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By lopprojectop at 12:29 pm, Feb 07, 2006

February 3, 2006

Re: Former Shell-branded Service Station

318 S. Livermore Avenue Livermore, California

Dear Mr. Jerry Wickham:

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

Sincerely, Shell Oil Products US

Denis L. Brown Project Manager





By lopprojectop at 12:29 pm, Feb 07, 2006

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February 2, 2006 Project No. SJ31-8LI-P

Mr. Jerry Wickham
Environmental Health Services – Environmental Protection
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Additional Over-Excavation Report Former Shell Service Station 318 South Livermore Ave.

Livermore, California

Dear Mr. Wickham,

Delta Environmental Consultants, Inc. (Delta), on behalf of Shell Oil Products US (Shell), has prepared this report documenting the results of the recent additional soil over-excavation activities at the above-referenced site. Additional over-excavation activities were performed to remove previously identified lead impacted soil in order to meet Alameda County Health Care Services Agency (ACHCSA) approved cleanup goals. Investigative excavations were also performed to further asses the lateral extent of impacted soils.

BACKGROUND

The following sections present a brief description of the former service station and a brief summary of previous site soil and groundwater investigations.

SITE DESCRIPTION

The site is located on the eastern corner of South Livermore Avenue and Third Street in Livermore, California (Figure 1). The site was formerly the location of a Shell-branded service station. The former service station consisted of a building containing vehicle service bays and a small convenience store, five fuel dispensers, three 12,000-gallon fuel underground storage tanks (USTs), and one 550-gallon waste oil UST. The former station plan is presented on Figure 2.



PREVIOUS INVESTIGATIONS

Monitoring Wells MW-1 through MW-4 Installation

In March 1989, a sample of backfill material was collected from around the fill pipe of the regular leaded UST formerly located near the southern corner of the site (Figure 2). The sample was found to contain total petroleum hydrocarbons as gasoline (TPH-G) at 37,000 parts per million (ppm). Subsequently, the ACHCSA required that groundwater at the site be assessed. In May 1990, following UST replacement activities, four groundwater monitoring wells (MW-1 through MW-4) were installed adjacent to former site USTs (Figure 2). TPH-G was not detected in any of the soil samples collected from the borings for the monitoring wells. TPH-G and benzene, toluene, ethylbenzene, and total xylenes (BTEX compounds) were detected in groundwater samples collected from Wells MW-3 and MW-4. The highest concentration of TPH-G detected was 90 micrograms per liter (ug/l). The wells were monitored through 1995 when case closure was granted by the ACHCSA and the wells destroyed.

Monitoring Wells MW-5 through MW-8 Installation

In September 2001, IT Corporation installed four site groundwater monitoring wells (MW-5 through MW-8) as part of Shell's voluntary Groundwater Assessment Program (GRASP). Only one soil sample was collected from the borings for site wells. Sample MW-7 at 35 feet below grade (bg) was analyzed for TPH-G, BTEX compounds, and fuel oxygenates. All analytes tested were below the laboratory method detection limit. Fourteen groundwater sampling events have now been performed to date.

Fuel System Removal

In December 2003 and January 2004, site USTs, fuel dispensers and associated product piping, and the oil/water separator were removed. Delta collected soil samples during removal activities. Soil analytical results were presented to Mr. Paul M. Smith, Hazardous Materials Inspector for the Livermore – Pleasanton Fire Department in a report titled, *Underground Storage Tank, Product Piping, and Dispenser Removals Report*, dated January 16, 2004.

Analytical data indicated minimal petroleum hydrocarbon impact to soil beneath the site. TPH-G was detected in only one soil sample (4.9 milligrams per kilogram (mg/kg)). Benzene and methyl tertiary butyl ether (MTBE) were not detected in any soil sample. Tert-butanol (TBA) was detected in one soil sample at 0.016 mg/kg. Total lead, exceeding the California Department of Toxic Substances Preliminary Remediation Goal of 150 mg/kg, was detected in only one soil sample. Total lead was detected at 380 mg/kg in the soil sample collected at a depth of 2.5 feet beneath the eastern-most fuel dispenser island.

Lead Impacted Soil Excavation and Investigation

On May 4, 2005, Delta directed the excavation of soil in the area beneath the former eastern fuel dispenser (P1) island (Figure 2). Approximately 100 cubic yards of soil was removed during initial excavation activities. Two of the confirmation soil samples collected during the initial over-excavation activities resulted in total lead detections that were above the ACHCSA approved cleanup goal of 150 mg/kg.

On May 18, 2005, Delta directed the excavation of an additional 75 cubic yards of lead impacted soil (Figure 2). Three of the confirmation soil samples collected during the additional over-excavation activities contained lead above the ACHCSA approved cleanup goal. Lead impacts appeared to be limited to depths between 2 and 4 feet bg within a dark brown soil unit. The presence of concrete debris below grade

indicated that this portion of the site was underlain by fill materials to a depth of approximately 5 feet bg. Shell concluded that the lead impacts appeared to be associated with the fill material.

On June 7, 2005, Delta directed the excavation of six (PH-1 through PH-6) investigative excavations ("potholes") in order to laterally define the extent of lead impacted soils and fill materials (Figure 2). Concrete debris was observed in two potholes, and one sample (PH-4) resulted in a total lead detection that was above the ACHCSA approved cleanup goal. Shell recommended over-excavation of approximately an additional 250 cubic yards at the site in order to address the lead impacted soils observed at PH-4 (Figure 2). Excavation activities were proposed in Delta's *Soil and Groundwater Investigation and Over-Excavation Report* dated July 11, 2005.

Soil and Groundwater Investigation

On June 2 and 3, 2005, Delta directed the advancement of three soil borings, B-1 through B-3 (Figure 2). Borings B-1 and B-3 were located southwest of the former fuel dispenser islands, adjacent to South Livermore Avenue. Boring B-2 was located in the footprint of the pre-1989 UST complex, in the approximate area of the former leaded gasoline UST.

Lead was detected in all retained soil samples at concentrations ranging from 3.8 to 17 mg/kg, well below the cleanup goal of 150 mg/kg. No other analytes were detected in soil samples. A summary of soil boring analytical results is included in Table 1.

One groundwater sample was collected from Boring B-2 at a depth of approximately 25 feet bg. Two depth discrete groundwater samples were collected from each Boring B-1 and B-3 within coarse-grained sand and gravel materials (approximately 30 feet bg) and within the depth interval (36 to 55 feet bg) that is screened by existing site wells. Depth discrete groundwater samples collected from Borings B-1 and B-3 contained concentrations of TPH-G, BTEX compounds, MTBE, 1,2-DCA and total lead (maximum concentration = TPH-G at 240 ug/l). The grab groundwater sample from Boring B-2 only contained total lead (0.56 ug/l). Groundwater analytical results and sample depth intervals are summarized on Table 2.

Monitoring Well MW-9 Installation

In September 2005, Delta installed one site well (MW-9) in order to monitor groundwater encountered within the coarse-grained unit encountered between 28 to 32 feet bg. The location of Well MW-9 is shown on Figure 2. Seven soil samples were retained for lab analysis. All soil samples were analyzed for TPH-G, BTEX compounds, MTBE, TBA, 1,2-DCA, and EDB by EPA Method 8260B, and for total lead by EPA Method 6010B. Lead was detected in all seven soil samples at concentrations ranging from 5 mg/kg to 12 mg/kg. All other analytes tested were below the laboratory method detection limit. One quarterly groundwater sampling event (October 7, 2005) has been performed since installation of Well MW-9.

Groundwater Monitoring and Sampling

Fifteen groundwater sampling events have now been performed to date. The ACHCSA recently approved a reduction in sampling frequency from quarterly to semi-annually for Wells MW-5 through MW-8. Well MW-9 will be sampled quarterly for one year beginning with the fourth quarter 2005 event. A summary of historic groundwater monitoring data is provided as Attachment A. Groundwater beneath the site typically fluctuates by about 8 to 10 feet annually, and the predominant groundwater gradient is towards the west at approximately 0.02 feet/feet.

Low-level concentrations of TPH-G, BTEX compounds, and MTBE have been detected primarily in downgradient Wells MW-7, MW-8, and MW-9. Low-level (≤ 260 ug/l) concentrations of TPH-G and BTEX compounds were detected once in groundwater samples collected from all site wells on November 13, 2003.

MTBE, diisopropyl ether (DIPE), and TBA are the fuel oxygenates that have been detected in groundwater. The maximum concentration of MTBE detected in groundwater over the last four sampling events is 12 ug/l (Well MW-9, September 23, 2005). DIPE has only been detected once, in the October 25, 2002 sample from Well MW-8 at 3.3 ug/l. TBA was detected for the first time in the September 23, 2005 sample from Well MW-9 at a concentration of 14 ug/l. Groundwater samples from Wells MW-5 through MW-8 have been analyzed for lead scavengers, 1,2-Dichloroethane (1,2-DCA) and 1,2-Dibromoethane (EDB) three times (during fourth quarter 2004, second and fourth quarter 2005). EDB has not been detected in any groundwater sample. 1,2-DCA was detected once in Well MW-8 at 3.2 ug/l (November 11, 2004), three times in Well MW-7 at a maximum concentration of 2.3 ug/l (November 11, 2004), and twice in Well MW-9 at a maximum concentration of 1.3 ug/l.

ADDITIONAL LEAD IMPACTED SOIL EXCAVATION AND INVESTIGATION

The following sections summarize additional lead impacted soil excavation and investigation activities conducted at the site and approved by the ACHCSA. The ACHCSA, in their letter to Shell dated July 18, 2005, approved the additional over-excavation activities.

INVESTIGATIVE EXCAVATIONS (PH-7 THROUGH PH-14)

Previous site excavation activities indicated that at least portions of the site were underlain by fill materials to a depth of approximately 5 feet bg, and that lead impacts appeared to be limited to depths between approximately 2 and 4 feet bg within a dark brown soil unit. The lateral extent of lead impacted soil was not fully defined.

On August 8, 2005, Delta directed the excavation of an additional eight investigative "potholes" (PH-7 through PH-14), primarily to confirm the lateral extent of lead impacted soils in the southwest portion of the site. Each pothole was approximately 5 feet long by 5 feet wide and 5 feet deep. Concrete debris was observed by Delta in Potholes PH-9 and PH-11. Pothole locations are shown on Figure 2.

Delta collected eleven soil samples (PH-7@3.0' through PH-14B@2.5') from the pothole sidewalls at depths ranging from 2.5 to 7 feet bg. Sidewall samples were collected within a dark brown, undulating soil layer encountered approximately 2 and 3 feet bg. Soil samples, with the exception of PH-7@7.0', were collected by pushing a brass tube into sidewall soils. Soil sample PH-7@7.0' was collected by pushing a brass tube into soil that was brought to the surface within the excavator bucket. The brass tube was then removed, sealed with Teflon sheeting and tight fitting plastic end caps, and clearly labeled. Samples were placed on ice for transportation to a certified testing laboratory for analysis. Soil samples were analyzed at Kiff Analytical LLC in Davis, California for total lead by EPA Method 6010B.

Lead was detected in all eleven soil samples. Concentrations were well below the ACHCSA approved cleanup goal for lead. Soil analytical results are summarized in Table 1 and are shown on Figure 2. Chain of custody documentation and certified laboratory analytical reports are included as Attachment B.

LEAD IMPACTED SOIL EXCAVATION (AUGUST 9, 2005)

Soil confirmation samples from the northeast and northwest walls of the May 18, 2005 excavation did not meet the ACHCSA approved cleanup goal for lead. Additionally, the June 7, 2005 investigative Pothole PH-4 contained an elevated lead level (1,040 mg/kg). In order to remediate impacted soils, Delta directed excavation of soil northeast and northwest of the May 18, 2005 excavation, extending past Pothole PH-4. Excavation activities were conducted on August 9, 2005, and excavation limits are shown on Figure 3.

Over-excavation soil confirmation sampling was observed by Mr. Jerry Wickham of the ACHCSA on August 9, 2005. Delta collected eleven soil samples (SS-1@2.5' through SS-11@6') from the bottom and sidewalls of the excavation at depths ranging from 2.5 to 6 feet bg. Sample locations are shown on Figure 3. Approximately 275 cubic yards of soil was over-excavated. Sidewall samples were collected within a dark brown, undulating soil layer between approximately 2 and 3 feet bg. Soil samples SS-8@6' and SS-11@6' were collected by pushing a brass tube into soil that was brought to the surface from the base of the excavation within the excavator bucket. All other soil samples were collected by pushing a brass tube into sidewall soils. The brass tubes were sealed with Teflon sheeting and a tight fitting plastic end caps, and clearly labeled. Samples were placed on ice for transportation to a certified testing laboratory for analysis. Soil samples were analyzed at Severn Trent Laboratories, Inc. (STL) in Pleasanton, California for total lead by EPA Method 6010B.

Lead was detected in all eleven soil samples. Only two samples (SS-3@2.5' and SS-4@2.5') resulted in a total lead detection that was above the ACHCSA approved cleanup goal. The total lead concentrations in Sample SS-3@2.5' and SS-4@2.5' were 480 mg/kg and 340 mg/kg, respectively. Soil analytical results are summarized in Table 1. Chain of custody documentation and certified laboratory analytical reports are included as Attachment C.

LEAD IMPACTED SOIL EXCAVATION (OCTOBER 24, 2005)

Based on the continued presence of elevated lead concentrations in soil (above ACHCSA cleanup goal) from the August 9, 2005 excavation, further over-excavation was determined to be warranted by Shell and the ACHCSA. On October 24, 2005, Delta directed over-excavation of soil extending from the northern corner and the southwest sidewall of the August 9, 2005 excavation. Excavation limits are shown on Figure 2.

Delta collected eleven soil samples (SS-12@1.8FT through SS-22@2.0FT) from the bottom and sidewalls of the excavation at depths ranging from 1.8 to 5.5 feet bg. Sample locations are shown on Figure 2. Approximately 150 cubic yards of soil was over-excavated. Sidewall samples were collected within a dark brown, undulating soil layer at approximately 2 feet bg. Soil Samples SS-16@5.5FT, SS-17@5.5FT, and SS-18@5.5FT were collected by pushing a brass tube into soil that was brought to the surface from the base of the excavation within the excavator bucket. All other soil samples were collected by pushing a brass tube into sidewall soils. The brass tubes were sealed with Teflon sheeting and a tight fitting plastic end caps, and clearly labeled. Samples were placed on ice for transportation to a certified testing laboratory for analysis. Soil samples were analyzed at STL in Pleasanton, California for total lead by EPA Method 6010B.

During excavation activities, an elevated photoionization detector (PID) reading (530 parts per million by volume) was detected in soil from the location of Sample SS-19. Additional soil was subsequently over-excavated southeast of Sample SS-19, and confirmation Sample SS-21 was collected from the extended sidewall. In addition to total lead, soil Samples SS-19@2.1FT and SS-21@2.1FT were also analyzed for

TPH-G; BTEX compounds; the five fuel oxygenates: MTBE, DIPE, ETBE, TAME, and TBA; EDB; and 1,2-DCA by EPA Method 8260B.

Lead was detected in all eleven soil samples. Two samples (SS-13@2.0FT and SS-21@2.0FT) contained total lead concentrations of 480 mg/kg and 170 mg/kg, respectively - above the ACHCSA approved cleanup goal. Sample SS-19@2.1FT contained TPH-G at a concentration of 2,000 mg/kg, ethylbenzene at a concentration of 3.1 mg/kg, and xylenes at a concentration of 24 mg/kg. The impacted soil was over-excavated and confirmation sample SS-21@2.1FT was collected from the sidewall. Total lead was detected in Sample SS-21@2.1FT at a concentration of 170 mg/kg – above the ACHCSA approved cleanup goal. All other analytes tested in Sample SS-21@2.1FT were below the laboratory reporting limits. Soil analytical results are summarized in Table 1 and are shown on Figure 2. Chain of custody documentation and certified laboratory analytical reports are included as Attachment C.

SOIL STOCKPILES

Delta previously collected two soil composite samples (Composite A,B,C,D and Composite E,F,G) from the stockpiles generated during the May 4 and 18, 2005 over-excavation activities. Chain of custody documentation and certified laboratory analytical reports for composite samples were previously submitted in Delta's *Soil and Groundwater Investigation and Over-Excavation Report* dated July 11, 2005.

Using laboratory analytical data from pothole samples (PH-7 through PH-13) in conjunction with the previous composite sample results, Delta profiled the soil stockpiles generated in August and October 2005 to Forward Landfill (Forward) in Manteca, California for waste acceptance. A total of approximately 425 cubic yards of stockpiled soil was transported to Forward for disposal on August 10, October 28, and October 31, 2005.

SUMMARY AND CONCLUSIONS

The detection of lead impacts in site soils appears to be sporadic, and continues to be limited to shallow depths (< 3 feet bg).

- Only one out of six samples collected beneath the dispensers and product piping at depths between 2.5 and 8.3 feet bg during fuel system removal activities in December 2003 contained an elevated lead concentration (>150 mg/kg).
- Only one out of seventeen "pothole" soil samples collected across the site contained an elevated lead concentration (>150 mg/kg).
- A total of ten out of twenty-nine sidewall samples collected during over-excavation activities conducted between May and October 2005 have contained elevated lead concentrations (>150 mg/kg).

Recent investigative "pothole" excavations indicate that lead impacted soils do not exist in the southern portion of the site. Additionally, Pothole PH-14, located in the northwestern portion of the site (near the former waste oil UST) did not encounter lead impacted soils.

Petroleum hydrocarbon impacts encountered in soil located in the vicinity of Sample SS-19@2.1FT (adjacent to the former eastern fuel dispenser island) appear to have been successfully remediated through over-excavation as shown by confirmation Sample SS-21@2.1FT.

Only two soil samples with lead detections above the ACHCSA approved cleanup goal remain in site soils. The lead detection in Sample SS-21@2.1FT (170 mg/kg) is just above the cleanup goal.

RECOMMENDATIONS

Delta recommends researching site-use history prior to proceeding with any further over-excavation activities. Background information on previous site use may allow the apparent sporadic nature of lead detections on-site to be better understood, and more effectively remediated.

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. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

If you have any questions regarding this site, please contact Debbie Arnold (Delta) at (408) 826-1873 or Denis Brown (Shell) at (707) 865-0251.

> DEBORAH ARNOLD NO. 7745

Sincerely,

Delta Environmental Consultants, Inc.

Heather Buckingham Senior Staff Geologist

Alberia Wilf

Debbie Arnold Project Manager

PG 7745

ATTACHMENTS:

- Table 1 Summary of Soil Analytical Data
- Table 2 Summary of Groundwater Analytical Data
- Figure 1 Site Location and Well Survey Map
- Figure 2 Pothole Location Map
- Figure 3 Over-Excavation and Soil Sampling Map
- Attachment A Well Concentrations Table (Blaine)
- Attachment B Laboratory Certified Analytical Results and Chain-of-Custody Documentation for Investigative "Potholes"
- Attachment C Laboratory Certified Analytical Results and Chain-of-Custody Documentation for Over-Excavation Soil Sampling

cc: Denis Brown, Shell Oil Products US, Carson Betty Graham, RWQCB, Oakland Chris Davidson, Redevelopment Agency, City of Livermore, Livermore Paul Smith, Livermore-Pleasanton Fire Department, Pleasanton

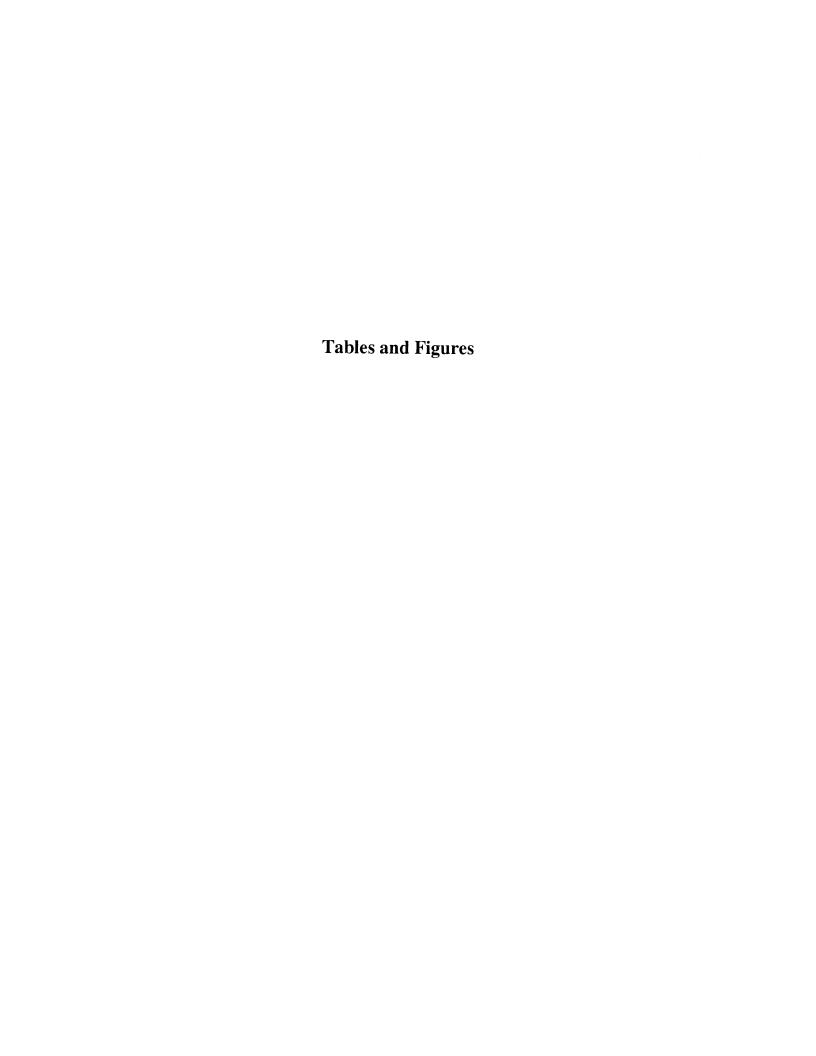


Table 1 Summary of Soil Analytical Data Pothole and Over-Excavation Samples

Former Shell Service Station 318 South Livermore Avenue, Livermore, California

Sample	Date	Depth	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylene	MTBE	EDB	1,2-DCA	
Designation	Sampled	(feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(ug/kg)	(mg/kg)	(mg/kg)
Over-Excavati	on Confirmati	on Sam	ples								
S-1 @ 5 FEET	5/4/2005	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	3.4
S-2 @ 5 FEET	5/4/2005	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	3.4
S-3 @ 5 FEET	5/4/2005	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	11
S-4 @ 5 FEET	5/4/2005	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	8
S-5@10'	5/4/2005	10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	4.4
S-6@10'	5/4/2005	10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	3.2
S-7@3.5'	5/4/2005	3.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	560
S-8@3.25'	5/4/2005	3.25	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	390
S-9@3.0'	5/4/2005	3	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	84
S-10@3.5'	5/4/2005	3.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	6.5
S-11@2.5'	5/4/2005	2.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	76
S-12@2.5'	5/4/2005	2.5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	140
S-13 @ 6 ft	5/18/2005	6	<1.0	<0.005	<0.005	< 0.005	<0.005	<0.005	<5	<0.005	3.23
S-14 @ 2.8 ft	5/18/2005	2.8	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	474
S-15 @ 1.9 ft	5/18/2005	1.9	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	313
S-16 @ 3 ft	5/18/2005	3	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	49.9
S-17 @ 1.9 ft	5/18/2005	1.9	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	202
S-18 @ 5 ft	5/18/2005	5	<1.0	<0.005	<0.005	< 0.005	<0.005	<0.005	<5	<0.005	5.02
SS-1@2.5'	8/9/2005	2.5	NA	NA	NA	NA	NA	NA	NA	NA	4.3
SS-2@3'	8/9/2005	3	NA	NA	NA	NA	NA	NA	NA	NA	5.1
SS-3@2.5'	8/9/2005	2.5	NA	NA	NA	NA	NA	NA	NA	NA	480
SS-4@2.5'	8/9/2005	2.5	NA	NA	NA	NA	NA	NA	NA	NA	340
SS-5@2.5'	8/9/2005	2.5	NA	NA	NA	NA	NA	NA	NA	NA	76
SS-6@3'	8/9/2005	3	NA	NA	NA	NA	NA	NA	NA	NA	49
SS-7@3'	8/9/2005	3	NA	NA	NA	NA	NA	NA	NA	NA	89
SS-8@6'	8/9/2005	6	NA	NA	NA	NA	NA	NA	NA	NA	3.7
SS-9@6'	8/9/2005	6	NA	NA	NA	NA	NA	NA	NA	NA	3.6
SS-10@6'	8/9/2005	6	NA	NA	NA	NA	NA	NA	NA	NA	4.2
SS-11@6'	8/9/2005	6	NA	NA	NA	NA	NA	NA	NA	NA	3.7
SS-12@1.8FT	10/24/2005	1.8	NA	NA	NA	NA	NA	NA	NA	NA	14
SS-13@2.0FT	10/24/2005	2	NA	NA	NA	NA	NA	NA	NA	NA	480
SS-14@2.0FT	10/24/2005	2	NA	NA	NA	NA	NA	NA	NA	NA	27

Table 1 Summary of Soil Analytical Data Pothole and Over-Excavation Samples

Former Shell Service Station 318 South Livermore Avenue, Livermore, California

Sample	Date	Depth	TPH-G	Benzene	Toluene	Ethyl-benzene	Xylene	MTBE	EDB	1,2-DCA	Lead
Designation	Sampled	(feet)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(ug/kg)	(mg/kg)	(mg/kg
Over-Excavati	on Confirmati	on Sam	oles (Con	tinued)							
SS-15@2.0FT	10/24/2005	2	NA	NA	NA	NA	NA	NA	NA	NA	110
SS-16@5.5FT	10/24/2005	5.5	NA	NA	NA	NA	NA	NA	NA	NA	6.6
SS-17@5.5FT	10/24/2005	5.5	NA	NA	NA	NA	NA	NA	NA	NA	3.7
SS-18@5.5FT	10/24/2005	5.5	NA	NA	NA	NA	NA	NA	NA	NA	3.7
SS-19@2.1FT	10/24/2005	2.1	2,000	<0.5	<0.5	3.1	24	<0.5	<500	<0.5	150
SS-20@1.9FT	10/24/2005	1.9	NA	NA	NA	NA	NA	NA	NA	NA	7.8
SS-21@2.1FT	10/24/2005	2.1	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<5	<0.005	170
SS-22@2.0FT	10/24/2005	2	NA	NA	NA	NA	NA	NA	NA	NA	7.2
Pothole Soil S	amples										
PH-1@2.5'	6/7/2005	2.5	NA	NA	NA	NA	NA	NA	NA	NA	12.3
PH-2@3'	6/7/2005	3	NA	NA	NA	NA	NA	NA	NA	NA	4.62
PH-3@2.5'	6/7/2005	2.5	NA	NA	NA	NA	NA	NA	NA	NA	4.97
PH-4@3'	6/7/2005	3	NA	NA	NA	NA	NA	NA	NA	NA	1,040
PH-5@2'	6/7/2005	2	NA	NA	NA	NA	NA	NA	NA	NA	5.09
PH-6@5'	6/7/2005	5	NA	NA	NA	NA	NA	NA	NA	NA	5.21
PH-7@3.0'	8/8/2005	3	NA	NA	NA	NA	NA	NA	NA	NA	3.62
PH-7@5.0'	8/8/2005	5	NA	NA	NA	NA	NA	NA	NA	NA	2.79
PH-7@7.0'	8/8/2005	7	NA	NA	NA	NA	NA	NA	NA	NA	13.3
PH-8@3.0'	8/8/2005	3	NA	NA	NA	NA	NA	NA	NA	NA	4.68
PH-9@3.0'	8/8/2005	3	NA	NA	NA	NA	NA	NA	NA	NA	8.87
PH-10@2.5'	8/8/2005	2.5	NA	NA	NA	NA	NA	NA	NA	NA	5.72
PH-11@2.5'	8/8/2005	2.5	NA	NA	NA	NA	NA	NA	NA	NA	4.89
PH-12@3.0'	8/8/2005	3	NA	NA	NA	NA	NA	NA	NA	NA	3.7
PH-13@3.0'	8/8/2005	3	NA	NA	NA	NA	NA	NA	NA	NA	3.06
PH-14@5.0'	8/8/2005	5	NA	NA	NA	NA	NA	NA	NA	NA	7.73
PH-14B@2.5'	8/9/2005	2.5	NA	NA	NA	NA	NA	NA	NA	NA	5

Notes:

mg/kg = milligrams per kilogram

ug/kg = micrograms per kilogram

TPH-G = Total petroleum hydrocarbons as gasoline

MTBE = Methyl tert-butyl ether

NA = not analyzed

EDB = Ethylene Dibromide

1,2-DCA = 1,2-Dichloroethane

sample over-excavated

Table 2 Summary of Groundwater Analytical Data Borings B-1 through B-3

Former Shell Service Station 318 South Livermore Avenue, Livermore, California

Sample Designation	Date Sampled	Sample Interval (feet)	TPH-G (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethyl-benzene (ug/l)	Xylene (ug/l)	MTBE (ug/l)	TBA (ug/l)	EDB (ug/l)	1,2-DCA (ug/l)	Lead (ug/l)
Groundwater Grab Samp	les											
B-1@30'	6/2/2005	29-30	83	8.4	1.1	1.1	2.9	1.5	<5.0	<0.02	<0.5	0.21
B-1@40.5'	6/3/2005	38-40.5	130	<0.5	<0.5	<0.5	<1	5	<5.0	<0.02	81	0.12
B-2@25'	6/2/2005	25	<50	<0.5	<0.5	<0.5	<1	<0.5	<5.0	<0.02	<0.5	0.56
B-3@31'	6/3/2005	29.5-31	240	2.4	<0.5	0.73	<1	2	<5.0	<0.02	0.64	NA
GRAB B-3@31'	6/3/2005	31	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.094
HYDROPUNCH B-3@31'	6/3/2005	29.5-31	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.22
B-3@51'	6/3/2005	49-51	<50	<0.5	<0.5	<0.5	<1	<0.5	<5.0	<0.02	<0.5	0.032

Notes:

ug/l = micrograms per liter

NA = not analyzed

TPH-G = Total petroleum hydrocarbons as gasoline

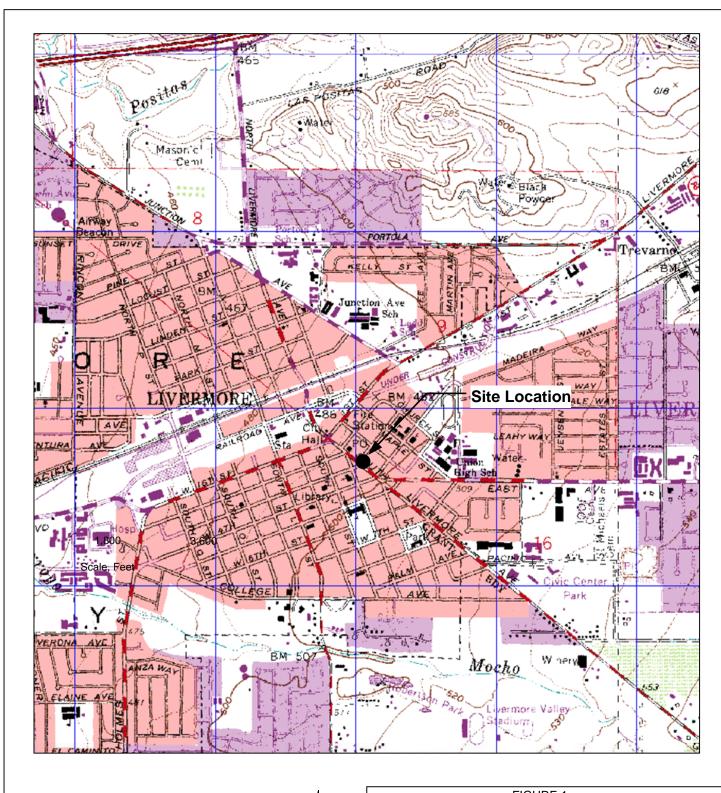
MTBE = Methyl tert-butyl ether

TBA = Tert-butanol

EDB = Ethylene Dibromide

1,2-DCA = 1,2-Dichloroethane

Sample GRAB B-3@31' was collected in case Sample HYDROPUNCH B-3@31' did not contain a sufficient amount of groundwater for lead analysis



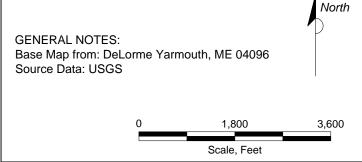


FIGURE 1 SITE LOCATION MAP

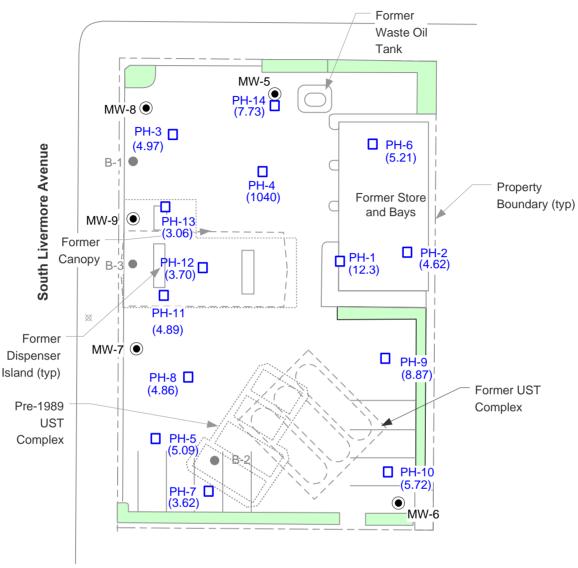
FORMER SHELL-BRANDED SERVICE STATION 318 South Livermore Avenue Livermore, CA

PROJECT NO.	DRAWN BY
SJ31-8LI-1.2005	VF 9/25/03
FILE NO.	PREPARED BY
SJ31-8LI-1.2005	VF
REVISION NO.	REVIEWED BY
۰ .	





Third Street



LEGEND



PH-6 DOTHOLE LOCATION AND DESIGNATION

(35) LEAD CONCENTRATION (PPM)

B-2 • SOIL BORING (JUNE 2005)

MW-6 • EXISTING GROUNDWATER MONITORING WELL

FIGURE 2

POTHOLE LOCATION MAP

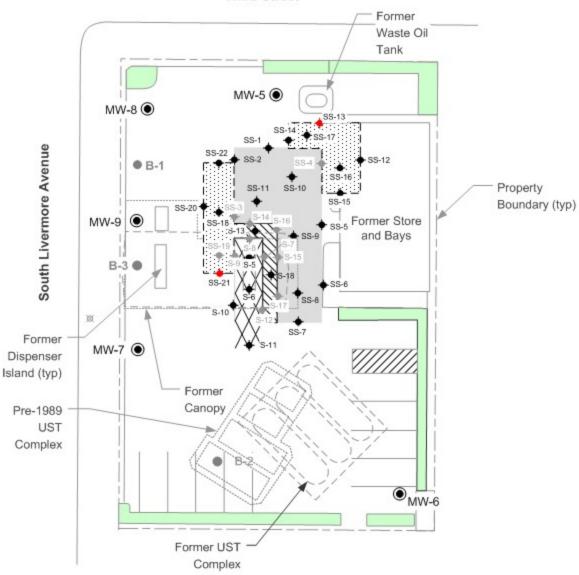
FORMER SHELL-BRANDED SERVICE STATION 318 South Livermore Avenue Livermore, California

PROJECT NO.	DRAWN BY
SJ31-8LI-1.2006	JL 01/23/06
FILE NO.	PREPARED BY
SJ31-8LI-2006	JL
REVISION NO.	REVIEWED BY
1 1	





Third Street



LEGEND

S-19 SOIL SAMPLE - ELEVATED LEAD CONCENTRATION (> 150 PPM)

S-7 ♦ OVER-EXCAVATED SOIL SAMPLE

S-13
SOIL SAMPLE - LEAD
CONCENTRATION (< 150 PPM)

EXCAVATION AREA (5-4-05)

EXCAVATION AREA (5-18-05)

EXCAVATION AREA (8-9-05)

EXCAVATION AREA (10-24-05)

B-2 SOIL BORING (JUNE 2005)

MW-6

EXISTING GROUNDWATER
MONITORING WELL



30 FT

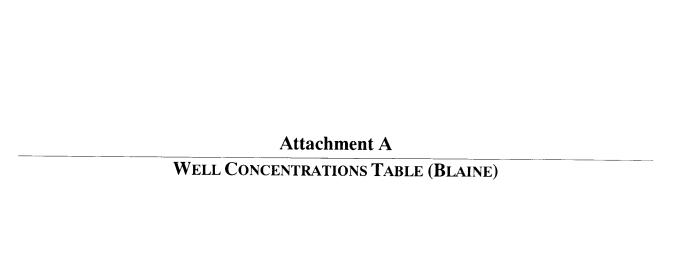
FIGURE 3

OVER-EXCAVATION AND SOIL SAMPLING MAP FORMER SHELL-BRANDED SERVICE STATION 318 South Livermore Avenue

318 South Livermore Avenue
Livermore, California

PROJECT NO. SJ31-8LI-1.2006	DRAWN BY JL 01/29/06	\neg
FILE NO. SJ31-8LI-2006	PREPARED BY JL	
REVISION NO.	REVIEWED BY	\neg







GROUNDWATER SAMPLING SPECIALISTS SINCE 1985

November 1, 2005

Denis Brown Shell Oil Products US 20945 South Wilmington Avenue Carson, CA 90810

> Fourth Quarter 2005 Groundwater Monitoring at Former Shell Service Station 318 South Livermore Avenue Livermore, CA

Monitoring performed on October 7, 2005

Groundwater Monitoring Report **051007-BR-2**

This report covers the routine monitoring of groundwater wells at this former Shell facility. In accordance with standard procedures that conform to Regional Water Quality Control Board requirements, routine field data collection includes depth to water, total well depth, thickness of any separate immiscible layer, water column volume, calculated purge volume (if applicable), elapsed evacuation time (if applicable), total volume of water removed (if applicable), and standard water parameter instrument readings. Sample material is collected, contained, stored, and transported to the laboratory in conformance with EPA standards. Purgewater (if applicable) is, likewise, collected and transported to the Martinez Refining Company.

Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL CONCENTRATIONS**. The full analytical report for the most recent samples and the field data sheets are attached to this report.

At a minimum, Blaine Tech Services, Inc. field personnel are certified on completion of a forty-hour Hazardous Materials and Emergency Response training course per 29 CFR 1910.120. Field personnel are also enrolled in annual eight-hour refresher courses.

 SAN JOSE
 SACRAMENTO
 LOS ANGELES
 SAN DIEGO

 1680 ROGERS AVENUE
 SAN JOSE, CA 95112-1105
 (408) 573-0555
 FAX (408) 573-7771
 LIC. 746684
 www.blqinetech.com

Blaine Tech Services, Inc. conducts sampling and documentation assignments of this type as an independent third party. Our activities at this site consisted of objective data and sample collection only. No interpretation of analytical results, defining of hydrological conditions or formulation of recommendations was performed.

Please call if you have any questions.

Yours truly,

Mike Ninokata Project Coordinator

MN/ks

attachments: Cumulative Table of WELL CONCENTRATIONS

Certified Analytical Report

Field Data Sheets

cc: Debbie Arnold
Delta Environmental
175 Bernal Road, Suite 200
San Jose, CA 95119

							MTBE						Depth to	GW
Well ID	Date	TPPH	В	Т	Е	Х	8260	DIPE	ETBE	TAME	ТВА	тос	Water	Elevation
		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(MSL)	(ft.)	(MSL)
	<u>'</u>		, , ,	, <u>, , , , , , , , , , , , , , , , , , </u>	, , ,	, ,	, , , , , , , , , , , , , , , , , , , 	, , ,	, , ,	, , ,	, ,			,
MW-5	09/18/2001	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-5	07/09/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	495.47	34.85	460.62
MW-5	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	495.47	37.26	458.21
MW-5	01/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	495.47	27.30	468.17
MW-5	04/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	495.47	27.84	467.63
MW-5	07/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	495.47	30.54	464.93
MW-5	11/13/2003	60	<0.50	1.5	1.7	9.6	<0.50	<2.0	<2.0	<2.0	<5.0	495.47	33.94	461.53
MW-5	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	495.47	26.59	468.88
MW-5	04/07/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	495.47	25.44	470.03
MW-5	07/21/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	495.47	32.34	463.13
MW-5	11/11/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	495.47	33.24	462.23
MW-5	01/26/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	495.47	26.80	468.67
MW-5	04/13/2005	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	495.47	22.58	472.89
MW-5	10/07/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	495.47	28.78	466.69
											,		_	
MW-6	09/18/2001	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-6	07/09/2002	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	497.57	35.41	462.16
MW-6	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	2.5	<2.0	<2.0	<2.0	<50	497.57	37.92	459.65
MW-6	01/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	497.57	27.71	469.86
MW-6	04/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	497.57	28.28	469.29
MW-6	07/17/2003	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	497.57	30.56	467.01
MW-6	11/13/2003	90	<0.50	2.6	2.4	12	<0.50	<2.0	<2.0	<2.0	<5.0	497.57	34.18	463.39
MW-6	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	497.57	27.16	470.41
MW-6	04/07/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	497.57	25.88	471.69
MW-6	07/21/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	497.57	32.74	464.83
MW-6	11/11/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	497.57	33.75	463.82

							MTBE						Depth to	GW
Well ID	Date	TPPH	В	T	Е	X	8260	DIPE	ETBE	TAME	TBA	TOC	Water	Elevation
		(ug/L)	(MSL)	(ft.)	(MSL)									
MW-6	01/26/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	497.57	26.89	470.68
MW-6	04/13/2005	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	497.57	23.05	474.52
MW-6	10/07/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	497.57	28.12	469.45
MW-7	09/18/2001	NA	<0.50	<0.50	<0.50	<0.50	1.2	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-7	07/09/2002	<50	<0.50	<0.50	<0.50	<0.50	2.0	<2.0	<2.0	<2.0	<50	495.58	34.29	461.29
MW-7	10/25/2002	<50	<0.50	<0.50	<0.50	<0.50	1.9	<2.0	<2.0	<2.0	<50	495.58	36.80	458.78
MW-7	01/24/2003	<50	<0.50	<0.50	<0.50	<0.50	0.89	<2.0	<2.0	<2.0	<50	495.58	26.75	468.83
MW-7	04/17/2003	<50	<0.50	<0.50	<0.50	<1.0	4.0	<2.0	<2.0	<2.0	<5.0	495.58	27.31	468.27
MW-7	07/17/2003	<50	<0.50	<0.50	<0.50	<1.0	3.2	<2.0	<2.0	<2.0	<5.0	495.58	30.02	465.56
MW-7	11/13/2003	72	<0.50	0.62	0.57	3.2	1.4	<2.0	<2.0	<2.0	<5.0	495.58	33.85	461.73
MW-7	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	0.85	NA	NA	NA	NA	495.58	27.13	468.45
MW-7	04/07/2004	<50	<0.50	<0.50	<0.50	<1.0	0.71	NA	NA	NA	NA	495.58	25.13	470.45
MW-7	07/21/2004	<50	<0.50	<0.50	<0.50	<1.0	1.8	NA	NA	NA	NA	495.58	31.68	463.90
MW-7	11/11/2004	75	<0.50	<0.50	<0.50	<1.0	2.2	<2.0	<2.0	<2.0	<5.0	495.58	32.92	462.66
MW-7	01/26/2005	<50	<0.50	<0.50	<0.50	<1.0	1.8	<2.0	<2.0	<2.0	<5.0	495.58	26.60	468.98
MW-7	04/13/2005	<50	<0.50	<0.50	<0.50	<0.50	0.87	<0.50	<0.50	<0.50	<5.0	495.58	23.25	472.33
MW-7	10/07/2005	77	<0.50	<0.50	<0.50	<1.0	0.70	<2.0	<2.0	<2.0	<5.0	495.58	27.76	467.82
MW-8	09/18/2001	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	NA	NA	NA
MW-8	07/09/2002	<50	<0.50	<0.50	<0.50	<0.50	6.9	<2.0	<2.0	<2.0	<50	494.90	34.46	460.44
MW-8	10/25/2002	140	<0.50	<0.50	<0.50	<0.50	2.2	3.3	<2.0	<2.0	<50	494.90	36.98	457.92
MW-8	01/24/2003	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.0	<2.0	<2.0	<50	494.90	27.35	467.55
MW-8	04/17/2003	<50	<0.50	<0.50	<0.50	<1.0	0.67	<2.0	<2.0	<2.0	<5.0	494.90	27.44	467.46
MW-8	07/17/2003	<50	<0.50	<0.50	<0.50	<1.0	0.50	<2.0	<2.0	<2.0	<5.0	494.90	32.29	462.61
MW-8	11/13/2003	260	1.5	2.3	2.9	16	1.4	<2.0	<2.0	<2.0	<5.0	494.90	33.08	461.82

							MTBE						Depth to	GW
Well ID	Date	TPPH	В	Т	E	X	8260	DIPE	ETBE	TAME	TBA	TOC	Water	Elevation
		(ug/L)	(MSL)	(ft.)	(MSL)									
MW-8	01/13/2004	<50	<0.50	<0.50	<0.50	<1.0	0.92	NA	NA	NA	NA	494.90	26.18	468.72
MW-8	04/07/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	494.90	25.10	469.80
MW-8	07/21/2004	<50	<0.50	<0.50	<0.50	<1.0	<0.50	NA	NA	NA	NA	494.90	31.97	462.93
MW-8	11/11/2004	<50	<0.50	<0.50	<0.50	<1.0	0.82	<2.0	<2.0	<2.0	<5.0	494.90	32.80	462.10
MW-8	01/26/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	494.90	26.00	468.90
MW-8	04/13/2005	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	494.90	22.81	472.09
MW-8	10/07/2005	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<2.0	<2.0	<2.0	<5.0	494.90	29.05	465.85
MW-9	09/19/2005	NA	27.89	NA										
MW-9	09/23/2005	290	53	2.7	7.8	34	12	<2.0	<2.0	<2.0	14	NA	27.95	NA
MW-9	10/07/2005	400	42	1.2	3.7	22	12	<2.0	<2.0	<2.0	9.4	494.77	28.13	466.64

							MTBE						Depth to	GW
Well ID	Date	TPPH	В	Т	E	X	8260	DIPE	ETBE	TAME	TBA	TOC	Water	Elevation
		(ug/L)	(MSL)	(ft.)	(MSL)									

Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B.

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B.

MTBE = Methyl tertiary butyl ether

DIPE = Di-isopropyl ether, analyzed by EPA Method 8260B

ETBE = Ethyl tertiary butyl ether, analyzed by EPA Method 8260B

TAME = Tertiary amyl methyl ether, analyzed by EPA Method 8260B

TBA = Tertiary butyl alcohol, analyzed by EPA Method 8260B

TOC = Top of Casing Elevation

GW = Groundwater

ug/L = Parts per billion

MSL = Mean sea level

ft. = Feet

<n = Below detection limit

NA = Not applicable

Notes:

Survey data provided by KHM Environmental Management, Inc.



LABORATORY CERTIFIED ANALYTICAL RESULTS

AND

CHAIN-OF-CUSTODY DOCUMENTATION FOR INVESTIGATIVE "POTHOLES"



Report Number: 45252

Date: 08/10/2005

Debbie Arnold Delta Environmental Consultants, Inc. 175 Bernal Road, Suite 200 San Jose, CA 95119

Subject: 10 Samples

Project Name: FORMER SHELL - SERVICE STATION

Project Number: SJ31-8LI-P P.O. Number: Pending

Dear Ms. Arnold,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,





August 10, 2005

Joel Kiff Kiff Analytical 2795 2nd Street, Suite 300 Davis, CA 95616-6593

Subject: Calscience Work Order No.: 05-08-0621

Client Reference: FORMER SHELL SERVICE STATION

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 8/9/2005 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 Assurance Program Manual, applicable standard operating procedures, and other related documentation. The original report of any subcontracted analysis 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.

Stephen Nowak Project Manager

CA-ELAP ID: 1230 · NELAP ID: 03220CA · CSDLAC ID: 10109 · SCAQMD ID: 93LA0830

7440 Lincoln Way, Garden Grove, CA 92841-1427 · TEL:(714) 895-5494 · FAX: (714) 894-7501



Analytical Report



Kiff Analytical 2795 2nd Street, Suite 300 Davis, CA 95616-6593

Date Received: Work Order No: Preparation: Method:

05-08-0621 EPA 3050B EPA 6010B

08/09/05

Project: FORMER SHELL SERVICE STATION

Page 1 of 2

1 TOJCCL. 1 OTKINETY OF IEI	LE OLIVIOL OT	711014					r age r or z
Client Sample Number		Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
PH-7@3.0'		05-08-0621-1	08/08/05	Solid	08/09/05	08/09/05	050809L09
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>		
Lead	3.62	0.50	1		mg/kg		
PH-7@5.0'		05-08-0621-2	08/08/05	Solid	08/09/05	08/09/05	050809L09
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>		
Lead	2.79	0.50	1		mg/kg		
PH-7@7.0'		05-08-0621-3	08/08/05	Solid	08/09/05	08/09/05	050809L09
<u>Parameter</u>	Result	<u>RL</u>	<u>DF</u>	<u>Qual</u>	<u>Units</u>		
Lead	13.3	0.5	1		mg/kg		
PH-8@3.0'		05-08-0621-4	08/08/05	Solid	08/09/05	08/09/05	050809L09
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>		
Lead	4.68	0.50	1		mg/kg		
PH-9@3.0'		05-08-0621-5	08/08/05	Solid	08/09/05	08/09/05	050809L09
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>		
Lead	8.87	0.50	1		mg/kg		
PH-10@2.5'		05-08-0621-6	08/08/05	Solid	08/09/05	08/09/05	050809L09
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>		
Lead	5.72	0.50	1		mg/kg		



Analytical Report



Kiff Analytical 2795 2nd Street, Suite 300 Davis, CA 95616-6593

Date Received: Work Order No: Preparation: Method:

05-08-0621 EPA 3050B EPA 6010B

08/09/05

Project: FORMER SHELL SERVICE STATION

Page 2 of 2

Client Sample Number		Lab Sample Number	Date Collected	Matrix	Date Prepared	Date Analyzed	QC Batch ID
PH-11@2.5'		05-08-0621-7	08/08/05	Solid	08/09/05	08/09/05	050809L09
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>		
Lead	4.89	0.50	1		mg/kg		
PH-12@3.0'		05-08-0621-8	08/08/05	Solid	08/09/05	08/09/05	050809L09
Parameter	<u>Result</u>	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>		
Lead	3.70	0.50	1		mg/kg		
PH-13@3.0'		05-08-0621-9	08/08/05	Solid	08/09/05	08/09/05	050809L09
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>		
Lead	3.06	0.50	1		mg/kg		
PH-14@5.0'		05-08-0621-10	08/08/05	Solid	08/09/05	08/09/05	050809L09
<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>		
Lead	7.73	0.50	1		mg/kg		
Method Blank		097-01-002-6,663	N/A	Solid	08/09/05	08/09/05	050809L09
Parameter_	<u>Result</u>	<u>RL</u>	<u>DF</u>	Qual	<u>Units</u>		
Lead	ND	0.500	1		mg/kg		



Quality Control - Spike/Spike Duplicate



Kiff Analytical 2795 2nd Street, Suite 300 Davis, CA 95616-6593 Date Received: Work Order No: Preparation: Method: 08/09/05 05-08-0621 EPA 3050B EPA 6010B

Project FORMER SHELL SERVICE STATION

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
PH-10@2.5'	Solid	ICP 3300	08/09/05	08/09/05	050809809
<u>Parameter</u>	MS %REC	MSD %REC	%REC CL	RPD RPD	CL Qualifiers
Lead	79	63	75-125	16 0-2	20 3

MMM_

RPD - Relative Percent Difference , CL - Control Limit

alscience nvironmental Quality Control - Laboratory Control Sample aboratories, Inc.



Kiff Analytical 2795 2nd Street, Suite 300 Davis, CA 95616-6593 Date Received: Work Order No: Preparation: Method:

05-08-0621 EPA 3050B EPA 6010B

N/A

Project: FORMER SHELL SERVICE STATION

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	Lab File ID) LC	S Batch Number
097-01-002-6,663	Solid	ICP 3300	08/09/05	050809-I-10		050809L09
<u>Parameter</u>		Conc Added	Conc Recovered	LCS %Rec	%Rec CL	<u>Qualifiers</u>
Lead		25.0	26.9	108	80-120	

MMM_

RPD - Relative Percent Difference , CL - Control Limit

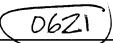


Glossary of Terms and Qualifiers



Work Order Number: 05-08-0621

Qualifier	<u>Definition</u>
*	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 or Matrix Spike Duplicate 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.
Α	Result is the average of all dilutions, as defined by the method.
В	Analyte was present in the associated method blank.
С	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
Н	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.
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.
Χ	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.





2795 Second Street, Suite 300 Davis, CA 95616

Lab: 530.297.4800 Fax: 530.297.4808 Cal Science Environmental 7440 Lincoln Way Garden Grove, CA 92841

	7 Willing Cicell LLC			/14-									895-5	494		L	<u>ab No.</u>				_ Pa	ge <u> </u>	01			
	Project Contact (Hardcopy	or PDF to):		Geotracker COELT EDD REPORT?							Chain-of-Custody Record and Analysis Request															
	Troy Turpen			YES _X_NO																						
	Company/Address:			Sampling Company Log Code:									Analy	/sis R	eques	it				Date Due:						
	Kiff Analytical, LLC	FAX No.:			bal												-	7 11.141.	T		.	$\overline{}$		1		
	Phone No.:	FAX NO)Dai	υ.									ļ	0]		
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1	PH-7@ 3.0'	8/8/05	8:53	1						>	<u> </u>			X		Х									Х	
2	PH-7@ 5.0'	8/8/05	9:04	1						>	<u> </u>	<u> </u>		Х		Х									X	
3	PH-7@ 7.0'	8/8/05	9:12	1						>	<u> </u>	<u> </u>		X		Х									X	
4	PH-8@ 3.0'	8/8/05	9:20	1						<u> </u>	<u> </u>			X		Х									Х	
5	PH-9@ 3.0'	8/8/05	8:45	1						<u> </u>	<u> </u>	<u> </u>	_	X	Щ	Х					_	ightharpoonup			X	
6	PH-10@ 2.5'	8/8/05	8:35	1						>	<u>()</u>		\downarrow	X		X			_		<u> </u>				X	
7	PH-11@ 2.5'	8/8/05	9:32	1						<u> </u>	<u>()</u>			X		Х			<u> </u>			\perp			Х	
8	PH-12@ 3.0'	8/8/05	9:40	1		_		_	_	<u></u>	<u> </u>	<u> </u>		X	Ш	Х			ļ		_				Х	
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10	PH-14@ 5.0'	8/8/05	10:10	1						>	()			X		X							. <u></u>		X	
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	Relinquished by:	·	Date	Time Received by Laboratory:									· · · ·	Bill	to: A	ccou	nts P	ayab	le							

Page 7 of 8



WORK ORDER #:

05-00-0000

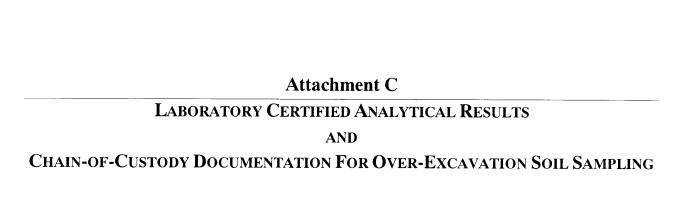
Cooler _____ of ___

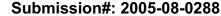
SAMPLE RECEIPT FORM

CLIENT: Kiff Analytical	DATE: 8/1/05
TEMPERATURE - SAMPLES RECEIVED BY:	
CALSCIENCE COURIER: Chilled, cooler with temperature blank provided. Chilled, cooler without temperature blank. Chilled and placed in cooler with wet ice. Ambient and placed in cooler with wet ice. Ambient temperature. ° C Temperature blank.	LABORATORY (Other than Calscience Courier): C Temperature blank. C IR thermometer. Ambient temperature.
CUSTODY SEAL INTACT:	
Sample(s): Cooler: No (Not Intact)	: Not Applicable (N/A):
SAMPLE CONDITION:	
Chain-Of-Custody document(s) received with samples	
COMMENTS:	

Analytical LLC Davis, Lab: Fax:	2nd Street CA 95616 530.297.4 530.297.4	800 802					_	SRO	G#/L	_ab	No.		46	- ,) [) [-)	<u> </u>							Page	- 4		of _	4
Project Contact (Hardcopy or PDF To): Obbit From Id		ia EDF	Report?			es		No				C	Chai	in-o	f-C	usto	ody	Re	cor	rd a	ınd	An	aly	sis F	Requ	uest		
Company/Address: 175 Burnal Rd. St. 200	Samplir	ng Comp	pany Loc	Code	· Z	ex	24	3 a	Ν	7	. T	1	I	· · · · ·	1	Ana	alysi	s R	eque	est		ı		Т		TA	1	
Phone #:	Global		11/1			Stal	sn bal	ZX	<u>です</u> ク#	4	odd o.c					8260B)			Vater)							12		>
408-224-4724 Project #: SJB1-8LI-M P.O. #: mail will night #	EDF De	eliverabl Bu CK	e To (En	nail Ad	dress): e/ta	cr	1v. (con	֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓						∢)B)	Volatile Organics Full List (EPA 8260B)	Volatile Organics (EPA 524.2 Drinking Water)		_					24		Series Constitution
Shell-Suma Station	EDF De FI	er Signat	ture.	Su	ehi	vsl	w	 ว่		֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓	r EPA 8021 level	odd C		0B)	0B)	,2 EDB	Volatile Halocarbons (EPA 8260B)	st (EPA	524.2 D	15M)	TPH as Motor Oil (EPA 8015M)					48		For Lab Us
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Project Address: Sampling 318 S. Livy Kmony. Live Live CA	₹									000	A 8260	A 8260E	EPA 82	ttes (EF	ites (EF	.(1,2 D	locarb	ganics	ganics	esel (E	otor Oil	I (EPA	ad (ST					
	40 ml VOA Sleeve	Poly Glass	Tedlar	HCI HNO ₃	<u>a</u>	Į.	ıter	Soil		ľ	MIBE (EPA 8260B)	BTEX (EPA 8260B)	TPH Gas (EPA 8260B)	5 Oxygenates (EPA 8260B)	7 Oxygenates (EPA 8260B)	Lead Scav.(1,2 DCA & 1,2	atile Ha	atile Or	atile Or	TPH as Diesel (EPA 8015M)	НаѕМ	Total Lead (EPA 6010)	W.E.T. Lead					
Sample Designation Date Time		<u>S</u> 8	Ď I	오 볼	None	9	×ε	S	₹	15	Σ		Ē	50	20	Les	<u>\$</u>	<u>o</u>	<u> </u>	ΤP	ΤΡ	Į Į	V.	\vdash	-	1 1	νk	
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Rev: 051805







Delta Env. Consultants San Jose

August 23, 2005

175 Bernal Road, Suite 200 San Jose, CA 95119

Attn.: Debbie Arnold

Project#: SJ31-8LI-P Project: SAP 135440

Site: 318 South Livermore Ave.

Dear Ms. Arnold:

Attached is our report for your samples received on 08/09/2005 13:40

This report has been reviewed and approved for release. Reproduction of this report

is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 09/23/2005 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: mbrewer@stl-inc.com Sincerely,

melissa Brewer

Melissa Brewer

Project Manager



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 224-4724 Fax: (408) 224-4518

Project: SJ31-8LI-P Received: 08/09/2005 13:40

SAP 135440

Site: 318 South Livermore Ave.

Samples Reported

Sample Name	Date Sampled	Matrix	Lab#
SS-1@2.5`	08/09/2005 11:35	Soil	1
SS-2@3`	08/09/2005 11:41	Soil	2
SS-3@2.5`	08/09/2005 11:47	Soil	3
SS-4@2.5`	08/09/2005 11:53	Soil	4
SS-5@2.5`	08/09/2005 12:01	Soil	5
SS-6@3`	08/09/2005 12:07	Soil	6
SS-7@3`	08/09/2005 12:18	Soil	7
SS-8@6`	08/09/2005 12:27	Soil	8
SS-9@6`	08/09/2005 12:30	Soil	9
SS-10@6`	08/09/2005 12:33	Soil	10
SS-11@6`	08/09/2005 12:37	Soil	11
PH-14B@2.5`	08/09/2005 12:57	Soil	12



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 224-4724 Fax: (408) 224-4518

Project: SJ31-8LI-P Received: 08/09/2005 13:40

SAP 135440

Site: 318 South Livermore Ave.

Prep(s): 3050B Test(s): 6010B

Sample ID: **SS-1@2.5**` Lab ID: 2005-08-0288 - 1

 Compound
 Conc.
 RL
 Unit
 Dilution
 Analyzed
 Flag

 Lead
 4.3
 1.0
 mg/Kg
 1.00
 08/22/2005 15:03



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 224-4724 Fax: (408) 224-4518

Project: SJ31-8LI-P Received: 08/09/2005 13:40

SAP 135440

Site: 318 South Livermore Ave.

Prep(s): 3050B Test(s): 6010B

Sample ID: **\$\$-2@3**` Lab ID: 2005-08-0288 - 2

Sampled: 08/09/2005 11:41 Extracted: 8/19/2005 16:35

Matrix: Soil QC Batch#: 2005/08/19-05.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	5.1	1.0	mg/Kg	1.00	08/22/2005 15:06	

Page 3 of 15



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 224-4724 Fax: (408) 224-4518

Project: SJ31-8LI-P Received: 08/09/2005 13:40

SAP 135440

Site: 318 South Livermore Ave.

Prep(s): 3050B Test(s): 6010B

Sample ID: **\$\$-3@2.5**` Lab ID: 2005-08-0288 - 3 Sampled: 08/09/2005 11:47 Extracted: 8/19/2005 16:35

Matrix: Soil QC Batch#: 2005/08/19-05.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	480	1.0	mg/Kg	1.00	08/22/2005 15:09	

08/23/2005 13:27



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 224-4724 Fax: (408) 224-4518

Project: SJ31-8LI-P Received: 08/09/2005 13:40

SAP 135440

Site: 318 South Livermore Ave.

Prep(s): 3050B Test(s): 6010B

Sample ID: **SS-4@2.5**` Lab ID: 2005-08-0288 - 4

Sampled: 08/09/2005 11:53 Extracted: 8/19/2005 16:35

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	340	1.0	mg/Kg	1.00	08/22/2005 15:12	



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 224-4724 Fax: (408) 224-4518

Project: SJ31-8LI-P Received: 08/09/2005 13:40

SAP 135440

Site: 318 South Livermore Ave.

Prep(s): 3050B Test(s): 6010B

Sample ID: **SS-5@2.5**` Lab ID: 2005-08-0288 - 5
Sampled: 08/09/2005 12:01 Extracted: 8/19/2005 16:35

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	76	1.0	mg/Kg	1.00	08/22/2005 15:16	



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 224-4724 Fax: (408) 224-4518

Project: SJ31-8LI-P Received: 08/09/2005 13:40

SAP 135440

Site: 318 South Livermore Ave.

Prep(s): 3050B Test(s): 6010B

Sample ID: **SS-6@3**` Lab ID: 2005-08-0288 - 6

Sampled: 08/09/2005 12:07 Extracted: 8/19/2005 16:35

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	49	1.0	mg/Kg	1.00	08/22/2005 15:19	



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 224-4724 Fax: (408) 224-4518

Project: SJ31-8LI-P Received: 08/09/2005 13:40

SAP 135440

Site: 318 South Livermore Ave.

Prep(s): 3050B Test(s): 6010B

Sample ID: **SS-7@3**` Lab ID: 2005-08-0288 - 7

Sampled: 08/09/2005 12:18 Extracted: 8/19/2005 16:35

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	89	1.0	mg/Kg	1.00	08/22/2005 15:22	



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 224-4724 Fax: (408) 224-4518

Project: SJ31-8LI-P Received: 08/09/2005 13:40

SAP 135440

Site: 318 South Livermore Ave.

Prep(s): 3050B Test(s): 6010B

Sample ID: **\$\$-8@6**` Lab ID: 2005-08-0288 - 8

Sampled: 08/09/2005 12:27 Extracted: 8/19/2005 16:35

Matrix: Soil QC Batch#: 2005/08/19-05.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	3.7	1.0	mg/Kg	1.00	08/22/2005 15:26	

08/23/2005 13:27



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 224-4724 Fax: (408) 224-4518

Project: SJ31-8LI-P Received: 08/09/2005 13:40

SAP 135440

Site: 318 South Livermore Ave.

Prep(s): 3050B Test(s): 6010B

Sample ID: **SS-9@6**` Lab ID: 2005-08-0288 - 9
Sampled: 08/09/2005 12:30 Extracted: 8/19/2005 16:35

Matrix: Soil QC Batch#: 2005/08/19-05.15

 Compound
 Conc.
 RL
 Unit
 Dilution
 Analyzed
 Flag

 Lead
 3.6
 1.0
 mg/Kg
 1.00
 08/22/2005 15:28



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 224-4724 Fax: (408) 224-4518

Project: SJ31-8LI-P Received: 08/09/2005 13:40

SAP 135440

Site: 318 South Livermore Ave.

Prep(s): 3050B Test(s): 6010B

Sample ID: **SS-10@6**` Lab ID: 2005-08-0288 - 10

Sampled: 08/09/2005 12:33 Extracted: 8/19/2005 16:35

Matrix: Soil QC Batch#: 2005/08/19-05.15

 Compound
 Conc.
 RL
 Unit
 Dilution
 Analyzed
 Flag

 Lead
 4.2
 1.0
 mg/Kg
 1.00
 08/22/2005 15:32



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 224-4724 Fax: (408) 224-4518

Project: SJ31-8LI-P Received: 08/09/2005 13:40

SAP 135440

Site: 318 South Livermore Ave.

Prep(s): 3050B Test(s): 6010B

Sample ID: **SS-11@6**` Lab ID: 2005-08-0288 - 11
Sampled: 08/09/2005 12:37 Extracted: 8/19/2005 16:35

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	3.7	1.0	mg/Kg	1.00	08/22/2005 15:41	



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Matrix:

Phone: (408) 224-4724 Fax: (408) 224-4518

Project: SJ31-8LI-P Received: 08/09/2005 13:40

SAP 135440

Soil

Site: 318 South Livermore Ave.

QC Batch#: 2005/08/19-05.15

Prep(s): 3050B Test(s): 6010B

 Sample ID: PH-14B@2.5`
 Lab ID: 2005-08-0288 - 12

 Sampled: 08/09/2005 12:57
 Extracted: 8/19/2005 16:35

 Compound
 Conc.
 RL
 Unit
 Dilution
 Analyzed
 Flag

 Lead
 5.0
 1.0
 mg/Kg
 1.00
 08/22/2005 15:44



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 224-4724 Fax: (408) 224-4518

Project: SJ31-8LI-P Received: 08/09/2005 13:40

SAP 135440

Site: 318 South Livermore Ave.

Batch QC Report									
Prep(s): 3050B Method Blank MB: 2005/08/19-05.15-051		Soil		Test(s) QC Batch # 2005/08/1 te Extracted: 08/19/200					
Compound	Conc.	RL	Unit	Analyzed	Flag				
Lead	ND	1.0	mg/Kg	08/22/2005 14:17					



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 224-4724 Fax: (408) 224-4518

Project: SJ31-8LI-P

SAP 135440

Received: 08/09/2005 13:40

Site: 318 South Livermore Ave.

Batch QC Report

Prep(s): 3050B Test(s): 6010B

Laboratory Control Spike Soil QC Batch # 2005/08/19-05.15

LCS 2005/08/19-05.15-052 Extracted: 08/19/2005 LCSD 2005/08/19-05.15-053 Extracted: 08/19/2005

Extracted: 08/19/2005 Analyzed: 08/22/2005 14:20 Extracted: 08/19/2005 Analyzed: 08/22/2005 14:24

Compound	Conc.	mg/Kg	Exp.Conc.	Recov	ery %	RPD	Ctrl.Lim	nits %	Fla	ıgs
- Compound	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Lead	101	102	100.0	101.0	102.0	1.0	80-120	20		

Brewer, Melissa

From: Debbie Arnold [darnold@deltaenv.com]

Sent: Thursday, August 11, 2005 10:47 AM

To: Brewer, Melissa

Subject: RE: Verification/Question 318 South Livermore Ave.: 2005-08-0288

It is hard to read, and it's even wrong on our end!!!

It should be SJ31-8LI-P.

Also, this project should not be billed to the incident number, but to the SAP number instead.

SAP # is: 135440

Send invoice to: Denis Brown - Shell OPUS

Accounts Payable PO Box 4935

Houston, TX 77210-4935

Thank you!

Sorry for the mistakes.

-----Original Message-----

From: Brewer, Melissa [mailto:MBrewer@stl-inc.com]

Sent: Thursday, August 11, 2005 9:24 AM

To: Debbie Arnold

Subject: Verification/Question 318 South Livermore Ave.: 2005-08-0288

From: Melissa Brewer <mbrewer@stl-inc.com>

Project# : SJ31-8CI-J Project Name: 97464709

This email includes reports for the following tests:

- Cover Letter

File: STLSF2005080288-ChainofCustody-COC0000501874.PDF

- Project Verification Sheet

File: STLSF2005080288-ProjectVerificationSheet-PVS0000502356.PDF

Could you check the Project Number that we entered? It's very difficult to read. Thanks.

Please let me know if you have any questions.

Melissa Brewer Project Manager

-	Committee and the second	The State of the S		
			ncisco	

EQUIVA Services LLC Chain Of Custody Record

117417

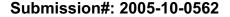
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EQUIVA Services LLC Chain Of Custody Record

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408) 224-4724 (408) 225-8506	darnold@delta	aenv.co	m		He	aathe	r Bu	cking	nhar	17															
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Field Sample Identification	DATE	TIME	MATRIX	CONT.	TPH	BTEX	MTBE	MTE	Oxy	Eths	TBA	EDB	EPA	Voc	TRP	Vap	Vap	Vap	Vap	Test	Fota	TPH	K	M T M	2004
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Delta Env. Consultants San Jose

November 08, 2005

175 Bernal Road, Suite 200 San Jose, CA 95119

Attn.: Debbie Arnold

Project#: SJ31-8LI-P Project: SAP#135440

Site: 318 S. Livermore Ave., Livermore

Dear Ms. Arnold:

Attached is our report for your samples received on 10/26/2005 15:09 This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 12/10/2005 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: mbrewer@stl-inc.com Sincerely,

melissa Brewer

Melissa Brewer

Project Manager



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P Received: 10/26/2005 15:09

SAP#135440

Site: 318 S. Livermore Ave., Livermore

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SS-19@2.1 FT	10/24/2005 14:30	Soil	1
SS-21@2.1 FT	10/24/2005 14:55	Soil	2
SS-12@1.8FT	10/24/2005 10:45	Soil	3
SS-13@2.0FT	10/24/2005 11:20	Soil	4
SS-14@2.0FT	10/24/2005 11:25	Soil	5
SS-15@2.0FT	10/24/2005 11:35	Soil	6
SS-16@5.5FT	10/24/2005 11:40	Soil	7
SS-17@5.5FT	10/24/2005 11:50	Soil	8
SS-18@5.5FT	10/24/2005 14:00	Soil	9
SS-20@1.9FT	10/24/2005 14:40	Soil	10
SS-22@2.0FT	10/24/2005 15:05	Soil	11



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P Receive

SAP#135440

Received: 10/26/2005 15:09

Test(s):

Site: 318 S. Livermore Ave., Livermore

6010B

Prep(s): 3050B

Sample ID: **SS-19@2.1 FT** Lab ID: 2005-10-0562 - 1

Sampled: 10/24/2005 14:30 Extracted: 10/31/2005 13:46

Matrix: Soil QC Batch#: 2005/10/31-05.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	150	1.0	mg/Kg	1.00	11/01/2005 11:28	



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P Received: 10/26/2005 15:09

SAP#135440

Site: 318 S. Livermore Ave., Livermore

Prep(s): 3050B Test(s): 6010B

Sample ID: **SS-21@2.1 FT** Lab ID: 2005-10-0562 - 2 Sampled: 10/24/2005 14:55 Extracted: 10/31/2005 13:46

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	170	1.0	mg/Kg	1.00	11/01/2005 11:38	



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P Received: 10/26/2005 15:09

SAP#135440

100011041 10/20/2000 10:00

Site: 318 S. Livermore Ave., Livermore

Prep(s): 3050B Test(s): 6010B

Sample ID: **SS-12@1.8FT** Lab ID: 2005-10-0562 - 3
Sampled: 10/24/2005 10:45 Extracted: 10/31/2005 13:46

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	14	1.0	mg/Kg	1.00	11/01/2005 11:41	



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P Received: 10/26/2005 15:09

SAP#135440

Site: 318 S. Livermore Ave., Livermore

Prep(s): 3050B Test(s): 6010B

Sample ID: **SS-13@2.0FT** Lab ID: 2005-10-0562 - 4
Sampled: 10/24/2005 11:20 Extracted: 10/31/2005 13:46

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	480	1.0	mg/Kg	1.00	11/01/2005 11:44	



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P Received: 10/26/2005 15:09

SAP#135440

Site: 318 S. Livermore Ave., Livermore

10/31/2005 13:46

Extracted:

Prep(s): 3050B Test(s): 6010B

Sample ID: **SS-14@2.0FT** Lab ID: 2005-10-0562 - 5 Sampled: 10/24/2005 11:25

Matrix: Soil QC Batch#: 2005/10/31-05.15

Compound Conc. RL Unit Dilution Analyzed Flag 27 1.0 1.00 Lead mg/Kg 11/01/2005 11:47



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P Received: 10/26/2005 15:09

SAP#135440

Site: 318 S. Livermore Ave., Livermore

Prep(s): 3050B Test(s): 6010B

Sample ID: **SS-15@2.0FT** Lab ID: 2005-10-0562 - 6
Sampled: 10/24/2005 11:35 Extracted: 10/31/2005 13:46

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	110	1.0	mg/Kg	1.00	11/01/2005 11:57	



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P Rece

SAP#135440

Received: 10/26/2005 15:09

Site: 318 S. Livermore Ave., Livermore

Prep(s): 3050B

Test(s):

6010B

Sample ID: **SS-16@5.5FT**

Lab ID: 2005-10-0562 - 7

Sampled: 10/24/2005 11:40

Extracted: 10/31/2005 13:46

Matrix: Soil

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	6.6	1.0	mg/Kg	1.00	11/01/2005 12:00	



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P Received: 10

SAP#135440

Received: 10/26/2005 15:09

Site: 318 S. Livermore Ave., Livermore

Prep(s): 3050B

Sample ID: **SS-17@5.5FT**

Sampled: 10/24/2005 11:50

Matrix: Soil

Test(s): 6010B

Lab ID: 2005-10-0562 - 8

Extracted: 10/31/2005 13:46

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	3.7	1.0	mg/Kg	1.00	11/01/2005 12:03	



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P

SAP#135440

Received: 10/26/2005 15:09

Site: 318 S. Livermore Ave., Livermore

3050B Prep(s):

Test(s):

6010B

Sample ID: **SS-18@5.5FT**

Lab ID:

2005-10-0562 - 9

Sampled: 10/24/2005 14:00

Extracted:

10/31/2005 13:46

Matrix: Soil

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	3.7	1.0	mg/Kg	1.00	11/01/2005 12:06	



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P

SAP#135440

Received: 10/26/2005 15:09

Site: 318 S. Livermore Ave., Livermore

Prep(s): 3050B

)B

Sample ID: SS-20@1.9FT

Sampled: 10/24/2005 14:40

Matrix: Soil

Test(s): 6010B

Lab ID: 2005-10-0562 - 10

Extracted: 10/31/2005 13:46

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	7.8	1.0	mg/Kg	1.00	11/01/2005 12:08	



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P

SAP#135440

Received: 10/26/2005 15:09

Test(s):

Site: 318 S. Livermore Ave., Livermore

Prep(s): 3050B

6010B

Sample ID: **SS-22@2.0FT**

Lab ID: 2005-10-0562 - 11

Sampled: 10/24/2005 15:05

Extracted: 10/31/2005 13:46

Matrix: Soil

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Lead	7.2	1.0	mg/Kg	1.00	11/01/2005 12:11	



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P Rece

SAP#135440

Received: 10/26/2005 15:09

Site: 318 S. Livermore Ave., Livermore

	E	Batch QC Report	
Prep(s): 3050B Method Blank MB: 2005/10/31-05.15-038		Soil	Test(s): 6010B QC Batch # 2005/10/31-05.15 Date Extracted: 10/31/2005 13:46

Compound	Conc.	RL	Unit	Analyzed	Flag
Lead	ND	1.0	mg/Kg	11/01/2005 10:57	



Total Lead

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200 San Jose, CA 95119

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P Received: 10/26/2005 15:09

SAP#135440

Site: 318 S. Livermore Ave., Livermore

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-D c	1161	ıw	•	\mathbf{r}		OIL

Prep(s): 3050B Test(s): 6010B

Laboratory Control Spike Soil QC Batch # 2005/10/31-05.15

LCS 2005/10/31-05.15-039 Extracted: 10/31/2005 Analyzed: 11/01/2005 11:00 LCSD 2005/10/31-05.15-040 Extracted: 10/31/2005 Analyzed: 11/01/2005 11:03

Compound	Conc.	mg/Kg	Exp.Conc.	Recov	ery %	RPD	Ctrl.Lim	nits %	Fla	igs
Compound	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Lead	103	103	100.0	103.0	103.0	0.0	80-120	20		



Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P Rece

SAP#135440

Received: 10/26/2005 15:09

Site: 318 S. Livermore Ave., Livermore

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SS-21@2.1 FT	10/24/2005 14:55	Soil	2

Tel 925 484 1919 Fax 925 484 1096 * www.stl-inc.com * CA DHS ELAP# 2496



Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

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San Jose, CA 95119

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P Received: 10/26/2005 15:09

SAP#135440

Site: 318 S. Livermore Ave., Livermore

Prep(s): 5030B Test(s): 8260B

 Sample ID:
 SS-21@2.1 FT
 Lab ID:
 2005-10-0562 - 2

 Sampled:
 10/24/2005 14:55
 Extracted:
 10/29/2005 13:05

 Matrix:
 Soil
 QC Batch#:
 2005/10/29-1A.69

Compound	Conc.	RL	Unit	Dilution Analyzed		Flag
Gasoline [Shell]	ND	1.0	mg/Kg	1.00	10/29/2005 13:05	
Benzene	ND	0.0050	mg/Kg	1.00	10/29/2005 13:05	
Toluene	ND	0.0050	mg/Kg	1.00	10/29/2005 13:05	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	10/29/2005 13:05	
Total xylenes	ND	0.0050	mg/Kg	1.00	10/29/2005 13:05	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	1.00	10/29/2005 13:05	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	1.00	10/29/2005 13:05	
1,2-DCA	ND	0.0050	mg/Kg	1.00	10/29/2005 13:05	
EDB	ND	0.0050	mg/Kg	1.00	10/29/2005 13:05	
Surrogate(s)						
1,2-Dichloroethane-d4	105.1	76-124	%	1.00	10/29/2005 13:05	
Toluene-d8	90.8	75-116	%	1.00	10/29/2005 13:05	



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Project: SJ31-8LI-P

SAP#135440

Received: 10/26/2005 15:09

Site: 318 S. Livermore Ave., Livermore

Batch	QC I	Report
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 Prep(s): 5030B
 Test(s): 8260B

 Method Blank
 Soil
 QC Batch # 2005/10/29-1A.69

MB: 2005/10/29-1A.69-050 Date Extracted: 10/29/2005 11:50

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	1.0	mg/Kg	10/29/2005 11:50	
tert-Butyl alcohol (TBA)	ND	0.010	mg/Kg	10/29/2005 11:50	
Methyl tert-butyl ether (MTBE)	ND	0.0050	mg/Kg	10/29/2005 11:50	
1,2-DCA	ND	0.0050	mg/Kg	10/29/2005 11:50	
EDB	ND	0.0050	mg/Kg	10/29/2005 11:50	
Benzene	ND	0.0050	mg/Kg	10/29/2005 11:50	
Toluene	ND	0.0050	mg/Kg	10/29/2005 11:50	
Ethyl benzene	ND	0.0050	mg/Kg	10/29/2005 11:50	
Total xylenes	ND	0.0050	mg/Kg	10/29/2005 11:50	
Surrogates(s)					
1,2-Dichloroethane-d4	100.8	76-124	%	10/29/2005 11:50	
Toluene-d8	92.0	75-116	%	10/29/2005 11:50	



Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

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Project: SJ31-8LI-P Received: 10/26/2005 15:09

SAP#135440

Site: 318 S. Livermore Ave., Livermore

Batch QC Report

Prep(s): 5030B Test(s): 8260B

Laboratory Control Spike Soil QC Batch # 2005/10/29-1A.69

LCS 2005/10/29-1A.69-051 Extracted: 10/29/2005 Analyzed: 10/29/2005 11:15

LCSD

Compound	Conc.	mg/Kg	Exp.Conc.	Recov	ery %	RPD	Ctrl.Lin	nits %	Fla	igs
•	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	0.0714		0.05	142.8			65-165	20		
Benzene	0.0471		0.05	94.2			69-129	20		
Toluene	0.0485		0.05	97.0			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	561		500	112.2			76-124			
Toluene-d8	472		500	94.4			75-116			



Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Prep(s):

MSD:

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P Received: 10/26/2005 15:09

SAP#135440

5030B

Matrix Spike (MS/MSD)

2005/10/29-1A.69-044

Site: 318 S. Livermore Ave., Livermore

Test(s): 8260	
QC Batch # 2005/10/29-1A.	Soil
Lab ID: 1998-09-0003 - 00	

MS/MSD MS: Extracted: 10/29/2005 2005/10/29-1A.69-022 10/29/2005 12:22

Batch QC Report

Dilution:

Analyzed: 1.00

Extracted: 10/29/2005

Analyzed: 10/29/2005 12:44

Dilution:

1.00

Compound	Conc. mg/Kg			Spk.Level	R	ecovery	%	Limits	%	Flags			
	MS	MSD	SD Sample m		MS	MSD	RPD	Rec.	RPD	MS	MSD		
Methyl tert-butyl ether	0.0582	0.0466	ND	0.047081	123.6	97.9	23.2	65-165	20		R1		
Benzene	0.0445	0.0370	ND	0.047081	94.5	77.7	19.5	69-129	20				
Toluene	0.0432	0.0349	ND	0.047081	91.8	73.3	22.4	70-130	20		R1		
Surrogate(s)													
1,2-Dichloroethane-d4	494	480		500	98.8	96.0		76-124					
Toluene-d8	452	453		500	90.4	90.6		75-116					



Gas/BTEX Fuel Oxygenates by 8260B (C6-C12)

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

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Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P

SAP#135440

Received: 10/26/2005 15:09

Site: 318 S. Livermore Ave., Livermore

Legend and Notes

Result Flag

-

R1

Analyte RPD was out of QC limits.

Severn Trent Laboratories, Inc.



Gas/BTEXFuel Oxygenates by 8260B (High Level)

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P

SAP#135440

Received: 10/26/2005 15:09

Site: 318 S. Livermore Ave., Livermore

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SS-19@2.1 FT	10/24/2005 14:30	Soil	1



Gas/BTEXFuel Oxygenates by 8260B (High Level)

Delta Env. Consultants San Jose

Attn.: Debbie Arnold

175 Bernal Road, Suite 200

San Jose, CA 95119

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P Received: 10/26/2005 15:09

SAP#135440

Site: 318 S. Livermore Ave., Livermore

Prep(s): 5030B Test(s): 8260B

 Sample ID:
 SS-19@2.1 FT
 Lab ID:
 2005-10-0562 - 1

 Sampled:
 10/24/2005 14:30
 Extracted:
 11/2/2005 03:41

 Matrix:
 Soil
 QC Batch#:
 2005/11/01-3A.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline [Shell]	2000	50	mg/Kg	1.00	11/02/2005 03:41	Q1
Benzene	ND	0.50	mg/Kg	1.00	11/02/2005 03:41	
Toluene	ND	0.50	mg/Kg	1.00	11/02/2005 03:41	
Ethyl benzene	3.1	0.50	mg/Kg	1.00	11/02/2005 03:41	
Total xylenes	24	0.50	mg/Kg	1.00	11/02/2005 03:41	
tert-Butyl alcohol (TBA)	ND	2.5	mg/Kg	1.00	11/02/2005 03:41	
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	1.00	11/02/2005 03:41	
1,2-DCA	ND	0.50	mg/Kg	1.00	11/02/2005 03:41	
EDB	ND	0.50	mg/Kg	1.00	11/02/2005 03:41	
Surrogate(s)						
1,2-Dichloroethane-d4	82.7	53-129	%	1.00	11/02/2005 03:41	
Toluene-d8	84.4	47-136	%	1.00	11/02/2005 03:41	



Gas/BTEXFuel Oxygenates by 8260B (High Level)

Delta Env. Consultants San Jose

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San Jose, CA 95119

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P Received: 10/26/2005 15:09

SAP#135440

Site: 318 S. Livermore Ave., Livermore

	Batch QC Report	
Prep(s): 5030B Method Blank	Soil	Test(s): 8260B QC Batch # 2005/11/01-3A.69
MB: 2005/11/01-3A.69-020		Date Extracted: 11/02/2005 03:20

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline [Shell]	ND	50	mg/Kg	11/02/2005 03:20	
tert-Butyl alcohol (TBA)	ND	2.5	mg/Kg	11/02/2005 03:20	
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	11/02/2005 03:20	
1,2-DCA	ND	0.50	mg/Kg	11/02/2005 03:20	
EDB	ND	0.50	mg/Kg	11/02/2005 03:20	
Benzene	ND	0.50	mg/Kg	11/02/2005 03:20	
Toluene	ND	0.50	mg/Kg	11/02/2005 03:20	
Ethyl benzene	ND	0.50	mg/Kg	11/02/2005 03:20	
Total xylenes	ND	0.50	mg/Kg	11/02/2005 03:20	
Surrogates(s)					
1,2-Dichloroethane-d4	90.8	53-129	%	11/02/2005 03:20	
Toluene-d8	84.8	47-136	%	11/02/2005 03:20	



Gas/BTEXFuel Oxygenates by 8260B (High Level)

Delta Env. Consultants San Jose

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San Jose, CA 95119

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P Received: 10/26/2005 15:09

SAP#135440

Site: 318 S. Livermore Ave., Livermore

Batch QC Report

Prep(s): 5030B Test(s): 8260B

Laboratory Control Spike Soil QC Batch # 2005/11/01-3A.69

LCS 2005/11/01-3A.69-038 Extracted: 11/02/2005 Analyzed: 11/02/2005 02:38 LCSD 2005/11/01-3A.69-059 Extracted: 11/02/2005 Analyzed: 11/02/2005 02:59

mg/Kg Exp.Conc. Recovery % RPD Ctrl.Limits % Conc. Flags Compound LCS **LCSD** LCS LCSD % Rec. **RPD** LCS LCSD 10 65-165 Methyl tert-butyl ether (MTBE) 9.81 10.1 98.1 101.0 2.9 20 Benzene 8.28 8.70 10 82.8 87.0 4.9 69-129 20 Toluene 8.90 10 85.7 89.0 8.57 3.8 70-130 20 Surrogates(s) 1,2-Dichloroethane-d4 53-129 212 223 250 84.8 89.2 Toluene-d8 225 250 85.6 90.0 47-136 214



Gas/BTEXFuel Oxygenates by 8260B (High Level)

Delta Env. Consultants San Jose

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175 Bernal Road, Suite 200 San Jose, CA 95119

Phone: (408) 826-1873 Fax: (408) 225-8506

Project: SJ31-8LI-P

SAP#135440

Received: 10/26/2005 15:09

Site: 318 S. Livermore Ave., Livermore

Legend and Notes

Result Flag

Q1

Quantit. of unknown hydrocarbon(s) in sample based on gasoline.

SHELL Chain Of Custody Record

	STL-San Francisco	Shell P	roject l	Manage	invoiced:								CIDE	NT N	UMB	ER (S	&E C	NLY										
	1220 Quarry Lane	SCIEN	ICE & ENGI	NEERING		Denis Brown																	10/25/2005					
	Pleasanton, CA 94566	☐ TECH	NICAL SERV	/ICES		(see invoicing notes below)					AP or CRMT NUMBER (TS/CRMT)						IT)	PAGE:1 of1										
(02	5) 484-1919 (925) 484-1096 fax	☐ CRMT	HOUSTON		200	ŠČ	7-	- /	0	—	D	5		, :	2				1	3	5	4	4	0	-			
SAMPLING	COMPANY	LOG CODE:																			L ID NO		27					
Delta E	nvironmental Consultants			<u>, 11.61</u>	··	318 S. Livermore Ave, Livermore EDF DELIVERABLE TO (Responsible Party or Designee): PHONE NO.:								T0600156427									CONSULTANT	ROJECT NO.:				
175 Be	rnal Rd, San Jose, CA 95119					Hos	athor	· Buc	kina	ham	1				(408	1 224	224-4724 <u>hbuckingham@deltaenv</u>						env.c	om	 SJ31-8LI-F			
	T CONTACT (Hardcopy or PDF Report to):							PLEF				Print	:			bie			1	<u>III.G.G.</u>					USE (ONLY		
TELEPHO (408) 2	NE: FAX: (408) 826-1873	E-MAIL: darnold@de	eltaenv.coi	m																								
□ TO DAYS □ 50 DAYS □ 72 HOURS □ 48 HOURS □ 24 HOURS □ LESS THAN 24 HOURS					4 HOURS											R	EQU	ESTE	ED A	NAL	YSIS							
	- RWQCB REPORT FORMAT 🗹 UST AGENCY:																TCL	TCL	TCL									
	MTBE CONFIRMATION: HIGHEST HI		RING	ALL		1	(8015m)									ပ္က	STLC [2	STLC [FIELD NO	TES:	
		CHECK BOX IF				1		Ì				_				, 8270C	TS 🗆	□ STLC	rs 🗆	_						Container/Pre or PID Rea		
	d hard copy invoice to Denis at P.O.	Box 4912	in Houst	ton A	P	able	table				se	EDB			80B	les by	Total	Total	Total	Disposal						or Laborator		
561	u natu copy invoice to being at the			V	`	Purgeable	Extractable				5 Oxygenates	A and	_	2	by 82	Semi-Volatiles		_		or Dis								
LAB USE	Field Sample Identification	SAMF		MATRIX	NO. OF	THT.	TPH -	ВТЕХ	MTBE	ξBA	Š	1,2 DCA	Ethanol	Methanol	VOCs by 8260B	emi-	Lead	LUFTS	CAM17	Test for						TEMPERATURE ON R	ECEIPT C°	
ONLY		DATE	TIME			X	_	X	X	X	LG.	X	<u> </u>	=		0,	X	_										
184	SS-19 @ 2.1 ft	10/24	2:30pm		1	x		x	x	х		х	ļ				X											
	SS-21 @ 2.1 ft	10/24	2:55pm	soil	1	 ^		 		- · ·		-		-		<u> </u>	X					_						
	SS-12 @ 1.8 ft	10/24	10;45an	soil	1	 		-				-		-	\vdash		X						-					
L	SS-13 @ 2.0 ft	10/24	11:20ar	soil	1	<u> </u>	<u> </u>	-				-	ļ <u> </u>	-	-													
	SS-14 @ 2.0 ft	10/24	11:25ar	soil	1	<u> </u>	<u> </u>	<u> </u>					-	ļ.—		<u> </u>	X								_			
	SS-15 @ 2.0 ft	10/24	11:35ar	soil	1		ļ					-	<u> </u>		ļ		X					_			-			
	SS-16 @ 5.5 ft	10/24	11:40ar	soil	1	ļ								<u> </u>		<u> </u>	X							_				
	SS-17 @ 5.5 ft	10/24	11:50ar	soil	1	<u> </u>			<u> </u>	ļ					<u> </u>		Х	<u> </u>					-					
	SS-18 @ 5.5 ft	10/24	2:00pm	soil	1									_		<u> </u>	X							_	<u> </u>			
	SS-20 @ 1.9 ft	10/24	2:40pm	soil	1										ļ		X											
	SS-22 @ 2.0 ₁ ft /	10/24	3:05pm	soil	1												x											
Relinquished by: (Signature) Received by: (Signature) 10/25/05 Received by: (Signature)						-				کے			>					Date	10/	/2	4/	0	<u> </u>	Time	1509			
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Relinqu	ished by: (Signature)			Received	by: (Signature)	7	2	/								_			Date	: (Time			
			Emmi				-																		L	10/16/00 Revision		