

FOUO  
SH



**Delta**  
Environmental  
Consultants, Inc.

3164 Gold Camp Drive  
Suite 200  
Rancho Cordova, CA 95670-6021  
U.S.A.  
916/638-2085  
FAX: 916/638-8385

November 20, 2001

Mr. Robert Weston  
Alameda County Health Care Services Agency  
Senior Hazardous Materials Specialist  
1131 Harbor Bay Parkway, 2<sup>nd</sup> Floor  
Alameda, CA 94502

NOV 27 2001

Subject: *Product Line and Dispenser Island Sampling Results*  
ARCO Station No. 2112  
1260 Park Street  
Alameda, California  
Delta Project No. D000-307

Dear Mr. Weston:

Delta Environmental Consultants, Inc. (Delta) has been authorized by ARCO Products Company to conduct soil sampling during the removal and replacement of underground product distribution lines and product dispenser islands at ARCO Service Station No. 2112, located at 1260 Park Street, Alameda, California (Figure 1). Site details are illustrated in Figure 2. This report summarizes the sampling activities and analytical results for samples collected during the product line and dispenser removal and upgrade activities. Field activities were performed in accordance with Delta's field methods and procedures outlined in Enclosure A.

**Underground Product Distribution Lines and Dispenser Removal**

On July 31, 2001, L.C. Services was contracted by ARCO to make all required preliminary notifications, and to clean, remove and dispose of the removed product distribution lines. Pertinent information concerning the product lines and dispenser removal activities is summarized below: A copy of the Uniform Hazardous Waste Manifest is included in Enclosure B.

Lead Agency: Alameda County Health Care Services Agency  
Agency Contact Name: Robert Weston  
Agency Phone Number: (510) 567-6781  
UST Contractor: L. C. Services  
527 North Parkview, Fresno, CA 93728

Final Disposition of Product Lines: Ecology Control Industries, 255 Parr Blvd, Richmond, CA 94801

NOV 27 2001

### **Soil Sampling Beneath Product Lines and Dispenser Island**

A Delta representative was on-site July 31, 2001 to conduct soil sampling during product line and dispenser removal and upgrade activities. A representative from the Alameda County Health Care Services Agency (ACHCSA) was on-site to observe the sampling. Soil samples were collected beneath the dispensers following their removal. Dispenser soil samples DP-1 through DP-4 were collected at depths ranging from 3.3 to 4.6 feet below surface grade (bsg). Product line soil samples PL-1 through PL-4 were collected within the product line trench at depths ranging from 3.6 to 4.8 feet bsg. At the request of the ACHCSA representative, underground storage tank soil samples, UST-1 and UST-2, were collected on the east side of the underground storage tank pit at approximately 3.0 feet bsg. The soil sample locations are shown in Figure 2.

Following collection, the soil sample tubes were capped with Teflon tape and plastic caps and stored on ice until the time the samples were received at the laboratory. Samples were submitted to Sequoia Analytical Laboratory (Sequoia) in Sacramento, California for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tertiary butyl ether (MTBE), and total petroleum hydrocarbons as gasoline (TPHg) using DHS LUFT Methods, and total metals using EPA Series Methods 6000/7000. Soil sample analytical results are summarized in Table 1.

In the soil samples collected during the July 31, 2001 sampling event, the laboratory reported detectable concentrations of analytes in samples PL-3, DP-3, UST-1 and UST-2. The laboratory reported detectable concentrations of TPHg ranging from 6.3 milligrams per kilogram (mg/kg) in soil sample UST-2 to 1400 mg/kg in soil samples PL-3 and UST-1. The laboratory reported detectable concentrations of benzene ranging from 0.32 mg/kg in PL-3 to 2.4 mg/kg in UST-1. Concentrations of toluene were reported at concentrations ranging from 0.060 mg/kg in UST-2 to 15 mg/kg in PL-3. Concentrations of ethylbenzene were reported at concentrations ranging from 0.036 mg/kg in UST-2 to 15 mg/kg in PL-3. Concentrations of total xylenes were reported at concentrations of 0.12 in DP-3 to 94 mg/kg in PL-3. Concentrations of MTBE were reported at concentrations of 0.58 mg/kg in DP-3 to 11 mg/kg in UST-1. A copy of the laboratory analytical reports with chain-of-custody documentation is included in Enclosure C.

### **Over-excavation and Sampling**

Following receipt of the analytical results from the July 31, 2001, sampling event, approximately 7 cubic yards of soil was over-excavated in the area of soil sample PL-3 on August 7, 2001. A confirmation soil sample (PL-3-9) was then collected from the base of the excavation at approximately 9.0 feet bsg and placed in a brass tube and capped with teflon and a plastic cap. The soil sample was submitted to Sequoia for analyses of BTEX, MTBE, and TPHg using the previously described methods. Soil sample analytical results for the samples are summarized in Table 1 and copies of the laboratory analytical reports with chain-of-custody documentation are included in Enclosure C. The soil sample location and limits of the over-excavation are shown on Figure 2. No soil was excavated near the location of sample UST-1 due to the proximity of the USTs.

### **Soil Management and Stockpile Sampling**

A total of approximately 14.44 tons (9.8 cubic yards) of overburden was excavated from the dispensers and lines and stockpiled onsite for disposal profile analysis. Two composite soil samples were collected

Mr. Robert Weston  
Alameda County Health Care Services Agency  
Department of Environmental Health  
November 20, 2001  
Page 3

in brass tubes from two separate soil stockpiles and submitted to the laboratory where they were analyzed by Sequoia for BTEX, TPHg and lead to ensure results met waste acceptance guidelines at Republic Landfill in Livermore, California. However, approximately 40 cubic yards of trench and dispenser soil was re-used as backfill upon the verbal approval of the ACHCSA as explained by CPI. Soil stockpile analytical results are presented in Table 1. A copy of the soil stockpile laboratory analytical report with chain-of-custody documentation is included in Enclosure B. The remaining stockpiled soil from the over-excavation was removed from the site on August 27, 2001, by Dillard and transported to Republic Landfill. A copy of the completion letter for all of the soil removed from the site is included in Enclosure D.

**Remarks/Signatures**

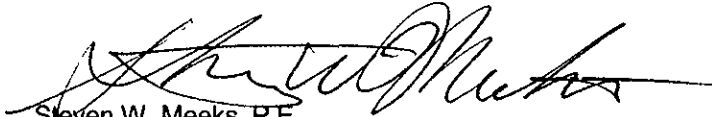
The interpretations contained in this document represent our professional opinions and are based, in part, on information supplied by the client. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydro-geologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

If you have any questions regarding this project, please contact Steven Meeks at (916) 536-2613.

**DELTA ENVIRONMENTAL CONSULTANTS, INC.**



Brett A. Bardsley  
Staff Geologist



Steven W. Meeks, P.E.  
Project Manager  
California Registered Civil Engineer No. C057461

BAB (Lrp001.307.doc)  
Enclosures

cc: Mr. Paul Supple – Atlantic Richfield Company



TABLE 1

## SOIL SAMPLE ANALYTICAL RESULTS

ARCO Service Station No. 2112  
1260 Park Street  
Alameda, California

Sample ID	Date Sampled	Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	TPHg (mg/kg)	MTBE (mg/kg)	Lead (mg/kg)
<b><u>Product Line Samples</u></b>									
PL-1	07/31/01	3.7	<0.025	<0.025	<0.025	<0.025	<5.0	<0.25	<10
PL-2	07/31/01	4.6	<0.025	<0.025	<0.025	<0.025	<5.0	<0.25	<10
PL-3	07/31/01	4.8	0.32	15	15	94.0	1400	2.6	<10
PL-4	07/31/01	3.6	<0.025	<0.025	<0.025	<0.025	<5.0	<0.25	<10
<b><u>Dispenser Samples</u></b>									
DP-1	07/31/01	3.3	<0.025	<0.025	<0.025	<0.025	<5.0	<0.25	<10
DP-2	07/31/01	4.3	<0.025	<0.025	<0.025	<0.025	<5.0	<0.25	<10
DP-3	07/31/01	4.6	<0.025	<0.025	<0.025	0.120	<5.0	0.58	<10
DP-4	07/31/01	3.5	<0.025	<0.025	<0.025	<0.025	<5.0	<0.25	<10
<b><u>UST Samples</u></b>									
UST-1	07/31/01	3	2.4	31	17	110	1400	11	<10
UST-2	07/31/01	3	<0.025	0.060	0.036	0.32	6.3	<0.25	<10
<b><u>Over-excavation</u></b>									
PL-3	08/07/01	9	<0.050	0.075	0.072	0.45	<10	11	<10
<b><u>Soil Stockpile Results</u></b>									
SP-1,2,3,4	07/31/01		<0.025	0.050	0.05	0.47	11	NA	11
SP-5,6,7,8	08/07/01		0.070	0.16	0.14	5.2	35	NA	<10

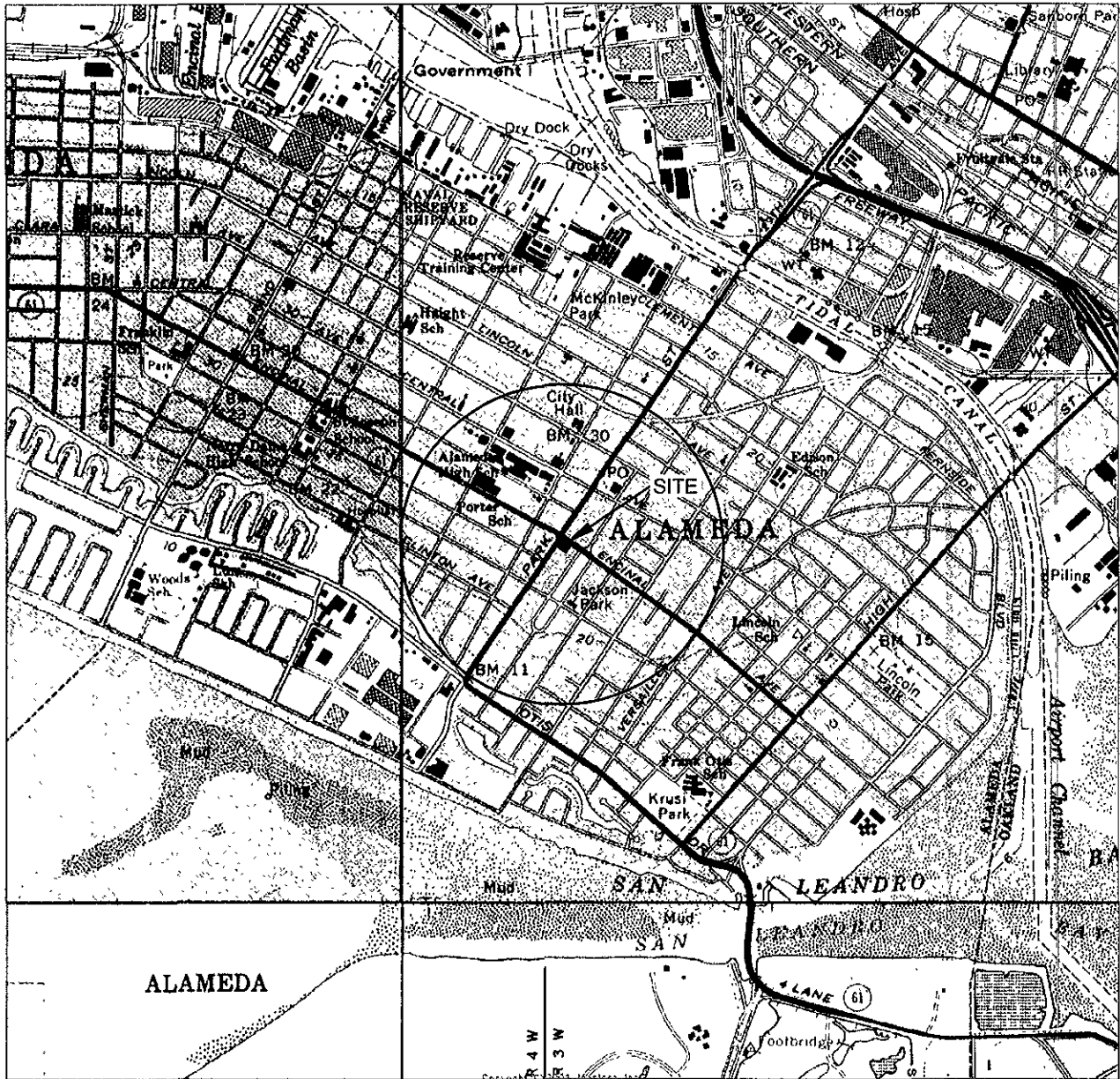
TPHg = Total Petroleum Hydrocarbons as gasoline (C6-C12)

MTBE = Methyl tertiary butyl ether analyzed by EPA Method 8021B unless otherwise noted

µg/L = Micrograms per liter

NA = Not Analyzed

N/A = Not Applicable



R.3.W.

GENERAL NOTES:  
 BASE MAP FROM U.S.G.S.  
 OAKLAND EAST, CALIF.  
 7.5 MINUTE TOPOGRAPHIC  
 PHOTOREVISED 1980



QUADRANGLE LOCATION



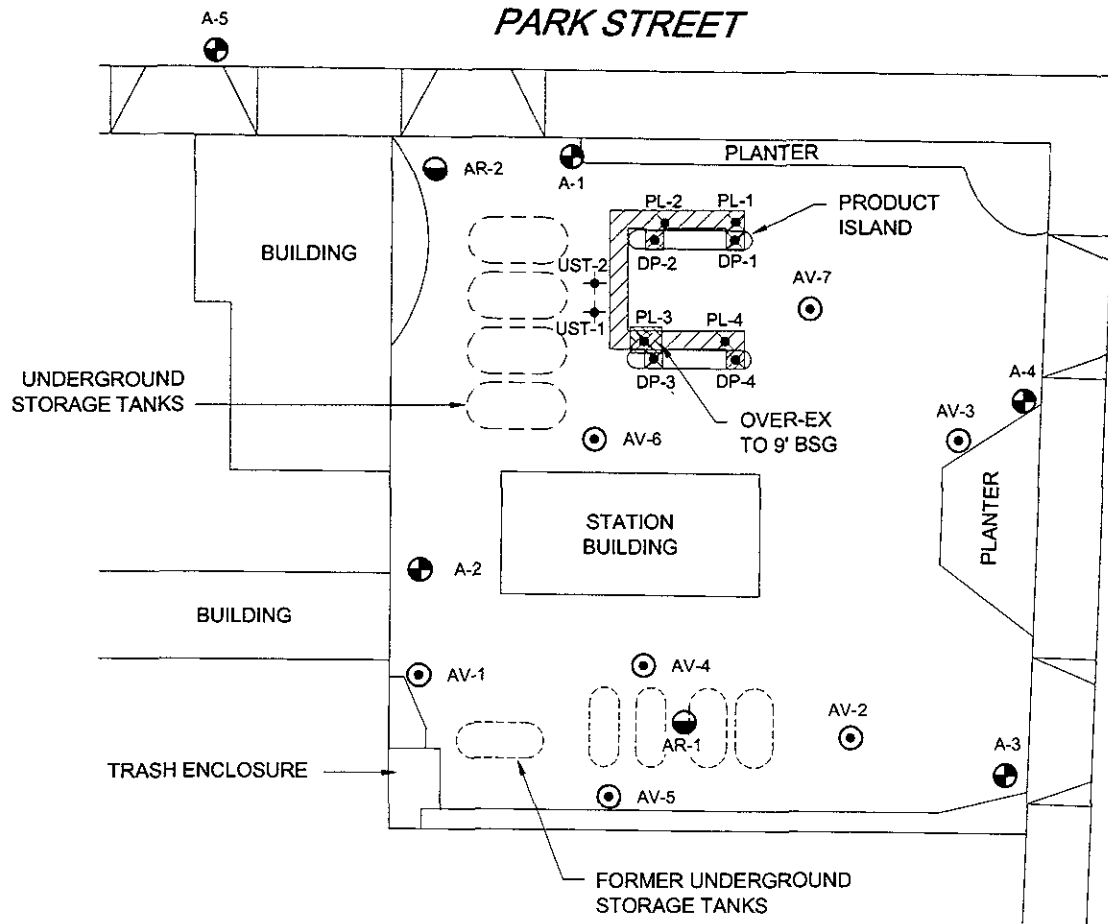
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FIGURE 1  
 SITE LOCATION MAP  
 ARCO SERVICE STATION NO. 2112  
 1260 PARK STREET  
 ALAMEDA, CALIFORNIA

PROJECT NO. D000-307	DRAWN BY TLA 9/23/01
FILE NO 2112-1A	PREPARED BY TLA
REVISION NO. 1	REVIEWED BY



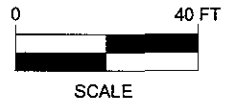
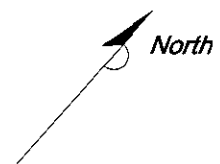
I:\Sacramento\CAD Files\Sacramento\ARCO\2112\2112-1.dwg



DISPENSER PUMP & PRODUCT LINES

SAMPLE I.D.	SAMPLE DEPTH
DP-1	3.3 FEET
DP-2	4.3 FEET
DP-3	4.6 FEET
DP-4	3.5 FEET
PL-1	3.7 FEET
PL-2	4.6 FEET
PL-3	4.8 FEET
PL-4	3.6 FEET
UST-1	3 0 FEET
UST-2	3 0 FEET

ENCINAL AVENUE



LEGEND:

- A-1 MONITORING WELL LOCATION
- AR-1 GROUND WATER EXTRACTION WELL LOCATION
- AV-1 VAPOR EXTRACTION WELL LOCATION
- ✦ UST-1 TANK BASIN SOIL SAMPLE LOCATIONS
- ✦ PL-1 FORMER PRODUCT LINE/ DISPENSER PUMP SOIL SAMPLE LOCATIONS
- ▨ PRODUCT LINE EXCAVATION TRENCH

FIGURE 2  
SOIL SAMPLE LOCATION MAP  
ARCO SERVICE STATION NO. 2112  
1260 PARK STREET  
ALAMEDA, CALIFORNIA

PROJECT NO D000-307	DRAWN BY TLA 9/24/01
FILE NO. 2112-1	PREPARED BY TLA
REVISION NO 2	REVIEWED BY



**ENCLOSURE A**  
Field Methods and Procedures

## **FIELD METHODS AND PROCEDURES**

ARCO Station No. 2112  
1260 Park Street, Alameda, California

### **1.1 Health and Safety Plan**

Delta personnel performed fieldwork in accordance with a Health and Safety Plan developed for the site. This plan described the basic safety requirements for the subsurface investigation at the site. The Health and Safety Plan was applicable to personnel and subcontractors of Delta. Personnel at the site were informed of the contents of the Health and Safety Plan prior to beginning work. A copy of the Health and Safety Plan was kept at the work site and was available for reference by appropriate parties during the work. The Delta geologist acted as the Site Safety Officer.

### **1.2 Soil Sampling and Contamination Reduction**

Soil sampling was performed under the direction of Delta geologists. To reduce the chances of cross-contamination between samples, all sampling equipment was either steam-cleaned or washed with a non-phosphatic detergent between each sample location. To reduce cross-contamination between samples, the sampler was washed in a soap solution and double-rinsed between each sampling event.

### **1.3 Soil Sample Collection**

Soil at the sample location was excavated to a depth of approximately 6 inches above the sampling depth. At this depth, a hand operated impact sampler lined with a 6-inch clean brass sampling tube was used to collect the soil sample. Soil cuttings collected immediately above the soil sample were placed into a Ziploc<sup>®</sup> bag and sealed for later screening with a PID. That part of the soil sample collected in the brass tube within the impact sampler was sealed with Teflon<sup>®</sup> sheeting and plastic caps, labeled and stored on ice at approximately 4° C for transport to the laboratory.

### **1.4 Soil Sample Screening/hNu Portable Photoionization Detector Method**

After the soil sample Ziploc<sup>®</sup> bags had been brought to ambient temperature, the headspace vapors of the soil sample in the bag were screened with a PID equipped with a 10.2 eV lamp. The corner of the sample bag was opened and the detector probe immediately placed within the headspace. The highest observed reading was recorded. Field instruments such as the PID are useful for indicating relative levels of hydrocarbon vapors, but do not detect concentrations with the same precision as laboratory analyses.

### **1.5 Product Distribution Lines and Dispenser Sampling**

Soil samples were collected following the removal of the product distribution lines and dispensers. Samples were collected approximately 1 foot below the backfill/native soil interface within the product line trench. If groundwater was encountered above the base of the excavation, soil samples were collected from the sidewalls of the excavations immediately above the groundwater. Following removal of the dispensers, one soil sample was collected approximately 2 feet below the backfill/native soil interface beneath each dispenser.

### **1.6 Soil Stockpile Sampling**

Four soil samples will be collected from each 50 cubic yards of stockpiled soil, with each set of four samples to be composited in the laboratory prior to analyses. Soil samples will be collected in 2-inch diameter brass tubes that will be sealed with Teflon sheeting and plastic caps. The samples will be labeled, stored in an ice chest and cooled to approximately 4°C for transport to the laboratory.



## **2.0 ANALYTICAL PROCEDURES**

Selected soil samples submitted to the laboratory were analyzed for BTEX, TPH as gasoline and MTBE using DHS LUFT and total metals using EPA Series Methods 6000/7000.

## **3.0 QUALITY ASSURANCE PLAN**

This section describes the field and analytical procedures followed throughout the investigation.

### **3.1 General Sample Collection and Handling Procedures**

Proper collection and handling are essential to ensure the quality of a sample. Each sample was collected in a suitable container, preserved correctly for the intended analysis, and stored prior to analysis for no longer than the maximum allowable holding time. Details on the procedures for collection and handling of soil samples used on this project can be found in Section 1.0 (Methods).

### **3.2 Sample Identification and Chain-of-Custody Procedures**

Sample identification and chain-of-custody procedures ensure sample integrity and document sample possession from the time of collection to its ultimate disposal. Each sample container submitted for analysis had a label affixed to identify the job number, sampler, date and time of sample collection, and a sample number unique to that sample. This information, in addition to a description of the sample, field measurements made, sampling methodology, names of on-site personnel, and any other pertinent field observations, was recorded on the borehole log or in the field records. A California-certified laboratory analyzed samples.

A chain-of-custody form was used to record possession of the sample from time of collection to its arrival at the laboratory. When the samples were shipped, the person in custody of them relinquished the samples by signing the chain-of-custody form and noting the time. The sample-control officer at the laboratory verified sample integrity and confirmed that the samples were collected in the proper container, preserved correctly, and that there was an adequate volume for analysis.

If these conditions were met, the sample was assigned a unique log number for identification throughout analysis and reporting. The log number was recorded on the chain-of-custody form and in the legally-required logbook maintained by the laboratory in the laboratory. The sample description, date received, client's name, and other relevant information was also recorded.

**ENCLOSURE B**

Uniform Hazardous Waste Manifest

See Instructions on back of page 6 *24240*

Department of Toxic Substances Control  
Sacramento, California

State of California—Environmental Protection Agency  
Form Approved OMB No. 2050-0039 (Expires 9-30-99)  
Please print or type. Form designed for use on elite (12-pitch) typewriter.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7350

GENERATOR FACILITY

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. <b>CALCIC00A2292</b>		Manifest Document No. <b>861511</b>		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.							
3. Generator's Name and Mailing Address <b>ARCO 1260 PARK ST ALHAMBRA CA 94570 SP4772012</b>				A. State Manifest Document Number <b>31005151</b>											
4. Generator's Phone <b>925 299-8891</b>				6. US EPA ID Number		C. State Generator's ID									
5. Transporter 1 Company Name <b>ECOLOGY CONTROL INDUSTRIES</b>				<b>CAD982030173</b>		D. Transporter's Phone <b>510-235-1393</b>									
7. Transporter 2 Company Name				8. US EPA ID Number		E. State Transporter's ID (Reserved)									
6. US EPA ID Number				10. US EPA ID Number		G. State Facility's ID <b>CAD009466392</b>									
7. Transporter 2 Company Name <b>ECOLOGY CONTROL INDUSTRIES</b>				<b>CAD009466392</b>		H. Facility's Phone <b>(510) 235-1393</b>									
5. Transporter 1 Company Name <b>ECOLOGY CONTROL INDUSTRIES</b>				255 PARR BLVD RICHMOND, CA 94801		12. Containers		13. Total Quantity		14. Unit Wt/Vol		I. Waste Number			
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) <b>NON HAZARDOUS WASTE SOLID WASTE EMPTY STORAGE TANK PIPING</b>				No. <b>091</b>		Type <b>CM</b>		<b>10000</b>		<b>P</b>		State <b>512</b>			
b.												EPA/Other <b>NONE</b>			
c.												State			
d.												EPA/Other			
Additional Description from Manifest and Other Documents <b>EMPTY STORAGE TANK PIPING CORRECT</b>				K. Handling Codes for Wastes Listed Above		a. <b>01/99</b>		b.		c.		d.			
<b>WEAR PROPER PROTECTIVE EQUIPMENT WHILE HANDLING. WEIGHTS OR VOLUMES ARE APPROXIMATE. 24 HOUR EMERGENCY CONTACT: 24 HOUR EMERGENCY TELEPHONE NUMBER: DOT ERG # 171</b>															
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.															
Printed/Typed Name <b>James Busck</b>				Signature <i>[Signature]</i>				Month <b>08</b>		Day <b>02</b>		Year <b>01</b>			
17. Transporter 1 Acknowledgment of Receipt of Materials Printed/Typed Name <b>Kirk Boden</b>				Signature <i>[Signature]</i>				Month <b>08</b>		Day <b>02</b>		Year <b>01</b>			
18. Transporter 2 Acknowledgment of Receipt of Materials Printed/Typed Name				Signature				Month		Day		Year			
19. Discrepancy Indication Space															
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.										Month <b>08</b>		Day <b>02</b>		Year <b>01</b>	
Printed/Typed Name <b>DAVID SANO</b>				Signature <i>[Signature]</i>											

DO NOT WRITE BELOW THIS LINE.

**ENCLOSURE C**

Soil Sample Laboratory Analytical Reports



**Sequoia  
Analytical**

819 Striker Avenue, Suite 8  
Sacramento, CA 95834  
(916) 921-9600  
FAX (916) 921-0100  
www.sequoialabs.com

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6 August, 2001

Steven Meeks  
Delta Environmental Consultants(Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova, CA 95670

RE: ARCO 2112, Alameda, CA  
Sequoia Report: S108005

Enclosed are the results of analyses for samples received by the laboratory on 08/01/01 09:43. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ron Chew  
Client Services Representative

Lito Diaz  
Laboratory Director

CA ELAP Certificate #1624



Delta Environmental Consultants(Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
Project Number: N/A  
Project Manager: Steven Meeks

**Reported:**  
08/06/01 15:33

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DP-1-3.3	S108005-01	Soil	07/31/01 13:23	08/01/01 09:43
PL-1-3.7	S108005-02	Soil	07/31/01 13:33	08/01/01 09:43
PL-2-4.6	S108005-03	Soil	07/31/01 13:43	08/01/01 09:43
DP-2-4.3	S108005-04	Soil	07/31/01 13:52	08/01/01 09:43
PL-3-4.8	S108005-05	Soil	07/31/01 14:04	08/01/01 09:43
DP-3-4.6	S108005-06	Soil	07/31/01 14:12	08/01/01 09:43
PL-4-3.6	S108005-07	Soil	07/31/01 14:17	08/01/01 09:43
DP-4-3.5	S108005-08	Soil	07/31/01 14:24	08/01/01 09:43
UST-1-3	S108005-09	Soil	07/31/01 14:37	08/01/01 09:43
UST-2-3	S108005-10	Soil	07/31/01 14:46	08/01/01 09:43

Sequoia Analytical - Sacramento

Ron Chew, Client Services Representative

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



Delta Environmental Consultants(Rancho Cordova 3164 Gold Camp Drive Ste. 200 Rancho Cordova CA, 95670	Project: ARCO 2112, Alameda, CA Project Number: N/A Project Manager: Steven Meeks	Reported: 08/06/01 15:33
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT**

**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>DP-1-3.3 (S108005-01) Soil Sampled: 07/31/01 13:23 Received: 08/01/01 09:43</b>									
Purgeable Hydrocarbons	ND	5.0	mg/kg	1	1080017	08/01/01	08/01/01	DHS LUFT	
Benzene	ND	0.025	"	"	"	"	"	"	
Toluene	ND	0.025	"	"	"	"	"	"	
Ethylbenzene	ND	0.025	"	"	"	"	"	"	
Xylenes (total)	ND	0.025	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.25	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		114 %	60-140		"	"	"	"	
<b>PL-1-3.7 (S108005-02) Soil Sampled: 07/31/01 13:33 Received: 08/01/01 09:43</b>									
Purgeable Hydrocarbons	ND	5.0	mg/kg	1	1080017	08/01/01	08/01/01	DHS LUFT	
Benzene	ND	0.025	"	"	"	"	"	"	
Toluene	ND	0.025	"	"	"	"	"	"	
Ethylbenzene	ND	0.025	"	"	"	"	"	"	
Xylenes (total)	ND	0.025	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.25	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		119 %	60-140		"	"	"	"	
<b>PL-2-4.6 (S108005-03) Soil Sampled: 07/31/01 13:43 Received: 08/01/01 09:43</b>									
Purgeable Hydrocarbons	ND	5.0	mg/kg	1	1080017	08/01/01	08/01/01	DHS LUFT	
Benzene	ND	0.025	"	"	"	"	"	"	
Toluene	ND	0.025	"	"	"	"	"	"	
Ethylbenzene	ND	0.025	"	"	"	"	"	"	
Xylenes (total)	ND	0.025	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.25	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		114 %	60-140		"	"	"	"	



Delta Environmental Consultants(Rancho Cordova  
 3164 Gold Camp Drive Ste. 200  
 Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
 Project Number: N/A  
 Project Manager: Steven Meeks

Reported:  
 08/06/01 15:33

**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT**

**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>DP-2-4.3 (S108005-04) Soil Sampled: 07/31/01 13:52 Received: 08/01/01 09:43</b>									
Purgeable Hydrocarbons	ND	5.0	mg/kg	1	1080017	08/01/01	08/01/01	DHS LUFT	
Benzene	ND	0.025	"	"	"	"	"	"	
Toluene	ND	0.025	"	"	"	"	"	"	
Ethylbenzene	ND	0.025	"	"	"	"	"	"	
Xylenes (total)	ND	0.025	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.25	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		115 %	60-140		"	"	"	"	
<b>PL-3-4.8 (S108005-05) Soil Sampled: 07/31/01 14:04 Received: 08/01/01 09:43</b>									
Purgeable Hydrocarbons	1400	50	mg/kg	10	1080017	08/01/01	08/01/01	DHS LUFT	
Benzene	0.32	0.25	"	"	"	"	"	"	
Toluene	15	0.25	"	"	"	"	"	"	
Ethylbenzene	15	0.25	"	"	"	"	"	"	
Xylenes (total)	94	0.25	"	"	"	"	"	"	
Methyl tert-butyl ether	2.6	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		107 %	60-140		"	"	"	"	
<b>DP-3-4.6 (S108005-06) Soil Sampled: 07/31/01 14:12 Received: 08/01/01 09:43</b>									
Purgeable Hydrocarbons	ND	5.0	mg/kg	1	1080017	08/01/01	08/01/01	DHS LUFT	
Benzene	ND	0.025	"	"	"	"	"	"	
Toluene	ND	0.025	"	"	"	"	"	"	
Ethylbenzene	ND	0.025	"	"	"	"	"	"	
Xylenes (total)	0.12	0.025	"	"	"	"	"	"	
Methyl tert-butyl ether	0.58	0.25	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		115 %	60-140		"	"	"	"	





Delta Environmental Consultants/Rancho Cordova  
 3164 Gold Camp Drive Ste. 200  
 Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
 Project Number: N/A  
 Project Manager: Steven Meeks

Reported:  
 08/06/01 15:33

**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT**  
**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>PL-4-3.6 (S108005-07) Soil Sampled: 07/31/01 14:17 Received: 08/01/01 09:43</b>									
Purgeable Hydrocarbons	ND	5.0	mg/kg	1	1080017	08/01/01	08/01/01	DHS LUFT	
Benzene	ND	0.025	"	"	"	"	"	"	
Toluene	ND	0.025	"	"	"	"	"	"	
Ethylbenzene	ND	0.025	"	"	"	"	"	"	
Xylenes (total)	ND	0.025	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.25	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		109 %	60-140		"	"	"	"	
<b>DP-4-3.5 (S108005-08) Soil Sampled: 07/31/01 14:24 Received: 08/01/01 09:43</b>									
Purgeable Hydrocarbons	ND	5.0	mg/kg	1	1080017	08/01/01	08/01/01	DHS LUFT	
Benzene	ND	0.025	"	"	"	"	"	"	
Toluene	ND	0.025	"	"	"	"	"	"	
Ethylbenzene	ND	0.025	"	"	"	"	"	"	
Xylenes (total)	ND	0.025	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.25	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		114 %	60-140		"	"	"	"	
<b>UST-1-3 (S108005-09) Soil Sampled: 07/31/01 14:37 Received: 08/01/01 09:43</b>									
Purgeable Hydrocarbons	1400	50	mg/kg	10	1080017	08/01/01	08/01/01	DHS LUFT	
Benzene	2.4	0.25	"	"	"	"	"	"	
Toluene	31	0.25	"	"	"	"	"	"	
Ethylbenzene	17	0.25	"	"	"	"	"	"	
Xylenes (total)	110	0.25	"	"	"	"	"	"	
Methyl tert-butyl ether	11	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		124 %	60-140		"	"	"	"	



Delta Environmental Consultants(Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
Project Number: N/A  
Project Manager: Steven Meeks

**Reported:**  
08/06/01 15:33

**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT**  
**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>UST-2-3 (S108005-10) Soil Sampled: 07/31/01 14:46 Received: 08/01/01 09:43</b>									
Purgeable Hydrocarbons	6.3	5.0	mg/kg	1	1080017	08/01/01	08/01/01	DHS LUFT	
Benzene	ND	0.025	"	"	"	"	"	"	
Toluene	0.060	0.025	"	"	"	"	"	"	
Ethylbenzene	0.036	0.025	"	"	"	"	"	"	
Xylenes (total)	0.32	0.025	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.25	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		104 %	60-140		"	"	"	"	



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Delta Environmental Consultants(Rancho Cordova  
 3164 Gold Camp Drive Ste. 200  
 Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
 Project Number: N/A  
 Project Manager: Steven Meeks

Reported:  
 08/06/01 15:33

**Total Metals by EPA 6000/7000 Series Methods**  
**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>DP-1-3.3 (S108005-01) Soil Sampled: 07/31/01 13:23 Received: 08/01/01 09:43</b>									
Lead	ND	10	mg/kg	4	1080028	08/02/01	08/06/01	EPA 6010A	
<b>PL-1-3.7 (S108005-02) Soil Sampled: 07/31/01 13:33 Received: 08/01/01 09:43</b>									
Lead	ND	10	mg/kg	4	1080028	08/02/01	08/06/01	EPA 6010A	
<b>PL-2-4.6 (S108005-03) Soil Sampled: 07/31/01 13:43 Received: 08/01/01 09:43</b>									
Lead	ND	10	mg/kg	4	1080028	08/02/01	08/06/01	EPA 6010A	
<b>DP-2-4.3 (S108005-04) Soil Sampled: 07/31/01 13:52 Received: 08/01/01 09:43</b>									
Lead	ND	10	mg/kg	4	1080028	08/02/01	08/06/01	EPA 6010A	R-01
<b>PL-3-4.8 (S108005-05) Soil Sampled: 07/31/01 14:04 Received: 08/01/01 09:43</b>									
Lead	ND	10	mg/kg	4	1080028	08/02/01	08/06/01	EPA 6010A	R-01
<b>DP-3-4.6 (S108005-06) Soil Sampled: 07/31/01 14:12 Received: 08/01/01 09:43</b>									
Lead	ND	10	mg/kg	4	1080028	08/02/01	08/06/01	EPA 6010A	R-01
<b>PL-4-3.6 (S108005-07) Soil Sampled: 07/31/01 14:17 Received: 08/01/01 09:43</b>									
Lead	ND	10	mg/kg	4	1080028	08/02/01	08/06/01	EPA 6010A	
<b>DP-4-3.5 (S108005-08) Soil Sampled: 07/31/01 14:24 Received: 08/01/01 09:43</b>									
Lead	ND	10	mg/kg	4	1080028	08/02/01	08/06/01	EPA 6010A	
<b>UST-1-3 (S108005-09) Soil Sampled: 07/31/01 14:37 Received: 08/01/01 09:43</b>									
Lead	ND	10	mg/kg	4	1080028	08/02/01	08/06/01	EPA 6010A	R-01



Delta Environmental Consultants(Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
Project Number: N/A  
Project Manager: Steven Meeks

**Reported:**  
08/06/01 15:33

**Total Metals by EPA 6000/7000 Series Methods  
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>UST-2-3 (S108005-10) Soil Sampled: 07/31/01 14:46 Received: 08/01/01 09:43</b>									
Lead	10	10	mg/kg	4	1080028	08/02/01	08/06/01	EPA 6010A	



Delta Environmental Consultants(Rancho Cordova 3164 Gold Camp Drive Ste. 200 Rancho Cordova CA, 95670	Project: ARCO 2112, Alameda, CA Project Number: N/A Project Manager: Steven Meeks	Reported: 08/06/01 15:33
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control**  
**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 1080017 - EPA 5030B (MeOH)**

**Blank (1080017-BLK1)**

Prepared & Analyzed: 08/01/01

Purgeable Hydrocarbons	ND	5.0	mg/kg							
Benzene	ND	0.025	"							
Toluene	ND	0.025	"							
Ethylbenzene	ND	0.025	"							
Xylenes (total)	ND	0.025	"							
Methyl tert-butyl ether	ND	0.25	"							

*Surrogate: a,a,a-Trifluorotoluene*      1.23      "      1.00      123      60-140

**LCS (1080017-BS1)**

Prepared & Analyzed: 08/01/01

Benzene	1.08	0.025	mg/kg	1.00		108	70-130			
Toluene	1.11	0.025	"	1.00		111	70-130			
Ethylbenzene	1.12	0.025	"	1.00		112	70-130			
Xylenes (total)	3.22	0.025	"	3.00		107	70-130			
Methyl tert-butyl ether	1.06	0.25	"	1.00		106	70-130			

*Surrogate: a,a,a-Trifluorotoluene*      1.13      "      1.00      113      60-140

**Matrix Spike (1080017-MS1)**

Source: S108005-07

Prepared & Analyzed: 08/01/01

Benzene	0.954	0.025	mg/kg	1.00	ND	95.4	60-140			
Toluene	0.996	0.025	"	1.00	ND	99.6	60-140			
Ethylbenzene	1.02	0.025	"	1.00	ND	102	60-140			
Xylenes (total)	2.93	0.025	"	3.00	ND	97.7	60-140			
Methyl tert-butyl ether	1.01	0.25	"	1.00	ND	101	60-140			

*Surrogate: a,a,a-Trifluorotoluene*      1.12      "      1.00      112      60-140

**Matrix Spike Dup (1080017-MSD1)**

Source: S108005-07

Prepared & Analyzed: 08/01/01

Benzene	0.967	0.025	mg/kg	1.00	ND	96.7	60-140	1.35	25	
Toluene	1.01	0.025	"	1.00	ND	101	60-140	1.40	25	
Ethylbenzene	1.01	0.025	"	1.00	ND	101	60-140	0.985	25	
Xylenes (total)	2.86	0.025	"	3.00	ND	95.3	60-140	2.42	25	
Methyl tert-butyl ether	1.02	0.25	"	1.00	ND	102	60-140	0.985	25	

*Surrogate: a,a,a-Trifluorotoluene*      1.11      "      1.00      111      60-140



Delta Environmental Consultants(Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
Project Number: N/A  
Project Manager: Steven Meeks

**Reported:**  
08/06/01 15:33

**Total Metals by EPA 6000/7000 Series Methods - Quality Control  
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1080028 - EPA 3050B</b>									
<b>Blank (1080028-BLK1)</b>					Prepared: 08/02/01 Analyzed: 08/06/01				
Lead	ND	2.5	mg/kg						
<b>LCS (1080028-BS1)</b>					Prepared: 08/02/01 Analyzed: 08/06/01				
Lead	53.8	2.5	mg/kg	50.0		108 80-120			
<b>Matrix Spike (1080028-MS1)</b>					Source: S108005-01 Prepared: 08/02/01 Analyzed: 08/06/01				
Lead	56.3	10	mg/kg	50.0	ND	105 80-120			
<b>Matrix Spike Dup (1080028-MSD1)</b>					Source: S108005-01 Prepared: 08/02/01 Analyzed: 08/06/01				
Lead	56.4	10	mg/kg	50.0	ND	105 80-120	0.177	20	



Delta Environmental Consultants/Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
Project Number: N/A  
Project Manager: Steven Meeks

**Reported:**  
08/06/01 15:33

#### Notes and Definitions

R-01 The Reporting Limit for this analyte has been raised to account for matrix interference.  
DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference



**Sequoia  
Analytical**

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2 August, 2001

Steven Meeks  
Delta Environmental Consultants(Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova, CA 95670

RE: ARCO 2112, Alameda, CA  
Sequoia Report: S108006

Enclosed are the results of analyses for samples received by the laboratory on 08/01/01 09:43. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ron Chew  
Client Services Representative

Lito Diaz  
Laboratory Director

CA ELAP Certificate #1624





Delta Environmental Consultants(Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
Project Number: N/A  
Project Manager: Steven Meeks

**Reported:**  
08/02/01 16:08

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP-1,2,3,4 (Composite)	S108006-01	Soil	07/31/01 14:54	08/01/01 09:43

Sequoia Analytical - Sacramento

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

Ron Chew, Client Services Representative



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Delta Environmental Consultants(Rancho Cordova  
 3164 Gold Camp Drive Ste. 200  
 Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
 Project Number: N/A  
 Project Manager: Steven Meeks

Reported:  
 08/02/01 16:08

**Total Purgeable Hydrocarbons (C6-C12) and BTEX by DHS LUFT**  
**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SP-1,2,3,4 (Composite) (S108006-01) Soil</b> <b>Sampled: 07/31/01 14:54</b> <b>Received: 08/01/01 09:43</b>									
<b>Purgeable Hydrocarbons</b>	<b>11</b>	<b>5.0</b>	<b>mg/kg</b>	<b>1</b>	<b>1080017</b>	<b>08/01/01</b>	<b>08/01/01</b>	<b>DHS LUFT</b>	
Benzene	ND	0.025	"	"	"	"	"	"	
Toluene	0.050	0.025	"	"	"	"	"	"	
Ethylbenzene	0.051	0.025	"	"	"	"	"	"	
Xylenes (total)	0.47	0.025	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		108 %	60-140		"	"	"	"	



Delta Environmental Consultants(Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
Project Number: N/A  
Project Manager: Steven Meeks

**Reported:**  
08/02/01 16:08

**Total Metals by EPA 6000/7000 Series Methods  
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>SP-1,2,3,4 (Composite) (S108006-01) Soil Sampled: 07/31/01 14:54 Received: 08/01/01 09:43</b>										
Lead	11	10		mg/kg	4	1080012	08/01/01	08/02/01	EPA 6010A	



Delta Environmental Consultants(Rancho Cordova  
 3164 Gold Camp Drive Ste. 200  
 Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
 Project Number: N/A  
 Project Manager: Steven Meeks

Reported:  
 08/02/01 16:08

**Total Purgeable Hydrocarbons (C6-C12) and BTEX by DHS LUFT - Quality Control**  
**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1080017 - EPA 5030B (MeOH)</b>										
<b>Blank (1080017-BLK1)</b> Prepared & Analyzed: 08/01/01										
Purgeable Hydrocarbons	ND	5.0	mg/kg							
Benzene	ND	0.025	"							
Toluene	ND	0.025	"							
Ethylbenzene	ND	0.025	"							
Xylenes (total)	ND	0.025	"							
Surrogate: a,a,a-Trifluorotoluene	1.23		"	1.00		123	60-140			
<b>LCS (1080017-BS1)</b> Prepared & Analyzed: 08/01/01										
Benzene	1.08	0.025	mg/kg	1.00		108	70-130			
Toluene	1.11	0.025	"	1.00		111	70-130			
Ethylbenzene	1.12	0.025	"	1.00		112	70-130			
Xylenes (total)	3.22	0.025	"	3.00		107	70-130			
Surrogate: a,a,a-Trifluorotoluene	1.13		"	1.00		113	60-140			
<b>Matrix Spike (1080017-MS1)</b> Source: S108005-07 Prepared & Analyzed: 08/01/01										
Benzene	0.954	0.025	mg/kg	1.00	ND	95.4	60-140			
Toluene	0.996	0.025	"	1.00	ND	98.8	60-140			
Ethylbenzene	1.02	0.025	"	1.00	ND	102	60-140			
Xylenes (total)	2.93	0.025	"	3.00	ND	96.9	60-140			
Surrogate: a,a,a-Trifluorotoluene	1.12		"	1.00		112	60-140			
<b>Matrix Spike Dup (1080017-MSD1)</b> Source: S108005-07 Prepared & Analyzed: 08/01/01										
Benzene	0.967	0.025	mg/kg	1.00	ND	96.7	60-140	1.35	25	
Toluene	1.01	0.025	"	1.00	ND	100	60-140	1.40	25	
Ethylbenzene	1.01	0.025	"	1.00	ND	101	60-140	0.985	25	
Xylenes (total)	2.86	0.025	"	3.00	ND	94.6	60-140	2.42	25	
Surrogate: a,a,a-Trifluorotoluene	1.11		"	1.00		111	60-140			



**Sequoia  
Analytical**

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Delta Environmental Consultants(Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
Project Number: N/A  
Project Manager: Steven Meeks

**Reported:**  
08/02/01 16:08

**Total Metals by EPA 6000/7000 Series Methods - Quality Control  
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1080012 - EPA 3050B</b>									
<b>Blank (1080012-BLK1)</b>					Prepared: 08/01/01 Analyzed: 08/02/01				
Lead	ND	2.5	mg/kg						
<b>LCS (1080012-BS1)</b>					Prepared: 08/01/01 Analyzed: 08/02/01				
Lead	50.7	2.5	mg/kg	50.0	14	89.2	80-120		
<b>Matrix Spike (1080012-MS1)</b>					Source: S107397-01 Prepared: 08/01/01 Analyzed: 08/02/01				
Lead	58.6	10	mg/kg	50.0	14	89.2	80-120		
<b>Matrix Spike Dup (1080012-MSD1)</b>					Source: S107397-01 Prepared: 08/01/01 Analyzed: 08/02/01				
Lead	64.0	10	mg/kg	50.0	14	100	80-120	8.81	20



Delta Environmental Consultants(Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
Project Number: N/A  
Project Manager: Steven Meeks

**Reported:**  
08/02/01 16:08

**Notes and Definitions**

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference



**Sequoia  
Analytical**

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9 August, 2001

Steven Meeks  
Delta Environmental Consultants(Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova, CA 95670

RE: ARCO 2112, Alameda, CA  
Sequoia Report: S108097

Enclosed are the results of analyses for samples received by the laboratory on 08/07/01 17:05. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ron Chew  
Client Services Representative

Lito Diaz  
Laboratory Director

CA ELAP Certificate #1624



Delta Environmental Consultants/Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
Project Number: N/A  
Project Manager: Steven Meeks

**Reported:**  
08/09/01 17:53

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP-5,6,7,8 (Composite)	S108097-01	Soil	08/07/01 00:00	08/07/01 17:05

Sequoia Analytical - Sacramento

Ron Chew, Client Services Representative

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





Delta Environmental Consultants/Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
Project Number: N/A  
Project Manager: Steven Meeks

**Reported:**  
08/09/01 17:53

**Total Purgeable Hydrocarbons and BTEX by DHS LUFT  
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SP-5.6.7.8 (Composite) (S108097-01) Soil</b> <b>Sampled: 08/07/01 00:00</b> <b>Received: 08/07/01 17:05</b>									
<b>Purgeable Hydrocarbons</b>	<b>35</b>	10	mg/kg	2	1080108	08/08/01	08/08/01	DHS LUFT	
<b>Benzene</b>	<b>0.070</b>	0.050	"	"	"	"	"	"	
<b>Toluene</b>	<b>0.16</b>	0.050	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.14</b>	0.050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>5.2</b>	0.050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		126 %	60-140		"	"	"	"	



Delta Environmental Consultants/Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
Project Number: N/A  
Project Manager: Steven Meeks

**Reported:**  
08/09/01 17:53

**Total Metals by EPA 6000/7000 Series Methods  
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SP-5.6.7.8 (Composite) (S108097-01) Soil Sampled: 08/07/01 00:00 Received: 08/07/01 17:05</b>									
Lead	ND	10	mg/kg	4	1080096	08/08/01	08/09/01	EPA 6010A	R-01



Delta Environmental Consultants/Rancho Cordova  
 3164 Gold Camp Drive Ste. 200  
 Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
 Project Number: N/A  
 Project Manager: Steven Meeks

Reported:  
 08/09/01 17:53

**Total Purgeable Hydrocarbons and BTEX by DHS LUFT - Quality Control**  
**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1080108 - EPA 5030B (MeOH)</b>										
<b>Blank (1080108-BLK1)</b> Prepared & Analyzed: 08/08/01										
Purgeable Hydrocarbons	ND	5.0	mg/kg							
Benzene	ND	0.025	"							
Toluene	ND	0.025	"							
Ethylbenzene	ND	0.025	"							
Xylenes (total)	ND	0.025	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>1.03</i>		<i>"</i>	<i>1.00</i>		<i>103</i>	<i>60-140</i>			
<b>LCS (1080108-BS1)</b> Prepared & Analyzed: 08/08/01										
Benzene	1.02	0.025	mg/kg	1.00		102	70-130			
Toluene	1.03	0.025	"	1.00		103	70-130			
Ethylbenzene	0.963	0.025	"	1.00		96.3	70-130			
Xylenes (total)	3.09	0.025	"	3.00		103	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>1.12</i>		<i>"</i>	<i>1.00</i>		<i>112</i>	<i>60-140</i>			
<b>Matrix Spike (1080108-MS1)</b> Source: S107405-29 Prepared & Analyzed: 08/08/01										
Benzene	1.04	0.025	mg/kg	1.00	ND	104	60-140			
Toluene	1.10	0.025	"	1.00	ND	110	60-140			
Ethylbenzene	0.985	0.025	"	1.00	ND	98.5	60-140			
Xylenes (total)	3.13	0.025	"	3.00	ND	104	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>1.10</i>		<i>"</i>	<i>1.00</i>		<i>110</i>	<i>60-140</i>			
<b>Matrix Spike Dup (1080108-MSD1)</b> Source: S107405-29 Prepared & Analyzed: 08/08/01										
Benzene	0.960	0.025	mg/kg	1.00	ND	96.0	60-140	8.00	25	
Toluene	0.911	0.025	"	1.00	ND	91.1	60-140	18.8	25	
Ethylbenzene	0.914	0.025	"	1.00	ND	91.4	60-140	7.48	25	
Xylenes (total)	1.99	0.025	"	3.00	ND	66.3	60-140	44.5	25	QM-07
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>1.03</i>		<i>"</i>	<i>1.00</i>		<i>103</i>	<i>60-140</i>			



Delta Environmental Consultants/Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
Project Number: N/A  
Project Manager: Steven Meeks

**Reported:**  
08/09/01 17:53

**Total Metals by EPA 6000/7000 Series Methods - Quality Control  
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Notes
<b>Batch 1080096 - EPA 3050B</b>										
<b>Blank (1080096-BLK1)</b>										
Prepared: 08/08/01 Analyzed: 08/09/01										
Lead	ND	2.5	mg/kg							
<b>LCS (1080096-BS1)</b>										
Prepared: 08/08/01 Analyzed: 08/09/01										
Lead	50.7	2.5	mg/kg	50.0		101	80-120			
<b>Matrix Spike (1080096-MS1)</b>										
Source: S108102-04 Prepared: 08/08/01 Analyzed: 08/09/01										
Lead	53.0	10	mg/kg	50.0	ND	96.8	80-120			
<b>Matrix Spike Dup (1080096-MSD1)</b>										
Source: S108102-04 Prepared: 08/08/01 Analyzed: 08/09/01										
Lead	52.9	10	mg/kg	50.0	ND	96.6	80-120	0.189	20	



Delta Environmental Consultants(Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
Project Number: N/A  
Project Manager: Steven Meeks

**Reported:**  
08/09/01 17:53

#### Notes and Definitions

QM-07 The spike recovery was outside control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

R-01 The Reporting Limit for this analyte has been raised to account for matrix interference.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

ARCO Facility no. **2112** City (Facility) **Alameda** Project manager (Consultant) **Steve Meeks**  
 ARCO engineer **Paul Supple** Telephone no. (ARCO) \_\_\_\_\_ Telephone no. (Consultant) **916-638-2085** Fax no. (Consultant) **716-638-8385**  
 Consultant name **Delta Environmental** Address (Consultant) **3164 Gold Camp Drive suite 200, Rancho Cordova, CA**

Laboratory name **Sequira**  
 Contract number \_\_\_\_\_

Sample I.D.	Lab no.	Container no.	Matrix			Preservation		Sampling date	Sampling time	BTEX EPA 802/EPA 8020	BTEX/TPH EPA 1602/8020/8015	TPH Modified 8015 Gas <input type="checkbox"/> Diesel <input type="checkbox"/>	Oil and Grease 413.1 <input type="checkbox"/> 413.2 <input type="checkbox"/>	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCUP Metals <input type="checkbox"/> VOAC <input type="checkbox"/> VOAC <input type="checkbox"/>	CATIONALS EPA 8017/8009 TLC <input type="checkbox"/> STP <input type="checkbox"/>	Lead Org/DHS <input type="checkbox"/> Lead EPA 7420/7421 <input type="checkbox"/>	Total Lead	Composite 4:1	
			Soil	Water	Other	Ice	Acid																
SP-5			X			X		8/7/01	950	X												X	
SP-6			X			X		8/7/01	950	X												X	
SP-7			X			X		8/7/01	950	X												X	
SP-8			X			X		8/7/01	950	X												X	

**5108097-01**

Method of shipment \_\_\_\_\_

Special detection Limit/reporting \_\_\_\_\_

Special QA/QC \_\_\_\_\_

Remarks **Stockpile**

Lab number \_\_\_\_\_

Turnaround time \_\_\_\_\_

Priority Rush  1 Business Day

Rush  2 Business Days

Expedited  5 Business Days

Standard  10 Business Days

Condition of sample: \_\_\_\_\_  
 Relinquished by sampler **Scott Barclay** Date **8/7/01** Time **1300**  
 Relinquished by **John Yarell** Date **8/7/01** Time **1705**  
 Relinquished by \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Temperature received: **17°C**  
 Received by **John Yarell** Date **8/7/01** Time **1600**  
 Received by **Melinda Gregson** Date **8/7/01** Time **1705**  
 Received by \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

P.2/3

NOV 20 '01 10:56AM SEQUIRIA/SAC



**Sequoia  
Analytical**

819 Striker Avenue, Suite 8  
Sacramento, CA 95834  
(916) 921-9600  
FAX (916) 921-0100  
www.sequoialabs.com

---

10 August, 2001

Steven Meeks  
Delta Environmental Consultants(Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova, CA 95670

RE: ARCO 2112, Alameda, CA  
Sequoia Report: S108098

Enclosed are the results of analyses for samples received by the laboratory on 08/07/01 17:05. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ron Chew  
Client Services Representative

Lito Diaz  
Laboratory Director

CA ELAP Certificate #1624



Delta Environmental Consultants/Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
Project Number: N/A  
Project Manager: Steven Meeks

**Reported:**  
08/10/01 14:27

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PL-3-9	S108098-01	Soil	08/07/01 09:30	08/07/01 17:05

Sequoia Analytical - Sacramento

Ron Chew, Client Services Representative

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





819 Striker Avenue, Suite 8  
 Sacramento, CA 95834  
 (916) 921-9600  
 FAX (916) 921-0100  
 www.sequoialabs.com

Delta Environmental Consultants(Rancho Cordova  
 3164 Gold Camp Drive Ste. 200  
 Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
 Project Number: N/A  
 Project Manager: Steven Meeks

Reported:  
 08/10/01 14:27

**Total Purgeable Hydrocarbon, BTEX and MTBE by DHS LUFT**

**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>PL-3-9 (S108098-01) Soil Sampled: 08/07/01 09:30 Received: 08/07/01 17:05</b>									
Purgeable Hydrocarbons	ND	10	mg/kg	2	1080116	08/09/01	08/09/01	DHS LUFT	
Benzene	ND	0.050	"	"	"	"	"	"	
<b>Toluene</b>	<b>0.075</b>	0.050	"	"	"	"	"	"	
Ethylbenzene	<b>0.072</b>	0.050	"	"	"	"	"	"	
Xylenes (total)	<b>0.45</b>	0.050	"	"	"	"	"	"	
Methyl tert-butyl ether	<b>11</b>	0.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		104 %	60-140		"	"	"	"	



Delta Environmental Consultants/Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
Project Number: N/A  
Project Manager: Steven Meeks

**Reported:**  
08/10/01 14:27

**Total Metals by EPA 6000/7000 Series Methods  
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>PL-3-9 (S108098-01) Soil Sampled: 08/07/01 09:30 Received: 08/07/01 17:05</b>										
Lead	ND	10		mg/kg	4	1080096	08/08/01	08/09/01	EPA 6010A	R-01



Delta Environmental Consultants(Rancho Cordova  
 3164 Gold Camp Drive Ste. 200  
 Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
 Project Number: N/A  
 Project Manager: Steven Meeks

Reported:  
 08/10/01 14:27

**Total Purgeable Hydrocarbon, BTEX and MTBE by DHS LUFT - Quality Control**  
**Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1080116 - EPA 5030B (MeOH)</b>										
<b>Blank (1080116-BLK1)</b> Prepared & Analyzed: 08/09/01										
Purgeable Hydrocarbons	ND	5.0	mg/kg							
Benzene	ND	0.025	"							
Toluene	ND	0.025	"							
Ethylbenzene	ND	0.025	"							
Xylenes (total)	ND	0.025	"							
Methyl tert-butyl ether	ND	0.25	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	1.04		"	1.00		104	60-140			
<b>LCS (1080116-BS1)</b> Prepared & Analyzed: 08/09/01										
Benzene	1.02	0.025	mg/kg	1.00		102	70-130			
Toluene	1.01	0.025	"	1.00		101	70-130			
Ethylbenzene	0.948	0.025	"	1.00		94.8	70-130			
Xylenes (total)	3.04	0.025	"	3.00		101	70-130			
Methyl tert-butyl ether	1.22	0.25	"	1.00		122	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	1.10		"	1.00		110	60-140			
<b>Matrix Spike (1080116-MS1)</b> Source: S108082-04 Prepared & Analyzed: 08/09/01										
Benzene	1.02	0.025	mg/kg	1.00	ND	101	60-140			
Toluene	1.04	0.025	"	1.00	0.056	98.4	60-140			
Ethylbenzene	0.958	0.025	"	1.00	ND	93.4	60-140			
Xylenes (total)	3.06	0.025	"	3.00	0.11	98.3	60-140			
Methyl tert-butyl ether	1.49	0.25	"	1.00	ND	149	60-140			QM-07
<i>Surrogate: a,a,a-Trifluorotoluene</i>	1.10		"	1.00		110	60-140			
<b>Matrix Spike Dup (1080116-MSD1)</b> Source: S108082-04 Prepared & Analyzed: 08/09/01										
Benzene	0.948	0.025	mg/kg	1.00	ND	94.0	60-140	7.32	25	
Toluene	0.919	0.025	"	1.00	0.056	86.3	60-140	12.4	25	
Ethylbenzene	0.899	0.025	"	1.00	ND	87.5	60-140	6.35	25	
Xylenes (total)	2.24	0.025	"	3.00	0.11	71.0	60-140	30.9	25	QM-07
Methyl tert-butyl ether	1.31	0.25	"	1.00	ND	131	60-140	12.9	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	1.06		"	1.00		106	60-140			



Delta Environmental Consultants/Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
Project Number: N/A  
Project Manager: Steven Meeks

**Reported:**  
08/10/01 14:27

**Total Metals by EPA 6000/7000 Series Methods - Quality Control  
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1080096 - EPA 3050B</b>									
<b>Blank (1080096-BLK1)</b>					Prepared: 08/08/01 Analyzed: 08/09/01				
Lead	ND	2.5	mg/kg						
<b>LCS (1080096-BS1)</b>					Prepared: 08/08/01 Analyzed: 08/09/01				
Lead	50.7	2.5	mg/kg	50.0		101 80-120			
<b>Matrix Spike (1080096-MS1)</b>					Source: S108102-04 Prepared: 08/08/01 Analyzed: 08/09/01				
Lead	53.0	10	mg/kg	50.0	ND	96.8 80-120			
<b>Matrix Spike Dup (1080096-MSD1)</b>					Source: S108102-04 Prepared: 08/08/01 Analyzed: 08/09/01				
Lead	52.9	10	mg/kg	50.0	ND	96.6 80-120	0.189	20	



Delta Environmental Consultants/Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova CA, 95670

Project: ARCO 2112, Alameda, CA  
Project Number: N/A  
Project Manager: Steven Meeks

**Reported:**  
08/10/01 14:27

#### Notes and Definitions

QM-07 The spike recovery was outside control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

R-01 The Reporting Limit for this analyte has been raised to account for matrix interference.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

ARCO Facility no. **2112** City (Facility) **Alameda** Project manager (Consultant) **Steve Meeks**  
 ARCO engineer **Paul Supple** Telephone no. (ARCO) \_\_\_\_\_ Telephone no. (Consultant) **916-638-2085** Fax no. (Consultant) **916-638-8385**  
 Consultant name **Delta Environmental** Address (Consultant) **3164 Gold Camp Drive suite 200, Rancho Cordova, CA**

Laboratory name **Sequoia**  
Contract number \_\_\_\_\_

Sample I.D.	Lab no.	Container no.	Matrix			Preservation		Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH MBE EPA 1602/8020/8015	TPH Modified 8015 Gas <input type="checkbox"/> Diesel <input type="checkbox"/>	Oil and Grease 413.1 <input type="checkbox"/> 413.2 <input type="checkbox"/>	TPH EPA 418.1/SME03E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCUP Merlab <input type="checkbox"/> VOAC <input type="checkbox"/> VOAC <input type="checkbox"/>	CHEM METALS EPA 601/7000 TLC <input type="checkbox"/> STLC <input type="checkbox"/>	Lead <input type="checkbox"/> Cad <input type="checkbox"/> Hg <input type="checkbox"/> Lead EPA 7420/7421 <input type="checkbox"/>	Total Lead	
			Soil	Water	Other	Ice	Acid															
<b>12-3-9</b>			<b>X</b>	<b>M<sup>o</sup> BB</b>		<b>X</b>		<b>8/7/01</b>	<b>930</b>		<b>X</b>											<b>X</b>

Method of shipment \_\_\_\_\_  
 Special detection Limit/reporting \_\_\_\_\_  
 Special QA/QC \_\_\_\_\_  
 Remarks **Line and dispenser sampling**  
 Lab number \_\_\_\_\_  
 Turnaround time \_\_\_\_\_  
 Priority Rush 1 Business Day \_\_\_\_\_  
 Rush 2 Business Days \_\_\_\_\_  
 Expedited 5 Business Days \_\_\_\_\_  
 Standard 10 Business Days \_\_\_\_\_

Condition of sample: \_\_\_\_\_ Temperature received: **16°C**

Relinquished by sampler <b>Brett Bardsley</b>	Date <b>8/7/01</b> Time <b>1300</b>	Received by <b>John Yuell</b>	Date <b>8/7/01</b> Time <b>1600</b>
Relinquished by <b>John Yuell</b>	Date <b>8/7/01</b> Time <b>1705</b>	Received by <b>Yvonna Groggen</b>	Date <b>8/7/01</b> Time <b>1705</b>
Relinquished by _____	Date _____ Time _____	Received by _____	Date _____ Time _____

P.3/3

NOV 20 '01 10:57AM SEQUOIA/SAC

**ENCLOSURE D**

Completion Letter for Soil Removed

Dillard Trucking, Inc. dba  
**DILLARD ENVIRONMENTAL SERVICES**  
P. O. BOX 579  
BYRON, CA. 94514  
(925) 634-6850 FAX (925) 634-0569

Via Fax (916) 638-8385

September 18, 2001

Attn: Brett  
Delta Environmental  
Sacramento, CA 95670

**RE: ARCO #2112**  
**1260 Park St.**  
**Alameda, CA**

Dear Brett:

Please be advised that 14.44 tons of soil from the above referenced site has been removed. The material was removed on 8/27/01 and disposed of at Republic Landfill, Vasco Rd., Livermore, California.

Should you have any questions, please do not hesitate to call.

Sincerely,

Dillard Trucking, Inc. dba,  
**DILLARD ENVIRONMENTAL SERVICES**

*Patty Dillard*

Patty Dillard  
President