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Suite 200
Rancho Cordova, California 95670-6021
916/638-2085
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June 20, 2001

Mr. Rob Weston
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

JUN 26 2001

Subject: *Tank Basin, Product Line and Dispenser Island Sampling Results and
Installation of Future Remediation System Piping*

ARCO Station No. 4977
2770 Castro Valley Road
Castro Valley, California
Delta Project No. D000-845

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 storage tanks (USTs), product distribution lines and product dispenser islands at ARCO Service Station No. 4977, located at 2770 Castro Valley Road, Castro Valley, California (Figure 1). Site details are illustrated in Figure 2. This report summarizes the sampling activities and analytical results for samples collected during the UST, 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 Storage Tank Removal

On March 15, 2001, one 10,000-gallon and two 12,000-gallon underground storage tanks were excavated and inspected upon removal. K.E. Curtis Construction Company, Inc. was contracted by ARCO to obtain all necessary tank removal permits, make all required preliminary notifications, and to clean, remove and dispose of the removed USTs. Adams Services transported the tanks to their facility in Richmond, California under a uniform hazardous waste manifest. Pertinent information concerning the UST removal activities is summarized below: A copy of Hazardous Waste Manifests and Certificates of Disposal are included in Enclosure B.

Lead Agency:	Alameda County Health Care Services Agency
Agency Contact Name:	Robert Weston
Agency Phone Number:	(510) 567-6781
UST Cleaning Contractor:	K.E. Curtis Construction Company, Inc. 11338 South Harlan Road, Lathrop, CA 95330

Final Disposition of Rinseate: DeMenno Kerdoon, 2000 North Alameda Street, Compton, CA 90222

Final Disposition of USTs: Pacheco Pass Landfill, 3675 Pacheco Pass, Gilroy, California

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Soil Sampling Beneath Product Lines and Dispenser Island

A Delta representative was on-site March 15, 2001 to conduct soil sampling during product line and dispenser removal and upgrade activities. A representative from Alameda County Health Care Services Agency (ACHCS) was on-site to observe the sampling. Soil samples were collected beneath the dispensers following their removal. Dispenser soil samples DP-1 through DP-5 were collected at depths ranging from 3.0 to 6.0 feet below surface grade (bsg). Product line soil samples PL-1 through PL-9 were collected within the product line trench at depths ranging from 3.0 to 6.0 feet bsg. The soil sample locations are shown in Figure 3. All dispenser pump and product line soil samples were collected using brass tubes, as outlined in Enclosure A.

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) using EPA Method 8020, total petroleum hydrocarbons (TPH) as gasoline using EPA Method 8015 Modified, and total lead using EPA Method 6000. Soil sample analytical results are summarized in Table 1.

In the soil samples collected during the March 15, 2001 sampling event, the laboratory reported detectable concentrations of benzene ranging from 0.077 milligrams per kilogram (mg/kg) in soil sample PL-4 to 8.05 mg/kg in soil sample DP-2. The laboratory reported detectable concentrations of TPH as gasoline ranging from 3.56 mg/kg in DP-5 to 1,450 mg/kg in DP-2. The laboratory reported detectable concentrations of MTBE by EPA Method 8260 ranging from 0.145 mg/kg in PL-6 to 8.6 mg/kg in PL-7. Concentrations of total lead were not detected at or above the laboratory reporting limits for any of the samples collected. A copy of the laboratory analytical reports with chain-of-custody documentation is included in Enclosure C.

Soil Sampling Beneath Underground Storage Tanks

A Delta representative was on-site March 15, 2001 to conduct soil sampling following the removal of the underground storage tanks. A representative from ACHCS was on-site to observe the sampling. Soil samples were collected from the North and South ends of the 10,000-gallon UST following its removal. Additional soil samples were collected from the side walls of the tank basin. Tank samples T1-N, T1-S, were collected at depths of 16.0 and 14.0 feet bsg, respectively. The sidewall soil samples SW-1 through SW-6 were collected at depths ranging from 7.5 to 8.0 feet bsg. The soil sample locations are shown in Figure 3. All Tank basin soil samples were collected using brass tubes, as outlined in Enclosure A.

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 BTEX and MTBE using EPA Method 8020, TPH as gasoline using EPA Method 8015 Modified, and total lead using EPA Method 6000. Soil sample analytical results are summarized in Table 1.

In the tank basin soil samples collected during the March 15, 2001 sampling event, the laboratory reported detectable concentrations of benzene ranging from 0.326 mg/kg in soil sample SW-6 to 0.503 mg/kg in soil sample SW-3. The laboratory reported detectable concentrations of TPH as gasoline ranging from 279 mg/kg in SW-1 to 1,170 mg/kg in SW-2. The laboratory did not detect concentrations

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Department of Environmental Health
June 21, 2001
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of MTBE by EPA Method 8260 at or above the laboratory reporting limit. Concentrations of total lead were not detected at or above the laboratory reporting limits for any of the samples collected. A copy of the March 15, 2001 laboratory analytical report with chain-of-custody documentation is included in Enclosure C.

Soil Management and Stockpile Sampling

A total 1,105.80 tons (760 cubic yards) of overburden was excavated from the gasoline UST basin, dispensers and lines and stockpiled onsite for disposal profile analysis. Four point composite soil samples from the stockpiles were collected in brass tubes for each approximate 150 cubic yards of soil and delivered to the laboratory for analysis. Soil samples were analyzed by Sequoia for BTEX, TPH as gasoline and lead to ensure results met waste acceptance guidelines at Forward Landfill in Manteca, California. 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 C. The stockpiled soil was removed from the site on March 26 & 27 and April 10, 11 & 12, 2001 by Dillard and transported to Forward Landfill. A copy of the completion letter for all of the soil removed from the site is included in Enclosure D. Based on the soil profile obtained from the UST basin, lines and dispenser soil sample results, the soil was disposed of appropriately.

Remediation Piping Layout and Installation

Due to the localized presence of petroleum hydrocarbons in the soil and groundwater at the site, Delta completed plans for the installation of remediation piping in the existing trenching lines to reduce the costs involved with the installation of a future remediation system. Delta discussed and obtained approval from the ACHCS representative prior to initiation of design and installation work.

The remediation piping layout consists of two horizontal vapor lines, one additional vapor expansion line and piping for a groundwater extraction line and electrical conduit. The majority of the piping was placed in a parallel trench next to the recently replaced product lines. The 20-foot horizontal vapor lines were installed in the vicinity of the dispenser islands at a depth of 5 feet bsg. To prevent possible short-circuiting within the trenched areas, the subsurface was sealed with an 8 ml layer of impermeable Visqueen prior to filling and compacting the trench. Remediation piping was stubbed up at two observation wells in the gravel backfill of the tank basin that could potentially be used as groundwater extraction points if needed. All subsurface piping was routed back to the Northwestern side of the tank basin to facilitate mobile extraction events, if needed. A copy of the remediation system piping layout and specifications used by the contractor for installation are included in Enclosure E.

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.

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

DELTA ENVIRONMENTAL CONSULTANTS, INC.



Trevor L. Atkinson
Project Engineer



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



TLA (Lrp001-4977.doc)
Enclosures

cc: Mr. Paul Supple – Atlantic Richfield Company
Mr. Scott Seery – Alameda County Health Care Services

TABLE 1

SOIL SAMPLE LABORATORY ANALYTICAL RESULTS

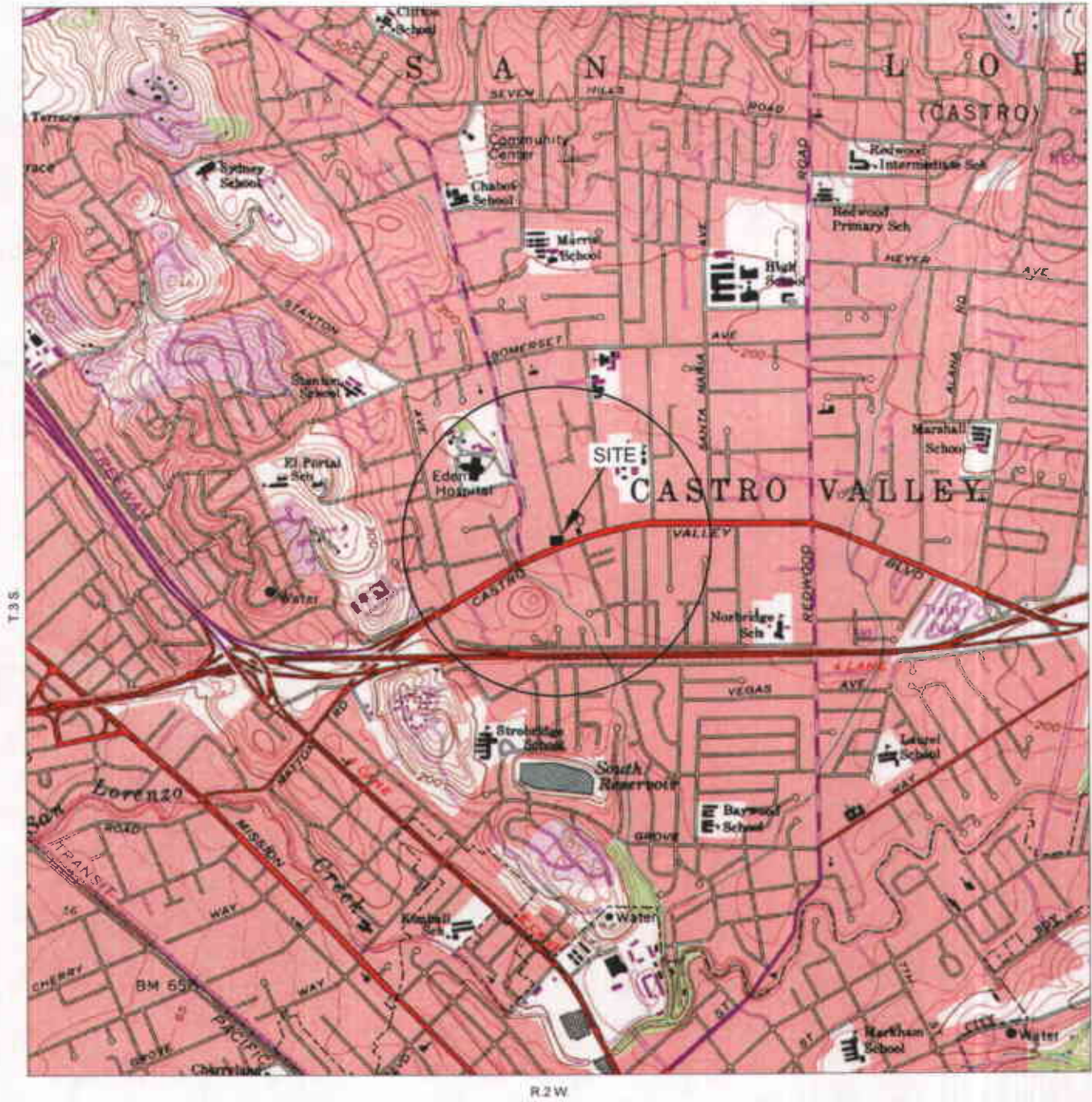
ARCO Service Station No. 4977
2770 Castro Valley Road
Castro Valley, California

Sample ID	Date	Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	TPH as Gasoline (mg/kg)	MTBE (mg/kg)	MTBE [8260] (mg/kg)	Lead (mg/kg)
Dispenser Island Samples										
DP-1	03/15/01	6.0	0.946	<0.025	5.14	3.52	235	1.39	1.63	<12.5
DP-2	03/15/01	6.0	8.05	2.17	37.3	127	1,450	<10	NA	<10
DP-3	03/15/01	3.0	<0.005	<0.005	<0.005	0.00746	<1.0	<0.05	NA	<10
DP-4	03/15/01	3.5	<0.25	<0.25	0.608	1.03	296	<2.5	NA	<10
DP-5	03/15/01	3.5	<0.005	<0.005	0.0174	0.0314	3.56	0.907	1.27	<10
Product Line Samples										
PL-1	03/15/01	6.0	1.79	<0.1	9.46	28.7	398	<1.0	NA	<10
PL-2	03/15/01	5.0	3.01	<0.25	25.8	65.7	1,140	6.33	4.79	<10
PL-3	03/15/01	5.5	<0.25	0.947	11	9.76	530	<2.5	NA	<12.5
PL-4	03/15/01	4.0	0.077	<0.005	0.0335	0.0623	8.77	<0.05	NA	<10
PL-5	03/15/01	4.0	0.107	<0.025	0.143	0.195	28.6	<0.25	NA	<10
PL-6	03/15/01	3.5	0.911	<0.1	2.26	0.484	243	1.48	0.145	<10
PL-7	03/15/01	3.5	0.847	0.438	2.5	9.13	128	9.97	8.6	<10
PL-8	03/15/01	3.5	0.36	<0.1	0.919	0.877	230	<1.0	NA	<10
PL-9	03/15/01	5.0	0.82	<0.25	3.64	1.67	295	<2.5	NA	<10
Tank Basin Samples										
T1-S	03/15/01	14.0	<0.005	<0.005	0.00644	0.00558	<1.0	0.0503	<0.1	<10
T1-N	03/15/01	16.0	<0.005	0.0187	0.00595	0.0209	<1.0	<0.05	NA	<10
SW-1	03/15/01	7.5	<0.05	<0.05	3.7	5.43	279	<0.5	NA	<10
SW-2	03/15/01	8.0	<1.0	<1.0	19.8	92.7	1,170	<10	NA	<10
SW-3	03/15/01	8.0	0.503	<0.5	10.4	57.9	678	<5.0	NA	<10
SW-4	03/15/01	8.0	<0.25	<0.25	5.38	32.9	581	<2.5	NA	<10
SW-5	03/15/01	7.5	<0.25	<0.25	3.49	16.6	556	<2.5	NA	<10
SW-6	03/15/01	7.5	0.326	<0.25	6.96	50.3	631	<2.5	NA	<10
Soil Stockpile Results										
STK-A	03/15/01	Composite	<0.25	<0.25	12.7	32.1	884	NA	NA	<10
STK-B	03/15/01	Composite	0.0572	0.0231	0.175	0.116	14.8	NA	NA	<10
SP-1,2,3,4	03/21/01	Composite	0.05	0.135	0.484	1.55	94.5	NA	NA	<10.0
SP-5,6,7,8	03/21/01	Composite	<0.05	0.109	0.331	1.53	83.4	NA	NA	16.2
SP-9,10,11,1	03/21/01	Composite	0.0151	0.0519	0.171	0.559	33.7	NA	NA	<10.0

TPH = Total petroleum hydrocarbons.

MTBE = Methyl tertiary butyl ether (analyzed by DHS LUFT)

NA = Not Analyzed



GENERAL NOTES:
 BASE MAP FROM U.S.G.S.
 HAYWARD, CA.
 7.5 MINUTE TOPOGRAPHIC
 PHOTOREVISED 1980



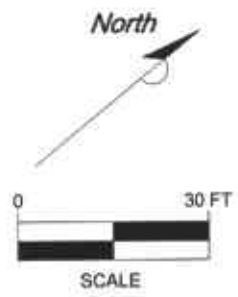
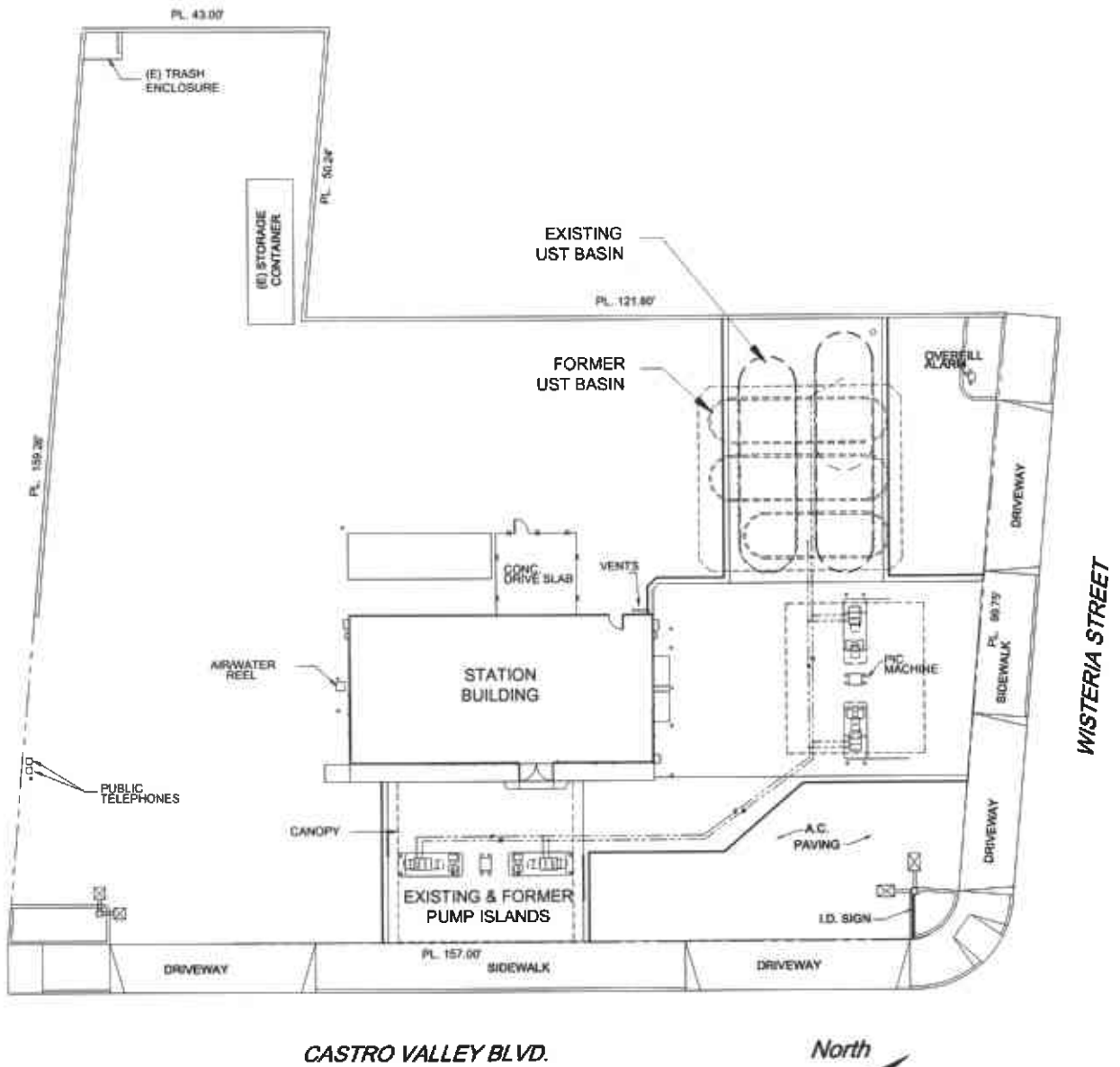
QUADRANGLE LOCATION



FIGURE 1
 SITE TOPOGRAPHIC MAP
 ARCO STATION NO. 4977
 2770 CASTRO VALLEY ROAD
 CASTRO VALLEY, CA

PROJECT NO D000-845	DRAWN BY TLA 4/13/01
FILE NO 4977-1A	PREPARED BY TLA
REVISION NO	REVIEWED BY





NOTE: SITE MAP ADAPTED FROM IT CORPORATION FIGURES
 SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

FIGURE 2
SITE MAP

ARCO FACILITY NO. 4977
2770 CASTRO VALLEY ROAD
CASTRO VALLEY, CA.

PROJECT NO. D000-845	DRAWN BY TLA 4/13/01
FILE NO. 4977-1	PREPARED BY TLA
REVISION NO. 2	REVIEWED BY

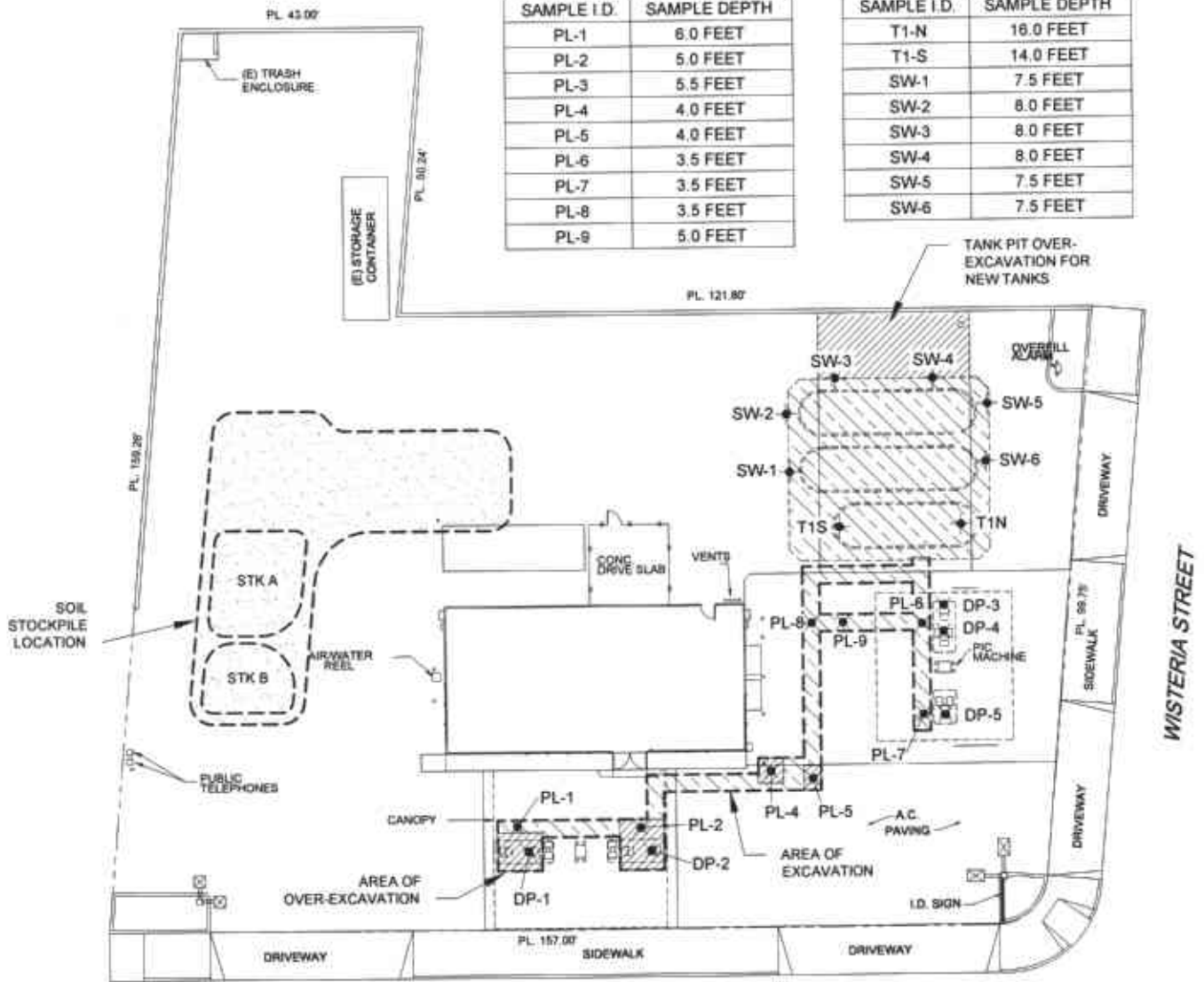


PRODUCT LINE SAMPLES

SAMPLE I.D.	SAMPLE DEPTH
PL-1	8.0 FEET
PL-2	5.0 FEET
PL-3	5.5 FEET
PL-4	4.0 FEET
PL-5	4.0 FEET
PL-6	3.5 FEET
PL-7	3.5 FEET
PL-8	3.5 FEET
PL-9	5.0 FEET

FORMER TANK BASIN

SAMPLE I.D.	SAMPLE DEPTH
T1-N	18.0 FEET
T1-S	14.0 FEET
SW-1	7.5 FEET
SW-2	8.0 FEET
SW-3	8.0 FEET
SW-4	8.0 FEET
SW-5	7.5 FEET
SW-6	7.5 FEET

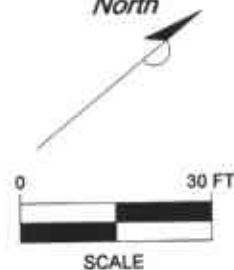


DISPENSER PUMP SAMPLES

SAMPLE I.D.	SAMPLE DEPTH
DP-1	8.0 FEET
DP-2	6.0 FEET
DP-3	3.0 FEET
DP-4	3.5 FEET
DP-5	3.5 FEET

CASTRO VALLEY BLVD.

North



NOTE: SITE MAP ADAPTED FROM IT CORPORATION FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

LEGEND:

- ◆ T-1N TANK BASIN SOIL SAMPLE LOCATIONS
- ★ PL-1 FORMER PRODUCT LINE/ DISPENSER PUMP SOIL SAMPLE LOCATIONS
- ▨ AREA OF SOIL EXCAVATION DURING REPLACEMENT OF TANKS/ PRODUCT LINES/ DISPENSER PUMPS
- ▩ AREA OF OVER-EXCAVATION DURING REPLACEMENT OF TANKS/ PRODUCT LINES/ DISPENSER PUMPS

FIGURE 3
 AREA OF EXCAVATION
 AND SAMPLE LOCATION MAP
 ARCO FACILITY NO. 4977
 2770 CASTRO VALLEY ROAD
 CASTRO VALLEY, CA.

PROJECT NO. 0000-845	DRAWN BY TLA 6/15/01
FILE NO. 4977-1	PREPARED BY TLA
REVISION NO. 4	REVIEWED BY



ENCLOSURE A
Field Methods and Procedures

FIELD METHODS AND PROCEDURES

ARCO Station No. 2111
1156 Davis Street, San Leandro, 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[®] 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[®] 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[®] 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 EPA Method 8260 and total lead using EPA Method 6010.

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 Manifests and Certificates of Disposal

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. CA11010101019871	Manifest Document No. 00001	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address ARCO PRODUCTS CO. 4 CENTERPOINTE DR.; LA PALMA, CA 90623-1066			A. State Manifest Document Number 20830873		
4. Generator's Phone (800) 272-6349			B. State Generator's ID		
5. Transporter 1 Company Name ADAMS SERVICES, INC.			C. State Transporter's ID (Reserved)		
6. US EPA ID Number CA11022125668			D. Transporter's Phone 310-523-4430		
7. Transporter 2 Company Name			E. State Transporter's ID (Reserved)		
8. US EPA ID Number			F. Transporter's Phone		
9. Designated Facility Name and Site Address DeMENNO/KERDOON 2000 N. ALAMEDA ST. COMPTON, CA 90222			G. State Facility's ID CA11080113352		
10. US EPA ID Number CA110810113352			H. Facility's Phone 310-537-7100		
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol	1. Waste Number
a. (OIL & WATER, NON-R.C.R.A. HAZARDOUS WASTE LIQUID		0 0 1 T T	005100	G	State 261 EPA/Other NONE
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other
15. Additional Descriptions for Materials Listed Above 99% WATER 1% OIL			K. Handling Codes for Wastes Listed Above a. 01		
15. Special Handling Instructions and Additional Information DON PROPER PROTECTIVE GEAR NO SMOKING; E.R.G. #27 EMERGENCY #: Site: ARCO 2770 Castro Valley Bl/Wisteria; Castro Valley, CA Contractor: K.E.Curtis Construction Co., Inc.					
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. 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 Tom DeVosser		Signature Tom DeVosser (AGENT)		Month Day Year 03/14/01	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name CHRISTIE		Signature OR CH		Month Day Year 03/14/01	
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indicator on Space					
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19. Printed/Typed Name WALTER DELOAR					
Signature WALTER DELOAR				Month Day Year 03/14/01	

DO NOT WRITE BELOW THIS LINE.

ADAMS SERVICES, INC.

406 E. Alondra Blvd., Gardena, CA 90248-2902
(310) 523-4430 Δ FAX (310) 523-1518

DISPOSAL DECLARATION

Adams Services, Inc. hereby certifies that the following tanks were delivered to Pacheco Pass Landfill, 3675 Pacheco Pass, Gilroy, CA, by Tom Cipponeri Trucking for destruction and disposal on Weighmaster Tickets 13288 & 13289 dated 03/15/01, below:

Job Site: ARCO #4977
2770 Castro Valley Blvd.
Castro Valley, CA

Tanks: 2 - 12,000 gallon fiberglass tanks
1 - 8,000 gallon fiberglass tank

Weighmaster: PACHECO PASS LANDFILL
Weighed @ 3675 PACHECO PASS
GILROY, CA 95020

Account:
CASH-ACCOUNT /42325
3675 PACHECO PASS
GILROY, CA 95020
Source: OTHER Route:

Inbound Weight: 23200 lbs.
SCALE A 23200 (M) Gross Weight lbs.
21200 Tare Weight lbs.
2000 Net Weight lbs.

TICKET NO.: 13288
DATE: 3/15/01 In: 11:38 Out: 12:01
Price/Unit: \$76.00
Commodity: DEMOLITION DEBRIS
Total Charge: \$76.00
Tendered: \$76.00
Change: \$0.00
Truck No.: 14 Lic:

C.O.D. CONNIE MUNOZ P1

P.O.#: ADAMS SERVICES Job #: B/L #:

Weighmaster: PACHECO PASS LANDFILL
Weighed @ 3675 PACHECO PASS
GILROY, CA 95020

Account:
CASH-ACCOUNT /42325
3675 PACHECO PASS
GILROY, CA 95020
Source: OTHER Route:

Inbound Weight: 34200 lbs.
SCALE A 34200 (M) Gross Weight lbs.
31140 Tare Weight lbs.
3060 Net Weight lbs.

TICKET NO.: 13289
DATE: 3/15/01 In: 11:40 Out: 12:16
Price/Unit: \$76.00
Commodity: DEMOLITION DEBRIS
Total Charge: \$120.50
Tendered: \$120.50
Change: \$0.00
Truck No.: 13 Lic:

C.O.D. CONNIE MUNOZ P1

P.O.#: ADAMS SERVICES Job #: B/L #:



ENCLOSURE C
Soil Sample Laboratory Analytical Reports

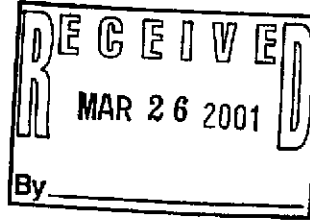


Sequoia Analytical

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

March 21, 2001

Steven Meeks
Delta Environmental Consultants(Rancho Cordova)
3164 Gold Camp Drive Ste. 200
Rancho Cordova, CA 95670
RE: ARCO 4977, Castro Valley, CA / S103306



Enclosed are the results of analyses for samples received by the laboratory on 03/16/01. 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 Number 1624





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

Project: ARCO 4977, Castro Valley, CA
Project Number: N/A
Project Manager: Steven Meeks

Reported:
03/21/01 12:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DP-1-6.0	S103306-01	Soil	03/15/01 12:20	03/16/01 11:55
DP-2-6.0	S103306-02	Soil	03/15/01 13:30	03/16/01 11:55
PL-1-6.0	S103306-03	Soil	03/15/01 15:45	03/16/01 11:55
PL-2-5.0	S103306-04	Soil	03/15/01 13:20	03/16/01 11:55
PL-3-5.5	S103306-05	Soil	03/15/01 15:40	03/16/01 11:55
PL-9-5.0	S103306-06	Soil	03/15/01 15:20	03/16/01 11:55
STK-A1,-2,-3,-4 (Composite)	S103306-07	Soil	03/15/01 16:45	03/16/01 11:55
STK-B	S103306-08	Soil	03/15/01 17:00	03/16/01 11:55
Tank 1-9.0	S103306-09	Water	03/15/01 10:35	03/16/01 11:55
Tank 2	S103306-10	Water	03/15/01 16:30	03/16/01 11:55





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Project Manager: Steven Meeks

Reported:
03/21/01 12:02

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
STK-A1,-2,-3,-4 (Composite) (S103306-07) Soil Sampled: 03/15/01 16:45 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	884	50.0	mg/kg	50	1030248	03/19/01	03/19/01	DHS LUFT	P-04
Benzene	ND	0.250	"	"	"	"	"	"	
Toluene	ND	0.250	"	"	"	"	"	"	
Ethylbenzene	12.7	0.250	"	"	"	"	"	"	
Xylenes (total)	32.1	0.250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		107 %	60-140	"	"	"	"	"	
STK-B (S103306-08) Soil Sampled: 03/15/01 17:00 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	14.8	1.00	mg/kg	1	1030248	03/19/01	03/19/01	DHS LUFT	P-03
Benzene	0.0572	0.00500	"	"	"	"	"	"	
Toluene	0.0231	0.00500	"	"	"	"	"	"	
Ethylbenzene	0.175	0.00500	"	"	"	"	"	"	
Xylenes (total)	0.116	0.00500	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		85.5 %	60-140	"	"	"	"	"	





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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
DP-1-6.0 (S103306-01) Soil Sampled: 03/15/01 12:20 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	235	5.00	mg/kg	5	1030248	03/19/01	03/19/01	DHS LUFT	P-03
Benzene	0.946	0.0250	"	"	"	"	"	"	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	5.14	0.0250	"	"	"	"	"	"	
Xylenes (total)	3.52	0.0250	"	"	"	"	"	"	
Methyl tert-butyl ether	1.39	0.250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		138 %	60-140		"	"	"	"	
DP-2-6.0 (S103306-02) Soil Sampled: 03/15/01 13:30 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	1450	200	mg/kg	200	1030248	03/19/01	03/19/01	DHS LUFT	P-04
Benzene	8.05	1.00	"	"	"	"	"	"	
Toluene	2.17	1.00	"	"	"	"	"	"	
Ethylbenzene	37.3	1.00	"	"	"	"	"	"	
Xylenes (total)	127	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	10.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		112 %	60-140		"	"	"	"	
PL-1-6.0 (S103306-03) Soil Sampled: 03/15/01 15:45 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	398	20.0	mg/kg	20	1030248	03/19/01	03/19/01	DHS LUFT	P-04
Benzene	1.79	0.100	"	"	"	"	"	"	
Toluene	ND	0.100	"	"	"	"	"	"	
Ethylbenzene	9.46	0.100	"	"	"	"	"	"	
Xylenes (total)	28.7	0.100	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		99.0 %	60-140		"	"	"	"	





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03/21/01 12:02

**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
PL-2-5.0 (S103306-04) Soil Sampled: 03/15/01 13:20 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	1140	50.0	mg/kg	50	1030248	03/19/01	03/19/01	DHS LUFT	P-04
Benzene	3.01	0.250	"	"	"	"	"	"	
Toluene	ND	0.250	"	"	"	"	"	"	
Ethylbenzene	25.8	0.250	"	"	"	"	"	"	
Xylenes (total)	65.7	0.250	"	"	"	"	"	"	
Methyl tert-butyl ether	6.33	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		117 %	60-140		"	"	"	"	
PL-3-5.5 (S103306-05) Soil Sampled: 03/15/01 15:40 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	530	50.0	mg/kg	50	1030248	03/19/01	03/19/01	DHS LUFT	P-04
Benzene	ND	0.250	"	"	"	"	"	"	
Toluene	0.947	0.250	"	"	"	"	"	"	
Ethylbenzene	11.0	0.250	"	"	"	"	"	"	
Xylenes (total)	9.76	0.250	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		108 %	60-140		"	"	"	"	
PL-9-5.0 (S103306-06) Soil Sampled: 03/15/01 15:20 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	295	50.0	mg/kg	50	1030248	03/19/01	03/19/01	DHS LUFT	P-03
Benzene	0.820	0.250	"	"	"	"	"	"	
Toluene	ND	0.250	"	"	"	"	"	"	
Ethylbenzene	3.64	0.250	"	"	"	"	"	"	
Xylenes (total)	1.67	0.250	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		105 %	60-140		"	"	"	"	





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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
Tank 1-9.0 (S103306-09) Water Sampled: 03/15/01 10:35 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	40500	10000	ug/l	200	1030291	03/21/01	03/21/01	DHS LUFT	P-02
Benzene	ND	100	"	"	"	"	"	"	
Toluene	1840	100	"	"	"	"	"	"	
Ethylbenzene	375	100	"	"	"	"	"	"	
Xylenes (total)	2880	100	"	"	"	"	"	"	
Methyl tert-butyl ether	6530	500	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		93.6 %	60-140		"	"	"	"	
Tank 2 (S103306-10) Water Sampled: 03/15/01 16:30 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	13600	5000	ug/l	100	1030292	03/20/01	03/20/01	DHS LUFT	P-02
Benzene	232	50.0	"	"	"	"	"	"	
Toluene	2100	50.0	"	"	"	"	"	"	
Ethylbenzene	233	50.0	"	"	"	"	"	"	
Xylenes (total)	1610	50.0	"	"	"	"	"	"	
Methyl tert-butyl ether	13900	250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		103 %	60-140		"	"	"	"	





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**MTBE Confirmation by EPA Method 8260A
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DP-1-6.0 (S103306-01) Soil Sampled: 03/15/01 12:20 Received: 03/16/01 11:55									
Methyl tert-butyl ether	1.63	0.100	mg/kg	1	1030269	03/20/01	03/20/01	EPA 8260A	
Surrogate: 1,2-DCA-d4		88.4 %	60-140		"	"	"	"	
PL-2-5.0 (S103306-04) Soil Sampled: 03/15/01 13:20 Received: 03/16/01 11:55									
Methyl tert-butyl ether	4.79	0.100	mg/kg	1	1030269	03/20/01	03/20/01	EPA 8260A	
Surrogate: 1,2-DCA-d4		84.0 %	60-140		"	"	"	"	
Tank 1-9.0 (S103306-09) Water Sampled: 03/15/01 10:35 Received: 03/16/01 11:55									
Methyl tert-butyl ether	6260	100	ug/l	50	1030263	03/16/01	03/20/01	EPA 8260A	
Surrogate: 1,2-DCA-d4		90.8 %	60-140		"	"	"	"	
Tank 2 (S103306-10) Water Sampled: 03/15/01 16:30 Received: 03/16/01 11:55									
Methyl tert-butyl ether	10100	500	ug/l	250	1030263	03/16/01	03/20/01	EPA 8260A	
Surrogate: 1,2-DCA-d4		85.0 %	60-140		"	"	"	"	





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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DP-1-6.0 (S103306-01) Soil Sampled: 03/15/01 12:20 Received: 03/16/01 11:55									
Lead	ND	12.5	mg/kg	5	1030254	03/19/01	03/20/01	EPA 6010A	
DP-2-6.0 (S103306-02) Soil Sampled: 03/15/01 13:30 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030254	03/19/01	03/20/01	EPA 6010A	
PL-1-6.0 (S103306-03) Soil Sampled: 03/15/01 15:45 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030254	03/19/01	03/20/01	EPA 6010A	
PL-2-5.0 (S103306-04) Soil Sampled: 03/15/01 13:20 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030254	03/19/01	03/20/01	EPA 6010A	
PL-3-5.5 (S103306-05) Soil Sampled: 03/15/01 15:40 Received: 03/16/01 11:55									
Lead	ND	12.5	mg/kg	5	1030254	03/19/01	03/20/01	EPA 6010A	
PL-9-5.0 (S103306-06) Soil Sampled: 03/15/01 15:20 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030254	03/19/01	03/20/01	EPA 6010A	
STK-A1,-2,-3,-4 (Composite) (S103306-07) Soil Sampled: 03/15/01 16:45 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030254	03/19/01	03/20/01	EPA 6010A	
STK-B (S103306-08) Soil Sampled: 03/15/01 17:00 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030254	03/19/01	03/20/01	EPA 6010A	





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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
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Batch 1030248 - EPA 5030B (MeOH)

Blank (1030248-BLK1)

Prepared & Analyzed: 03/19/01

Purgeable Hydrocarbons	ND	1.00	mg/kg							
Benzene	ND	0.00500	"							
Toluene	ND	0.00500	"							
Ethylbenzene	ND	0.00500	"							
Xylenes (total)	ND	0.00500	"							
Surrogate: a,a,a-Trifluorotoluene	0.216		"	0.200		108	60-140			

LCS (1030248-BS1)

Prepared & Analyzed: 03/19/01

Benzene	0.208	0.00500	mg/kg	0.200		104	70-130			
Toluene	0.218	0.00500	"	0.200		109	70-130			
Ethylbenzene	0.230	0.00500	"	0.200		115	70-130			
Xylenes (total)	0.592	0.00500	"	0.600		98.7	70-130			
Surrogate: a,a,a-Trifluorotoluene	0.227		"	0.200		113	60-140			

Matrix Spike (1030248-MS1)

Source: S103307-09

Prepared & Analyzed: 03/19/01

Benzene	0.171	0.00500	mg/kg	0.200	ND	85.5	60-140			
Toluene	0.188	0.00500	"	0.200	ND	94.0	60-140			
Ethylbenzene	0.204	0.00500	"	0.200	0.00644	98.8	60-140			
Xylenes (total)	0.535	0.00500	"	0.600	0.00558	88.2	60-140			
Surrogate: a,a,a-Trifluorotoluene	0.191		"	0.200		95.5	60-140			

Matrix Spike Dup (1030248-MSD1)

Source: S103307-09

Prepared & Analyzed: 03/19/01

Benzene	0.185	0.00500	mg/kg	0.200	ND	92.5	60-140	7.87	25	
Toluene	0.197	0.00500	"	0.200	ND	98.5	60-140	4.68	25	
Ethylbenzene	0.212	0.00500	"	0.200	0.00644	103	60-140	3.85	25	
Xylenes (total)	0.541	0.00500	"	0.600	0.00558	89.2	60-140	1.12	25	
Surrogate: a,a,a-Trifluorotoluene	0.219		"	0.200		109	60-140			





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03/21/01 12:02

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 1030248 - EPA 5030B (MeOH)

Blank (1030248-BLK1)

Prepared & Analyzed: 03/19/01

Purgeable Hydrocarbons	ND	1.00	mg/kg							
Benzene	ND	0.00500	"							
Toluene	ND	0.00500	"							
Ethylbenzene	ND	0.00500	"							
Xylenes (total)	ND	0.00500	"							
Methyl tert-butyl ether	ND	0.0500	"							
Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.216		"	0.200		108	60-140			

LCS (1030248-BS1)

Prepared & Analyzed: 03/19/01

Benzene	0.208	0.00500	mg/kg	0.200		104	70-130			
Toluene	0.218	0.00500	"	0.200		109	70-130			
Ethylbenzene	0.230	0.00500	"	0.200		115	70-130			
Xylenes (total)	0.592	0.00500	"	0.600		98.7	70-130			
Methyl tert-butyl ether	0.193	0.0500	"	0.200		96.5	70-130			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.227		"	0.200		113	60-140			

Matrix Spike (1030248-MS1)

Source: S103307-09

Prepared & Analyzed: 03/19/01

Benzene	0.171	0.00500	mg/kg	0.200	ND	85.5	60-140			
Toluene	0.188	0.00500	"	0.200	ND	94.0	60-140			
Ethylbenzene	0.204	0.00500	"	0.200	0.00644	98.8	60-140			
Xylenes (total)	0.535	0.00500	"	0.600	0.00558	88.2	60-140			
Methyl tert-butyl ether	0.207	0.0500	"	0.200	0.0503	78.4	60-140			
Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.191		"	0.200		95.5	60-140			

Matrix Spike Dup (1030248-MSD1)

Source: S103307-09

Prepared & Analyzed: 03/19/01

Benzene	0.185	0.00500	mg/kg	0.200	ND	92.5	60-140	7.87	25	
Toluene	0.197	0.00500	"	0.200	ND	98.5	60-140	4.68	25	
Ethylbenzene	0.212	0.00500	"	0.200	0.00644	103	60-140	3.85	25	
Xylenes (total)	0.541	0.00500	"	0.600	0.00558	89.2	60-140	1.12	25	
Methyl tert-butyl ether	0.230	0.0500	"	0.200	0.0503	89.9	60-140	10.5	25	
Surrogate: <i>a,a,a</i> -Trifluorotoluene	0.219		"	0.200		109	60-140			





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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 1030291 - EPA 5030B (P/T)

Blank (1030291-BLK1)

Prepared & Analyzed: 03/21/01

Purgeable Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	2.50	"							
Surrogate: a,a,a-Trifluorotoluene	9.63		"	10.0		96.3	60-140			

LCS (1030291-BS1)

Prepared & Analyzed: 03/21/01

Benzene	8.49	0.500	ug/l	10.0		84.9	70-130			
Toluene	9.09	0.500	"	10.0		90.9	70-130			
Ethylbenzene	9.53	0.500	"	10.0		95.3	70-130			
Xylenes (total)	28.3	0.500	"	30.0		94.3	70-130			
Methyl tert-butyl ether	8.72	2.50	"	10.0		87.2	70-130			
Surrogate: a,a,a-Trifluorotoluene	9.21		"	10.0		92.1	60-140			

Batch 1030292 - EPA 5030B (P/T)

Blank (1030292-BLK1)

Prepared & Analyzed: 03/20/01

Purgeable Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	2.50	"							
Surrogate: a,a,a-Trifluorotoluene	9.89		"	10.0		98.9	60-140			





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Reported:
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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 1030292 - EPA 5030B (P/T)

LCS (1030292-BS1)

Prepared & Analyzed: 03/20/01

Benzene	9.69	0.500	ug/l	10.0		96.9	70-130			
Toluene	10.0	0.500	"	10.0		100	70-130			
Ethylbenzene	10.3	0.500	"	10.0		103	70-130			
Xylenes (total)	31.7	0.500	"	30.0		106	70-130			
Methyl tert-butyl ether	8.95	2.50	"	10.0		89.5	70-130			

Surrogate: a,a,a-Trifluorotoluene 9.66 " 10.0 96.6 60-140

Matrix Spike (1030292-MS1)

Source: S103206-13

Prepared & Analyzed: 03/20/01

Benzene	8.50	0.500	ug/l	10.0	ND	85.0	60-140			
Toluene	9.20	0.500	"	10.0	ND	92.0	60-140			
Ethylbenzene	9.51	0.500	"	10.0	ND	95.1	60-140			
Xylenes (total)	29.4	0.500	"	30.0	ND	98.0	60-140			
Methyl tert-butyl ether	ND	2.50	"	10.0	ND		60-140			Q-03

Surrogate: a,a,a-Trifluorotoluene 10.3 " 10.0 103 60-140

Matrix Spike Dup (1030292-MSD1)

Source: S103206-13

Prepared & Analyzed: 03/20/01

Benzene	8.55	0.500	ug/l	10.0	ND	85.5	60-140	0.587	25	
Toluene	9.23	0.500	"	10.0	ND	92.3	60-140	0.326	25	
Ethylbenzene	9.56	0.500	"	10.0	ND	95.6	60-140	0.524	25	
Xylenes (total)	29.5	0.500	"	30.0	ND	98.3	60-140	0.340	25	
Methyl tert-butyl ether	ND	2.50	"	10.0	ND		60-140		25	Q-03

Surrogate: a,a,a-Trifluorotoluene 10.1 " 10.0 101 60-140





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

Project: ARCO 4977, Castro Valley, CA
Project Number: N/A
Project Manager: Steven Meeks

Reported:
03/21/01 12:02

**MTBE Confirmation by EPA Method 8260A - Quality Control
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%RBC Limits	RPD	RPD Limit	Notes
Batch 1030263 - EPA 5030B [P/T]										
Blank (1030263-BLK1) Prepared & Analyzed: 03/20/01										
Methyl tert-butyl ether	ND	2.00	ug/l							
Surrogate: 1,2-DCA-d4	48.5		"	50.0		97.0	60-140			
LCS (1030263-BS1) Prepared & Analyzed: 03/20/01										
Methyl tert-butyl ether	55.0	2.00	ug/l	50.0		110	70-130			
Surrogate: 1,2-DCA-d4	48.3		"	50.0		96.6	60-140			
LCS Dup (1030263-BSD1) Prepared & Analyzed: 03/20/01										
Methyl tert-butyl ether	54.3	2.00	ug/l	50.0		109	70-130	1.28	25	
Surrogate: 1,2-DCA-d4	47.0		"	50.0		94.0	60-140			
Batch 1030269 - EPA 5030B [MeOH]										
Blank (1030269-BLK1) Prepared & Analyzed: 03/20/01										
Methyl tert-butyl ether	ND	0.100	mg/kg							
Surrogate: 1,2-DCA-d4	2.40		"	2.50		96.0	60-140			
LCS (1030269-BS1) Prepared & Analyzed: 03/20/01										
Methyl tert-butyl ether	2.64	0.100	mg/kg	2.50		106	70-130			
Surrogate: 1,2-DCA-d4	2.40		"	2.50		96.0	60-140			





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

Project: ARCO 4977, Castro Valley, CA
Project Number: N/A
Project Manager: Steven Meeks

Reported:
03/21/01 12:02

**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
Batch 1030254 - EPA 3050B									
Blank (1030254-BLK1)					Prepared: 03/19/01 Analyzed: 03/20/01				
Lead	ND	2.50	mg/kg						
LCS (1030254-BS1)					Prepared: 03/19/01 Analyzed: 03/20/01				
Lead	49.1	2.50	mg/kg	50.0		98.2	80-120		
Matrix Spike (1030254-MS1)					Source: S103306-08 Prepared: 03/19/01 Analyzed: 03/20/01				
Lead	41.0	10.0	mg/kg	50.0	ND	71.5	80-120		Q-02
Matrix Spike Dup (1030254-MSD1)					Source: S103306-08 Prepared: 03/19/01 Analyzed: 03/20/01				
Lead	36.4	10.0	mg/kg	50.0	ND	62.3	80-120	11.9	20 Q-02





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

Project: ARCO 4977, Castro Valley, CA
Project Number: N/A
Project Manager: Steven Meeks

Reported:
03/21/01 12:02

Notes and Definitions

- P-02 Chromatogram Pattern: Weathered Gasoline C6-C12
- P-03 Chromatogram Pattern: Unidentified Hydrocarbons C6-C12
- P-04 Chromatogram Pattern: Weathered Gasoline C6-C12 + Unidentified Hydrocarbons C6-C12
- Q-02 The RPD and/or spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
- Q-03 The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte already present in the sample.
- 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 Products Company

Division of Atlantic-Richfield Company

Task Order No.

Chain of Custody

ARCO Facility no. 4977	City (Facility) CASTRO VALLEY	Project manager (Consultant) STEVE WEEKS	Laboratory name SEQUOIA
ARCO engineer PAUL SUPPLE	Telephone no. (ARCO)	Telephone no. (Consultant) 916 536-2613	Contract number
Consultant name DELTA ENVIRONMENTAL		Address (Consultant) 3164 GOLD CAMP # 200, RANCHO CONDONA, CA	

Sample I.D.	Lab no.	Container no.	Matrix			Preservation		Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH/MTBE 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/SMS08E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals VOAD VOAD	SEMIMETALS EPA 8010/700 TLC <input type="checkbox"/> STLC <input type="checkbox"/>	Lead Org./DHS <input type="checkbox"/> Lead EPA 7420/7421 <input type="checkbox"/>	LEAD	Method of shipment			
			Soil	Water	Other	Ice	Acid																		
DP-1-6.0		1	X			X		3/15/01	1220		X												HAND DEL.		
DP-2-6.0		1	X			X			1330		X												Special detection Limit/reporting CONFIRM MTOE BY 8260		
PL-1-6.0		1	X			X			1545		X														
PL-2-5.0		1	X			X			1320		X													Special QA/QC	
PL-3-5.5		1	X			X			1540		X														
PL-4-5.0		1	X			X		V	1520		X														
																							Remarks DISPOSED ISLAND/ PRODUCT LINE SOIL SAMPLES		

Condition of sample:				Temperature received: 9°C			
Relinquished by sampler J. Clark / DELTA	Date 3/16/01	Time 1155	Received by Monica Grogan	Date 3/16/01	Time 1155	Rush 1 Business Day <input type="checkbox"/>	
Relinquished by	Date	Time	Received by	Date	Time	Rush 2 Business Days <input checked="" type="checkbox"/>	
Relinquished by	Date	Time	Received by	Date	Time	Expedited 5 Business Days <input type="checkbox"/>	
Relinquished by	Date	Time	Received by	Date	Time	Standard 10 Business Days <input type="checkbox"/>	

ARCO Facility no. 4977	City (Facility) CASTRO VALLEY	Project manager (Consultant) STEVE MEEKS	Laboratory name SEQUOIA
ARCO engineer PAUL SUPPLE	Telephone no. (ARCO)	Telephone no. (Consultant) 916 530 2617	Contract number
Consultant name DELTA ENVIRONMENTAL		Address (Consultant) 3164 GOLD AMP DR. # 200, RAYCHURCH, CALIFORNIA, CA	
Fax no. (Consultant) 916 650 8385		Method of shipment HAND DEL.	

Sample I.D.	Lab no.	Container no.	Matrix			Preservation		Sampling date	Sampling time	BTEX 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/SM603E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals <input type="checkbox"/> VOC <input type="checkbox"/> VOAC <input type="checkbox"/>	CAM METALS EPA 601/700 TLC <input type="checkbox"/> STLC <input type="checkbox"/>	Lead Org./CHS <input type="checkbox"/> Lead EPA 7420/7421 <input type="checkbox"/>	LEAD(TLC)	
			Soil	Water	Other	Ice	Acid															
STK-A1		1	X			X		3/15/01	1645	X												X
STK-A2		1	X			X		↓	↓	X												X
STK-A3		1	X			X		↓	↓	X												X
STK-A4		1	X			X		↓	↓	X												X
STK-B		1	X			X		3/15/01	1700	X												X

Condition of sample:				Temperature received: 9°C			
Relinquished by sampler A. Clark / DELTA	Date 3/16/01	Time 1155	Received by Monica Goggen	Date 3/16/01	Time 1155	Priority Rush 1 Business Day <input type="checkbox"/>	Rush 2 Business Days <input checked="" type="checkbox"/>
Relinquished by	Date	Time	Received by	Date	Time	Expedited 5 Business Days <input type="checkbox"/>	Standard 10 Business Days <input type="checkbox"/>

Special detection Limit/reporting

Special QA/QC

Remarks
STOCKPILE
SOIL
SAMPLES
(STK-A-
COMPOSITE)

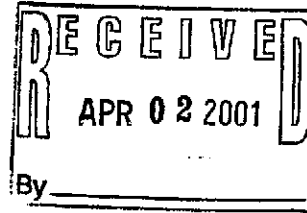
ARCO Facility no. 4977		City (Facility) CASTRO VALLEY		Project manager (Consultant) STEVE MEESKS		Laboratory name SEQUOIA		
ARCO engineer PAUL SUPPLE		Telephone no. (ARCO) (925) 299-8891		Telephone no. (Consultant) (916) 536-2613		Fax no. (Consultant) (916) 639-8385		
Consultant name DELTA ENVIRONMENTAL		Address (Consultant) 3146 GOLD CAMP DR. RIVERLAND CANYON CA						Contract number

Sample I.D.	Lab no.	Container no.	Matrix			Preservation		Sampling date	Sampling time	BTEX EPA 802/EPA 8020	BTEX/TPH/MTBE EPA 802/8020/8015	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	TCLP Metals <input type="checkbox"/> VOAC <input type="checkbox"/> VOAC	Semi Metals <input type="checkbox"/> VOAC <input type="checkbox"/> VOAC	CAM METALS EPA 8010/7000 TLC <input type="checkbox"/> STLC <input type="checkbox"/>	Lead Org./DHS <input type="checkbox"/> Lead EPA 7420/7421 <input type="checkbox"/>	Method of shipment HAND		
			Soil	Water	Other	Ice	Acid																	
TANK 1-90																							Special detection Limit/reporting CONFIRM MTBE BY 8260	
TANK 2																								Special QA/QC
TANK 1-90	4			X		X	3/15/01	1035		X													Remarks TANK PULL/ PRDCT LINE SOIL SAMPLES	
TANK 2	4			X		X	↓	1630		X														
																							Lab number	
																							Turnaround time	
																							Priority Rush 1 Business Day	
Condition of sample		Retinquired by sampler f- (Del)		Retinquired by DELTA		Retinquired by		Temperature received: 90C		Received by Manica Gageem		Received by 3/16/01		Received by 1155		Rush 2 Business Days		Expedited 5 Business Days		Standard 10 Business Days				
Date		Time		Date		Time		Date		Time		Date		Time										



Sequoia Analytical

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March 22 , 2001

Steven Meeks
Delta Environmental Consultants(Rancho Cordova)
3164 Gold Camp Drive Ste. 200
Rancho Cordova, CA 95670
RE: ARCO 4977, Castro Valley, CA / S103307

Enclosed are the results of analyses for samples received by the laboratory on 03/16/01. 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 Number 1624





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

Project: ARCO 4977, Castro Valley, CA
Project Number: N/A
Project Manager: Steven Meeks

Reported:
03/22/01 16:32

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PL-4-4.0	S103307-01	Soil	03/15/01 13:50	03/16/01 11:55
PL-5-4.0	S103307-02	Soil	03/15/01 14:05	03/16/01 11:55
PL-6-3.5	S103307-03	Soil	03/15/01 14:35	03/16/01 11:55
PL-7-3.5	S103307-04	Soil	03/15/01 14:50	03/16/01 11:55
PL-8-3.5	S103307-05	Soil	03/15/01 15:00	03/16/01 11:55
DP-3-3.0	S103307-06	Soil	03/15/01 14:15	03/16/01 11:55
DP-4-3.5	S103307-07	Soil	03/15/01 14:25	03/16/01 11:55
DP-5-3.5	S103307-08	Soil	03/15/01 14:45	03/16/01 11:55
TIS-14.0	S103307-09	Soil	03/15/01 10:15	03/16/01 11:55
TIN-16.0	S103307-10	Soil	03/15/01 10:20	03/16/01 11:55
SW-1-7.5	S103307-11	Soil	03/15/01 15:55	03/16/01 11:55
SW-2-8.0	S103307-12	Soil	03/15/01 16:00	03/16/01 11:55
SW-3-8.0	S103307-13	Soil	03/15/01 16:10	03/16/01 11:55
SW-4-8.0	S103307-14	Soil	03/15/01 16:15	03/16/01 11:55
SW-5-7.5	S103307-15	Soil	03/15/01 16:20	03/16/01 11:55
SW-6-7.5	S103307-16	Soil	03/15/01 16:25	03/16/01 11:55





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

Project: ARCO 4977, Castro Valley, CA
Project Number: N/A
Project Manager: Steven Meeks

Reported:
03/22/01 16:32

**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
PL-4-4.0 (S103307-01) Soil Sampled: 03/15/01 13:50 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	8.77	1.00	mg/kg	1	1030248	03/19/01	03/19/01	DHS LUFT	P-03
Benzene	0.0770	0.00500	"	"	"	"	"	"	
Toluene	ND	0.00500	"	"	"	"	"	"	
Ethylbenzene	0.0335	0.00500	"	"	"	"	"	"	
Xylenes (total)	0.0623	0.00500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0500	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		116 %	60-140		"	"	"	"	
PL-5-4.0 (S103307-02) Soil Sampled: 03/15/01 14:05 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	28.6	5.00	mg/kg	5	1030248	03/19/01	03/19/01	DHS LUFT	P-03
Benzene	0.107	0.0250	"	"	"	"	"	"	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.143	0.0250	"	"	"	"	"	"	
Xylenes (total)	0.195	0.0250	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		101 %	60-140		"	"	"	"	
PL-6-3.5 (S103307-03) Soil Sampled: 03/15/01 14:35 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	243	20.0	mg/kg	20	1030248	03/19/01	03/19/01	DHS LUFT	P-03
Benzene	0.911	0.100	"	"	"	"	"	"	
Toluene	ND	0.100	"	"	"	"	"	"	
Ethylbenzene	2.26	0.100	"	"	"	"	"	"	
Xylenes (total)	0.484	0.100	"	"	"	"	"	"	
Methyl tert-butyl ether	1.48	1.00	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		110 %	60-140		"	"	"	"	





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

Project: ARCO 4977, Castro Valley, CA
Project Number: N/A
Project Manager: Steven Meeks

Reported:
03/22/01 16:32

**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
PL-7-3.5 (S103307-04) Soil Sampled: 03/15/01 14:50 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	128	10.0	mg/kg	10	1030248	03/19/01	03/20/01	DHS LUFT	P-04
Benzene	0.847	0.0500	"	"	"	"	"	"	
Toluene	0.438	0.0500	"	"	"	"	"	"	
Ethylbenzene	2.50	0.0500	"	"	"	"	"	"	
Xylenes (total)	9.13	0.0500	"	"	"	"	"	"	
Methyl tert-butyl ether	9.97	0.500	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		105 %	60-140		"	"	"	"	
PL-8-3.5 (S103307-05) Soil Sampled: 03/15/01 15:00 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	230	20.0	mg/kg	20	1030248	03/19/01	03/19/01	DHS LUFT	P-03
Benzene	0.360	0.100	"	"	"	"	"	"	
Toluene	ND	0.100	"	"	"	"	"	"	
Ethylbenzene	0.919	0.100	"	"	"	"	"	"	
Xylenes (total)	0.877	0.100	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.00	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		94.0 %	60-140		"	"	"	"	
DP-3-3.0 (S103307-06) Soil Sampled: 03/15/01 14:15 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	ND	1.00	mg/kg	1	1030248	03/19/01	03/19/01	DHS LUFT	
Benzene	ND	0.00500	"	"	"	"	"	"	
Toluene	ND	0.00500	"	"	"	"	"	"	
Ethylbenzene	ND	0.00500	"	"	"	"	"	"	
Xylenes (total)	0.00746	0.00500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0500	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		100 %	60-140		"	"	"	"	





Delta Environmental Consultants(Rancho Cordova 3164 Gold Camp Drive Ste. 200 Rancho Cordova CA, 95670	Project: ARCO 4977, Castro Valley, CA Project Number: N/A Project Manager: Steven Meeks	Reported: 03/22/01 16:32
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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
DP-4-3.5 (S103307-07) Soil Sampled: 03/15/01 14:25 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	296	50.0	mg/kg	50	1030248	03/19/01	03/19/01	DHS LUFT	P-03
Benzene	ND	0.250	"	"	"	"	"	"	
Toluene	ND	0.250	"	"	"	"	"	"	
Ethylbenzene	0.608	0.250	"	"	"	"	"	"	
Xylenes (total)	1.03	0.250	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		87.0 %	60-140	"	"	"	"	"	
DP-5-3.5 (S103307-08) Soil Sampled: 03/15/01 14:45 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	3.56	1.00	mg/kg	1	1030248	03/19/01	03/19/01	DHS LUFT	P-03
Benzene	ND	0.00500	"	"	"	"	"	"	
Toluene	ND	0.00500	"	"	"	"	"	"	
Ethylbenzene	0.0174	0.00500	"	"	"	"	"	"	
Xylenes (total)	0.0314	0.00500	"	"	"	"	"	"	
Methyl tert-butyl ether	0.907	0.0500	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		91.0 %	60-140	"	"	"	"	"	
TIS-14.0 (S103307-09) Soil Sampled: 03/15/01 10:15 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	ND	1.00	mg/kg	1	1030248	03/19/01	03/19/01	DHS LUFT	
Benzene	ND	0.00500	"	"	"	"	"	"	
Toluene	ND	0.00500	"	"	"	"	"	"	
Ethylbenzene	0.00644	0.00500	"	"	"	"	"	"	
Xylenes (total)	0.00558	0.00500	"	"	"	"	"	"	
Methyl tert-butyl ether	0.0503	0.0500	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		106 %	60-140	"	"	"	"	"	





Delta Environmental Consultants(Rancho Cordova 3164 Gold Camp Drive Ste. 200 Rancho Cordova CA, 95670	Project: ARCO 4977, Castro Valley, CA Project Number: N/A Project Manager: Steven Meeks	Reported: 03/22/01 16:32
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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
TIN-16.0 (S103307-10) Soil Sampled: 03/15/01 10:20 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	ND	1.00	mg/kg	1	1030248	03/19/01	03/19/01	DHS LUFT	
Benzene	ND	0.00500	"	"	"	"	"	"	
Toluene	0.0187	0.00500	"	"	"	"	"	"	
Ethylbenzene	0.00595	0.00500	"	"	"	"	"	"	
Xylenes (total)	0.0209	0.00500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.0500	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		105 %	60-140		"	"	"	"	
SW-1-7.5 (S103307-11) Soil Sampled: 03/15/01 15:55 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	279	10.0	mg/kg	10	1030290	03/20/01	03/20/01	DHS LUFT	P-04
Benzene	ND	0.0500	"	"	"	"	"	"	
Toluene	ND	0.0500	"	"	"	"	"	"	
Ethylbenzene	3.70	0.0500	"	"	"	"	"	"	
Xylenes (total)	5.43	0.0500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.500	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		113 %	60-140		"	"	"	"	
SW-2-8.0 (S103307-12) Soil Sampled: 03/15/01 16:00 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	1170	200	mg/kg	200	1030290	03/20/01	03/20/01	DHS LUFT	P-04
Benzene	ND	1.00	"	"	"	"	"	"	
Toluene	ND	1.00	"	"	"	"	"	"	
Ethylbenzene	19.8	1.00	"	"	"	"	"	"	
Xylenes (total)	92.7	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	10.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		90.0 %	60-140		"	"	"	"	





Delta Environmental Consultants(Rancho Cordova 3164 Gold Camp Drive Ste. 200 Rancho Cordova CA, 95670	Project: ARCO 4977, Castro Valley, CA Project Number: N/A Project Manager: Steven Meeks	Reported: 03/22/01 16:32
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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
SW-3-8.0 (S103307-13) Soil Sampled: 03/15/01 16:10 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	678	100	mg/kg	100	1030290	03/20/01	03/20/01	DHS LUFT	P-04
Benzene	0.503	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	10.4	0.500	"	"	"	"	"	"	
Xylenes (total)	57.9	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	5.00	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		90.0 %	60-140	"	"	"	"	"	
SW-4-8.0 (S103307-14) Soil Sampled: 03/15/01 16:15 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	581	50.0	mg/kg	50	1030290	03/20/01	03/20/01	DHS LUFT	P-04
Benzene	ND	0.250	"	"	"	"	"	"	
Toluene	ND	0.250	"	"	"	"	"	"	
Ethylbenzene	5.38	0.250	"	"	"	"	"	"	
Xylenes (total)	32.9	0.250	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		103 %	60-140	"	"	"	"	"	
SW-5-7.5 (S103307-15) Soil Sampled: 03/15/01 16:20 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	556	50.0	mg/kg	50	1030290	03/20/01	03/20/01	DHS LUFT	P-04
Benzene	ND	0.250	"	"	"	"	"	"	
Toluene	ND	0.250	"	"	"	"	"	"	
Ethylbenzene	3.49	0.250	"	"	"	"	"	"	
Xylenes (total)	16.6	0.250	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		98.0 %	60-140	"	"	"	"	"	





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

Project: ARCO 4977, Castro Valley, CA
Project Number: N/A
Project Manager: Steven Meeks

Reported:
03/22/01 16:32

**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
SW-6-7.5 (S103307-16) Soil Sampled: 03/15/01 16:25 Received: 03/16/01 11:55									
Purgeable Hydrocarbons	631	50.0	mg/kg	50	1030290	03/20/01	03/20/01	DHS LUFT	P-04
Benzene	0.326	0.250	"	"	"	"	"	"	
Toluene	ND	0.250	"	"	"	"	"	"	
Ethylbenzene	6.96	0.250	"	"	"	"	"	"	
Xylenes (total)	50.3	0.250	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
Surrogate: <i>a, a, a-Trifluorotoluene</i>		98.5 %		60-140	"	"	"	"	





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

Project: ARCO 4977, Castro Valley, CA
Project Number: N/A
Project Manager: Steven Meeks

Reported:
03/22/01 16:32

**MTBE Confirmation by EPA Method 8260A
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PL-6-3.5 (S103307-03) Soil Sampled: 03/15/01 14:35 Received: 03/16/01 11:55									
Methyl tert-butyl ether	0.145	0.100	mg/kg	1	1030307	03/21/01	03/22/01	EPA 8260A	
Surrogate: 1,2-DCA-d4		80.4 %	60-140		"	"	"	"	
PL-7-3.5 (S103307-04) Soil Sampled: 03/15/01 14:50 Received: 03/16/01 11:55									
Methyl tert-butyl ether	8.60	0.200	mg/kg	2	1030307	03/21/01	03/22/01	EPA 8260A	
Surrogate: 1,2-DCA-d4		81.6 %	60-140		"	"	"	"	
DP-5-3.5 (S103307-08) Soil Sampled: 03/15/01 14:45 Received: 03/16/01 11:55									
Methyl tert-butyl ether	1.27	0.100	mg/kg	1	1030307	03/21/01	03/22/01	EPA 8260A	
Surrogate: 1,2-DCA-d4		82.8 %	60-140		"	"	"	"	
TIS-14.0 (S103307-09) Soil Sampled: 03/15/01 10:15 Received: 03/16/01 11:55									
Methyl tert-butyl ether	ND	0.100	mg/kg	1	1030307	03/21/01	03/22/01	EPA 8260A	
Surrogate: 1,2-DCA-d4		83.2 %	60-140		"	"	"	"	





Delta Environmental Consultants(Rancho Cordova 3164 Gold Camp Drive Ste. 200 Rancho Cordova CA, 95670	Project: ARCO 4977, Castro Valley, CA Project Number: N/A Project Manager: Steven Meeks	Reported: 03/22/01 16:32
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**Total Metals by EPA 6000/7000 Series Methods
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
PL-4-4.0 (S103307-01) Soil Sampled: 03/15/01 13:50 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030277	03/20/01	03/20/01	EPA 6010A	
PL-5-4.0 (S103307-02) Soil Sampled: 03/15/01 14:05 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030277	03/20/01	03/20/01	EPA 6010A	
PL-6-3.5 (S103307-03) Soil Sampled: 03/15/01 14:35 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030277	03/20/01	03/20/01	EPA 6010A	
PL-7-3.5 (S103307-04) Soil Sampled: 03/15/01 14:50 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030277	03/20/01	03/20/01	EPA 6010A	
PL-8-3.5 (S103307-05) Soil Sampled: 03/15/01 15:00 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030277	03/20/01	03/20/01	EPA 6010A	
DP-3-3.0 (S103307-06) Soil Sampled: 03/15/01 14:15 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030277	03/20/01	03/20/01	EPA 6010A	
DP-4-3.5 (S103307-07) Soil Sampled: 03/15/01 14:25 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030277	03/20/01	03/20/01	EPA 6010A	
DP-5-3.5 (S103307-08) Soil Sampled: 03/15/01 14:45 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030277	03/20/01	03/20/01	EPA 6010A	
TIS-14.0 (S103307-09) Soil Sampled: 03/15/01 10:15 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030277	03/20/01	03/20/01	EPA 6010A	





Delta Environmental Consultants(Rancho Cordova 3164 Gold Camp Drive Ste. 200 Rancho Cordova CA, 95670	Project: ARCO 4977, Castro Valley, CA Project Number: N/A Project Manager: Steven Meeks	Reported: 03/22/01 16:32
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**Total Metals by EPA 6000/7000 Series Methods
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TIN-16.0 (S103307-10) Soil Sampled: 03/15/01 10:20 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030277	03/20/01	03/20/01	EPA 6010A	
SW-1-7.5 (S103307-11) Soil Sampled: 03/15/01 15:55 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030277	03/20/01	03/20/01	EPA 6010A	
SW-2-8.0 (S103307-12) Soil Sampled: 03/15/01 16:00 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030277	03/20/01	03/20/01	EPA 6010A	
SW-3-8.0 (S103307-13) Soil Sampled: 03/15/01 16:10 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030277	03/20/01	03/20/01	EPA 6010A	
SW-4-8.0 (S103307-14) Soil Sampled: 03/15/01 16:15 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030277	03/20/01	03/20/01	EPA 6010A	
SW-5-7.5 (S103307-15) Soil Sampled: 03/15/01 16:20 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030277	03/20/01	03/20/01	EPA 6010A	
SW-6-7.5 (S103307-16) Soil Sampled: 03/15/01 16:25 Received: 03/16/01 11:55									
Lead	ND	10.0	mg/kg	4	1030277	03/20/01	03/20/01	EPA 6010A	





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

Project: ARCO 4977, Castro Valley, CA
Project Number: N/A
Project Manager: Steven Meeks

Reported:
03/22/01 16:32

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

Analytic	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1030248 - EPA 5030B (MeOH)

Blank (1030248-BLK1)

Prepared & Analyzed: 03/19/01

Purgeable Hydrocarbons	ND	1.00	mg/kg							
Benzene	ND	0.00500	"							
Toluene	ND	0.00500	"							
Ethylbenzene	ND	0.00500	"							
Xylenes (total)	ND	0.00500	"							
Methyl tert-butyl ether	ND	0.0500	"							
Surrogate: a,a,a-Trifluorotoluene	0.216		"	0.200		108	60-140			

LCS (1030248-BS1)

Prepared & Analyzed: 03/19/01

Benzene	0.208	0.00500	mg/kg	0.200		104	70-130			
Toluene	0.218	0.00500	"	0.200		109	70-130			
Ethylbenzene	0.230	0.00500	"	0.200		115	70-130			
Xylenes (total)	0.592	0.00500	"	0.600		98.7	70-130			
Methyl tert-butyl ether	0.193	0.0500	"	0.200		96.5	70-130			
Surrogate: a,a,a-Trifluorotoluene	0.227		"	0.200		113	60-140			

Matrix Spike (1030248-MS1)

Source: S103307-09

Prepared & Analyzed: 03/19/01

Benzene	0.171	0.00500	mg/kg	0.200	ND	85.5	60-140			
Toluene	0.188	0.00500	"	0.200	ND	94.0	60-140			
Ethylbenzene	0.204	0.00500	"	0.200	0.00644	98.8	60-140			
Xylenes (total)	0.535	0.00500	"	0.600	0.00558	88.2	60-140			
Methyl tert-butyl ether	0.207	0.0500	"	0.200	0.0503	78.4	60-140			
Surrogate: a,a,a-Trifluorotoluene	0.191		"	0.200		95.5	60-140			

Matrix Spike Dup (1030248-MSD1)

Source: S103307-09

Prepared & Analyzed: 03/19/01

Benzene	0.185	0.00500	mg/kg	0.200	ND	92.5	60-140	7.87	25	
Toluene	0.197	0.00500	"	0.200	ND	98.5	60-140	4.68	25	
Ethylbenzene	0.212	0.00500	"	0.200	0.00644	103	60-140	3.85	25	
Xylenes (total)	0.541	0.00500	"	0.600	0.00558	89.2	60-140	1.12	25	
Methyl tert-butyl ether	0.230	0.0500	"	0.200	0.0503	89.9	60-140	10.5	25	
Surrogate: a,a,a-Trifluorotoluene	0.219		"	0.200		109	60-140			





Delta Environmental Consultants(Rancho Cordova 3164 Gold Camp Drive Ste. 200 Rancho Cordova CA, 95670	Project: ARCO 4977, Castro Valley, CA Project Number: N/A Project Manager: Steven Meeks	Reported: 03/22/01 16:32
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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
Batch 1030290 - EPA 5030B (MeOH)										
Blank (1030290-BLK1) Prepared & Analyzed: 03/20/01										
Purgeable Hydrocarbons	ND	1.00	mg/kg							
Benzene	ND	0.00500	"							
Toluene	ND	0.00500	"							
Ethylbenzene	ND	0.00500	"							
Xylenes (total)	ND	0.00500	"							
Methyl tert-butyl ether	ND	0.0500	"							
Surrogate: a,a,a-Trifluorotoluene	0.206		"	0.200		103	60-140			
LCS (1030290-BS1) Prepared & Analyzed: 03/20/01										
Benzene	0.206	0.00500	mg/kg	0.200		103	70-130			
Toluene	0.216	0.00500	"	0.200		108	70-130			
Ethylbenzene	0.228	0.00500	"	0.200		114	70-130			
Xylenes (total)	0.590	0.00500	"	0.600		98.3	70-130			
Methyl tert-butyl ether	0.186	0.0500	"	0.200		93.0	70-130			
Surrogate: a,a,a-Trifluorotoluene	0.220		"	0.200		110	60-140			
Matrix Spike (1030290-MS1) Source: S103310-03 Prepared & Analyzed: 03/20/01										
Benzene	0.156	0.00500	mg/kg	0.200	ND	78.0	60-140			
Toluene	0.167	0.00500	"	0.200	ND	83.5	60-140			
Ethylbenzene	0.177	0.00500	"	0.200	ND	88.5	60-140			
Xylenes (total)	0.460	0.00500	"	0.600	0.00736	75.4	60-140			
Methyl tert-butyl ether	0.145	0.0500	"	0.200	ND	72.5	60-140			
Surrogate: a,a,a-Trifluorotoluene	0.200		"	0.200		100	60-140			
Matrix Spike Dup (1030290-MSD1) Source: S103310-03 Prepared & Analyzed: 03/20/01										
Benzene	0.161	0.00500	mg/kg	0.200	ND	80.5	60-140	3.15	25	
Toluene	0.173	0.00500	"	0.200	ND	86.5	60-140	3.53	25	
Ethylbenzene	0.182	0.00500	"	0.200	ND	91.0	60-140	2.79	25	
Xylenes (total)	0.474	0.00500	"	0.600	0.00736	77.8	60-140	3.00	25	
Methyl tert-butyl ether	0.149	0.0500	"	0.200	ND	74.5	60-140	2.72	25	
Surrogate: a,a,a-Trifluorotoluene	0.210		"	0.200		105	60-140			





Delta Environmental Consultants(Rancho Cordova 3164 Gold Camp Drive Ste. 200 Rancho Cordova CA, 95670	Project: ARCO 4977, Castro Valley, CA Project Number: N/A Project Manager: Steven Meeks	Reported: 03/22/01 16:32
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**MTBE Confirmation by EPA Method 8260A - Quality Control
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%RBC Limits	RPD	RPD Limit	Notes
Batch 1030307 - EPA 5030B [P/T]										
Blank (1030307-BLK1)										
										Prepared: 03/21/01 Analyzed: 03/22/01
Methyl tert-butyl ether	ND	0.100	mg/kg							
Surrogate: 1,2-DCA-d4	2.45		"	2.50		98.0	60-140			
LCS (1030307-BS1)										
										Prepared: 03/21/01 Analyzed: 03/22/01
Methyl tert-butyl ether	2.66	0.100	mg/kg	2.50		106	70-130			
Surrogate: 1,2-DCA-d4	2.48		"	2.50		99.2	60-140			
Matrix Spike Dup (1030307-MSD1)										
										Source: S103310-05 Prepared: 03/21/01 Analyzed: 03/22/01
Methyl tert-butyl ether	2.37	0.100	mg/kg	2.50		94.8	60-140		25	
Surrogate: 1,2-DCA-d4	2.02		"	2.50		80.8	60-140			





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

Project: ARCO 4977, Castro Valley, CA
Project Number: N/A
Project Manager: Steven Meeks

Reported:
03/22/01 16:32

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1030277 - EPA 3050B										
Blank (1030277-BLK1)										
										Prepared & Analyzed: 03/20/01
Lead	ND	2.50	mg/kg							
LCS (1030277-BS1)										
										Prepared & Analyzed: 03/20/01
Lead	49.5	2.50	mg/kg	50.0		99.0	80-120			
Matrix Spike (1030277-MS1)										
										Source: S103307-16 Prepared & Analyzed: 03/20/01
Lead	38.0	10.0	mg/kg	50.0	ND	66.6	80-120			Q-02
Matrix Spike Dup (1030277-MSD1)										
										Source: S103307-16 Prepared & Analyzed: 03/20/01
Lead	28.1	10.0	mg/kg	50.0	ND	46.8	80-120	30.0	20	Q-02





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

Project: ARCO 4977, Castro Valley, CA
Project Number: N/A
Project Manager: Steven Meeks

Reported:
03/22/01 16:32

Notes and Definitions

P-03 Chromatogram Pattern: Unidentified Hydrocarbons C6-C12
P-04 Chromatogram Pattern: Weathered Gasoline C6-C12 + Unidentified Hydrocarbons C6-C12
Q-02 The RPD and/or spike recovery for this QC sample is outside of established control limits due to sample 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 Products Company

Division of Atlantic-Richfield Company

Task Order No.

Chain of Custody

ARCO Facility no. 4977	City (Facility) CASIMO VALLEY	Project manager (Consultant) STEVE WEEKS	Laboratory name SEQUOIA
ARCO engineer PAUL SUPPLE	Telephone no. (ARCO)	Telephone no. (Consultant) 916 536-2613	Contract number
Consultant name DELTA ENVIRONMENTAL	Address (Consultant) 3144 GOLD CAMP DR # 200, RANCHO CONCORDIA, CA		

Sample I.D.	Lab no.	Container no.	Matrix			Preservation		Sampling date	Sampling time	BTEX EPA 802/EPA 8020	STX/TPH/MTBE 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 601/6010	EPA 824/8240	EPA 825/8270	TCLP Metals <input type="checkbox"/> VOC <input type="checkbox"/> VOAC <input type="checkbox"/>	CAN METALS EPA 801/7000 TLC <input type="checkbox"/> STLC <input type="checkbox"/>	Lead Org./DHS <input type="checkbox"/> Lead EPA 7420/7421 C	LEAD (Pb) <input checked="" type="checkbox"/>	Method of shipment HAND DEL			
			Soil	Water	Other	Ice	Acid																		
PL-4-40		1	X			X		3/15/01	1350		X													Special detection Limit/reporting CONFIRM MTBE BY 8260	
PL-5-40		1	X			X			1405		X														
PL-6-35		1	X			X			1435		X														
PL-7-35		1	X			X			1450		X														
PL-8-35		1	X			X			1500		X														
DP-3-30		1	X			X			1415		X														
DP-4-35		1	X			X			1425		X														
DI-5-35		1	X			X		V	1445		X														

Condition of sample:				Temperature received: 90°C			
Relinquished by sampler <i>[Signature]</i> / DELTA	Date 3/16/01	Time 1155	Received by Monica Grogan	Date 3/16/01	Time 1155	Rush <input checked="" type="checkbox"/>	
Relinquished by	Date	Time	Received by	Date	Time	Expedited 5 Business Days TA <input checked="" type="checkbox"/>	
Relinquished by	Date	Time	Received by	Date	Time	Standard 10 Business Days <input type="checkbox"/>	

Distribution: White copy — Laboratory; Canary copy — ARCO Environmental Engineering; Pink copy — Consultant
APC-3292 (2-91)

ARCO Facility no. 4977	City (Facility) CASTRO VALLEY	Project manager (Consultant) STEVE MEEKS	Laboratory name SEQUOIA
ARCO engineer PAUL SUPPLE	Telephone no. (ARCO)	Telephone no. (Consultant) 916 536 2613	Contract number
Consultant name DELTA ENVIRONMENTAL		Address (Consultant) 3164 GOLD CAMP DR # 200, RANCHO CORDOVA, CA	Method of shipment HAND DELIV.
		Fax no. (Consultant) 916 638 8385	Special detection Limit/reporting CONFIRM MTBE BY 9260

Sample I.D.	Lab no.	Container no.	Matrix			Preservation		Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH/MTBE EPA 1602/6020/8015	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	Semi Metals VOAC VOAC VOAC	CAN METALS EPA 601/7000 TLC <input type="checkbox"/> STLC <input type="checkbox"/>	Lead Org/DHS <input type="checkbox"/> Lead EPA 7420/7421 <input type="checkbox"/>	LEAD	
			Soil	Water	Other	Ice	Acid															
TIS-14.0		1	X			X		3/15/01	1015	X												X
TIN-16.0		1	X			X		3/15/01	1020	X												X
SW-1-7.5		1	X			X		3/15/01	1555	X												X
SW-2-8.0		1	X			X			1600	X												X
SW-3-8.0		1	X			X			1610	X												X
SW-4-8.0		1	X			X			1615	X												X
SW-5-7.5		1	X			X			1620	X												X
SW-6-7.5		1	X			X			1625	X												X

Special QA/QC

Remarks
TANK BASIN SOIL SAMPLES

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: 9°C			
Relinquished by sampler PAUL SUPPLE / DELTA	Date 3/16/01	Time 1155	Received by Monica Grogan	Date 3/16/01	Time 1155		
Relinquished by	Date	Time	Received by	Date	Time		
Relinquished by	Date	Time	Received by	Date	Time		

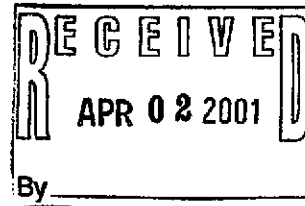


Sequoia Analytical

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

March 23 , 2001

Steven Meeks
Delta Environmental Consultants(Rancho Cordova
3164 Gold Camp Drive Ste. 200
Rancho Cordova, CA 95670
RE: ARCO 4977, Castro Valley, CA / S103400



Enclosed are the results of analyses for samples received by the laboratory on 03/22/01. 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 Number 1624





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

Project: ARCO 4977, Castro Valley, CA
Project Number: N/A
Project Manager: Steven Meeks

Reported:
03/23/01 15:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP-1,2,3,4 (Composite)	S103400-01	Soil	03/21/01 12:05	03/22/01 10:02
SP-5,6,7,8 (Composite)	S103400-02	Soil	03/21/01 12:30	03/22/01 10:02
SP-9,10,11,12 (Composite)	S103400-03	Soil	03/21/01 12:50	03/22/01 10:02





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

Project: ARCO 4977, Castro Valley, CA
Project Number: N/A
Project Manager: Steven Meeks

Reported:
03/23/01 15:26

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-1,2,3,4 (Composite) (S103400-01) Soil Sampled: 03/21/01 12:05 Received: 03/22/01 10:02									
Purgeable Hydrocarbons	94.5	10.0	mg/kg	10	1030330	03/23/01	03/23/01	DHS LUFT	P-04
Benzene	0.0500	0.0500	"	"	"	"	"	"	
Toluene	0.135	0.0500	"	"	"	"	"	"	
Ethylbenzene	0.484	0.0500	"	"	"	"	"	"	
Xylenes (total)	1.55	0.0500	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		88.5 %		60-140	"	"	"	"	
SP-5,6,7,8 (Composite) (S103400-02) Soil Sampled: 03/21/01 12:30 Received: 03/22/01 10:02									
Purgeable Hydrocarbons	83.4	10.0	mg/kg	10	1030330	03/23/01	03/23/01	DHS LUFT	P-04
Benzene	ND	0.0500	"	"	"	"	"	"	
Toluene	0.109	0.0500	"	"	"	"	"	"	
Ethylbenzene	0.331	0.0500	"	"	"	"	"	"	
Xylenes (total)	1.53	0.0500	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		89.0 %		60-140	"	"	"	"	
SP-9,10,11,12 (Composite) (S103400-03) Soil Sampled: 03/21/01 12:50 Received: 03/22/01 10:02									
Purgeable Hydrocarbons	33.7	1.00	mg/kg	1	1030330	03/23/01	03/23/01	DHS LUFT	P-04
Benzene	0.0151	0.00500	"	"	"	"	"	"	
Toluene	0.0519	0.00500	"	"	"	"	"	"	
Ethylbenzene	0.171	0.00500	"	"	"	"	"	"	
Xylenes (total)	0.559	0.00500	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		92.5 %		60-140	"	"	"	"	





Delta Environmental Consultants(Rancho Cordova 3164 Gold Camp Drive Ste. 200 Rancho Cordova CA, 95670	Project: ARCO 4977, Castro Valley, CA Project Number: N/A Project Manager: Steven Meeks	Reported: 03/23/01 15:26
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**Total Metals by EPA 6000/7000 Series Methods
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-1,2,3,4 (Composite) (S103400-01) Soil Sampled: 03/21/01 12:05 Received: 03/22/01 10:02									
Lead	ND	10.0	mg/kg	4	1030314	03/22/01	03/23/01	EPA 6010A	
SP-5,6,7,8 (Composite) (S103400-02) Soil Sampled: 03/21/01 12:30 Received: 03/22/01 10:02									
Lead	16.2	10.0	mg/kg	4	1030314	03/22/01	03/23/01	EPA 6010A	
SP-9,10,11,12 (Composite) (S103400-03) Soil Sampled: 03/21/01 12:50 Received: 03/22/01 10:02									
Lead	ND	10.0	mg/kg	4	1030314	03/22/01	03/23/01	EPA 6010A	





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

Project: ARCO 4977, Castro Valley, CA
Project Number: N/A
Project Manager: Steven Meeks

Reported:
03/23/01 15:26

**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	%REC Limits	RPD	RPD Limit	Notes
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Batch 1030330 - EPA 5030B (MeOH)

Blank (1030330-BLK1)

Prepared & Analyzed: 03/23/01

Purgeable Hydrocarbons	ND	1.00	mg/kg							
Benzene	ND	0.00500	"							
Toluene	ND	0.00500	"							
Ethylbenzene	ND	0.00500	"							
Xylenes (total)	ND	0.00500	"							
Surrogate: <i>a,a</i> -Trifluorotoluene	0.207		"	0.200		103	60-140			

LCS (1030330-BS1)

Prepared & Analyzed: 03/23/01

Benzene	0.191	0.00500	mg/kg	0.200		95.5	70-130			
Toluene	0.195	0.00500	"	0.200		97.5	70-130			
Ethylbenzene	0.205	0.00500	"	0.200		102	70-130			
Xylenes (total)	0.522	0.00500	"	0.600		87.0	70-130			
Surrogate: <i>a,a</i> -Trifluorotoluene	0.209		"	0.200		105	60-140			





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

Project: ARCO 4977, Castro Valley, CA
Project Number: N/A
Project Manager: Steven Meeks

Reported:
03/23/01 15:26

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1030314 - EPA 3050B										
Blank (1030314-BLK1)										
Lead	ND	2.50	mg/kg							Prepared: 03/22/01 Analyzed: 03/23/01
LCS (1030314-BS1)										
Lead	43.8	2.50	mg/kg	50.0		87.6	80-120			Prepared: 03/22/01 Analyzed: 03/23/01
Matrix Spike (1030314-MS1)										
Lead	43.6	10.0	mg/kg	50.0	ND	87.2	80-120			Source: S103311-08 Prepared: 03/22/01 Analyzed: 03/23/01
Matrix Spike Dup (1030314-MSD1)										
Lead	42.0	10.0	mg/kg	50.0	ND	84.0	80-120	3.74	20	





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

Project: ARCO 4977, Castro Valley, CA
Project Number: N/A
Project Manager: Steven Meeks

Reported:
03/23/01 15:26

Notes and Definitions

P-04 Chromatogram Pattern: Weathered Gasoline C6-C12 + Unidentified Hydrocarbons C6-C12
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



ENCLOSURE D

Completion Letter for Soil Removed

Dillard Trucking, Inc. dba
Dillard Environmental Services

P. O. Box 579 · Byron, CA 94514
Phone (925) 634-6850 – Fax (925) 634-0589
EPA #CAD982523433 · D.T.S.C. #1715 · CA LIC #624665-A HAZ

Via Fax (916) 638-8385

June 14, 2001

Attn: Steve Meeks
Delta Environmental Consultants, Inc.
3164 Gold Camp Drive, Suite 200
Rancho Cordova, CA 95670

RE: ARCO #4977
2770 Castro Valley Road
Castro Valley, CA

Dear Mr. Meeks:

Please be advised that 1,105.85 tons of non-hazardous petroleum contaminated soil from the referenced site has been removed. The soil was transported for disposal to Forward Landfill in Manteca, California on 03/26/01, 03/27/01, 04/10/01, 04/11/01 and 04/12/01.

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

Sincerely,

Dillard Trucking, Inc. dba,
DILLARD ENVIRONMENTAL SERVICES

Lynette Smith
Lynette Smith
Customer Service

ENCLOSURE E

Copy of Piping Layout Design Plans

1.0 INTRODUCTION

The enclosed drawings and specifications contain information for the construction and installation of remediation piping for a future remediation system. The following drawings depicting the piping layout for the system are required for construction and installation:

Drawing No.	Revision	Title
G-1	0	Specifications
P-1	0	Site Layout
P-2	0	Cross Sections

This package also contains the following specifications required for construction and installation:

- General
- Excavation
- Piping
- Construction Schedule
- Safety/Clean-up

2.0 SPECIFICATIONS

2.1 General

1. The selected Contractor shall verify all dimensions and site conditions before starting work. The Consultant's Project Manager shall be notified of any discrepancy.
2. All materials used for construction of the system piping shall be provided by the Contractor, all materials used shall be new unless otherwise noted.
3. Only equipment and instruments within the system that are specifically defined will be provided by the Consultant or ARCO for installation by the Contractor. All materials not specifically defined shall be provided by the Contractor.
4. All necessary construction permits and inspections shall be obtained and paid for by the Contractor, including permits for electrical, mechanical, and civil construction.
5. The Contractor shall restore all excavated surface areas to match existing.
6. All construction areas shall be clearly marked with barricades, cones, plates, or other approved safety markers to restrict access and provide a safe work environment for the Contractor and station customers.
7. A pre-construction meeting between ARCO, the Contractor, and Consultant will be required before any work begins. The meeting will be held at the site.
8. The Contractor shall warranty all materials and construction for a period of one year. All defects shall be corrected at the Contractor's expense.

2.2 Excavation

1. All excavated soil shall be monitored by the consultant in accordance with the Bay Area Air Quality Management District (BAAQMD) Rules. If hydrocarbon-impacted soil is detected, the soil shall be stockpiled in an area designated by the Consultant and covered with plastic sheets if necessary. The Consultant will sample the excavated soil for hydrocarbons. ARCO will be responsible for disposal of hydrocarbon-impacted soils. The Contractor shall dispose of all hydrocarbon-free soil and construction debris off-site including any pavement removed during trenching.
2. Where piping is installed below ground, the pipe shall be buried in a trench or excavation at a minimum depth of 24-inches to the top of the pipe, unless otherwise stated. The excavations shall be saw cut to provide a square vertical joint for repaving. If excavations must remain open after normal work hours, they shall be covered with metal plates capable of supporting vehicular traffic. Excavations shall not remain open over a weekend.
3. Process piping trenches and excavations shall be backfilled with imported sand from 4-inches below the piping to 4-inches above the piping. Upon approval by the consultant, native soil may be used as backfill material from 4-inches above the piping to the bottom of the concrete or asphalt base material. The backfill material shall be compacted to 90% of the relative dry density. Pavement removed for trenches or other excavations shall be replaced with new material to match existing. When resurfacing with asphalt, a minimum of 4 inches of asphaltic base material shall be used. Base material shall be compacted to 95% of the relative dry density. The asphalt mix shall be designed and installed to allow for normal service station traffic including fuel delivery trucks. When resurfacing with concrete, a minimum of 6-inch thick, 2,500 psi reinforced concrete shall be used. Reinforcing shall be No. 4 rebar tied into the existing slab staggered on each side of the trench on 24-inch centers placed at mid-height.
4. Contractor to remove and dispose of concrete parking blocks as needed.
5. The Contractor shall take all necessary precautions to prevent damage to underground utilities, piping and adjoining structures.

2.3 Piping

1. All underground process piping shall be schedule 40 PVC with glued slip fittings, all aboveground process piping shall be schedule 40 PVC with glued slip fittings as indicated on the drawings. Contractor to use low volatile organic compound emitting primers and solvents when installing glued slip fittings. Unless otherwise stated, all valves shall be PVC slip fitted as indicated in the drawings.
2. When connecting to or bypassing existing underground piping the Contractor shall first verify the existing piping path.
3. Where piping is routed aboveground inside the equipment enclosure, the piping shall be supported by uni-strut pipe supports and clamps. The uni-strut supports shall be fastened to the wall or mounted on a base that is secured to the ground surface.
4. All process piping shall be pressure tested according to local specifications and witnessed by a Consultant's representative. No testing will be conducted through instruments or equipment.
5. Whenever possible lateral piping shall be sloped toward wellheads at a ratio of 1:100. If a trench depth of greater than 4 feet is needed to achieve the required slope, then clean-out tees (stubbed up and capped within traffic rated wellhead protection boxes) may be substituted. The clean-out tees to be installed at low point of piping run.
6. All electrical work shall be completed in accordance with the most recent edition of the N.E.C., the local building department, and the local fire department. Any drawings required for permits other than those presented herein will be the responsibility of the Contractor and shall be reviewed by the Consultant prior to use.


2.4 Construction Schedule

1. The Contractor shall confirm a construction schedule with the Consultant's Project Manager at least 72-hours prior to any work at the site.
2. The proposed construction schedule shall be presented in a time line format showing estimated start date, duration and completion times for each activity. Any deviation from the originally proposed schedule must be communicated to the Consultant's Project Manager within 24-hours.

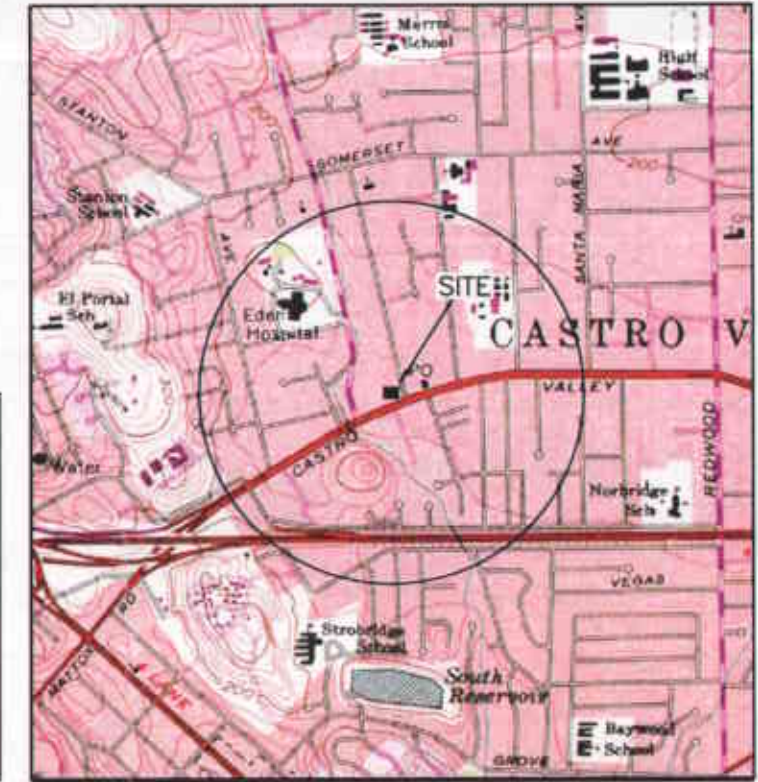
3.0 SAFETY/CLEAN-UP

The Contractor shall read, sign and abide by the Consultant's Site-Specific Health and Safety Plan prior to beginning any work. Prior to departure from the site, the Contractor shall make sure that the work area is clean and orderly.

The Contractor shall contain loose debris and store construction materials on a daily basis prior to departure from the site to provide a clean and orderly work area.

REV	DATE	DESCRIPTION	DRAWN	REVIEW
PREPARED BY		REVIEWED BY		
T. ATKINSON				
DATE		DATE		
3/26/01				
DRAWING G-1 SPECIFICATIONS PIPING LAYOUT FOR EXTRACTION SYSTEM ARCO FACILITY NO. 4977 2770 CASTRO VALLEY ROAD CASTRO VALLEY, CALIFORNIA				
				
PROJECT NUMBER	FILE NAME	DRAWING NO		
D000-845	4977 G-1	G-1		

PIPING LAYOUT FOR EXTRACTION SYSTEM ARCO FACILITY NO. 4977 2770 CASTRO VALLEY ROAD CASTRO VALLEY, CALIFORNIA



SITE VICINITY MAP

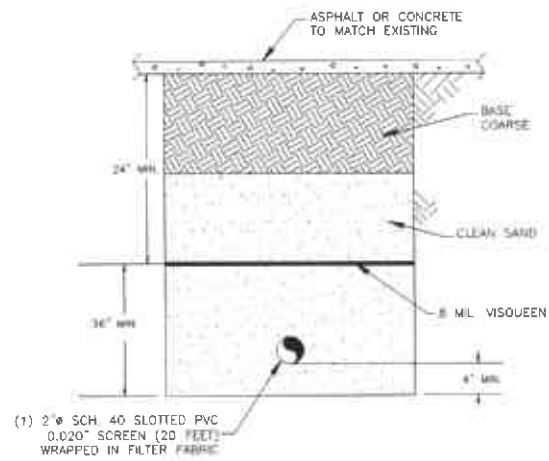


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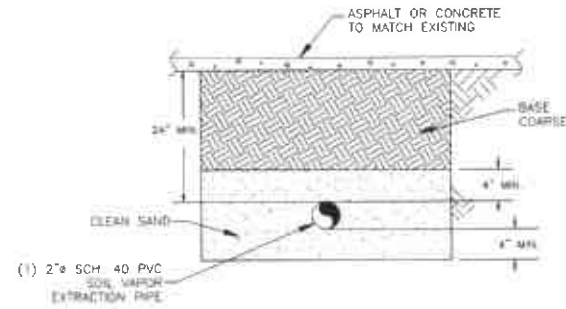
<u>SHEET NO.</u>	<u>SHEET TITLE</u>	<u>DRAWING NO.</u>
1	TITLE SHEET	TS
2	SPECIFICATIONS	G-1
3	SITE LAYOUT	P-1
4	CROSS SECTIONS	P-2

PREPARED FOR:
ARCO PRODUCTS COMPANY
4 CENTERPOINTE DRIVE
LA PALMA, CALIFORNIA 90623-1066

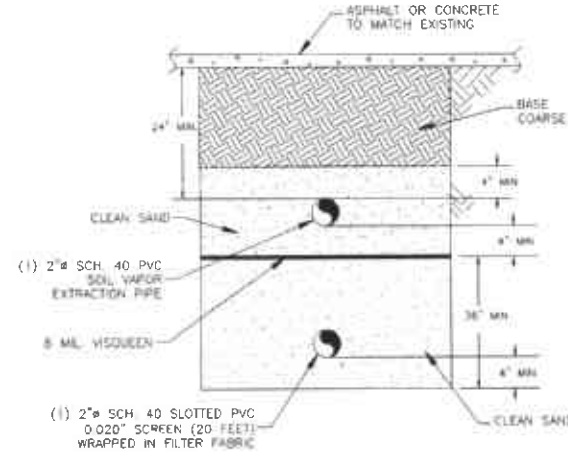
REV	DATE	DESCRIPTION	DRAWN	REVIEW
PREPARED BY	T. ATKINSON	REVIEWED BY		
DATE	3/26/01	DATE		
 Delta Environmental Consultants, Inc.				
PROJECT NUMBER	D000-845	FILE NAME	4977_C-1	DRAWING NO.
				TS



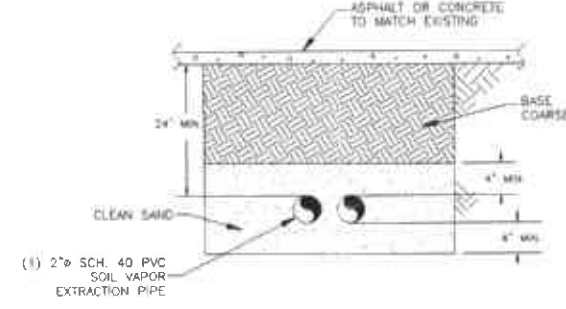
A
P-1
TRENCH CROSS SECTION A-A'
NOT TO SCALE



B
P-1
TRENCH CROSS SECTION B-B'
NOT TO SCALE



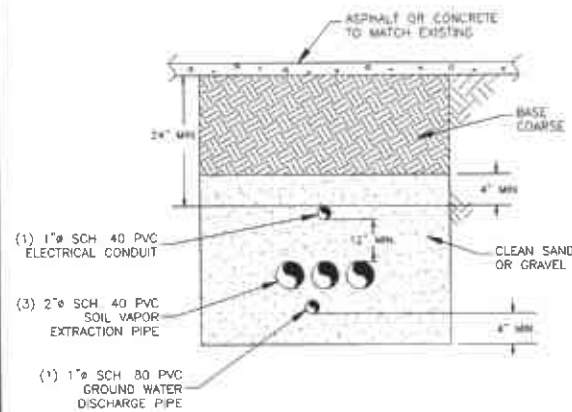
C
P-1
TRENCH CROSS SECTION C-C'
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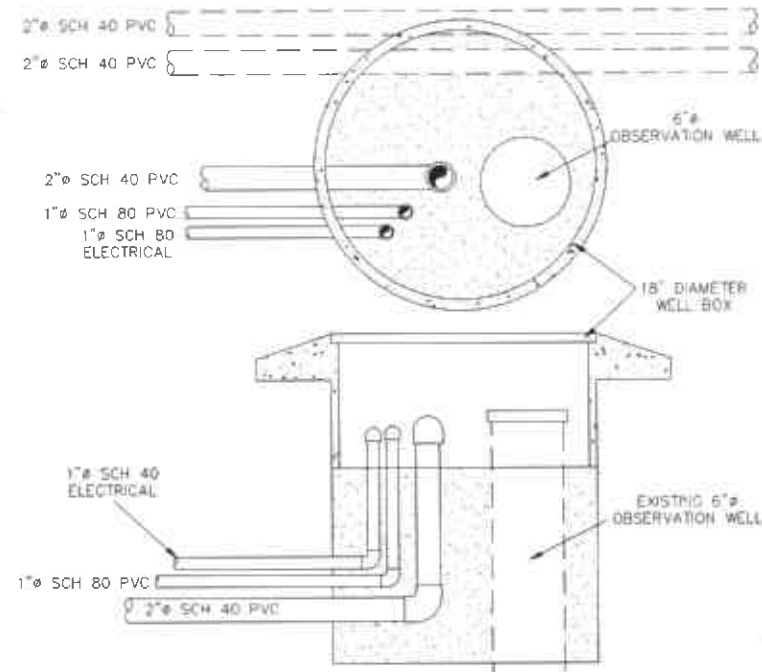
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P-1
TRENCH CROSS SECTION D-D'
NOT TO SCALE

NOTES:

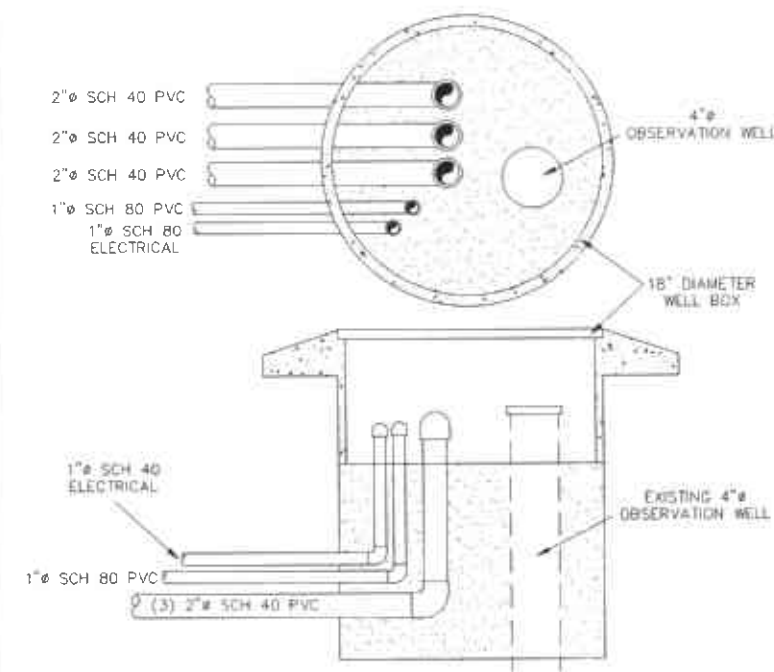
- ① ASSUMES CONTRACTOR HAS INSTALLED TWO 8\"/>
- ② NO CONNECTIONS ARE TO BE MADE TO WELLS ONLY CAPPED STUB UPS.
- ③ CONTRACTOR TO MAINTAIN A VERTICAL 12\"/>
- ④ CONTRACTOR TO INSTALL ALL ELECTRICAL CONDUITS, CONDUCTORS, AND EQUIPMENT IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE NATIONAL ELECTRICAL CODE AND OBTAIN APPROVAL UNDER EXISTING SITE CONSTRUCTION PERMIT.



E
P-1
TRENCH CROSS SECTION E-E'
NOT TO SCALE



1
P-1
TRAFFIC RATED JUNCTION BOX (18\"/>



2
P-1
TRAFFIC RATED JUNCTION BOX (18\"/>

REV	DATE	DESCRIPTION	DRAWN	REVIEW
PREPARED BY	T. ATKINSON	REVIEWED BY		
DATE	3/28/01	DATE		

DRAWING P-2
CROSS SECTIONS
PIPING LAYOUT FOR
EXTRACTION SYSTEM
ARCO FACILITY NO. 4977
2770 CASTRO VALLEY ROAD
CASTRO VALLEY, CALIFORNIA



PROJECT NUMBER D000-B45	FILE NAME 4977 P-2	DRAWING NO. P-2
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