETROLEUM HYDROCARBONS DIESEL RANGE ORGANICS (ug/L)

NA	NOT ANALYZED
NS	NOT SAMPLED (GROUNDWATER NOT ENCOUNTERED)
ug/L	MICROGRAMS PER LITER
<0.50	LESS THAN METHOD REPORTING LIMIT (NOT DETECTED)
MTBE	METHYL TERT-BUTYL ETHER

N

0 20 40

Scale (feet)
(GRID NORTH)

Projection: California State Plane Coordinate System, Zone 3, NAD83, U.S. Survey foot

Figure 4
GROUNDWATER CONCENTRATION MAP
AUGUST 19, 2008
Shell SAP 135444
4530 Las Positas Road
Livermore, California

Project No.	Prepared by	Drawn by	
CASHLBADWA	LNH	LNH/JH	
Date	Reviewed by	Filename	
10/2/08		135444	DELTA

Table 1
Summary of Soil Analytical Results - TPH & VOCs
SAP No. 135444
4530 Las Positas Road
Livermore, California

Sample Identification	Sample Depth (feet)	Sample Date	TPH-G (mg/kg)	TPH-D (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	EDB (mg/kg)	EDC (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	Ethanol (mg/kg)
B-1-14'-15'	14-15	08/19/08	< 0.50	NA	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.0050	< 0.0050	< 0.0050	< 0.050	< 0.010	< 0.010	< 0.010	< 0.50
B-2-13'	13	08/19/08	< 0.50	NA	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.0050	< 0.0050	< 0.0050	< 0.050	< 0.010	< 0.010	< 0.010	< 0.50
B-3-14'	14	08/19/08	< 0.50	NA	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.0050	< 0.0050	< 0.0050	< 0.050	< 0.010	< 0.010	< 0.010	< 0.50
B-4-14'-15'	14-15	08/19/08	< 0.50	NA	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.0050	< 0.0050	< 0.0050	< 0.050	< 0.010	< 0.010	< 0.010	< 0.50
B-5	18.5-19.5	08/19/08	< 0.50	NA	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.0050	< 0.0050	< 0.0050	< 0.050	< 0.010	< 0.010	< 0.010	< 0.50
B-7-14'	14	08/19/08	< 0.50	NA	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.0050	< 0.0050	< 0.0050	< 0.050	< 0.010	< 0.010	< 0.010	< 0.50
ESL[1]: Shallow Soils (<3m), Residential Land Use, Groundwater is Current or Potential Source of Drinking Water (Table A)			83	83	0.044	2.9	2.3	2.3	0.00033	0.0045	0.023	0.075	NA	NA	NA	NA
ESL[1]: Deep Soils (>3m), Residential Land Use, Groundwater is Current or Potential Source of Drinking Water (Table C)			83	83	0.044	2.9	3.3	2.3	0.00033	0.0045	0.023	0.075	NA	NA	NA	NA

Notes:
mg/kg = milligrams per kilogram
< = Not detected at concentration exceeding laboratory method reporting limit (MRL)
VOC = Volatile organic compound
TPH-G = Total Petroleum Hydrocarbons as Gasoline
TPH-D = Total Petroleum Hydrocarbons as Diesel
EDB = 1,2-dibromoethane
EDC = 1,2-dichloroethane
MTBE = Methyl tert-Butyl Ether
TBA = Tertiary Butyl Alcohol
DIPE = Diisopropyl Ether
ETBE = Ethyl tert-Butyl Ether
TAME = Tert-Amyl Butyl Ether
NA = Not Analyzed, Not Available
VOC analysis by EPA Method 8260B
Gasoline-range hydrocarbons by EPA Method 8260B
Diesel-range hydrocarbons by EPA Method 8015B
[1] ESL = Environmental Screening Level. Screening criteria referenced are from the *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater,* California Regional Water Quality Control Board, San Francisco Bay Region, Interim Final, November 2007, revised May 2008.

Table 2
Summary of Groundwater Analytical Results - TPH & VOCs
SAP No. 135444
4530 Las Positas Road
Livermore, California

Sample Identification	Sample Date	Depth to Water (feet)	TPH-G (µg/L)	TPH-D (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (µg/L)	EDC (µg/L)	MTBE (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	Ethanol (µg/L)
B-1	08/19/08	15	< 50	NA	< 0.50	< 1.0	< 1.0	< 2.0	< 1.0	< 0.50	< 1.0	< 10	< 2.0	< 2.0	< 2.0	< 100
B-2	08/19/08	15	< 50	NA	< 0.50	< 1.0	< 1.0	< 2.0	< 1.0	< 0.50	< 1.0	< 10	< 2.0	< 2.0	< 2.0	< 100
B-3	08/19/08	14	< 50	NA	< 0.50	< 1.0	< 1.0	< 2.0	< 1.0	< 0.50	< 1.0	< 10	< 2.0	< 2.0	< 2.0	< 100
B-4	08/19/08	15	< 50	NA	< 0.50	< 1.0	< 1.0	< 2.0	< 1.0	< 0.50	< 1.0	< 10	< 2.0	< 2.0	< 2.0	< 100
B-7	08/19/08	15	< 50	NA	< 0.50	< 1.0	< 1.0	< 2.0	< 1.0	< 0.50	< 1.0	< 10	< 2.0	< 2.0	< 2.0	< 100
ESL[1]: Shallow Soils (<3m), Residential Land Use, Groundwater is a Current or Potential Source of Drinking Water (Table A)			100	100	1	40	30	20	0.05	0.5	5	12	NA	NA	NA	NA
ESL[1]: Deep Soils (>3m), Residential Land Use, Groundwater is a Current or Potential Source of Drinking Water ESLs (Table C)			100	100	1	40	30	20	0.05	0.5	5	12	NA	NA	NA	NA

Notes:
µg/L = micrograms per liter
< = Not detected at concentration exceeding laboratory method reporting limit (MRL)
VOC = Volatile organic compound
TPH-G = Total Petroleum Hydrocarbons as Gasoline
TPH-D = Total Petroleum Hydrocarbons as Diesel
EDB = 1,2-dibromoethane
EDC = 1,2-dichloroethane
MTBE = Methyl tert-Butyl Ether
TBA = Tertiary Butyl Alcohol
DIPE = Diisopropyl Ether
ETBE = Ethyl tert-Butyl Ether
TAME = Tert-Amyl Butyl Ether
NA = Not Analyzed, Not Available
VOC analysis by EPA Method 8260B
Gasoline-range hydrocarbons by EPA Method 8260B
Diesel-range hydrocarbons by EPA Method 8015B
[1] ESL = Environmental Screening Level. Screening criteria referenced are from the *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater,* California Regional Water Quality Control Board, San Francisco Bay Region, Interim Final, November 2007, revised May 2008.

APPENDIX A
ENVIRONMENTAL DATA RESOURCES WELL SURVEY REPORT

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 137 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	1 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 0.42 Min: 0.01	Max: 8.4 Min: 7.9
2	1 inches	20 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 0.42 Min: 0.01	Max: 8.4 Min: 7.9
3	20 inches	72 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 0.42 Min: 0.01	Max: 8.4 Min: 7.9

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	0.189
Federal FRDS PWS	0.189
State Database	0.189

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS3223050	1/8 - 1/4 Mile NE
7	USGS3223055	1/8 - 1/4 Mile NE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

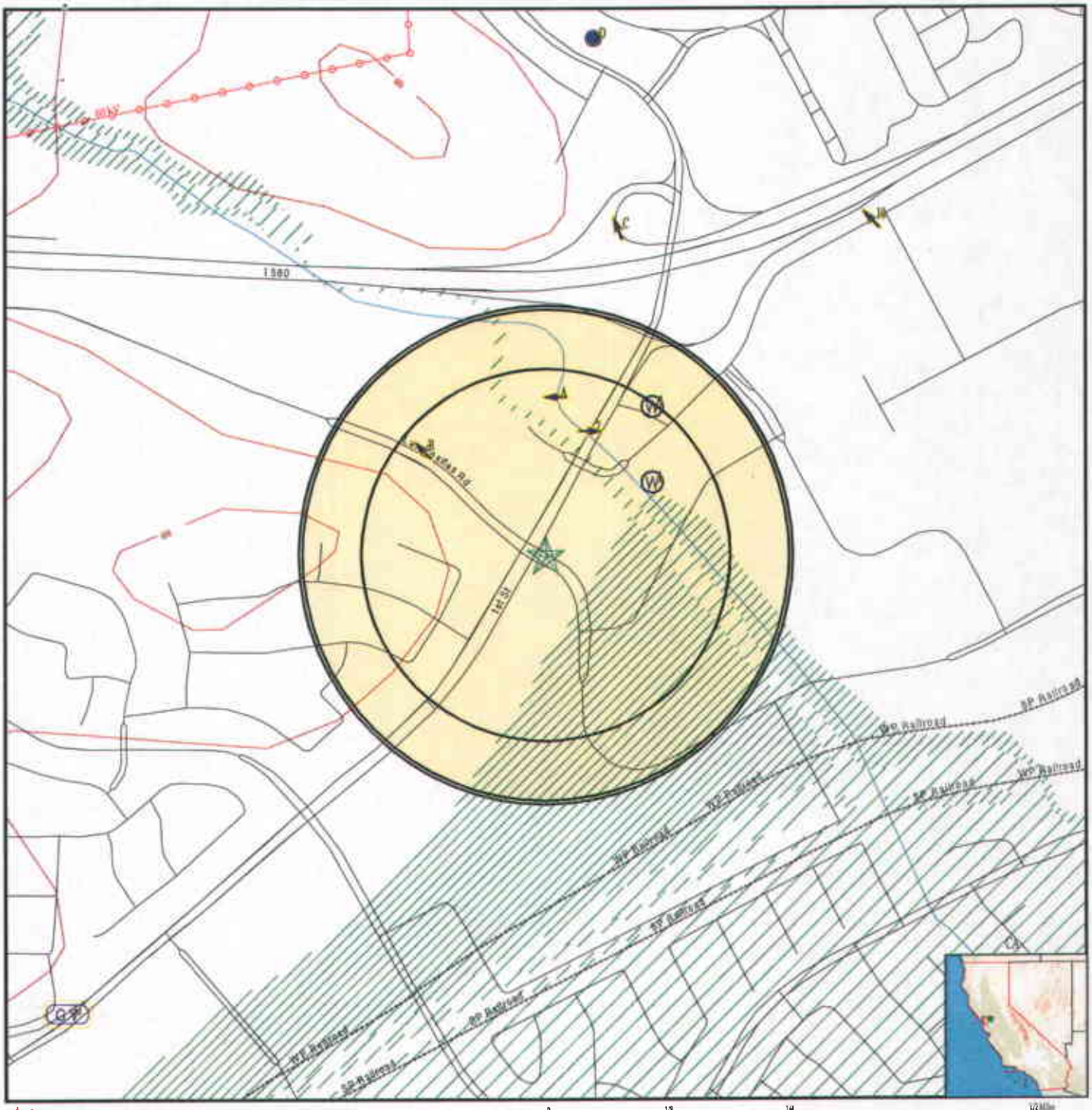
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 02271121.6r



- County Boundary
- Major Roads
- Contour Lines
- Power transmission lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells
- 100-year flood zone
- 500-year flood zone

SITE NAME: 135444 ADDRESS: 4530 LAS POSITAS ROAD LIVERMORE CA 94551 LAT/LONG: 37.6983 / 121.7425	CLIENT: Delta Consultants CONTACT: Gary E. Turgeon INQUIRY #: 02271121.6r DATE: July 17, 2008 9:39 am

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
1 **NE** **1/8 - 1/4 Mile** **Lower**	**FED USGS**	**USGS3223050**

Agency cd:	USGS	Site no:	374158121442201
Site name:	003S002E03K002M		
Latitude:	374158		
Longitude:	1214422	Dec lat:	37.69937399
Dec lon:	-121.74050804	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	001
Country:	US	Land net:	SENWSES3 T 3S R2E M
Location map:	ALTAMONT	Map scale:	24000
Altitude:	518.00		
Altitude method:	Level or other surveying method		
Altitude accuracy:	.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	San Francisco Bay. California. Area = 1200 sq.mi.		
Topographic:	Valley flat		
Site type:	Ground-water other than Spring	Date construction:	19590904
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	ALLUVIUM (QUATERNARY)		
Well depth:	488	Hole depth:	500
Source of depth data:	Not Reported		
Project number:	479200200		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1977-08-08
Water quality data end date:	1978-08-29	Water quality data count:	5
Ground water data begin date:	1977-08-12	Ground water data end date:	1978-08-29
Ground water data count:	4		

Ground-water levels, Number of Measurements: 4

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1978-08-29	65.8		1978-04-20	18.1	
1977-11-30	22.8		1977-08-12	45.2	

---

2 **NNE** **1/8 - 1/4 Mile** **Lower**	Site ID:	01-1602	**AQUIFLOW**	**53575**
	Groundwater Flow:	E		
	Shallow Water Depth:	13.95		
	Deep Water Depth:	15.65		
	Average Water Depth:	Not Reported		
	Date:	11/14/1994		

A3 **North** **1/8 - 1/4 Mile** **Lower**	Site ID:	Not Reported	**AQUIFLOW**	**53555**
	Groundwater Flow:	W		
	Shallow Water Depth:	11.12		
	Deep Water Depth:	16.49		
	Average Water Depth:	Not Reported		
	Date:	02/20/1991		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID / Direction / Distance / Elevation			Database	EDR ID Number
A4 **North** **1/8 - 1/4 Mile** **Lower**	Site ID:	Not Reported	**AQUIFLOW**	**53556**
	Groundwater Flow:	W		
	Shallow Water Depth:	11.12		
	Deep Water Depth:	16.49		
	Average Water Depth:	Not Reported		
	Date:	02/20/1991		
B5 **NW** **1/8 - 1/4 Mile** **Lower**	Site ID:	Not Reported	**AQUIFLOW**	**52450**
	Groundwater Flow:	NW		
	Shallow Water Depth:	12		
	Deep Water Depth:	15		
	Average Water Depth:	Not Reported		
	Date:	01/13/1997		
B6 **NW** **1/8 - 1/4 Mile** **Lower**	Site ID:	2090	**AQUIFLOW**	**52451**
	Groundwater Flow:	NW		
	Shallow Water Depth:	12		
	Deep Water Depth:	15		
	Average Water Depth:	Not Reported		
	Date:	01/13/1997		

7
NE
1/8 - 1/4 Mile
Lower

FED USGS **USGS3223055**

Agency cd:	USGS	Site no:	374202121442201
Site name:	003S002E03K003M		
Latitude:	374202		
Longitude:	1214422	Dec lat:	37.70048507
Dec lon:	-121.74050804	Coor meth:	M
Coor accr:	S	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	001
Country:	US	Land net:	NWNWSES3 T 3S R 2E M
Location map:	ALTAMONT	Map scale:	24000
Altitude:	520.20		
Altitude method:	Level or other surveying method		
Altitude accuracy:	.1		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	San Francisco Bay. California. Area = 1200 sq.mi.		
Topographic:	Valley flat		
Site type:	Ground-water other than Spring	Date construction:	19771117
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	ALLUVIUM (QUATERNARY)		
Well depth:	60.0	Hole depth:	60.0
Source of depth data:	Not Reported		
Project number:	CA-9-358M		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00

Peak flow data count: 0
Water quality data end date:1983-06-01
Ground water data begin date: 1977-12-13
Ground water data count: 74

Water quality data begin date: 1977-12-12
Water quality data count: 22
Ground water data end date: 1981-11-18

Ground-water levels, Number of Measurements: 74

Date	Feet below Surface	Feet to Sealevel
1981-11-18	14.8	
1981-10-26	16.0	
1981-08-05	21.4	
1981-01-26	14.1	
1980-10-14	20.2	
1980-09-29	22.0	
1980-09-02	22.0	
1980-08-06	23.5	
1980-07-21	16.7	
1980-06-24	22.3	
1980-06-02	18.1	
1980-05-04	14.1	
1980-04-07	14.7	
1980-03-18	14.5	
1980-02-25	15.0	
1980-01-28	16.0	
1979-12-31	17.0	
1979-12-03	18.3	
1979-11-06	19.6	
1979-10-25	20.5	
1979-10-08	22.1	
1979-09-10	25.8	
1979-08-13	28.7	
1979-07-30	28.0	
1979-06-25	24.6	
1979-06-04	28.3	
1979-05-07	16.6	
1979-04-26	16.9	
1979-04-02	16.8	
1979-03-19	16.9	
1979-03-12	17.1	
1979-02-20	17.4	
1979-02-06	18.2	
1979-01-23	18.4	
1978-11-28	21.3	
1978-06-21	30.7	
1977-12-22	20.7	
1981-11-12	15.2	
1981-09-30	16.2	
1981-05-29	16.5	
1980-10-24	20.3	
1980-10-07	17.5	
1980-09-15	20.9	
1980-08-18	22.8	
1980-08-05	24.3	
1980-07-02	17.8	
1980-06-16	17.4	
1980-05-19	16.5	
1980-04-20	14.4	
1980-03-24	14.4	
1980-03-10	14.5	
1980-02-11	17.6	
1980-01-15	16.1	
1979-12-18	17.9	
1979-11-19	19.3	
1979-11-05	19.8	
1979-10-22	21.5	
1979-09-24	22.9	
1979-08-27	28.6	
1979-08-03	27.3	
1979-07-09	27.2	
1979-06-18	22.7	
1979-05-21	21.1	
1979-04-30	16.8	
1979-04-09	18.3	
1979-03-27	16.8	
1979-03-16	17.0	
1979-02-27	17.4	
1979-02-13	17.8	
1979-01-30	18.2	
1979-01-12	18.6	
1978-08-25	28.8	
1978-06-01	23.4	
1977-12-13	21.3	

C8
NNE
1/4 - 1/2 Mile Higher

Site ID:	Not Reported
Groundwater Flow:	NNW
Shallow Water Depth:	9.22
Deep Water Depth:	18.70
Average Water Depth:	Not Reported
Date:	11/15/1991

AQUIFLOW **53519**

C9
NNE
1/4 - 1/2 Mile Higher

Site ID:	Not Reported
Groundwater Flow:	NNW
Shallow Water Depth:	9.22
Deep Water Depth:	18.70
Average Water Depth:	Not Reported
Date:	11/15/1991

AQUIFLOW **53518**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation			Database	EDR ID Number
10 **NE** **1/4 - 1/2 Mile** **Higher**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	Not Reported NW 11.5 19.5 Not Reported 07/14/1994	**AQUIFLOW**	**52469**
D11 **North** **1/2 - 1 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-0206 W Not Reported Not Reported 6 02/21/1992	**AQUIFLOW**	**52963**
D12 **North** **1/2 - 1 Mile** **Lower**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-0206 NNW 7.60 8.42 Not Reported 06/04/1999	**AQUIFLOW**	**52964**
13 **SW** **1/2 - 1 Mile** **Higher**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	Not Reported Varies 23.62 28.71 Not Reported 09/1992	**AQUIFLOW**	**53548**
14 **NE** **1/2 - 1 Mile** **Higher**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	3285 NW 11.5 19.5 Not Reported 07/14/1994	**AQUIFLOW**	**52468**

Drilling Started: 08/19/2008
Drilling Completed: 08/19/2008
Drilling Method and Diameter: Direct Push – 2" Dia.
Drilling Company: Cascade Drilling
Drilled By:
Logged By: Steve Harquail
Boring: B-1

Depth (feet)	Samples	Recovery (%)	PID (ppm)	LITHOLOGIC DESCRIPTION	USCS	Graphic Log	Depth (feet)
				No Recovery – Air Knifed to 5 feet below ground surface (bgs).			
2							2
4				5.00'			4
				Gravelly Silt: Dark gray, moist.	ML		
6				6.50'			6
				Sandy Silt: Light gray/white mix, with trace gravel.	ML		
8				*Similar to above, with some black and brown mottling.*			8
10		100	0.0	*Sandy Silt with Gravel: Light tan/brown.*			10
12							12
14							14
15		100	0.0	*Water at 15' bgs.* ▼ 15.50'			15
				Boring terminated at 15 feet bgs.			

▼ Water Level (15.0')

CONTINUOUS CORE Sample Collected for Laboratory Analysis

DELTA	CASHL-BADW-A 09-25-2008 / 09-25-2008 CALIFORNIA / O.P. / J.R. SH5444-B1	SHELL FACILITY No. 135444 4530 Las Positas Rd. Livermore, California	Soil Boring Log B-1	FIGURE

Drilling Started: 08/20/2008
Drilling Completed: 08/20/2008
Drilling Method and Diameter: **Direct Push - 2" Dia.**
Drilling Company: **Cascade Drilling**
Drilled By:
Logged By: **Steve Harquail**
Boring: **B-2**

Depth (feet)	Samples	Recovery (%)	PID (ppm)	LITHOLOGIC DESCRIPTION	USCS	Graphic Log	Depth (feet)
				No Recovery - Air Knifed to 5 feet below ground surface (bgs).			
2							2
4				5.00'			4
				Sandy Silt: Dark brown, hard, dry.	ML		
6							6
8				*Sandy Silt: Brown, with 5% fined grained sand, hard, dry.*			8
10		100	0.0	*Similar to above.*			10
				12.00'			
12				*Clayey Silt: Tan, dry, firm, with 5% sand.*	ML		12
				14.00'			
14				*Silty Clay: Tan, soft.*	CL		14
		100	0.0	15.00'			
				Clayey Silt: Brown, hard, dry.	ML		
16							16
18							18
20		100	0.0	*Clayey Silt: Brown/tan* *Sand: Brown, wet.*			20
				22.00'			
22				*Clayey Sand: Tan.*	SC		22
				23.00'			
				Clay: Tan, soft, dry.	CL		
24							24
25		100	0.0	25.00'			25

Boring terminated at 25 feet bgs.

▼ Water Level (Not Encountered)

CONTINUOUS CORE Sample Collected for Laboratory Analysis

DELTA	CASHL-BADW-A 09-26-2008 / 09-26-2008 CALIFORNIA / O.F. / J.E. SH5112-B2	SHELL FACILITY No. 135112 4895 Hacienda Drive Dublin, California	Soil Boring Log B-2

FIGURE

Drilling Started: 08/19/2008
Drilling Completed: 08/19/2008
Drilling Method and Diameter: Direct Push – 2" Dia.
Drilling Company: Cascade Drilling
Drilled By:
Logged By: Steve Harquail
Boring: B-3

Depth (feet)	Samples	Recovery (%)	PID (ppm)	LITHOLOGIC DESCRIPTION	USCS	Graphic Log	Depth (feet)
				No Recovery – Air Knifed to 5 feet below ground surface (bgs).			
2							2
4				5.00'			4
				Silt: Blackish gray, with 5% clay.	ML		
6				*Silt: Light tan/light gray, hard, with 5% fine grained sand.*			6
8				8.00'			8
				Silty Sand with Gravel.	SM		
10		100	0.0	10.00'			10
				Gravelly Silt: Brown/greenish gray mix.	ML		
				11.00'			
				Silt: Green, soft.	ML		
12				12.50'			12
				Silty Sand with Gravel.	SM		
				▼ 14.00'			
14				*Silty Sand: Reddish brown, wet.*	SM		14
		100	0.0	*As above, with gravel from 14.5 to 15 feet bgs.*			
16				16.50'			16
				Sandy Silt: Light gray/light tan, hard, dry.	ML		
18				18.00'			18
				Boring terminated at 18 feet bgs.			

▼ Water Level (14.0')

CONTINUOUS CORE
Sample Collected for Laboratory Analysis

DELTA	CASHL-BADW-A 09-25-2008 / 09-25-2008 CALIFORNIA / O.F. / J.E. SH5444-B3	SHELL FACILITY No. 135444 4530 Las Positas Rd. Livermore, California	Soil Boring Log B-3	FIGURE

Drilling Started: 08/19/2008
Drilling Completed: 08/19/2008
Drilling Method and Diameter: Direct Push - 2" Dia.
Drilling Company: Cascade Drilling
Drilled By:
Logged By: Steve Harquail
Boring: B-4

Depth (feet)	Samples	Recovery (%)	PID (ppm)	LITHOLOGIC DESCRIPTION	USCS	Graphic Log	Depth (feet)
				No Recovery - Air Knifed to 5 feet below ground surface (bgs).			
				Silty Sand with Cobbles: Brown, hard, dry. 5.00'	SM		
				Sandy Silt: Light gray/light tan, hard, dry. 9.00'	ML		
		100	0.0	*Silty Sand with Gravel: Tan/light tan mix.* 10.50'	SM		
				Silty Sand: Light gray, dry, brown mottling. 12.00'	SM		
				Silty Sand with Gravel: Light tan/brown, dry.	SM		
		80	0.0	▼ *Wet at 15' bgs.* 16.00'			
				Silty Sand: Tan, moist to wet. 18.00'	SM		
				Boring terminated at 18 feet bgs.			

▼ Water Level (15.0')

CONTINUOUS CORE Sample Collected for Laboratory Analysis

DELTA	CASHL-BADW-A 09-25-2008 / 09-25-2008 CALIFORNIA / O.P. / J.R. SH5444-B4	SHELL FACILITY No. 135444 4530 Las Positas Rd. Livermore, California	Soil Boring Log B-4

FIGURE

Drilling Started: 08/19/2008
Drilling Completed: 08/19/2008
Drilling Method and Diameter: **Direct Push – 2" Dia.**
Drilling Company: **Cascade Drilling**
Drilled By:
Logged By: **Steve Harquail**
Boring: **B-5**

Depth (feet)	Samples	Recovery (%)	PID (ppm)	LITHOLOGIC DESCRIPTION	USCS	Graphic Log	Depth (feet)
				No Recovery – Air Knifed to 5 feet below ground surface (bgs).			
2							2
4				5.00'			4
				Sandy Silt with Gravel: Brown.	ML		
6				*Sandy Silt: Greenish gray, firm, dry.*			6
8				9.00'			8
				Silty Sand: Tan/light tan, dry, hard.	SM		
10				10.00'			10
				Sandy Silt with Clay: Greenish tan.	ML		
12				*Similar to above, with occasional black and brown mottling.*			12
				14.00'			
14				*Clayey Silt: Greenish brown, trace sand.*	ML		14
16							16
18							18
				20.00'			
20				*Boring terminated at 20 feet bgs.*			20

▼ Water Level (Not Encountered)

CONTINUOUS CORE Sample Collected for Laboratory Analysis

DELTA	CASHL-BADW-A 09-25-2008 / 09-25-2008 CALIFORNIA / O.F. / J.E. SH5444-B5	SHELL FACILITY No. 135444 4530 Las Positas Rd. Livermore, California	Soil Boring Log B-5	FIGURE

Drilling Started: 08/19/2008
Drilling Completed: 08/19/2008
Drilling Method and Diameter: Direct Push - 2" Dia.
Drilling Company: Cascade Drilling
Drilled By:
Logged By: Steve Harquail
Boring: B-7

Depth (feet)	Samples	Recovery (%)	PID (ppm)	LITHOLOGIC DESCRIPTION	USCS	Graphic Log	Depth (feet)
				No Recovery - Air Knifed to 5 feet below ground surface (bgs).			
2							2
4				5.00'			4
				Gravelly Silt: Dark brown, hard, dry.	ML		
6				6.00'			6
				Sandy Silt: Greenish/light gray, hard, with occasional white marbling, dry.	ML		
8				*Similar to above, with brown/rust marbling, dry.* 9.00'			8
		100	0.0	*Sandy Silt with Gravel* 10.00'	ML		
10				*Silty Sand with Gravel.*	SM		10
12				13.00'			12
				Sand: Medium to coarse grained, wet. 14.00'	SP		
14				*Silty Sand with Gravel: Rust brown.* ▼ 15.00'	SM		14
15		80	0.0	*Boring terminated at 15 feet bgs.*			15

▼ Water Level (15.0')

CONTINUOUS CORE Sample Collected for Laboratory Analysis

DELTA	CASHL-BADW-A 09-25-2008 / 09-25-2008 CALIFORNIA / O.F. / J.R. SH5444-B7	SHELL FACILITY No. 135444 4530 Las Positas Rd. Livermore, California	Soil Boring Log B-7	FIGURE

APPENDIX C
LABORATORY REPORTS
AND CHAIN OF CUSTODY FORMS

Calscience
Environmental
Laboratories, Inc.

September 05, 2008

Kevin McCarthy
Delta Environmental Consultants
4640 SW Macadam Ave; Suite 110
Portland, OR 97239-4283

Subject: **Calscience Work Order No.:** **08-08-2004**
Client Reference: **4530 Las Positas Rd., CA**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 8/22/2008 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Jessie Kim
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Environmental Consultants	Date Received:	08/22/08
4640 SW Macadam Ave; Suite 110	Work Order No:	08-08-2004
Portland, OR 97239-4283	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: 4530 Las Positas Rd., CA		Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Trip Blank	**08-08-2004-12-A**	**08/19/08 00:00**	**Aqueous**	**GC/MS RR**	**08/28/08**	**08/28/08 18:20**	**080828L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		p/m-Xylene	ND	1.0	1	
Ethylbenzene	ND	1.0	1		o-Xylene	ND	1.0	1	
Toluene	ND	1.0	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	102	82-130			1,2-Dichloroethane-d4	111	75-141		
Toluene-d8	99	83-113			1,4-Bromofluorobenzene	94	70-118		

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-10-006-26,712**	**N/A**	**Aqueous**	**GC/MS RR**	**08/28/08**	**08/28/08 13:05**	**080828L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		p/m-Xylene	ND	1.0	1	
Ethylbenzene	ND	1.0	1		o-Xylene	ND	1.0	1	
Toluene	ND	1.0	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	100	82-130			1,2-Dichloroethane-d4	104	75-141		
Toluene-d8	99	83-113			1,4-Bromofluorobenzene	96	70-118		

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Environmental Consultants	Date Received:	08/22/08
4640 SW Macadam Ave; Suite 110	Work Order No:	08-08-2004
Portland, OR 97239-4283	Preparation:	EPA 5030B
	Method:	LUFT GC/MS / EPA 8260B
	Units:	ug/L

Project: 4530 Las Positas Rd., CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-3	**08-08-2004-2-A**	**08/19/08 08:20**	**Aqueous**	**GC/MS UU**	**08/29/08**	**08/30/08 03:36**	**080829L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	2.0	1	
Ethylbenzene	ND	1.0	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Toluene	ND	1.0	1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
p/m-Xylene	ND	1.0	1		Ethanol	ND	100	1	
o-Xylene	ND	1.0	1		TPPH	ND	50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	114	74-140			1,2-Dichloroethane-d4	113	74-146		
Toluene-d8	98	88-112			Toluene-d8-TPPH	101	88-112		
1,4-Bromofluorobenzene	85	74-110							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-2	**08-08-2004-4-A**	**08/19/08 10:00**	**Aqueous**	**GC/MS UU**	**08/29/08**	**08/30/08 04:01**	**080829L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	2.0	1	
Ethylbenzene	ND	1.0	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Toluene	ND	1.0	1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
p/m-Xylene	ND	1.0	1		Ethanol	ND	100	1	
o-Xylene	ND	1.0	1		TPPH	ND	50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	115	74-140			1,2-Dichloroethane-d4	112	74-146		
Toluene-d8	98	88-112			Toluene-d8-TPPH	102	88-112		
1,4-Bromofluorobenzene	83	74-110							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Environmental Consultants		Date Received:	08/22/08
4640 SW Macadam Ave; Suite 110		Work Order No:	08-08-2004
Portland, OR 97239-4283		Preparation:	EPA 5030B
		Method:	LUFT GC/MS / EPA 8260B
		Units:	ug/L
Project: 4530 Las Positas Rd., CA			Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-4	**08-08-2004-6-A**	**08/19/08 11:10**	**Aqueous**	**GC/MS UU**	**08/29/08**	**08/30/08 04:26**	**080829L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	2.0	1	
Ethylbenzene	ND	1.0	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Toluene	ND	1.0	1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
p/m-Xylene	ND	1.0	1		Ethanol	ND	100	1	
o-Xylene	ND	1.0	1		TPPH	ND	50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	117	74-140			1,2-Dichloroethane-d4	115	74-146		
Toluene-d8	99	88-112			Toluene-d8-TPPH	102	88-112		
1,4-Bromofluorobenzene	82	74-110							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-7	**08-08-2004-9-A**	**08/19/08 16:10**	**Aqueous**	**GC/MS UU**	**08/29/08**	**08/30/08 04:50**	**080829L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	2.0	1	
Ethylbenzene	ND	1.0	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Toluene	ND	1.0	1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
p/m-Xylene	ND	1.0	1		Ethanol	ND	100	1	
o-Xylene	ND	1.0	1		TPPH	ND	50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	116	74-140			1,2-Dichloroethane-d4	115	74-146		
Toluene-d8	99	88-112			Toluene-d8-TPPH	102	88-112		
1,4-Bromofluorobenzene	80	74-110							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Environmental Consultants		Date Received:	08/22/08
4640 SW Macadam Ave; Suite 110		Work Order No:	08-08-2004
Portland, OR 97239-4283		Preparation:	EPA 5030B
		Method:	LUFT GC/MS / EPA 8260B
		Units:	ug/L
Project: 4530 Las Positas Rd., CA			Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-1	**08-08-2004-10-A**	**08/19/08 17:15**	**Aqueous**	**GC/MS UU**	**08/29/08**	**08/30/08 05:15**	**080829L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	2.0	1	
Ethylbenzene	ND	1.0	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Toluene	ND	1.0	1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
p/m-Xylene	ND	1.0	1		Ethanol	ND	100	1	
o-Xylene	ND	1.0	1		TPPH	ND	50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	122	74-140			1,2-Dichloroethane-d4	120	74-146		
Toluene-d8	99	88-112			Toluene-d8-TPPH	103	88-112		
1,4-Bromofluorobenzene	81	74-110							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-767-157**	**N/A**	**Aqueous**	**GC/MS UU**	**08/29/08**	**08/30/08 01:34**	**080829L02**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.50	1		Methyl-t-Butyl Ether (MTBE)	ND	1.0	1	
1,2-Dibromoethane	ND	1.0	1		Tert-Butyl Alcohol (TBA)	ND	10	1	
1,2-Dichloroethane	ND	0.50	1		Diisopropyl Ether (DIPE)	ND	2.0	1	
Ethylbenzene	ND	1.0	1		Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1	
Toluene	ND	1.0	1		Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1	
p/m-Xylene	ND	1.0	1		Ethanol	ND	100	1	
o-Xylene	ND	1.0	1		TPPH	ND	50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	110	74-140			1,2-Dichloroethane-d4	109	74-146		
Toluene-d8	99	88-112			Toluene-d8-TPPH	103	88-112		
1,4-Bromofluorobenzene	84	74-110							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Environmental Consultants		Date Received:	08/22/08
4640 SW Macadam Ave; Suite 110		Work Order No:	08-08-2004
Portland, OR 97239-4283		Preparation:	EPA 5030B
		Method:	LUFT GC/MS / EPA 8260B
		Units:	mg/kg
Project: 4530 Las Positas Rd., CA			Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-3-14'	**08-08-2004-1-A**	**08/19/08 08:20**	**Solid**	**GC/MS PP**	**08/29/08**	**08/29/08 17:11**	**080829L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	
1,2-Dibromoethane	ND	0.0050	1		Tert-Butyl Alcohol (TBA)	ND	0.050	1	
1,2-Dichloroethane	ND	0.0050	1		Diisopropyl Ether (DIPE)	ND	0.010	1	
Ethylbenzene	ND	0.0050	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.010	1	
Toluene	ND	0.0050	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.010	1	
p/m-Xylene	ND	0.0050	1		Ethanol	ND	0.50	1	
o-Xylene	ND	0.0050	1		TPPH	ND	0.50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	102	73-139			1,2-Dichloroethane-d4	102	73-145		
Toluene-d8	101	90-108			1,4-Bromofluorobenzene	90	71-113		
Toluene-d8-TPPH	102	88-112							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-2-13'	**08-08-2004-3-A**	**08/19/08 10:00**	**Solid**	**GC/MS PP**	**08/29/08**	**08/29/08 17:37**	**080829L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	
1,2-Dibromoethane	ND	0.0050	1		Tert-Butyl Alcohol (TBA)	ND	0.050	1	
1,2-Dichloroethane	ND	0.0050	1		Diisopropyl Ether (DIPE)	ND	0.010	1	
Ethylbenzene	ND	0.0050	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.010	1	
Toluene	ND	0.0050	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.010	1	
p/m-Xylene	ND	0.0050	1		Ethanol	ND	0.50	1	
o-Xylene	ND	0.0050	1		TPPH	ND	0.50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	104	73-139			1,2-Dichloroethane-d4	104	73-145		
Toluene-d8	101	90-108			1,4-Bromofluorobenzene	91	71-113		
Toluene-d8-TPPH	102	88-112							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Environmental Consultants	Date Received:	08/22/08
4640 SW Macadam Ave; Suite 110	Work Order No:	08-08-2004
Portland, OR 97239-4283	Preparation:	EPA 5030B
	Method:	LUFT GC/MS / EPA 8260B
	Units:	mg/kg
Project: 4530 Las Positas Rd., CA		Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-4-14'-15'	**08-08-2004-5-A**	**08/19/08 11:10**	**Solid**	**GC/MS PP**	**08/29/08**	**08/29/08 18:02**	**080829L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	
1,2-Dibromoethane	ND	0.0050	1		Tert-Butyl Alcohol (TBA)	ND	0.050	1	
1,2-Dichloroethane	ND	0.0050	1		Diisopropyl Ether (DIPE)	ND	0.010	1	
Ethylbenzene	ND	0.0050	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.010	1	
Toluene	ND	0.0050	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.010	1	
p/m-Xylene	ND	0.0050	1		Ethanol	ND	0.50	1	
o-Xylene	ND	0.0050	1		TPPH	ND	0.50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	104	73-139			1,2-Dichloroethane-d4	102	73-145		
Toluene-d8	100	90-108			1,4-Bromofluorobenzene	89	71-113		
Toluene-d8-TPPH	101	88-112							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-5	**08-08-2004-7-A**	**08/19/08 13:45**	**Solid**	**GC/MS PP**	**08/29/08**	**08/29/08 18:28**	**080829L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	
1,2-Dibromoethane	ND	0.0050	1		Tert-Butyl Alcohol (TBA)	ND	0.050	1	
1,2-Dichloroethane	ND	0.0050	1		Diisopropyl Ether (DIPE)	ND	0.010	1	
Ethylbenzene	ND	0.0050	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.010	1	
Toluene	ND	0.0050	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.010	1	
p/m-Xylene	ND	0.0050	1		Ethanol	ND	0.50	1	
o-Xylene	ND	0.0050	1		TPPH	ND	0.50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	108	73-139			1,2-Dichloroethane-d4	109	73-145		
Toluene-d8	99	90-108			1,4-Bromofluorobenzene	91	71-113		
Toluene-d8-TPPH	101	88-112							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Environmental Consultants	Date Received:	08/22/08
4640 SW Macadam Ave; Suite 110	Work Order No:	08-08-2004
Portland, OR 97239-4283	Preparation:	EPA 5030B
	Method:	LUFT GC/MS / EPA 8260B
	Units:	mg/kg

Project: 4530 Las Positas Rd., CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-7-14'	**08-08-2004-8-A**	**08/19/08 15:10**	**Solid**	**GC/MS PP**	**08/29/08**	**08/29/08 18:53**	**080829L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	
1,2-Dibromoethane	ND	0.0050	1		Tert-Butyl Alcohol (TBA)	ND	0.050	1	
1,2-Dichloroethane	ND	0.0050	1		Diisopropyl Ether (DIPE)	ND	0.010	1	
Ethylbenzene	ND	0.0050	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.010	1	
Toluene	ND	0.0050	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.010	1	
p/m-Xylene	ND	0.0050	1		Ethanol	ND	0.50	1	
o-Xylene	ND	0.0050	1		TPPH	ND	0.50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	104	73-139			1,2-Dichloroethane-d4	102	73-145		
Toluene-d8	100	90-108			1,4-Bromofluorobenzene	91	71-113		
Toluene-d8-TPPH	101	88-112							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
B-1-14'-15'	**08-08-2004-11-A**	**08/20/08 17:15**	**Solid**	**GC/MS PP**	**08/29/08**	**08/29/08 19:19**	**080829L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	
1,2-Dibromoethane	ND	0.0050	1		Tert-Butyl Alcohol (TBA)	ND	0.050	1	
1,2-Dichloroethane	ND	0.0050	1		Diisopropyl Ether (DIPE)	ND	0.010	1	
Ethylbenzene	ND	0.0050	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.010	1	
Toluene	ND	0.0050	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.010	1	
p/m-Xylene	ND	0.0050	1		Ethanol	ND	0.50	1	
o-Xylene	ND	0.0050	1		TPPH	ND	0.50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	105	73-139			1,2-Dichloroethane-d4	105	73-145		
Toluene-d8	101	90-108			1,4-Bromofluorobenzene	90	71-113		
Toluene-d8-TPPH	102	88-112							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Environmental Consultants	Date Received:	08/22/08
4640 SW Macadam Ave; Suite 110	Work Order No:	08-08-2004
Portland, OR 97239-4283	Preparation:	EPA 5030B
	Method:	LUFT GC/MS / EPA 8260B
	Units:	mg/kg

Project: 4530 Las Positas Rd., CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-769-60**	**N/A**	**Solid**	**GC/MS PP**	**08/29/08**	**08/29/08 13:21**	**080829L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	0.0050	1		Methyl-t-Butyl Ether (MTBE)	ND	0.0050	1	
1,2-Dibromoethane	ND	0.0050	1		Tert-Butyl Alcohol (TBA)	ND	0.050	1	
1,2-Dichloroethane	ND	0.0050	1		Diisopropyl Ether (DIPE)	ND	0.010	1	
Ethylbenzene	ND	0.0050	1		Ethyl-t-Butyl Ether (ETBE)	ND	0.010	1	
Toluene	ND	0.0050	1		Tert-Amyl-Methyl Ether (TAME)	ND	0.010	1	
p/m-Xylene	ND	0.0050	1		Ethanol	ND	0.50	1	
o-Xylene	ND	0.0050	1		TPPH	ND	0.50	1	
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
Dibromofluoromethane	101	73-139			1,2-Dichloroethane-d4	98	73-145		
Toluene-d8	98	90-108			1,4-Bromofluorobenzene	90	71-113		
Toluene-d8-TPPH	100	88-112							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Delta Environmental Consultants	Date Received:	08/22/08
4640 SW Macadam Ave; Suite 110	Work Order No:	08-08-2004
Portland, OR 97239-4283	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project 4530 Las Positas Rd., CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-08-1926-7	**Aqueous**	**GC/MS RR**	**08/28/08**	**08/28/08**	**080828S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	104	103	88-118	2	0-7	
Carbon Tetrachloride	115	111	67-145	3	0-11	
Chlorobenzene	100	99	88-118	1	0-7	
1,2-Dibromoethane	104	101	70-130	3	0-30	
1,2-Dichlorobenzene	94	91	86-116	3	0-8	
1,1-Dichloroethene	108	107	70-130	1	0-25	
Ethylbenzene	99	97	70-130	2	0-30	
Toluene	101	99	87-123	3	0-8	
Trichloroethene	101	100	79-127	0	0-10	
Vinyl Chloride	98	104	69-129	6	0-13	
Methyl-t-Butyl Ether (MTBE)	111	109	71-131	1	0-13	
Tert-Butyl Alcohol (TBA)	107	101	36-168	6	0-45	
Diisopropyl Ether (DIPE)	106	101	81-123	5	0-9	
Ethyl-t-Butyl Ether (ETBE)	109	106	72-126	3	0-12	
Tert-Amyl-Methyl Ether (TAME)	107	104	72-126	4	0-12	
Ethanol	100	88	53-149	13	0-31	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Delta Environmental Consultants	Date Received: 08/22/08
4640 SW Macadam Ave; Suite 110	Work Order No: 08-08-2004
Portland, OR 97239-4283	Preparation: EPA 5030B
	Method: LUFT GC/MS / EPA 8260B

Project 4530 Las Positas Rd., CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
B-3	**Aqueous**	**GC/MS UU**	**08/29/08**	**08/30/08**	**080829S02**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	100	100	88-118	1	0-7	
Carbon Tetrachloride	97	98	67-145	1	0-11	
Chlorobenzene	99	102	88-118	3	0-7	
1,2-Dibromoethane	99	102	70-130	3	0-30	
1,2-Dichlorobenzene	96	97	86-116	1	0-8	
1,1-Dichloroethene	103	100	70-130	3	0-25	
Ethylbenzene	100	100	70-130	0	0-30	
Toluene	103	102	87-123	1	0-8	
Trichloroethene	98	97	79-127	1	0-10	
Vinyl Chloride	115	116	69-129	0	0-13	
Methyl-t-Butyl Ether (MTBE)	101	104	71-131	3	0-13	
Tert-Butyl Alcohol (TBA)	86	94	36-168	10	0-45	
Diisopropyl Ether (DIPE)	106	106	81-123	1	0-9	
Ethyl-t-Butyl Ether (ETBE)	99	100	72-126	0	0-12	
Tert-Amyl-Methyl Ether (TAME)	101	101	72-126	0	0-12	
Ethanol	100	103	53-149	4	0-31	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Delta Environmental Consultants		Date Received:	08/22/08
4640 SW Macadam Ave; Suite 110		Work Order No:	08-08-2004
Portland, OR 97239-4283		Preparation:	EPA 5030B
		Method:	LUFT GC/MS / EPA 8260B

Project 4530 Las Positas Rd., CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-08-1858-1	**Solid**	**GC/MS PP**	**08/29/08**	**08/29/08**	**080829S01**

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	95	95	79-115	0	0-13	
Carbon Tetrachloride	85	88	55-139	3	0-15	
Chlorobenzene	95	95	79-115	1	0-17	
1,2-Dibromoethane	96	96	70-130	0	0-30	
1,2-Dichlorobenzene	91	93	63-123	2	0-23	
1,1-Dichloroethene	94	93	69-123	1	0-16	
Ethylbenzene	95	94	70-130	1	0-30	
Toluene	94	94	79-115	0	0-15	
Trichloroethene	89	89	66-144	0	0-14	
Vinyl Chloride	107	113	60-126	6	0-14	
Methyl-t-Butyl Ether (MTBE)	95	97	68-128	2	0-14	
Tert-Butyl Alcohol (TBA)	86	84	44-134	2	0-37	
Diisopropyl Ether (DIPE)	96	97	75-123	1	0-12	
Ethyl-t-Butyl Ether (ETBE)	95	97	75-117	3	0-12	
Tert-Amyl-Methyl Ether (TAME)	99	100	79-115	2	0-12	
Ethanol	95	91	42-138	5	0-28	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Delta Environmental Consultants	Date Received:	N/A
4640 SW Macadam Ave; Suite 110	Work Order No:	08-08-2004
Portland, OR 97239-4283	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project: 4530 Las Positas Rd., CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-006-26,712	**Aqueous**	**GC/MS RR**	**08/28/08**	**08/28/08**	**080828L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	106	103	84-120	78-126	3	0-8	
Carbon Tetrachloride	120	116	63-147	49-161	3	0-10	
Chlorobenzene	101	101	89-119	84-124	0	0-7	
1,2-Dibromoethane	101	100	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	97	97	89-119	84-124	0	0-9	
1,1-Dichloroethene	112	111	77-125	69-133	1	0-16	
Ethylbenzene	101	100	80-120	73-127	1	0-20	
Toluene	105	102	83-125	76-132	3	0-9	
Trichloroethene	104	101	89-119	84-124	3	0-8	
Vinyl Chloride	101	115	63-135	51-147	12	0-13	
Methyl-t-Butyl Ether (MTBE)	107	113	82-118	76-124	5	0-13	
Tert-Butyl Alcohol (TBA)	94	99	46-154	28-172	5	0-32	
Diisopropyl Ether (DIPE)	104	103	81-123	74-130	1	0-11	
Ethyl-t-Butyl Ether (ETBE)	105	108	74-122	66-130	2	0-12	
Tert-Amyl-Methyl Ether (TAME)	104	103	76-124	68-132	2	0-10	
Ethanol	95	97	60-138	47-151	2	0-32	

Total number of LCS compounds : 16
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Delta Environmental Consultants	Date Received:	N/A
4640 SW Macadam Ave; Suite 110	Work Order No:	08-08-2004
Portland, OR 97239-4283	Preparation:	EPA 5030B
	Method:	LUFT GC/MS / EPA 8260B

Project: 4530 Las Positas Rd., CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-767-157	Aqueous	GC/MS UU	08/29/08	08/29/08	080829L02

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	100	97	84-120	78-126	3	0-8	
Carbon Tetrachloride	98	96	63-147	49-161	2	0-10	
Chlorobenzene	99	98	89-119	84-124	1	0-7	
1,2-Dibromoethane	102	101	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	95	98	89-119	84-124	3	0-9	
1,1-Dichloroethene	104	101	77-125	69-133	4	0-16	
Ethylbenzene	101	100	80-120	73-127	1	0-20	
Toluene	101	100	83-125	76-132	1	0-9	
Trichloroethene	100	98	89-119	84-124	2	0-8	
Vinyl Chloride	119	117	63-135	51-147	2	0-13	
Methyl-t-Butyl Ether (MTBE)	100	103	82-118	76-124	3	0-13	
Tert-Butyl Alcohol (TBA)	89	88	46-154	28-172	1	0-32	
Diisopropyl Ether (DIPE)	104	107	81-123	74-130	3	0-11	
Ethyl-t-Butyl Ether (ETBE)	98	101	74-122	66-130	3	0-12	
Tert-Amyl-Methyl Ether (TAME)	99	100	76-124	68-132	1	0-10	
Ethanol	105	94	60-138	47-151	11	0-32	
TPPH	87	83	65-135	53-147	5	0-30	

Total number of LCS compounds : 17
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Delta Environmental Consultants	Date Received:	N/A
4640 SW Macadam Ave; Suite 110	Work Order No:	08-08-2004
Portland, OR 97239-4283	Preparation:	EPA 5030B
	Method:	LUFT GC/MS / EPA 8260B

Project: 4530 Las Positas Rd., CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-769-60	Solid	GC/MS PP	08/29/08	08/29/08	080829L01

Parameter	LCS %REC	LCSD %REC	%REC CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	98	98	84-114	79-119	0	0-7	
Carbon Tetrachloride	91	91	66-132	55-143	0	0-12	
Chlorobenzene	99	98	87-111	83-115	1	0-7	
1,2-Dibromoethane	102	102	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	98	97	79-115	73-121	0	0-8	
1,1-Dichloroethene	98	96	73-121	65-129	2	0-12	
Ethylbenzene	101	100	80-120	73-127	1	0-20	
Toluene	99	97	78-114	72-120	2	0-7	
Trichloroethene	95	96	84-114	79-119	0	0-8	
Vinyl Chloride	114	116	63-129	52-140	2	0-15	
Methyl-t-Butyl Ether (MTBE)	100	99	77-125	69-133	1	0-11	
Tert-Butyl Alcohol (TBA)	88	85	47-137	32-152	3	0-27	
Diisopropyl Ether (DIPE)	102	100	76-130	67-139	1	0-8	
Ethyl-t-Butyl Ether (ETBE)	99	99	76-124	68-132	1	0-12	
Tert-Amyl-Methyl Ether (TAME)	101	100	82-118	76-124	1	0-11	
Ethanol	92	91	59-131	47-143	1	0-21	
TPPH	96	92	65-135	53-147	4	0-30	

Total number of LCS compounds : 17
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 08-08-2004

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Jessie Kim

From: Kevin McCarthy [KMcCarthy@deltaenv.com]
Sent: Monday, August 25, 2008 9:01 AM
To: Jessie Kim; Jeff Schatz
Subject: RE: 08-08-2004, -2132, -2133

Hi Jessie - The diesel and metals analyses were incorrectly marked on the COC, please don't run. The B-3 sample is the B-3-19' sample, the field geo did not at the 19 to the sample label. Please run the TBs.

Kevin McCarthy
Project Manager
DELTA Consultants
4640 SW Macadam Avenue; Suite 110
Portland, OR 97239
Direct: 503.863.2102
Cell: 360.556.9742
Toll Free: 800.477.7411
Fax: 503.639.7619
kmccarthy@deltaenv.com

-----Original Message-----
From: Jessie Kim [mailto:JKim@calscience.com]
Sent: Monday, August 25, 2008 8:57 AM
To: Kevin McCarthy; Jeff Schatz
Subject: 08-08-2004, -2132, -2133

Hi All,

1. We did not receive metal bottles for sample # 2, 4, 6, 9, & 10 for work order 08-08-2004.
2. We did not receive diesel and metal bottle for sample # 5 for work order 08-08-2133. Also, sample IDs on labels are not consistent with one on COC.
   For example, it says B-3 on label and B-3-19' on COC.
3. We received two trip blanks not listed on COC for work order 08-08-2132. Do you want me to add those TBs to this work order?

Could you please tell your field people to mark the right analysis on COC? They marked 6 vials only for container but they marked all analyses including diesel and metals.

Thanks!

<<08-08-2004.PDF>> <<08-08-2132.PDF>> <<08-08-2133.PDF>>

Best Regards,
Jessie Kim
Project Manager
Calscience Environmental
Laboratories, Inc.
7440 Lincoln Way

Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ CALSCIENCE ( )
- ☐ SPL ( )
- ☐ XENCO ( )
- ☐ TEST AMERICA ( )
- ☐ OTHER ( )

Please Check Appropriate Box:
☐ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SD&CM ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Charlie O'Neil
INCIDENT # (ENV SERVICES): ☐ CHECK IF NO INCIDENT # APPLIES
DATE: 8/19/08
PAGE: 1 of 2
PO #: 9767783
SAP #: 135444

CONSULTANT COMPANY: Delta Consultants
ADDRESS: 4640 SW Macadam Avenue; Suite 110
CITY: Portland, OR 97239
TELEPHONE: 1-800-477-7411 FAX: 503.639.7619 E-MAIL: kmccarthy@deltaenv.com
SITE ADDRESS: Street and City: State: CA GLOBAL ID NO:
EDF DELIVERABLE TO (Name, Company, Office Location): Angela Pico PHONE NO.: 408-826-1862 E-MAIL: apico@deltaenv.com CONSULTANT PROJECT NO.:
SAMPLER NAME(S) (Print): Stephen Hargrail
LAB USE ONLY: 08-2004

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND
☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

SPECIAL INSTRUCTIONS OR NOTES: Do not Run* Amber Soil samples
Please also email results to: droulette@deltaenv.com jeckart@deltaenv.com
☐ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☐ RECEIPT VERIFICATION REQUESTED

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	TPH - Gas, Purgeable (8260B)	TPH - Diesel Range Only (8015M)	BTEX (8260B)	5 Oxygenates (8260B) (MTBE, TBA, DIPE, TAME, ETBE)	MTBE (8260B)	TBA (8260B)	DIPE (8260B)	TAME (8260B)	ETBE (8260B)	1,2 DCA (8260B)	EDB (8260B)	Ethanol (8260B)	Methanol (8015M)	TPH-motor oil (8015M)	TDS (160.1)	Total Iron (6010B)	Total Lead (6010B) (If >50ppm run STLC)	CAM 17	Total Oil and Grease (1664A)	TEMPERATURE ON RECEIPT C° / Container PID Readings or Laboratory Notes
1	B-3-14'	8/19/08	820	Soil				X		1	X	X	X	X						X	X	X								
2	B-3	"	820	water	X			X		8	X	X	X	X						X	X	X						X		
3	B-2-13'		1000	Soil				X		1	X	X	X	X						X	X	X								
4	B-2		1000	water	X			X		8	X	X	X	X						X	X	X						X		
5	B-4-14-15'	*	1110	Soil				X		1	X	X	X	X						X	X	X								
6	B-4	8/19/08	1110	water	X			X		8	X	X	X	X						X	X	X						X		
7	B-5	8/19	1345	Soil				X		1	X	X	X	X						X	X	X								
8	B-7-14'	8/19	1510	Soil				X		1	X	X	X	X						X	X	X								
9	B-7	8/19	1610	water	X					6	X	X	X	X						X	X	X						X		

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
GSO 105866843		8/22/08	1000

06/2/06 Revision

Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ CALSCIENCE (_____)
- ☐ SPL (_____)
- ☐ XENCO (_____)
- ☐ TEST AMERICA (_____)
- ☐ OTHER (_____)

Please Check Appropriate Box:
☐ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SD&CM ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER _____

Print Bill To Contact Name: Charlie O'Neil
INCIDENT # (ENV SERVICES): ☐ CHECK IF NO INCIDENT # APPLIES
DATE: 8/19/08
PAGE: 2 of 2
PO #: 9776778 3
SAP #: 135444

CONSULTANT COMPANY: Delta Consultants
ADDRESS: 4640 SW Macadam Avenue; Suite 110
CITY: Portland, OR 97239
TELEPHONE: 1-800-477-7411 FAX: 503.639.7619 E-MAIL: kmccarthy@deltaenv.com
SITE ADDRESS: Street and City: _____ State: CA GLOBAL ID NO.: _____
EDF DELIVERABLE TO (Name, Company, Office Location): Angela Pico PHONE NO.: 408-826-1862 E-MAIL: apico@deltaenv.com CONSULTANT PROJECT NO.: _____
SAMPLER NAME(S) (Print): Stephen Hargrave
LAB USE ONLY: 08-2004

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND
☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

SPECIAL INSTRUCTIONS OR NOTES :
Please also email results to:
droulette@deltaenv.com jeckert@deltaenv.com

☐ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☐ RECEIPT VERIFICATION REQUESTED

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	TPH - Gas, Purgeable (8260B)	TPH - Diesel Range Only (8015M)	BTEX (8260B)	5 Oxygenates (8260B) (MTBE, TBA, DIPE, TAME, ETBE)	MTBE (8260B)	TBA (8260B)	DIPE (8260B)	TAME (8260B)	ETBE (8260B)	1,2 DCA (8260B)	EDB (8260B)	Ethanol (8260B)	Methanol (8015M)	TPH-motor oil (8015M)	TDS (160.1)	Total Iron (6010B)	Total Lead (6010B) (if >50ppm, run STLC)	CAM 17	Total Oil and Grease (1664A)		TEMPERATURE ON RECEIPT C° / Container PID Readings or Laboratory Notes
10	B-1	8/19/08	1715	water	X					6	X	X	X	X						X	X	X									
11	B-1-14'-15'	8/19	1715	Soil						1	X	X	X	X						X	X	X									
12	Trip Blank									2			X																		

Relinquished by: (Signature) _____ Received by: (Signature) _____ Date: _____ Time: _____
Relinquished by: (Signature) _____ Received by: (Signature) _____ Date: _____ Time: _____
Relinquished by: (Signature) GSO IDS866843 Received by: (Signature) _____ Date: 8/22/08 Time: 1000

05/2/06 Revision

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 08 - 2004

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: Delta DATE: 8/22/08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:	LABORATORY (Other than Calscience Courier):
_____ Chilled, cooler with temperature blank provided.	3.3 °C Temperature blank.
_____ Chilled, cooler without temperature blank.	___.__ °C IR Thermometer.
_____ Chilled and placed in cooler with wet ice.	_____ Ambient temperature (For Air & Filter Only).
_____ Ambient and placed in cooler with wet ice.	
_____ Ambient temperature (For Air & Filter Only).	
___.__ °C Temperature blank.	Initial:

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: _____ No (Not Intact) : _____ Not Present: ✓

Initial:

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC	✓		
Sample container label(s) consistent with custody papers	W P.S.	✓	
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.	✓		
Tedlar bag(s) free of condensation			✓

Initial:

COMMENTS:

(-2)+(-4)+(-6) RECEIVED 6 VIALS W/ HCL AND 2 x 500 ML AMBER UNPRESERVED ONLY NO METAL BOTTLE SAMPLE.

(-9)+(-10) RECEIVED 6 VIALS ONLY, DID NOT RECEIVE METAL BOTTLE.

08-22-08 PS.

APPENDIX D

COPIES of WASTE DISPOSAL MANIFESTS

(as applicable and available)

THIS ATTACHMENT HAS BEEN LEFT BLANK INTENTIALLY. THE DOCUMENTS ASSOCIATED WITH THE DISPOSAL OF SOIL FOR THIS PHASE II ESA WERE NOT AVAILABLE AT THE TIME THE REPORT WAS WRITTEN.