RO 2436

Delta
Environmental
Consultants, Inc.

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

June 25, 2002

Mr. Scott Seery
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: *Monitoring Well Installation Results Report*
ARCO Station No. 4977
2770 Castro Valley Boulevard
Castro Valley, California
Delta Project No. D000-845

Mr. Seery:

Delta Environmental Consultants, Inc. (Delta) has been authorized by Atlantic Richfield Company to conduct a preliminary hydrogeologic investigation at the subject site as shown on Figure 1. A site map illustrating on-site features is included as Figure 2. This investigation was intended to evaluate the distribution of dissolved petroleum hydrocarbons in groundwater and soil beneath the subject site. This report includes the results of drilling and well installation activities conducted on April 11 and 12, 2002. The work was conducted in accordance with Delta's *Work Plan for Preliminary Hydrogeological Assessment* dated October 26, 2001. This work was performed under Alameda County Public Works Agency (ACPWA) well installation permit numbers W01-0313 through W01-0316. Copies of the permits are included in Enclosure A.

Site Description

The site is located on the northwest corner of Castro Valley Boulevard and Wisteria Street at 2770 Castro Valley Boulevard in Castro Valley, California. The site is currently used as a retail gasoline service station consisting of a station building, two multi-pump fuel dispenser islands, and two underground storage tanks (USTs) that share a common tank basin near the north site boundary. The site vicinity is used by commercial retail businesses and residential homes. The site lies at an elevation of approximately 160 feet above mean sea level (msl) with the surrounding topography sloping towards the south.

Project Background

On March 15, 2001, Delta observed the removal of product distribution lines, product dispenser islands, and one 10,000-gallon and two 12,000-gallon USTs. As a result, approximately 750 cubic yards of soil and 11,200 gallons of groundwater were removed and disposed of at an ARCO approved facility. During the removal event, Delta collected twenty-two soil samples from the areas beneath the product distribution lines, product dispensers, and tank basin. The samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX); methyl tertiary butyl ether (MTBE)

and total petroleum hydrocarbons in the gasoline range (TPHg) using the California DHS LUFT Method, and total lead using EPA Method 6010. Concentrations of TPHg were detected in 19 of the samples. The highest TPHg concentration was detected in a soil sample collected from the southern dispenser island. Benzene was detected in 12 of the samples with concentrations ranging from 0.36 to 8.05 milligram per kilogram (mg/kg). Similar to TPHg, the highest benzene concentration was also detected in samples collected from the southern dispenser island. A grab groundwater sample (Tank 1-9) was also collected from the UST basin and analyzed for BTEX, TPHg, and MTBE. Benzene was not detected at or above the laboratory reporting limits. TPHg was reported at 40,500 micrograms per liter (µg/L) and MTBE was reported at 6,530 µg/L. The above data are presented in Delta's report entitled "Tank Basin, Product Line and Dispenser Island Sampling Results, and Installation of Future Remediation System Piping" dated June 20, 2001.

Regional Geology

The subject site is located on the eastern margin of the East Bay Plain at the southern edge of the San Leandro Hills, approximately 2 miles southeast of Lake Chabot. As mapped by Helley and others (1979), soil in the site vicinity consists of late Pleistocene alluvium consisting of weakly consolidated, slightly weathered, poorly sorted, irregular interbedded clay, silt, sand, and gravel (GR 1997). The nearest surface water body is an unnamed tributary of San Lorenzo Creek, which is located approximately 600 feet west of the site.

Soil Borings

On April 11 and 12, 2002, a Delta geologist observed Mitchell Drilling Environmental of Sacramento, California advance five borings, each to a depth of 15 feet bsg, using 8- to 10-inch diameter hollow-stem augers. Three of the borings were completed as groundwater monitoring wells MW-1 through MW-3. Field methods and procedures used by Delta during installation of these wells are summarized in Enclosure B.

Soil samples were collected at 5-foot intervals from each soil boring to 10-feet bsg and then at 0.5-foot intervals using a California-modified split spoon sampler to the total depth of each boring. The soil samples from each boring were logged using visual and manual methods then field-analyzed for the presence of organic vapors using a photoionization detector (PID). The boring logs are included in Enclosure C. Figure 2 presents the location of cross-section trace A-A'. Figure 3 presents an interpretation of subsurface conditions shown on geologic cross section A-A'.

Soil Sample Analytical Results

Eighteen soil samples were submitted to Sequoia Analytical Laboratory (Sequoia) in Sacramento, California for chemical analysis of BTEX and TPHg by DHS LUFT Methods, and MTBE by EPA Method 8260B. Benzene concentrations were detected in six soil samples at concentrations ranging from 0.15 mg/kg in B-1 to 3.2 mg/kg in MW-1. TPHg concentrations were detected in eight soil samples ranging from 12 mg/kg in MW-2 to 1,600 mg/kg in B-2. MTBE concentrations were detected in ten of the soil samples ranging from 0.016 mg/kg in MW-2 to 0.12 mg/kg in MW-3. Soil sample analytical results are presented in Table 1.

One composite soil sample SP-1,2,3,4 was collected from the stockpile and submitted to Sequoia for analyses of BTEX and TPHg by DHS LUFT Methods, and total lead by EPA 6000/7000 Series Methods. Concentrations of TPHg were detected in the stockpile sample at 0.91 mg/kg. Soil

stockpile sample analytical results are summarized in Table 1. Copies of the soil analytical reports are included in Enclosure D.

Monitoring Well Construction

Groundwater monitoring wells MW-1 through MW-3 were installed to assess the vertical and lateral extent of petroleum hydrocarbon beneath the site. The locations of the monitoring wells are shown on Figure 2. The monitoring wells were constructed with 15 feet of 4-inch diameter, flush-threaded, Schedule 40 PVC casing. The wells were screened with 10 feet of 0.020-inch machine-slotted well screen. The well annulus was backfilled with Lonestar No. 3 sand to approximately 0.5-feet above the well screen followed by a 0.5-foot thick bentonite transition seal. The upper portions of the well borings were backfilled with neat cement containing approximately five percent bentonite powder. The tops of the wells were completed with traffic-rated well boxes and set flush to grade in concrete.

Well Survey

On April 30, 2002, the monitoring wells were surveyed by Morrow Surveying of West Sacramento, California, relative to Alameda County benchmark L.C.R.-CHAP. In accordance with State Assembly Bill AB2886, longitude and latitude coordinates were recorded from GPS observations along with well box and top of casing elevations relative to mean seal level. The well survey is presented in Enclosure E.

Well Development, Groundwater Level Measurements and Sampling

On April 17, 2002, Delta developed the newly installed wells MW-1 through MW-3 using the methods described in Enclosure B. On April 17, 2002, depth to water in the wells ranged from 5.36 to 9.28 feet bsg. Based on the April 17, 2002 event, groundwater beneath the site flows toward the southwest at a gradient of 0.0038. After development, the wells were allowed to stabilize for over 24-hours before they were sampled on April 19, 20002. All groundwater samples from wells MW-1 through MW-3 were submitted to Sequoia for analyses of BTEX and TPHg using DHS LUFT Methods, and MTBE using EPA Method 8260B. Groundwater sampling field data sheets are included in Enclosure F. A groundwater contour map based on the April 17, 2002 water level data is included as Figure 4.

Groundwater Sample Analytical Results

Benzene was reported in wells MW-1 through MW-3 at concentrations ranging from 12 µg/L in MW-1 to 970 µg/L in MW-2. Concentrations of TPHg were reported ranging from 660 µg/L in MW-1 to 28,000 µg/L in MW-3. Concentrations of MTBE were reported ranging from 38 µg/L in MW-1 to 1,700 µg/L in MW-3. Groundwater chemical analytical results are presented in Table 2. Copies of the groundwater analytical reports with chain-of-custody documentation are included in Enclosure G.

Disposal of Soil Stockpile

Approximately two cubic yards of drill cuttings was generated during the drilling activities. The cuttings were temporarily covered with visqueen and stockpiled on-site. The stockpile was removed on May 5, 2002, by Dillard Environmental Services and transported to Forward Landfill in Manteca, California for disposal. The soil completion letter is included in Enclosure H.

Discussion

Laboratory analytical results for the soil samples collected during this investigation indicate that the highest petroleum hydrocarbon impact in the soil have occurred in the vicinity of B-2 between 6 and 10.5-feet bsg. Although, it appears the majority of impacted soil is confined to between 10 and 11-feet bsg. Soil between 12 to 14-feet bsg does not appear to be significantly impacted. Groundwater analytical results indicate that benzene, TPHg, and MTBE have impacted the groundwater at the site. The highest groundwater impact is located southeast of the existing UST basin in the vicinity of monitoring well MW-2.

Remarks/Signatures

The interpretations contained in this report 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 hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

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

Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.

William Stowick for
Brett A. Bardsley
Staff Geologist

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

REGISTERED PROFESSIONAL ENGINEER
STEVEN WHITTEN MEEKS
C 057461
Exp. 12/31/05
CIVIL
STATE OF CALIFORNIA
6/25/02

BAB (LRP003.D000845 - 4977)
Enclosures

cc: Mr. Paul Supple – Atlantic Richfield Company

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)	Total Lead (mg/kg)
Dispenser Island Samples									
MW-1-5.50	04/11/02	5.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	<0.0050	NA
MW-1-10.50		10.5	3.2	1.8	5.8	2.6	340	<0.025	NA
MW-1-12.50		12.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	<0.0050	NA
MW-1-14.00		14.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	<0.0050	NA
MW-2-6.00	04/11/02	6.0	<0.050	<0.050	<0.050	<0.050	12	<0.025	NA
MW-2-10.00		10.0	0.59	0.10	1.7	6.9	60	0.064	NA
MW-2-12.00		12.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	<0.0050	NA
MW-2-13.50		13.5	<0.0050	<0.0050	0.0061	0.019	<0.50	0.016	NA
MW-3-6.00	04/11/02	6.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	0.025	NA
MW-3-11.00		11.0	0.36	<0.10	0.69	0.43	35	0.098	NA
MW-3-12.50		12.5	0.0067	<0.0050	<0.0050	<0.0050	<0.50	0.12	NA
MW-3-14.00		14.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	0.10	NA
B-1-6.00	04/12/02	6.0	0.15	<0.050	0.8	0.87	95	<0.025	NA
B-1-10.50		10.5	1.1	1.2	6.2	2.1	240	<0.025	NA
B-1-12.00		12.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	0.0098	NA
B-2-6.00	04/11/02	6.0	<1.0	<1.0	25	150	1,600	0.037	NA
B-2-10.50		10.5	0.61	0.73	3.0	2.4	160	0.075	NA
B-2-12.50		12.5	<0.0050	<0.0050	<0.0050	<0.0050	<0.50	0.023	NA
Soil Stockpile Results									
SP-1,2,3,4	04/12/02	-	<0.0050	<0.0050	0.0096	0.012	0.91	NA	<10

TPH = Total petroleum hydrocarbons.
MTBE = Methyl tertiary butyl ether (analyzed by DHS LUFT)
NA = Not analyzed

TABLE 2

GROUNDWATER SAMPLE ANALYTICAL RESULTS

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

Sample ID	Date	Top of Casing Elevation (ft amsl)	Depth to Groundwater (ft. btc)	Groundwater Elevation (ft amsl)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPHg (µg/L)	MTBE (µg/L)
MW-1	04/19/02	161.11	11.21	149.90	12	1.3	4.3	0.80	660	38
MW-2	04/19/02	161.87	6.59	155.28	970	120	860	6,900	28,000	760
MW-3	04/19/02	162.14	6.94	155.20	29	1.1	43	62	1,200	1,700

amsl = above mean sea level

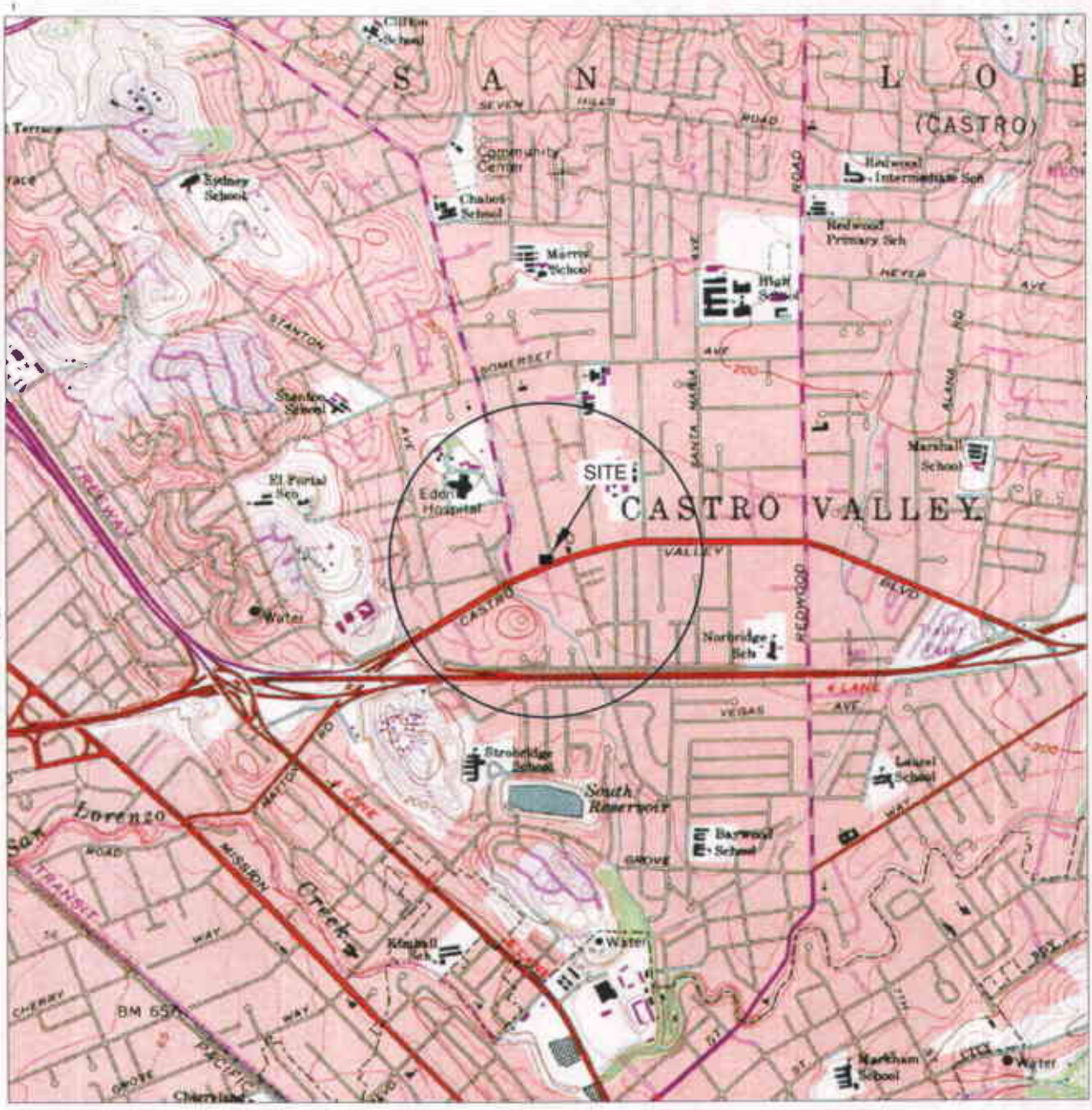
btc = below top of casing

TPHg = Total petroleum hydrocarbons in the gasoline range (C5-C9).

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

µg/L = micrograms per liter

[1] MTBE anlayzed by EPA Method 8260.



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

QUADRANGLE LOCATION

North

0 2000 FT

SCALE 1:24,000

FIGURE 1

SITE TOPOGRAPHIC MAP

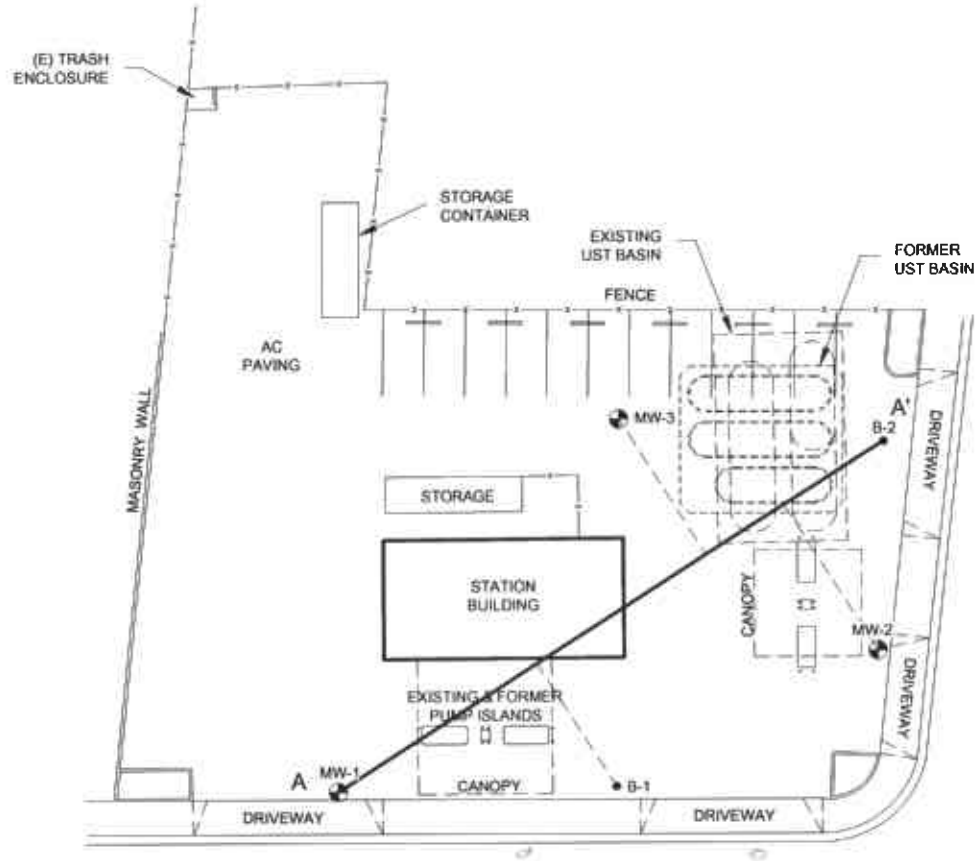
ARCO STATION NO. 4977

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

Delta Environmental Consultants, Inc.



LEGEND:

MW-1	MONITORING WELL LOCATION
B-1	SOIL BORING LOCATION
A——A'	CROSS SECTION LOCATION

FIGURE 2

SITE MAP

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

PROJECT NO. D000-845	DRAWN BY M.L. 6/20/02
FILE NO. D000845C	PREPARED BY BAB
REVISION NO. 3	REVIEWED BY

Delta Environmental Consultants, Inc.

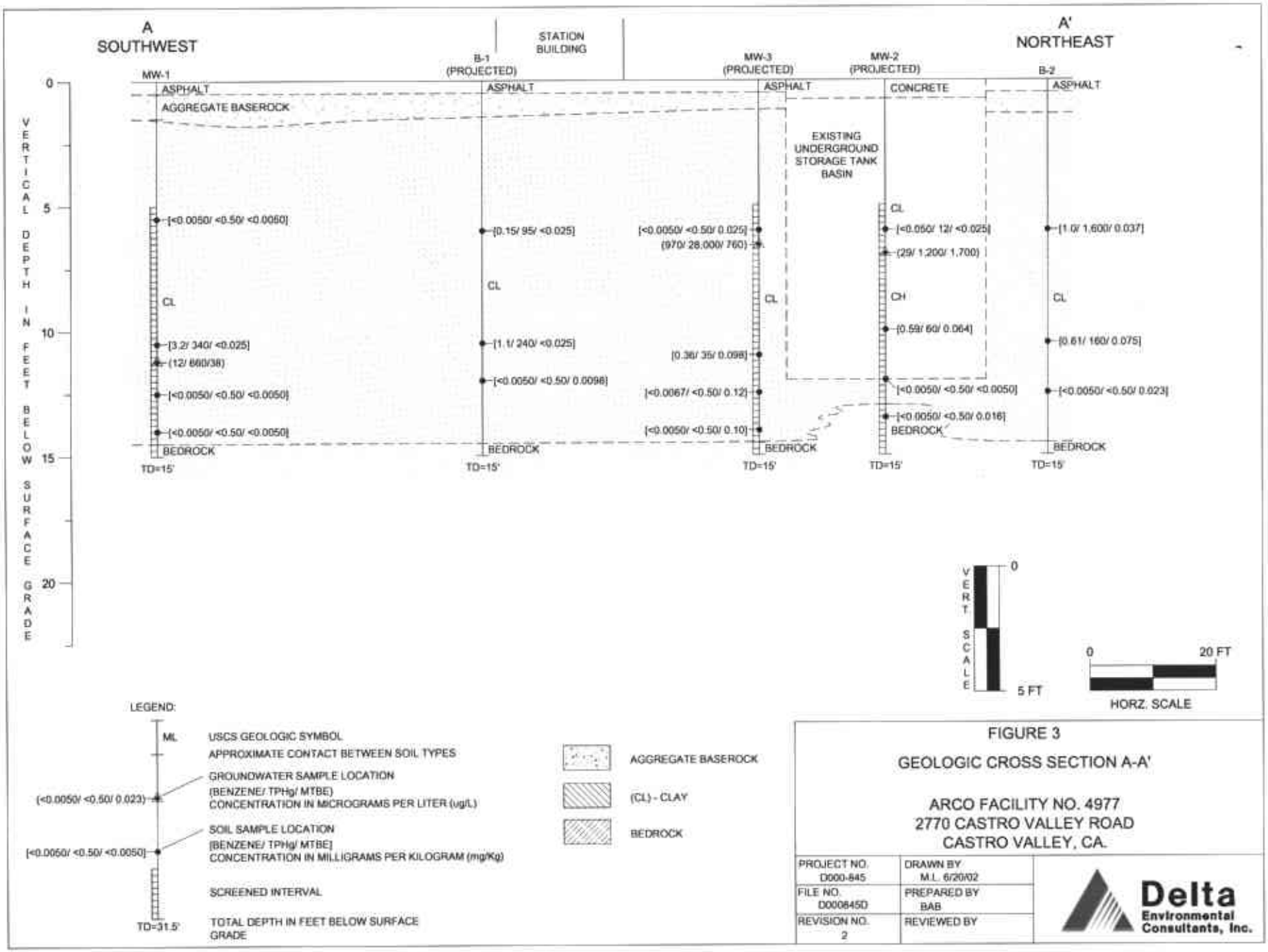


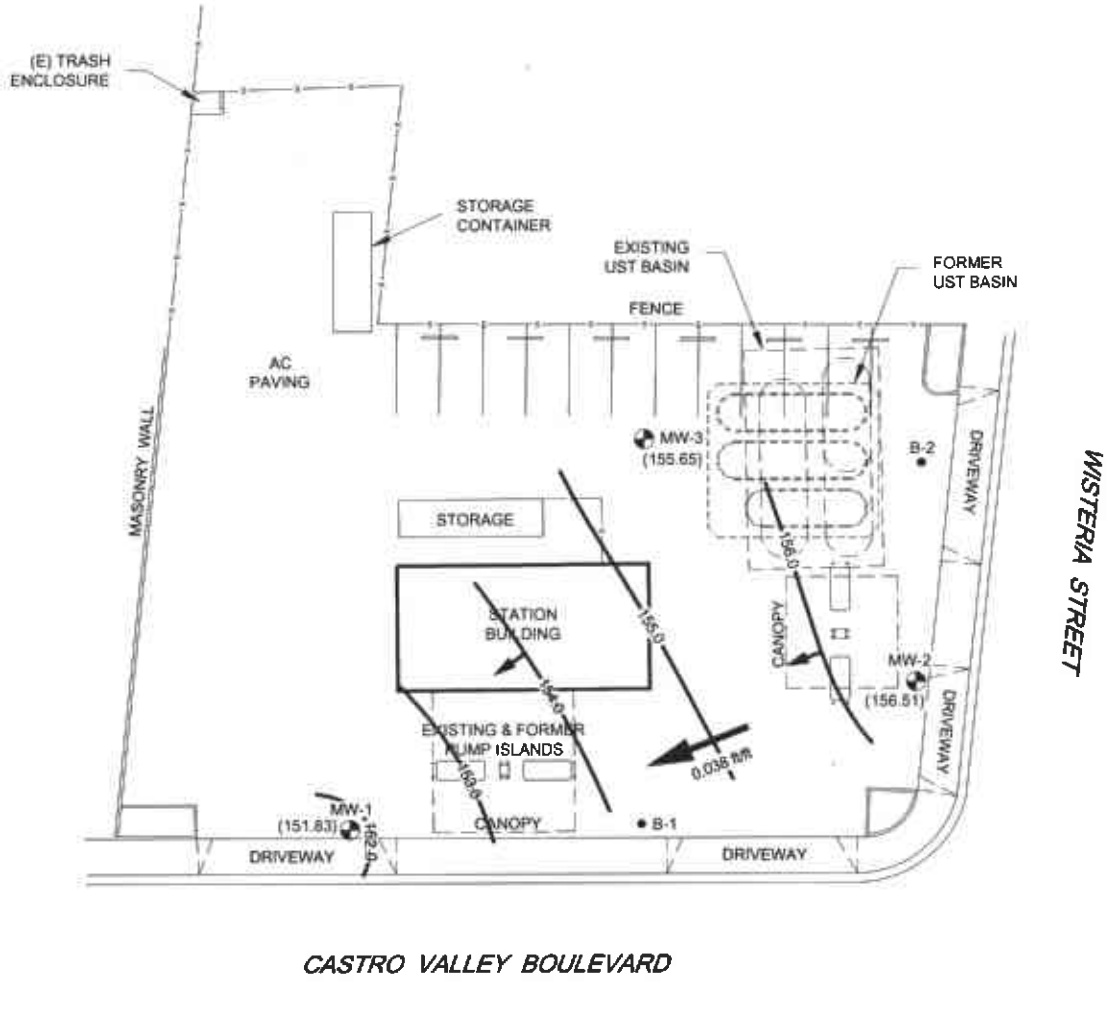
FIGURE 3

GEOLOGIC CROSS SECTION A-A'

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

PROJECT NO. D000-845	DRAWN BY M.L. 6/20/02
FILE NO. D0008450	PREPARED BY BAB
REVISION NO. 2	REVIEWED BY

Delta Environmental Consultants, Inc.



LEGEND:

MW-1	MONITORING WELL LOCATION
B-1	SOIL BORING LOCATION
(151.83)	GROUNDWATER ELEVATION IN FEET RELATIVE TO AN ASSUMED BENCH MARK
152.0	INFERRED WATER TABLE CONTOUR IN FEET RELATIVE TO AN ASSUMED BENCH MARK
	INFERRED GROUNDWATER FLOW DIRECTION

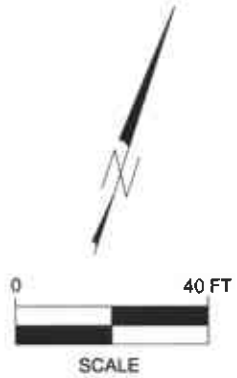


FIGURE 4
GROUNDWATER ELEVATION CONTOUR MAP
4/17/02

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

PROJECT NO. D000-845	DRAWN BY M.L. 6/20/02
FILE NO. D000845C	PREPARED BY BAB
REVISION NO. 2	REVIEWED BY

Delta Environmental Consultants, Inc.

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD CA. 94544-1395
PHONE (510) 670-5554
FAX (510)782-1939

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT
ARCO Station No. 4977
2770 Castro Valley Road
Castro Valley, California

CLIENT
Name Atlantic Richfield Company
Address 4 Centerpointe Drive Phone
City La Palma, CA Zip 90623-1066

APPLICANT
Name Delta Environmental Consultants, Inc.
Fax 916-638-9385
Address 3164 Gold Camp Dr. Suite 200 Phone 916-638-2085
City Rancho Cordova Zip 95670

TYPE OF PROJECT
Well Construction
Cathodic Protection
Water Supply
Monitoring
Geotechnical Investigation
General
Contamination X
Well Destruction

PROPOSED WATER SUPPLY WELL USE
New Domestic
Municipal
Industrial
Replacement Domestic
Irrigation
Other

DRILLING METHOD:
Mud Rotary
Cable
Air Rotary
Other
Auger ✓

DRILLER'S NAME Mitchell Drilling

DRILLER'S LICENSE NO. C57 # 672617

WELL PROJECTS
Drill Hole Diameter ____ in.
Casing Diameter ____ in.
Surface Seal Depth ____ ft.
Maximum Depth ____ ft.
Number B-1 Boring B-2

GEOTECHNICAL PROJECTS
Number of Borings 2
Hole Diameter 4 in.
Maximum Depth 20 ft.

ESTIMATED STARTING DATE 4/8/02
ESTIMATED COMPLETION DATE 4/12/02

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Brett Bardsley DATE 3/13/02

PLEASE PRINT NAME Brett Bardsley

Rev.5-13-00

FOR OFFICE USE
PERMIT NUMBER W02-0313
WELL NUMBER
APN

PERMIT CONDITIONS
Circled Permit Requirements Apply

A. GENERAL
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and Industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. GEOTECHNICAL
Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

E. CATHODIC
Fill hole anode zone with concrete placed by tremie.

F. WELL DESTRUCTION
Send a map of work site. A separate permit is required for wells deeper than 45 feet.

G. SPECIAL CONDITIONS

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED [signature] DATE 3-14-02

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD CA. 94544-1395
PHONE (510) 670-5554
FAX (510)782-1939

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT
ARCO Station No. 4477
2770 Castro Valley Road
Castro Valley, California

CLIENT
Name Atlantic Richfield Company
Address 1 Centerpointe Drive Phone
City La Palma, CA Zip 90633-1066

APPLICANT
Name Delta Environmental Consultants, Inc.
Address 3164 Gold Camp Drive Suite 2 Phone 916/638-2085 Fax 916/638-8385
City Rancho Cordova Zip 95670

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection		General	
Water Supply		Contamination	
Monitoring	✓	Well Destruction	

PROPOSED WATER SUPPLY WELL USE

New Domestic		Replacement Domestic	
Municipal		Irrigation	
Industrial		Other	

DRILLING METHOD:

Mud Rotary		Air Rotary		Auger	✓
Cable		Other			

DRILLER'S NAME Mitchell Drilling

DRILLER'S LICENSE NO. C57# 672617

WELL PROJECTS
Drill Hole Diameter 10 in. Maximum
Casing Diameter 4 in. Depth 20 ft.
Surface Seal Depth 5 ft. Owner's Well Number MW-1

GEOTECHNICAL PROJECTS
Number of Borings
Hole Diameter in. Maximum
Depth ft.

ESTIMATED STARTING DATE 4/11/02
ESTIMATED COMPLETION DATE 4/13/02

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Brett Bardsley DATE 3/13/02

PLEASE PRINT NAME Brett Bardsley

Rev 3-13-00

FOR OFFICE USE
PERMIT NUMBER W02-0314
WELL NUMBER
APN

PERMIT CONDITIONS
Circled Permit Requirements Apply

A. GENERAL
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. GEOTECHNICAL
Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

E. CATHODIC
Fill hole anode zone with concrete placed by tremie.

F. WELL DESTRUCTION
Send a map of work site. A separate permit is required for wells deeper than 45 feet.

G. SPECIAL CONDITIONS

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED [signature] DATE 3-14-02

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD CA. 94544-1395
PHONE (510) 670-5554
FAX (510)782-1939

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT
ARCO Station No. 4977
3770 Castro Valley Road
Castro Valley, California

CLIENT
Name Atlantic Richfield Company
Address 4 Centerpointe Drive Phone
City La Palma, CA Zip 90623-1066

APPLICANT
Name Delta Environmental Consultants, Inc.
Fax 916-638-8385
Address 3164 Gold Camp Drive Suite 200 Phone 916-638-2164
City Rancho Cordova Zip 95670

FOR OFFICE USE
PERMIT NUMBER WO2-0315
WELL NUMBER
APN

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection		General	
Water Supply		Contamination	
Monitoring	✓	Well Destruction	

PROPOSED WATER SUPPLY WELL USE

New Domestic		Replacement Domestic	
Municipal		Irrigation	
Industrial		Other	

DRILLING METHOD:

Mud Rotary		Air Rotary		Auger	✓
Cable		Other			

DRILLER'S NAME Mitchell Drilling
DRILLER'S LICENSE NO. C57 # 672617

WELL PROJECTS
Drill Hole Diameter 10 in. Maximum
Casing Diameter 4 in. Depth 20 ft.
Surface Seal Depth 5 ft. Owner's Well Number MW-2

GEOTECHNICAL PROJECTS
Number of Borings
Hole Diameter in. Maximum Depth ft.

ESTIMATED STARTING DATE 4/11/02
ESTIMATED COMPLETION DATE 4/12/02

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Brett Bardsley DATE 3/13/02
PLEASE PRINT NAME Brett Bardsley

Rev.5-13-00

PERMIT CONDITIONS
Circled Permit Requirements Apply

A. GENERAL
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources-Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. GEOTECHNICAL
Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

E. CATHODIC
Fill hole anode zone with concrete placed by tremie.

F. WELL DESTRUCTION
Send a map of work site. A separate permit is required for wells deeper than 45 feet.

G. SPECIAL CONDITIONS

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED [signature] DATE 3-14-02

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD CA. 94544-1395
PHONE (510) 670-5554
FAX (510)782-1939

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT
ARCO Station No. 4977
3770 Castro Valley Road
Castro Valley, California

CLIENT
Name Atlantic Richfield Company
Address 4 Centerpointe Drive Phone
City La Palma, CA Zip 90623-1066

APPLICANT
Name Delta Environmental Consultants, Inc.
Fax 916-638-8385
Address 3164 Gold Camp Dr. Suite 200 Phone 916-638-2164
City Rancho Cordova Zip 95670

FOR OFFICE USE
PERMIT NUMBER W02-0316
WELL NUMBER
APN

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection		General	
Water Supply		Contamination	
Monitoring	✓	Well Destruction	

PROPOSED WATER SUPPLY WELL USE

New Domestic		Replacement Domestic	
Municipal		Irrigation	
Industrial		Other	

DRILLING METHOD:

Mud Rotary		Air Rotary		Auger	✓
Cable		Other			

DRILLER'S NAME Mitchell Driling
DRILLER'S LICENSE NO. C57 # 672617

WELL PROJECTS
Drill Hole Diameter 10 in. Maximum
Casing Diameter 4 in. Depth 20 ft.
Surface Seal Depth 5 ft. Owner's Well Number MW-3

GEOTECHNICAL PROJECTS
Number of Borings
Hole Diameter in. Maximum
Depth ft.

ESTIMATED STARTING DATE 4/11/02
ESTIMATED COMPLETION DATE 4/12/02

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Brett Bardsley DATE 3/13/02
PLEASE PRINT NAME Brett Bardsley

Rev.5-15-00

PERMIT CONDITIONS
Circled Permit Requirements Apply

A. GENERAL
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources - Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. GEOTECHNICAL
Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

E. CATHODIC
Fill hole anode zone with concrete placed by tremie.

F. WELL DESTRUCTION
Send a map of work site. A separate permit is required for wells deeper than 45 feet.

G. SPECIAL CONDITIONS

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED [signature] DATE 3-14-02

1.0 FIELD METHODS AND PROCEDURES

1.1 Health and Safety Plan

Field work performed by Delta and Delta's subcontractors at the site is conducted according to guidelines established in a Site Health and Safety Plan (SHSP). The SHSP is a document which describes the hazards that may be encountered in the field and specifies protective equipment, work procedures, and emergency information. A copy of the SHSP is at the site and available for reference by appropriate parties during work at the site.

1.2 Locating Underground Utilities

Prior to commencement of work on-site, Delta researches the location of underground utilities with the assistance of Underground Service Alert (USA). USA contacts the owners of the various utilities in the vicinity of the site to have the utility owners mark the locations of their underground utilities. Work associated with the boring and monitoring well installation is preceded by manual hand augering to a minimum depth of 5 feet below surface grade (bsg) to avoid contact with underground utilities.

1.3 Soil Sampling and Contamination Reduction

Soil borings and soil sampling are performed under the direction of a Delta geologist. Soil borings are advanced using a truck-mounted hollow-stem auger drill rig.

To reduce the chances of cross-contamination between boreholes, all downhole drilling equipment is steam-cleaned between each boring. To reduce cross-contamination between samples, the split-barrel sampler is washed in a soap solution and double-rinsed between each sampling event.

Soil sampling beyond 5 feet bsg is conducted in accordance with ASTM 1586-84. Using this procedure, a 2-inch outside-diameter split-barrel sampler or a 2-inch inside-diameter California-type sampler is driven into the soil by a 140-pound weight falling 30-inches. After an initial set of 6-inches, the number of blows required to drive the sampler an additional 12-inches (known as penetration resistance or the "N" value) is recorded. The N value is used as an empirical measure of the relative density of cohesionless soils and the consistency of cohesive soils.

Upon recovery, a portion of the soil sample is placed into a plastic bag and sealed for later screening with a photoionization detector (PID). Another portion of the soil sample is used for classification and description. That part of the soil sample collected in the leading brass tube within the California-type sampler is stored at approximately 4°C for transport to the laboratory.

1.4 Soil Classification

As the samples are obtained in the field, they are classified by the geologist in accordance with the Unified Soil Classification System (USCS). Representative portions of the samples are then retained for further examination and for verification of the field classification. Logs of the borings indicating the depth and identification of the various strata, the N value, and pertinent information regarding the method of maintaining and advancing the borehole are made.

1.5 Soil Sample Screening/hNu Portable Photoionization Detector Method

After the soil sample plastic bags are brought to ambient temperature, the headspace vapors of the soil sample in the bag are screened with a PID equipped with a 10.2 eV lamp. The sample corner of the bag is opened and the detector probe immediately placed within the headspace. The highest observed reading is recorded.

1.6 Monitoring Well Gravel Pack and Slot Size Selection

The gravel pack is selected such that it will permit the development of a zone of higher hydraulic conductivity adjacent to the well screen but will reduce piping of the finer-grained formation materials into the well. The slot size of the well screen is selected such that it will retain a minimum of 95 percent of the gravel pack material.

1.7 Monitoring Well Development

After monitoring wells are installed, each monitoring well is developed with a surge block and bailer (or pump) until the water produced is relatively sediment-free and until the conductivity, pH, and temperature stabilize. If the well is pumped dry during the development process, recharge rates are recorded. No water or chemicals are introduced into the monitoring wells during well development. All development water is placed in drums on-site for later disposal.

1.8 Groundwater Sampling

At least three wetted casing volumes of liquid are removed from each well by bailing with a clean disposable bailer. A liquid sample is collected from each well with a clean disposable bailer and transferred into a laboratory supplied sampling container. Each sample is appropriately labeled and stored on ice from the time of collection through the time of delivery to the laboratory. Groundwater samples are transported to the laboratory and analyzed within the EPA-specified holding times for the requested analyses.

1.9 Liquid-Phase Petroleum Hydrocarbons

If liquid-phase petroleum hydrocarbons are present in a well, the thickness of the petroleum layer is measured by collecting a sample in a transparent disposable bailer with a check valve at the bottom, or by measurement using appropriate fluid-level sounding equipment.

2.0 ANALYTICAL PROCEDURES

Selected soil samples submitted to the laboratory are analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX), MTBE, and TPHg using DHS LUFT.

3.0 QUALITY ASSURANCE PLAN

This section describes the field and analytical procedures to be 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 is 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 has 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, are recorded on the borehole log or in the field records. Samples are analyzed by a California-certified laboratory.

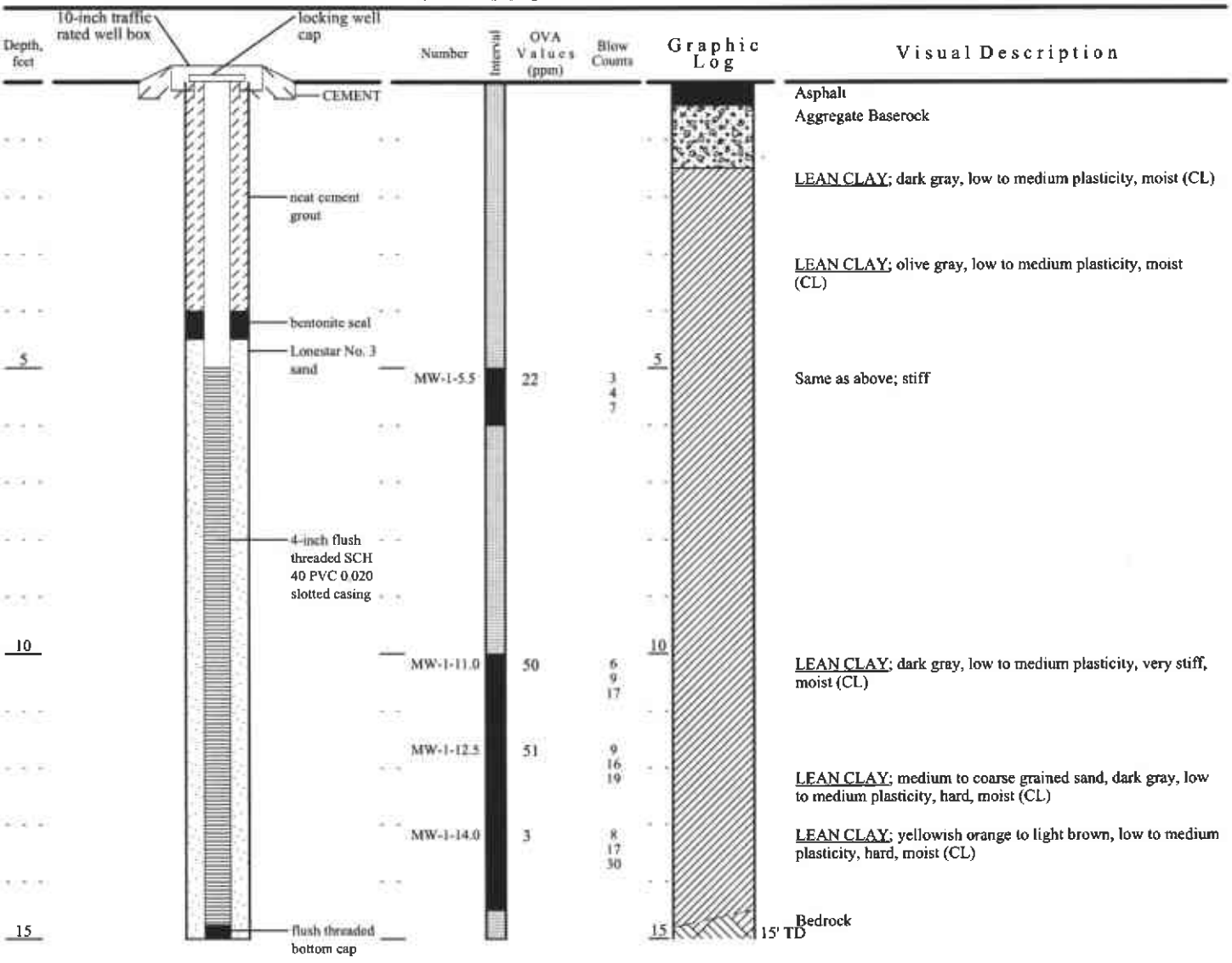
A chain-of-custody form is used to record possession of the sample from time of collection to its arrival at the laboratory. When the samples are shipped, the person in custody of them relinquish as the samples by signing the chain-of-custody form and noting the time. The sample-control officer at the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

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

ENCLOSURE C

Soil Boring Logs and Well Construction Details

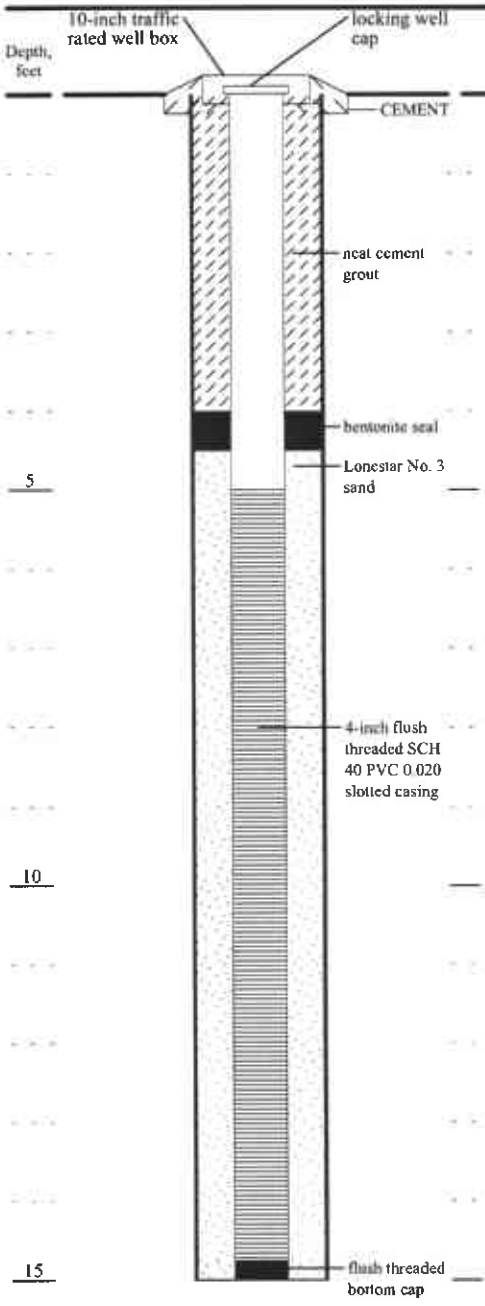
Delta Environmental Consultants, Inc.	Street Address	Project ID	
	2770 Castro Valley Road	**ARCO Station No. 4977**	
	City & State	Surface Elev.	Well / Boring ID
	Castro Valley, California	**161.63'**	**MW-1**
	Delta Project #	Casing Elev.	Total Depth
	D000-845	**161.11'**	**15'**



Dates and Times	Logger	Sampling Method & Diameter	Permitting Agency
	Brett A. Bardsley	**2-inch split spoon**	**Alameda County Public Works Agency**
Start	Drilling Company & Driller	Bore Hole Diameter	Permit #
4/11/02 1145	**Mitchell Drilling Environmental, Eddie Mitchell**	**10-inches**	**W02-0314**
Total Depth	Drillers C-57#		
4/11/02 1311	**672617**	**4-inch SCH 40 PVC/0.020 slot**	
Completion or backfill	Drilling Equipment and method		
4/12/02 1115	**CME-75, hollow stem auger**		**Page 1 of 1**

Delta Environmental Consultants, Inc.	Street Address **2770 Castro Valley Road**	Project ID **ARCO Station No. 4977**	
	City & State **Castro Valley, California**	Surface Elev. **162.15'**	Well / Boring ID **MW-2**
	Delta Project # **D000-845**	Casing Elev. **161.87'**	Total Depth **15'**

WELL CONSTRUCTION | SAMPLING DATA | SOIL PROFILE/LITHOLOGY

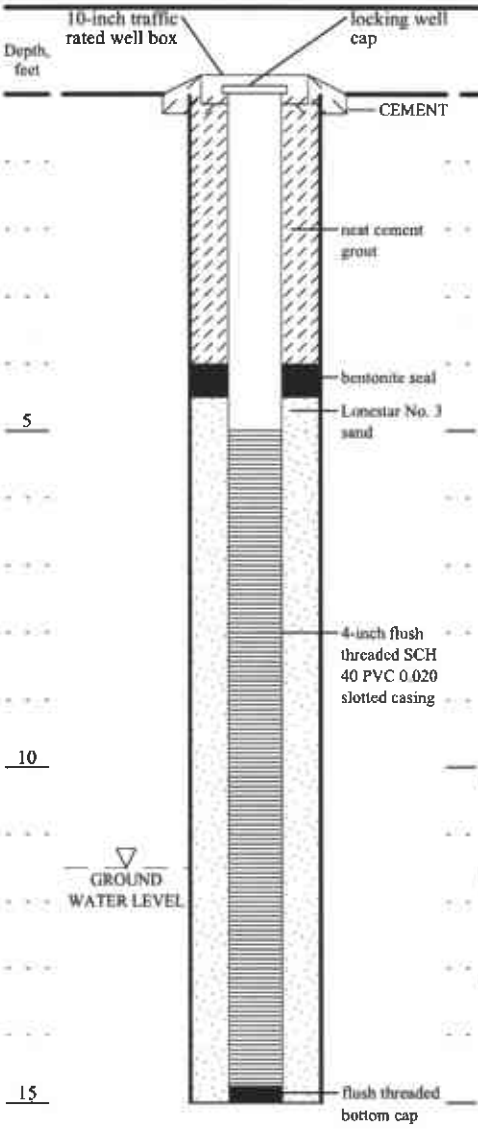


Depth, feet	Number	Interval	OVA Values (ppm)	Blow Counts	Graphic Log	Visual Description
						Concrete
						LEAN CLAY; dark gray, low to medium plasticity, moist (CL)
						LEAN CLAY; olive gray, low to medium plasticity, moist (CL)
5	MW-2-6.0		9	3 3 4	5	Same as above; medium stiff
10	MW-2-10.5		203	3 7 14	10	LEAN CLAY WITH SAND; fine to medium grained sand; greenish gray, very stiff, moist (CL)
	MW-2-12.5		360	5 20 33		Same as above; hard
	MW-2-13.5		152	7 20 50		Bedrock
15					15	15' TD

Dates and Times	Logger **Brett A. Bardsley**	Sampling Method & Diameter **2-inch split spoon**	Permitting Agency **Alameda County Public Works Agency**
Start **4/11/02 1407**	Drilling Company & Driller **Mitchell Drilling Environmental, Eddie Mitchell**	Bore Hole Diameter **10-inches**	Permit # **W02-0315**
Total Depth **4/11/02 1458**	Drillers C-57# **672617**	Diameter, Type & Slot Size of Casing **4-inch SCH 40 PVC/0.020 slot**	
Completion or backfill **4/11/02 1800**	Drilling Equipment and method **CME-75, hollow stem auger**		**Page 1 of 1**

WELL ARCO4977.GPJ 7/2/02

Delta Environmental Consultants, Inc.	Street Address **2770 Castro Valley Road**	Project ID **ARCO Station No. 4977**	
	City & State **Castro Valley, California**	Surface Elev. **162.60'**	Well / Boring ID **MW-3**
	Delta Project # **D000-845**	Casing Elev. **162.14'**	Total Depth **15'**



Dates and Times	Logger **Brett A. Bardsley**	Sampling Method & Diameter **2-inch split spoon**	Permitting Agency **Alameda County Public Works Agency**
Start **4/11/02 0930**	Drilling Company & Driller **Mitchell Drilling Environmental, Eddie Mitchell**	Bore Hole Diameter **10-inches**	Permit # **W02-0316**
Total Depth **4/11/02 1041**	Drillers C-57# **672617**	Diameter, Type & Slot Size of Casing **4-inch SCH 40 PVC/0.020 slot**	
Completion or backfill **4/11/02 1730**	Drilling Equipment and method **CME-75, hollow stem auger**		**Page 1 of 1**

WELL ARCO4977.GPJ 5/3/02

Delta Environmental Consultants, Inc.	Street Address: 2770 Castro Valley Road	Project ID: ARCO Station No. 4977	
	City & State: Castro Valley, California	Surface Elev.	Well / Boring ID: B-1
	Delta Project #: D000-845	Casing Elev.	Total Depth: 15'

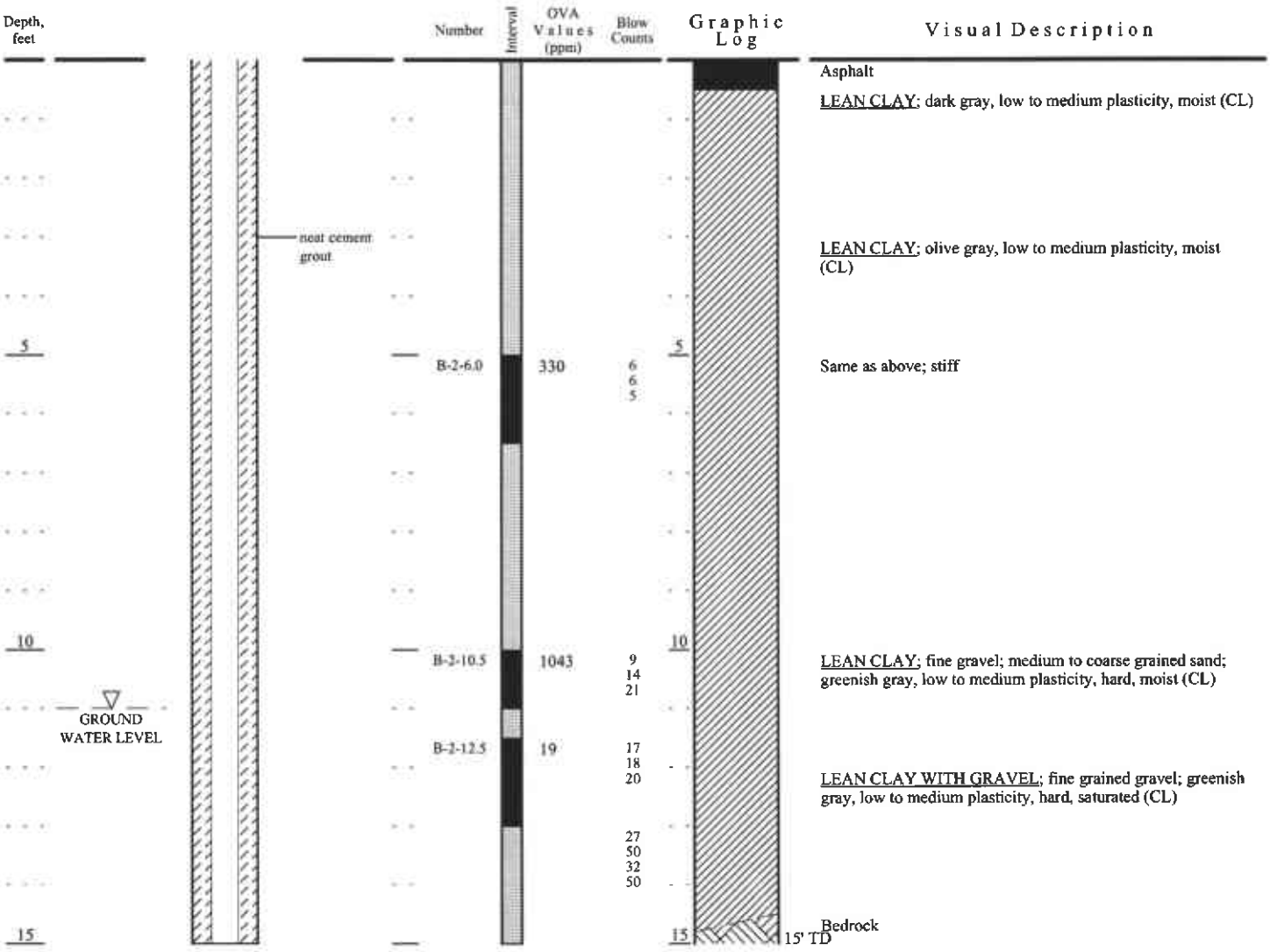
BACKFILL DETAIL	SAMPLING DATA				SOIL PROFILE/LITHOLOGY	
Depth, feet		Number	Interval	OVA Values (ppm)	Blow Counts	Graphic Log	Visual Description
							Asphalt
							LEAN CLAY; dark gray, low to medium plasticity, moist (CL)
				35			
	neat cement grout						LEAN CLAY; olive gray, low to medium plasticity, moist (CL)
				200			
5		B-1-6.0		234	4 4 4	5	LEAN CLAY; medium to coarse grained sand; dark gray, low to medium plasticity, medium stiff, moist (CL)
10		B-1-11.0		1319	6 15 20	10	LEAN CLAY; greenish gray to yellowish orange, hard, moist (CL)
	GROUND WATER LEVEL	B-1-12.0		379	7 19 33		LEAN CLAY WITH GRAVEL; fine grained gravel; dark to greenish gray, low to medium plasticity, hard, saturated (CL)
				26	18 50 50		
15						15	Bedrock 15' TD

JUL 16 2002

Dates and Times	Logger: Brett A. Bardsley	Sampling Method & Diameter: 2-inch split spoon	Permitting Agency: Alameda County Public Works Agency
Start: 4/12/02 0900	Drilling Company & Driller: Mitchell Drilling Environmental, Eddie Mitchell	Bore Hole Diameter: 8.25-inches	Permit #: W02-0313
Total Depth: 4/12/02 0934	Drillers C-57#: 672617		
Completion or backfill: 4/12/02 1015	Drilling Equipment and method: CME-75, hollow stem auger		Page 1 of 1

WELL ARCO4977.GPJ 7/2/02

Delta Environmental Consultants, Inc.	Street Address **2770 Castro Valley Road**	Project ID **ARCO Station No. 4977**	
	City & State **Castro Valley, California**	Surface Elev.	Well / Boring ID **B-2**
	Delta Project # **D000-845**	Casing Elev.	Total Depth **15'**



Dates and Times	Logger **Brett A. Bardsley**	Sampling Method & Diameter **2-inch split spoon**	Permitting Agency **Alameda County Public Works Agency**
Start **4/11/02 1545**	Drilling Company & Driller **Mitchell Drilling Environmental, Eddie Mitchell**	Bore Hole Diameter **8.25-inches**	Permit # **W02-0313**
Total Depth **4/11/02 1630**	Drillers C-57# **672617**		
Completion or backfill **4/11/02 1645**	Drilling Equipment and method **CME-75, hollow stem auger**		**Page 1 of 1**

ENCLOSURE D

Soil Sample Laboratory Analytical Reports

Sequoia
Analytical

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

26 April, 2002

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

RE: ARCO 4977, Castro Valley, CA
Sequoia Report: S204254

Enclosed are the results of analyses for samples received by the laboratory on 04/12/02 14:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lito Diaz
Laboratory Director

CA ELAP Certificate #1624

Sequoia Analytical

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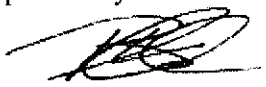
Sacramento, CA 95834
(916) 921-9600
FAX (916) 921-0100
www.sequoialabs.com

Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/26/02 14:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-1-5.50-020412	S204254-01	Soil	04/12/02 09:24	04/12/02 14:00
B-1-6.00-020412	S204254-02	Soil	04/12/02 09:24	04/12/02 14:00
B-1-10.50-020412	S204254-03	Soil	04/12/02 09:27	04/12/02 14:00
B-1-11.00-020412	S204254-04	Soil	04/12/02 09:27	04/12/02 14:00
B-1-12.00-020412	S204254-05	Soil	04/12/02 09:29	04/12/02 14:00
B-1-11.50-020412	S204254-06	Soil	04/12/02 09:29	04/12/02 14:00
MW-1-5.00-020411	S204254-07	Soil	04/11/02 13:00	04/12/02 14:00
MW-1-5.50-020411	S204254-08	Soil	04/11/02 13:00	04/12/02 14:00
MW-1-10.50-020411	S204254-09	Soil	04/11/02 13:05	04/12/02 14:00
MW-1-11.00-020411	S204254-10	Soil	04/11/02 13:05	04/12/02 14:00
MW-1-12.00-020411	S204254-11	Soil	04/11/02 13:06	04/12/02 14:00
MW-1-12.50-020411	S204254-12	Soil	04/11/02 13:06	04/12/02 14:00
MW-1-13.50-020411	S204254-13	Soil	04/11/02 13:11	04/12/02 14:00
MW-1-14.00-020411	S204254-14	Soil	04/11/02 13:11	04/12/02 14:00
B-2-5.50-020411	S204254-15	Soil	04/11/02 16:05	04/12/02 14:00
B-2-6.00-020411	S204254-16	Soil	04/11/02 16:05	04/12/02 14:00
B-2-10.00-020411	S204254-17	Soil	04/11/02 16:10	04/12/02 14:00
B-2-10.50-020411	S204254-18	Soil	04/11/02 16:10	04/12/02 14:00
B-2-12.0-020411	S204254-19	Soil	04/11/02 16:18	04/12/02 14:00
B-2-12.5-020411	S204254-20	Soil	04/11/02 16:18	04/12/02 14:00
MW-2-5.50-020411	S204254-21	Soil	04/11/02 14:40	04/12/02 14:00
MW-2-6.00-020411	S204254-22	Soil	04/11/02 14:40	04/12/02 14:00
MW-2-10.00-020411	S204254-23	Soil	04/11/02 14:47	04/12/02 14:00
MW-2-10.50-020411	S204254-24	Soil	04/11/02 14:47	04/12/02 14:00
MW-2-12.00-020411	S204254-25	Soil	04/11/02 14:53	04/12/02 14:00
MW-2-12.50-020411	S204254-26	Soil	04/11/02 14:53	04/12/02 14:00
MW-2-13.00-020411	S204254-27	Soil	04/11/02 14:58	04/12/02 14:00
MW-2-13.50-020411	S204254-28	Soil	04/11/02 14:58	04/12/02 14:00
MW-3-5.50-020411	S204254-29	Soil	04/11/02 10:15	04/12/02 14:00
MW-3-6.00-020411	S204254-30	Soil	04/11/02 10:15	04/12/02 14:00
MW-3-10.50-020411	S204254-31	Soil	04/11/02 10:33	04/12/02 14:00

Sequoia Analytical - Sacramento



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

Ron Chew, Client Services Representative

Sequoia Analytical

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Sacramento, CA 95834
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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/26/02 14:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-3-11.0-020411	S204254-32	Soil	04/11/02 10:33	04/12/02 14:00
MW-3-12.0-020411	S204254-33	Soil	04/11/02 10:37	04/12/02 14:00
MW-3-12.5-020411	S204254-34	Soil	04/11/02 10:37	04/12/02 14:00
MW-3-13.5-020411	S204254-35	Soil	04/11/02 10:41	04/12/02 14:00
MW-3-14.0-020411	S204254-36	Soil	04/11/02 10:41	04/12/02 14:00

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/26/02 14:40

Total Purgeable Hydrocarbons and BTEX by DHS LUFT

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-1-6.00-020412 (S204254-02) Soil Sampled: 04/12/02 09:24 Received: 04/12/02 14:00									
Purgeable Hydrocarbons	**95**	5.0	mg/kg	1	2040291	04/22/02	04/22/02	DHS LUFT	HC-12
Benzene	**0.15**	0.050	"	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	"	
Ethylbenzene	**0.80**	0.050	"	"	"	"	"	"	
Xylenes (total)	**0.87**	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*115 %*	*60-140*		"	"	"	"	
B-1-10.50-020412 (S204254-03) Soil Sampled: 04/12/02 09:27 Received: 04/12/02 14:00									
Purgeable Hydrocarbons	**240**	10	mg/kg	2	2040310	04/24/02	04/25/02	DHS LUFT	HC-12
Benzene	**1.1**	0.10	"	"	"	"	"	"	
Toluene	**1.2**	0.10	"	"	"	"	"	"	
Ethylbenzene	**6.2**	0.10	"	"	"	"	"	"	
Xylenes (total)	**2.1**	0.10	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*142 %*	*60-140*		"	"	"	"	*S-02*
B-1-12.00-020412 (S204254-05) Soil Sampled: 04/12/02 09:29 Received: 04/12/02 14:00									
Purgeable Hydrocarbons	ND	0.50	mg/kg	1	2040303	04/24/02	04/24/02	DHS LUFT	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*105 %*	*60-140*		"	"	"	"	
MW-1-5.50-020411 (S204254-08) Soil Sampled: 04/11/02 13:00 Received: 04/12/02 14:00									
Purgeable Hydrocarbons	ND	0.50	mg/kg	1	2040253	04/18/02	04/18/02	DHS LUFT	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*99.0 %*	*60-140*		"	"	"	"	

Sequoia Analytical

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/26/02 14:40

Total Purgeable Hydrocarbons and BTEX by DHS LUFT

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1-10.50-020411 (S204254-09) Soil	**Sampled: 04/11/02 13:05**		**Received: 04/12/02 14:00**						
Purgeable Hydrocarbons	**340**	10	mg/kg	2	2040310	04/24/02	04/25/02	DHS LUFT	HC-12
Benzene	**3.2**	0.10	"	"	"	"	"	"	
Toluene	**1.8**	0.10	"	"	"	"	"	"	
Ethylbenzene	**5.8**	0.10	"	"	"	"	"	"	
Xylenes (total)	**2.6**	0.10	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*70.1 %*	*60-140*		"	"	"	"	
MW-1-12.50-020411 (S204254-12) Soil	**Sampled: 04/11/02 13:06**		**Received: 04/12/02 14:00**						
Purgeable Hydrocarbons	ND	0.50	mg/kg	1	2040303	04/24/02	04/24/02	DHS LUFT	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*106 %*	*60-140*		"	"	"	"	
MW-1-14.00-020411 (S204254-14) Soil	**Sampled: 04/11/02 13:11**		**Received: 04/12/02 14:00**						
Purgeable Hydrocarbons	ND	0.50	mg/kg	1	2040303	04/24/02	04/24/02	DHS LUFT	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*93.0 %*	*60-140*		"	"	"	"	
B-2-6.00-020411 (S204254-16) Soil	**Sampled: 04/11/02 16:05**		**Received: 04/12/02 14:00**						
Purgeable Hydrocarbons	**1600**	100	mg/kg	20	2040224	04/17/02	04/17/02	DHS LUFT	
Benzene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	**25**	1.0	"	"	"	"	"	"	
Xylenes (total)	**150**	1.0	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*123 %*	*60-140*		"	"	"	"	

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/26/02 14:40

Total Purgeable Hydrocarbons and BTEX by DHS LUFT

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-2-10.50-020411 (S204254-18) Soil Sampled: 04/11/02 16:10 Received: 04/12/02 14:00									
Purgeable Hydrocarbons	**160**	10	mg/kg	2	2040310	04/24/02	04/25/02	DHS LUFT	HC-12
Benzene	**0.61**	0.10	"	"	"	"	"	"	
Toluene	**0.73**	0.10	"	"	"	"	"	"	
Ethylbenzene	**3.0**	0.10	"	"	"	"	"	"	
Xylenes (total)	**2.4**	0.10	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*124 %*	*60-140*		"	"	"	"	
B-2-12.5-020411 (S204254-20) Soil Sampled: 04/11/02 16:18 Received: 04/12/02 14:00									
Purgeable Hydrocarbons	ND	0.50	mg/kg	1	2040303	04/24/02	04/24/02	DHS LUFT	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*104 %*	*60-140*		"	"	"	"	
MW-2-6.00-020411 (S204254-22) Soil Sampled: 04/11/02 14:40 Received: 04/12/02 14:00									
Purgeable Hydrocarbons	**12**	5.0	mg/kg	1	2040224	04/17/02	04/17/02	DHS LUFT	HC-12
Benzene	ND	0.050	"	"	"	"	"	"	
Toluene	ND	0.050	"	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	"	
Xylenes (total)	ND	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*107 %*	*60-140*		"	"	"	"	
MW-2-10.00-020411 (S204254-23) Soil Sampled: 04/11/02 14:47 Received: 04/12/02 14:00									
Purgeable Hydrocarbons	**60**	10	mg/kg	2	2040310	04/24/02	04/25/02	DHS LUFT	
Benzene	**0.59**	0.10	"	"	"	"	"	"	
Toluene	**0.10**	0.10	"	"	"	"	"	"	
Ethylbenzene	**1.7**	0.10	"	"	"	"	"	"	
Xylenes (total)	**6.9**	0.10	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*110 %*	*60-140*		"	"	"	"	

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3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/26/02 14:40

Total Purgeable Hydrocarbons and BTEX by DHS LUFT

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2-12.00-020411 (S204254-25) Soil	**Sampled: 04/11/02 14:53**		**Received: 04/12/02 14:00**						
Purgeable Hydrocarbons	ND	0.50	mg/kg	1	2040303	04/24/02	04/24/02	DHS LUFT	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*93.5 %*	*60-140*		"	"	"	"	
MW-2-13.50-020411 (S204254-28) Soil	**Sampled: 04/11/02 14:58**		**Received: 04/12/02 14:00**						
Purgeable Hydrocarbons	ND	0.50	mg/kg	1	2040303	04/24/02	04/24/02	DHS LUFT	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	**0.0061**	0.0050	"	"	"	"	"	"	
Xylenes (total)	**0.019**	0.0050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*100 %*	*60-140*		"	"	"	"	
MW-3-6.00-020411 (S204254-30) Soil	**Sampled: 04/11/02 10:15**		**Received: 04/12/02 14:00**						
Purgeable Hydrocarbons	ND	0.50	mg/kg	1	2040253	04/18/02	04/18/02	DHS LUFT	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*112 %*	*60-140*		"	"	"	"	
MW-3-11.0-020411 (S204254-32) Soil	**Sampled: 04/11/02 10:33**		**Received: 04/12/02 14:00**						
Purgeable Hydrocarbons	**35**	10	mg/kg	2	2040310	04/24/02	04/25/02	DHS LUFT	
Benzene	**0.36**	0.10	"	"	"	"	"	"	
Toluene	ND	0.10	"	"	"	"	"	"	
Ethylbenzene	**0.69**	0.10	"	"	"	"	"	"	
Xylenes (total)	**0.43**	0.10	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*115 %*	*60-140*		"	"	"	"	

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3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/26/02 14:40

Total Purgeable Hydrocarbons and BTEX by DHS LUFT

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-3-12.5-020411 (S204254-34) Soil	**Sampled: 04/11/02 10:37**		**Received: 04/12/02 14:00**						
Purgeable Hydrocarbons	ND	0.50	mg/kg	1	2040303	04/24/02	04/24/02	DHS LUFT	
Benzene	**0.0067**	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*100 %*	*60-140*		"	"	"	"	
MW-3-14.0-020411 (S204254-36) Soil	**Sampled: 04/11/02 10:41**		**Received: 04/12/02 14:00**						
Purgeable Hydrocarbons	ND	0.50	mg/kg	1	2040303	04/24/02	04/24/02	DHS LUFT	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*106 %*	*60-140*		"	"	"	"	

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/26/02 14:40

MTBE by EPA Method 8260B

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-1-6.00-020412 (S204254-02) Soil Sampled: 04/12/02 09:24 Received: 04/12/02 14:00									**R-05a**
Methyl tert-butyl ether	ND	0.025	mg/kg	5	2040215	04/18/02	04/18/02	EPA 8260B	
Surrogate: 1,2-DCA-d4		*93.2 %*	*60-140*		"	"	"	"	
B-1-12.00-020412 (S204254-05) Soil Sampled: 04/12/02 09:29 Received: 04/12/02 14:00									
Methyl tert-butyl ether	**0.0098**	0.0050	mg/kg	1	2040287	04/24/02	04/24/02	EPA 8260B	
Surrogate: 1,2-DCA-d4		*87.6 %*	*60-140*		"	"	"	"	
MW-1-5.50-020411 (S204254-08) Soil Sampled: 04/11/02 13:00 Received: 04/12/02 14:00									
Methyl tert-butyl ether	ND	0.0050	mg/kg	1	2040215	04/18/02	04/18/02	EPA 8260B	
Surrogate: 1,2-DCA-d4		*97.4 %*	*60-140*		"	"	"	"	
MW-1-12.50-020411 (S204254-12) Soil Sampled: 04/11/02 13:06 Received: 04/12/02 14:00									
Methyl tert-butyl ether	ND	0.0050	mg/kg	1	2040287	04/24/02	04/24/02	EPA 8260B	
Surrogate: 1,2-DCA-d4		*85.4 %*	*60-140*		"	"	"	"	
MW-1-14.00-020411 (S204254-14) Soil Sampled: 04/11/02 13:11 Received: 04/12/02 14:00									
Methyl tert-butyl ether	ND	0.0050	mg/kg	1	2040287	04/24/02	04/24/02	EPA 8260B	
Surrogate: 1,2-DCA-d4		*85.2 %*	*60-140*		"	"	"	"	
B-2-6.00-020411 (S204254-16) Soil Sampled: 04/11/02 16:05 Received: 04/12/02 14:00									**R-05a**
Methyl tert-butyl ether	**0.037**	0.025	mg/kg	5	2040215	04/18/02	04/18/02	EPA 8260B	
Surrogate: 1,2-DCA-d4		*85.6 %*	*60-140*		"	"	"	"	
B-2-12.5-020411 (S204254-20) Soil Sampled: 04/11/02 16:18 Received: 04/12/02 14:00									
Methyl tert-butyl ether	**0.023**	0.0050	mg/kg	1	2040287	04/24/02	04/24/02	EPA 8260B	
Surrogate: 1,2-DCA-d4		*86.0 %*	*60-140*		"	"	"	"	

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/26/02 14:40

MTBE by EPA Method 8260B

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-2-6.00-020411 (S204254-22) Soil	**Sampled: 04/11/02 14:40**		**Received: 04/12/02 14:00**						**R-05a**
Methyl tert-butyl ether	ND	0.025	mg/kg	5	2040215	04/18/02	04/18/02	EPA 8260B	
Surrogate: 1,2-DCA-d4		*91.6 %*	*60-140*		"	"	"	"	
MW-2-12.00-020411 (S204254-25) Soil	**Sampled: 04/11/02 14:53**		**Received: 04/12/02 14:00**						
Methyl tert-butyl ether	ND	0.0050	mg/kg	1	2040287	04/24/02	04/24/02	EPA 8260B	
Surrogate: 1,2-DCA-d4		*66.4 %*	*60-140*		"	"	"	"	
MW-2-13.50-020411 (S204254-28) Soil	**Sampled: 04/11/02 14:58**		**Received: 04/12/02 14:00**						
Methyl tert-butyl ether	**0.016**	0.0050	mg/kg	1	2040287	04/24/02	04/24/02	EPA 8260B	
Surrogate: 1,2-DCA-d4		*90.4 %*	*60-140*		"	"	"	"	
MW-3-6.00-020411 (S204254-30) Soil	**Sampled: 04/11/02 10:15**		**Received: 04/12/02 14:00**						
Methyl tert-butyl ether	**0.025**	0.0050	mg/kg	1	2040215	04/18/02	04/18/02	EPA 8260B	
Surrogate: 1,2-DCA-d4		*108 %*	*60-140*		"	"	"	"	
MW-3-12.5-020411 (S204254-34) Soil	**Sampled: 04/11/02 10:37**		**Received: 04/12/02 14:00**						
Methyl tert-butyl ether	**0.12**	0.0050	mg/kg	1	2040287	04/24/02	04/24/02	EPA 8260B	
Surrogate: 1,2-DCA-d4		*86.8 %*	*60-140*		"	"	"	"	
MW-3-14.0-020411 (S204254-36) Soil	**Sampled: 04/11/02 10:41**		**Received: 04/12/02 14:00**						
Methyl tert-butyl ether	**0.10**	0.0050	mg/kg	1	2040287	04/24/02	04/24/02	EPA 8260B	
Surrogate: 1,2-DCA-d4		*93.4 %*	*60-140*		"	"	"	"	

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/26/02 14:40

MTBE by EPA Method 8260B

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
B-1-10.50-020412 (S204254-03) Soil Sampled: 04/12/02 09:27 Received: 04/12/02 14:00									**R-05**
Methyl tert-butyl ether	ND	0.025	mg/kg	5	2040062	04/25/02	04/25/02	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		*88.6 %*	*70-130*		"	"	"	"	
MW-1-10.50-020411 (S204254-09) Soil Sampled: 04/11/02 13:05 Received: 04/12/02 14:00									**R-05**
Methyl tert-butyl ether	ND	0.025	mg/kg	5	2040062	04/25/02	04/25/02	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		*90.0 %*	*70-130*		"	"	"	"	
B-2-10.50-020411 (S204254-18) Soil Sampled: 04/11/02 16:10 Received: 04/12/02 14:00									
Methyl tert-butyl ether	**0.075**	0.025	mg/kg	5	2040062	04/25/02	04/25/02	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		*92.0 %*	*70-130*		"	"	"	"	
MW-2-10.00-020411 (S204254-23) Soil Sampled: 04/11/02 14:47 Received: 04/12/02 14:00									
Methyl tert-butyl ether	**0.064**	0.025	mg/kg	5	2040062	04/25/02	04/25/02	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		*91.0 %*	*70-130*		"	"	"	"	
MW-3-11.0-020411 (S204254-32) Soil Sampled: 04/11/02 10:33 Received: 04/12/02 14:00									
Methyl tert-butyl ether	**0.098**	0.025	mg/kg	5	2040062	04/25/02	04/25/02	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4		*90.0 %*	*70-130*		"	"	"	"	

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3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/26/02 14:40

Total Purgeable Hydrocarbons and BTEX by DHS LUFT - Quality Control

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2040224 - EPA 5030B (MeOH)										
Blank (2040224-BLK1)				Prepared & Analyzed: 04/17/02						
Purgeable Hydrocarbons	ND	5.0	mg/kg							
Benzene	ND	0.050	"							
Toluene	ND	0.050	"							
Ethylbenzene	ND	0.050	"							
Xylenes (total)	ND	0.050	"							
Surrogate: a,a,a-Trifluorotoluene	*1.16*		"	*1.00*		*116*	*60-140*			
LCS (2040224-BS1)				Prepared & Analyzed: 04/17/02						
Benzene	1.09	0.050	mg/kg	1.00		109	70-130			
Toluene	1.16	0.050	"	1.00		116	70-130			
Ethylbenzene	1.20	0.050	"	1.00		120	70-130			
Xylenes (total)	3.51	0.050	"	3.00		117	70-130			
Surrogate: a,a,a-Trifluorotoluene	*1.15*		"	*1.00*		*115*	*60-140*			
LCS Dup (2040224-BSD1)				Prepared & Analyzed: 04/17/02						
Benzene	1.07	0.050	mg/kg	1.00		107	70-130	1.85	25	
Toluene	1.11	0.050	"	1.00		111	70-130	4.41	25	
Ethylbenzene	1.15	0.050	"	1.00		115	70-130	4.26	25	
Xylenes (total)	3.43	0.050	"	3.00		114	70-130	2.31	25	
Surrogate: a,a,a-Trifluorotoluene	*1.14*		"	*1.00*		*114*	*60-140*			
Batch 2040253 - EPA 5030B (P/T)										
Blank (2040253-BLK1)				Prepared & Analyzed: 04/18/02						
Purgeable Hydrocarbons	ND	0.50	mg/kg							
Benzene	ND	0.0050	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Surrogate: a,a,a-Trifluorotoluene	*0.0234*		"	*0.0200*		*117*	*60-140*			

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3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/26/02 14:40

Total Purgeable Hydrocarbons and BTEX by DHS LUFT - Quality Control

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2040253 - EPA 5030B (P/T)										
LCS (2040253-BS1)				Prepared & Analyzed: 04/18/02						
Benzene	0.0227	0.0050	mg/kg	0.0200		114	70-130			
Toluene	0.0212	0.0050	"	0.0200		106	70-130			
Ethylbenzene	0.0222	0.0050	"	0.0200		111	70-130			
Xylenes (total)	0.0640	0.0050	"	0.0600		107	70-130			
Surrogate: a,a,a-Trifluorotoluene	*0.0238*		"	*0.0200*		*119*	*60-140*			
Matrix Spike (2040253-MS1)		**Source: S204290-02**		Prepared & Analyzed: 04/18/02						
Benzene	0.0215	0.0050	mg/kg	0.0200	ND	108	60-140			
Toluene	0.0201	0.0050	"	0.0200	ND	100	60-140			
Ethylbenzene	0.0209	0.0050	"	0.0200	ND	104	60-140			
Xylenes (total)	0.0607	0.0050	"	0.0600	ND	101	60-140			
Surrogate: a,a,a-Trifluorotoluene	*0.0214*		"	*0.0200*		*107*	*60-140*			
Matrix Spike Dup (2040253-MSD1)		**Source: S204290-02**		Prepared & Analyzed: 04/18/02						
Benzene	0.0227	0.0050	mg/kg	0.0200	ND	114	60-140	5.43	25	
Toluene	0.0209	0.0050	"	0.0200	ND	104	60-140	3.90	25	
Ethylbenzene	0.0216	0.0050	"	0.0200	ND	108	60-140	3.29	25	
Xylenes (total)	0.0625	0.0050	"	0.0600	ND	104	60-140	2.92	25	
Surrogate: a,a,a-Trifluorotoluene	*0.0232*		"	*0.0200*		*116*	*60-140*			
Batch 2040291 - EPA 5030B (MeOH)										
Blank (2040291-BLK1)				Prepared & Analyzed: 04/22/02						
Purgeable Hydrocarbons	ND	5.0	mg/kg							
Benzene	ND	0.050	"							
Toluene	ND	0.050	"							
Ethylbenzene	ND	0.050	"							
Xylenes (total)	ND	0.050	"							
Surrogate: a,a,a-Trifluorotoluene	*1.10*		"	*1.00*		*110*	*60-140*			

Sequoia Analytical

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

Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/26/02 14:40

Total Purgeable Hydrocarbons and BTEX by DHS LUFT - Quality Control

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2040291 - EPA 5030B (MeOH)										
LCS (2040291-BS1)				Prepared & Analyzed: 04/22/02						
Benzene	1.12	0.050	mg/kg	1.00		112	70-130			
Toluene	1.08	0.050	"	1.00		108	70-130			
Ethylbenzene	1.15	0.050	"	1.00		115	70-130			
Xylenes (total)	3.33	0.050	"	3.00		111	70-130			
Surrogate: a,a,a-Trifluorotoluene	*1.08*		"	*1.00*		*108*	*60-140*			
LCS Dup (2040291-BSD1)				Prepared & Analyzed: 04/22/02						
Benzene	1.16	0.050	mg/kg	1.00		116	70-130	3.51	25	
Toluene	1.17	0.050	"	1.00		117	70-130	8.00	25	
Ethylbenzene	1.24	0.050	"	1.00		124	70-130	7.53	25	
Xylenes (total)	3.66	0.050	"	3.00		122	70-130	9.44	25	
Surrogate: a,a,a-Trifluorotoluene	*1.10*		"	*1.00*		*110*	*60-140*			
Batch 2040303 - EPA 5030B (P/T)										
Blank (2040303-BLK1)				Prepared & Analyzed: 04/24/02						
Purgeable Hydrocarbons	ND	0.50	mg/kg							
Benzene	ND	0.0050	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Surrogate: a,a,a-Trifluorotoluene	*0.0230*		"	*0.0200*		*115*	*60-140*			
LCS (2040303-BS1)				Prepared & Analyzed: 04/24/02						
Benzene	0.0215	0.0050	mg/kg	0.0200		108	70-130			
Toluene	0.0196	0.0050	"	0.0200		98.0	70-130			
Ethylbenzene	0.0204	0.0050	"	0.0200		102	70-130			
Xylenes (total)	0.0594	0.0050	"	0.0600		99.0	70-130			
Surrogate: a,a,a-Trifluorotoluene	*0.0213*		"	*0.0200*		*106*	*60-140*			

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/26/02 14:40

Total Purgeable Hydrocarbons and BTEX by DHS LUFT - Quality Control

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2040303 - EPA 5030B (P/T)										
Matrix Spike (2040303-MS1)		**Source: S204254-28**		Prepared & Analyzed: 04/24/02						
Benzene	0.0208	0.0050	mg/kg	0.0200	ND	104	60-140			
Toluene	0.0170	0.0050	"	0.0200	ND	85.0	60-140			
Ethylbenzene	0.0224	0.0050	"	0.0200	0.0061	81.5	60-140			
Xylenes (total)	0.0668	0.0050	"	0.0600	0.019	79.7	60-140			
Surrogate: a,a,a-Trifluorotoluene	*0.0176*		"	*0.0200*		*88.0*	*60-140*			
Matrix Spike Dup (2040303-MSD1)		**Source: S204254-28**		Prepared & Analyzed: 04/24/02						
Benzene	0.0231	0.0050	mg/kg	0.0200	ND	116	60-140	10.5	25	
Toluene	0.0198	0.0050	"	0.0200	ND	99.0	60-140	15.2	25	
Ethylbenzene	0.0241	0.0050	"	0.0200	0.0061	90.0	60-140	7.31	25	
Xylenes (total)	0.0730	0.0050	"	0.0600	0.019	90.0	60-140	8.87	25	
Surrogate: a,a,a-Trifluorotoluene	*0.0200*		"	*0.0200*		*100*	*60-140*			
Batch 2040310 - EPA 5030B (MeOH)										
Blank (2040310-BLK1)				Prepared & Analyzed: 04/24/02						
Purgeable Hydrocarbons	ND	5.0	mg/kg							
Benzene	ND	0.050	"							
Toluene	ND	0.050	"							
Ethylbenzene	ND	0.050	"							
Xylenes (total)	ND	0.050	"							
Surrogate: a,a,a-Trifluorotoluene	*0.962*		"	*1.00*		*96.2*	*60-140*			
LCS (2040310-BS1)				Prepared & Analyzed: 04/24/02						
Benzene	1.09	0.050	mg/kg	1.00		109	70-130			
Toluene	1.07	0.050	"	1.00		107	70-130			
Ethylbenzene	1.13	0.050	"	1.00		113	70-130			
Xylenes (total)	3.28	0.050	"	3.00		109	70-130			
Surrogate: a,a,a-Trifluorotoluene	*0.992*		"	*1.00*		*99.2*	*60-140*			*A-01*

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/26/02 14:40

Total Purgeable Hydrocarbons and BTEX by DHS LUFT - Quality Control

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2040310 - EPA 5030B (MeOH)										
LCS Dup (2040310-BSD1)				Prepared: 04/24/02 Analyzed: 04/25/02						
Benzene	1.06	0.050	mg/kg	1.00		106	70-130	2.79	25	
Toluene	1.04	0.050	"	1.00		104	70-130	2.84	25	
Ethylbenzene	1.10	0.050	"	1.00		110	70-130	2.69	25	
Xylenes (total)	3.21	0.050	"	3.00		107	70-130	2.16	25	
Surrogate: a,a,a-Trifluorotoluene	*0.978*		"	*1.00*		*97.8*	*60-140*			

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/26/02 14:40

MTBE by EPA Method 8260B - Quality Control

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2040287 - EPA 5030B [P/T]										
Blank (2040287-BLK1)				Prepared & Analyzed: 04/24/02						
Methyl tert-butyl ether	ND	0.0050	mg/kg							
Surrogate: 1,2-DCA-d4	*0.0422*		"	*0.0500*		*84.4*	*60-140*			
LCS (2040287-BS1)				Prepared & Analyzed: 04/24/02						
Methyl tert-butyl ether	0.0483	0.0050	mg/kg	0.0500		96.6	70-130			
Surrogate: 1,2-DCA-d4	*0.0422*		"	*0.0500*		*84.4*	*60-140*			
Matrix Spike (2040287-MS1)		**Source: S204292-02**		Prepared & Analyzed: 04/24/02						
Methyl tert-butyl ether	0.0464	0.0050	mg/kg	0.0500	ND	92.8	60-140			
Surrogate: 1,2-DCA-d4	*0.0414*		"	*0.0500*		*82.8*	*60-140*			
Matrix Spike Dup (2040287-MSD1)		**Source: S204292-02**		Prepared & Analyzed: 04/24/02						
Methyl tert-butyl ether	0.0466	0.0050	mg/kg	0.0500	ND	93.2	60-140	0.430	25	
Surrogate: 1,2-DCA-d4	*0.0433*		"	*0.0500*		*86.6*	*60-140*			

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/26/02 14:40

MTBE by EPA Method 8260B - Quality Control

Sequoia Analytical - San Carlos

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2040062 - EPA 5030B [P/T]										
Blank (2040062-BLK1)				Prepared & Analyzed: 04/18/02						
Methyl tert-butyl ether	ND	0.0050	mg/kg							
Surrogate: 1,2-Dichloroethane-d4	*0.0499*		"	*0.0500*		*99.8*	*70-130*			
Blank (2040062-BLK2)				Prepared & Analyzed: 04/25/02						
Methyl tert-butyl ether	ND	0.0050	mg/kg							
Surrogate: 1,2-Dichloroethane-d4	*0.0501*		"	*0.0500*		*100*	*70-130*			
LCS (2040062-BS1)				Prepared & Analyzed: 04/18/02						
Methyl tert-butyl ether	0.0416	0.0050	mg/kg	0.0500		83.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0478*		"	*0.0500*		*95.6*	*70-130*			
LCS (2040062-BS2)				Prepared & Analyzed: 04/25/02						
Methyl tert-butyl ether	0.0483	0.0050	mg/kg	0.0500		96.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.0489*		"	*0.0500*		*97.8*	*70-130*			
Matrix Spike (2040062-MS1)		**Source: L204077-01**		Prepared & Analyzed: 04/18/02						
Methyl tert-butyl ether	0.0483	0.0050	mg/kg	0.0500	ND	96.6	60-140			
Surrogate: 1,2-Dichloroethane-d4	*0.0536*		"	*0.0500*		*107*	*70-130*			
Matrix Spike Dup (2040062-MSD1)		**Source: L204077-01**		Prepared & Analyzed: 04/18/02						
Methyl tert-butyl ether	0.0474	0.0050	mg/kg	0.0500	ND	94.8	60-140	1.88	25	
Surrogate: 1,2-Dichloroethane-d4	*0.0523*		"	*0.0500*		*105*	*70-130*			

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/26/02 14:40

Notes and Definitions

A-01	TFT was not spiked into this QC sample. BFB surrogate recovery reported in place of TFT.
HC-12	Hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.
R-05	The reporting limit(s) for this sample have been raised due to high levels of non-target interferents.
R-05a	The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.
S-02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
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

bp

Chain of Custody Record

Project Name ARCO STATION No. 4977
BP BU/GEM CO Portfolio:
BP Laboratory Contract Number:

Date: 4/12/02 **Requested Due Date (mm/dd/yy)** STANDARD TAT

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Send To:	BP/GEM Facility No.: ARCO STATION No. 4977	Consultant/Contractor: Delta Environmental Consultants, Inc
Lab Name: Sequoia Analytical	BP/GEM Facility Address: 2770 Castro Valley Road, Castro Valley	Address: 3164 Gold Camp Drive, Suite 200
Lab Address:	Site ID No.	Rancho Cordova, CA 95670-6021
	Site Lat/Long:	e-mail EDD:
	California Global ID #:	Consultant/Contractor Project No.: D000-945
Lab PM:	BP/GEM PM Contact: Paul Supple	Consultant/Contractor Tele/Fax: 916-536-2613/638-9385
Tele/Fax:	Address: ARCO Products Company, P.O. Box 6549	Consultant/Contractor PM: Steve Meeks
Report Type & QC Level:	Moraga, CA 94570	Invoice to: Consultant/Contractor or BP/GEM (Circle one)
BP/GEM Account No.:	Tele/Fax:	BP/GEM Work Release No:

Lab Bottle Order No:

Item No.	Sample Description	Time	Matrix: Soil/Solid	Water/Liquid	Sediments	Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	Requested Analysis: BTEX 8021	BTEX/TPH	EPA 8260	EPA 8270	TPH 5030/8015	BTEX 5030/8020	MTBE by 8260	Hold	Sample Point Lat/Long and Comments
1	B-1-5.50-020412	0924	/	4/12/02			202251-01	1									/	/	/	/	
2	B-1-6.00-020412	0924	/				-02	1									/	/	/		
3	B-1-10.50-020412	0927	/				-03	1												/	
4	B-1-11.00-020412	0927	/				-04	1												/	
5	B-1-12.00-020412	0929	/				-05	1												/	
6	B-1-11.50-020412	0929	/				-06	1												/	
7	MW-1-5.00-020411	1300	/	4/11/02			-07	1									/	/	/	/	
8	MW-1-5.50-020411	1300	/				-08	1									/	/	/		
9	MW-1-10.50-020411	1305	/				-09	1												/	
10	MW-1-11.00-020411	1305	/				-10	1												/	RUSH

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: Brett Bardsley						
Sampler's Company: Delta Environmental Consultants, Inc.	Brett Bardsley / Delta	4/12/02	1400	Monica Gogen / Sequoia	4/12/02	1400
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						

Special Instructions:

Custody Seals In Place Yes ___ No ___ Temperature Blank Yes ___ No ___ Cooler Temperature on Receipt ___ °F/C Trip Blank Yes ___ No ___

Distribution: White Copy - Laboratory / Yellow Copy - BP/GEM / Pink Copy - Consultant/Contractor

BP COC Rev. 1 1/5/01

Chain of Custody Record

bp

Project Name: ARCO Station No. 4977
BP BU/GEM CO Portfolio:
BP Laboratory Contract Number:
Date:
Requested Due Date (mm/dd/yy): Standard TAT

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Send To:	BP/GEM Facility No.: ARCO Station No. 4977	Consultant/Contractor: Delta Environmental Consultants, Inc.
Lab Name: Sequoia Analytical	BP/GEM Facility Address: 8770 Castro Valley Road, Castro Valley	Address: 3164 Gold Camp Drive, Suite 200
Lab Address:	Site ID No.	Rancho Cordova, CA 95670-6021
	Site Lat/Long:	e-mail EDD:
	California Global ID #:	Consultant/Contractor Project No.: Doco-845
Lab PM:	BP/GEM PM Contact: Paul Supple	Consultant/Contractor Tele/Fax: 916-936-2613/638-938[illegible]
Tele/Fax:	Address: P.O. Box 6549, Moraga, CA 94570	Consultant/Contractor PM: Steve Meeks
Report Type & QC Level:		Invoice to: Consultant/Contractor or BP/GEM (Circle one)
BP/GEM Account No.:	Tele/Fax:	BP/GEM Work Release No:

Lab Bottle Order No:

Matrix: Soil/Solid | Water/Liquid | Sediments | Air

Preservatives: Unpreserved | H_2SO_4 | HNO_3 | HCl

Requested Analysis: BTEX 8021 | BTEX/TPH | EPA 8260 | EPA 8270 | TPHg 8015/8015 | BTEX 8020/8021 | MTBE by 8260 | H&ID

Item No.	Sample Description	Time	Soil/Solid	Water/Liquid	Sediments	Air	Laboratory No.	No. of containers	Unpreserved	H_2SO_4	HNO_3	HCl	BTEX 8021	BTEX/TPH	EPA 8260	EPA 8270	TPHg 8015/8015	BTEX 8020/8021	MTBE by 8260	H&ID	Sample Point Lat/Long and Comments
1	MW-1-12,00-020411	1306	/	4/40			320429H-11	1												/	
2	MW-1-12,50-020411	1306	/				-12	1												/	
3	MW-1-13,50-020411	1311	/				-13	1												/	
4	MW-1-14,00-020411	1311	/				-14	1												/	
5	B-2-5,50-020411	1605	/				-15	1												/	
6	B-2-6,00-020411	1605	/				-16	1									/	/	/		
7	B-2-10,00-020411	1610	/				-17	1												/	
8	B-2-10,50-020411	1610	/				-18	1												/	
9	B-2-12,0-020411	1618	/				-19	1												/	Rush 2 days
10	B-2-12,5-020411	1618	/	+			-20	1												/	

Sampler's Name: Brett Bardsley	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Delta Env. Consultants, Inc.	Brett Bardsley / Delta	4/12/02	1900	Monica Brown / Sequoia	4/12/02	1900
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						

Special Instructions:

Custody Seals In Place Yes No Temperature Blank Yes No Cooler Temperature on Receipt °F/C Trip Blank Yes No

Distribution: White Copy - Laboratory / Yellow Copy - BP/GEM / Pink Copy - Consultant/Contractor

BP COC Rev. 1 2/5/02

Page____ of____

Chain of Custody Record

Project Name ARCO Station No. 4977
BP BU/GEM CO Portfolio:
BP Laboratory Contract Number:
Date:
Requested Due Date (mm/dd/yy) standard TAT

On-site Time:		Temp:	
Off-site Time:		Temp:	
Sky Conditions:			
Meteorological Events:			
Wind Speed:		Direction:	

Send To:	BP/GEM Facility No.: ARCO Station No. 4977	Consultant/Contractor: Delta Environmental Consultants, Inc.
Lab Name: Sequoia Analytical	BP/GEM Facility Address: 2770 Castro Valley Road, Castro Valley	Address: 3164 Gold Camp Drive, Suite 200
Lab Address:	Site ID No.	Rancho Cordova, CA 95670-6021
	Site Lat/Long:	e-mail EDD:
	California Global ID #:	Consultant/Contractor Project No.: 0000-945
Lab PM:	BP/GEM PM Contact: Paul Supple	Consultant/Contractor Tele/Fax: 916-536-2613/638-8385
Tele/Fax:	Address: P.O. Box 6549, Moraga, CA 94570	Consultant/Contractor PM: Steve Meeks
Report Type & QC Level:		Invoice to: Consultant/Contractor or BP/GEM (Circle one)
BP/GEM Account No.:	Tele/Fax:	BP/GEM Work Release No:

Lab Bottle Order No:

Item No.	Sample Description	Time	Matrix: Soil/Solid	Water/Liquid	Sediments	Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl			Requested Analysis: BTEX 8021	BTEX/TPH	EPA 8260	EPA 8270	TPHg 5030/8015	BTEX 5030/8020	MTBE by 8260	Hold			Sample Point Lat/Long and Comments
1	MW-2-5.50-020411	1940	/	4/11/02			S204254-21	1														/			
2	MW-2-6.00-020411	1440	/				-22	1											/	/	/				
3	MW-2-10.00-020411	1447	/				-23	1														/			
4	MW-2-10.50-020411	1447	/				-24	1														/			
5	MW-2-12.00-020411	1453	/				-25	1														/			
6	MW-2-12.50-020411	1453	/				-26	1														/			
7	MW-2-13.00-020411	1458	/				-27	1														/			
8	MW-2-13.50-020411	1458	/				-28	1														/			
9	MW-3-5.50-020411	1015	/				-29	1														/			
10	MW-3-6.00-020411	1015	/				-30	1											/	/	/				[illegible]

Sampler's Name: Brett Bardsley	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Delta Env. Consultants, Inc.	Brett Bardsley / Delta	4/12/02	1400	Monica Gibson / Sequoia	4/12/02	1400
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						

Special Instructions:

Custody Seals In Place Yes____ No____ Temperature Blank Yes____ No____ Cooler Temperature on Receipt____ °F/C Trip Blank Yes____ No____

Distribution: White Copy - Laboratory / Yellow Copy - BP/GEM / Pink Copy - Consultant/Contractor

BP COC Rev. 1 2/5/03

Page ___ of ___

Chain of Custody Record

Project Name: ARCO Station No. 4977
BP BU/GEM CO Portfolio:
BP Laboratory Contract Number:
Date: 4/12/02
Requested Due Date (mm/dd/yy): Standard Turn Around

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Send To:	
Lab Name: Sequoia Analytical	
Lab Address:	
Lab PM:	
Tele/Fax:	
Report Type & QC Level:	
BP/GEM Account No.:	

BP/GEM Facility No.: ARCO Station No. 4977	
BP/GEM Facility Address: 2770 Castro Valley Road, Castro Valley	
Site ID No.	
Site Lat/Long:	
California Global ID #:	
BP/GEM PM Contact: Paul Supple	
Address: P.O. Box 6549, Moraga, CA 94570	
Tele/Fax:	

Consultant/Contractor: Delta Environmental Consultants, Inc.	
Address: 3164 Gold Camp Drive, Suite 200	
Rancho Cordova, CA 95670-6021	
e-mail EDD:	
Consultant/Contractor Project No.: 0000-946	
Consultant/Contractor Tele/Fax: 916-536-2613/639-9385	
Consultant/Contractor PM: Steve Meeks	
Invoice to: Consultant/Contractor or BP/GEM (Circle one)	
BP/GEM Work Release No:	

Lab Bottle Order No:

Item No.	Sample Description	Time	Matrix: Soil/Solid	Water/Liquid	Sediments	Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl			Requested Analysis: BTEX 8021	BTEX/TPH	EPA 8260	EPA 8270	TPH as 5030/8015	BTEX 5030/8020	MTBE by 8260	Hold			Sample Point Lat/Long and Comments
1	MW-3-10.5-020411	1033	/	5/1L2			S204254-31	1														/			
2	MW-3-11.0-020411	1033	/	1			-32	1														/			
3	MW-3-12.0-020411	1037	/	1			-33	1														/			
4	MW-3-12.5-020411	1037	/	1			-34	1														/			
5	MW-3-13.5-020411	1041	/	1			-35	1														/			
6	MW-3-14.0-020411	1041	/	1			-36	1														/			
7																									
8																									
9																									
10																									Road Stc

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: Brett Bardsley						
Sampler's Company: Delta Environmental Consultants, Inc.	Brett Bardsley / Delta	4/12/02	1400	Monica Begley / Sequoia	4/12/02	1400
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						

Special Instructions:

Custody Seals In Place Yes ___ No ___ Temperature Blank Yes ___ No ___ Cooler Temperature on Receipt ___ °F/C Trip Blank Yes ___ No ___

Distribution: White Copy - Laboratory / Yellow Copy - BP/GEM / Pink Copy - Consultant/Contractor

BP COC Rev. 1 2/5/02

Sequoia Analytical

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

16 April, 2002

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

RE: ARCO 4977, Castro Valley, CA
Sequoia Report: S204214

Enclosed are the results of analyses for samples received by the laboratory on 04/12/02 14:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ron Chew
Client Services Representative

Lito Diaz
Laboratory Director

CA ELAP Certificate #1624

Sequoia Analytical

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Sacramento, CA 95834
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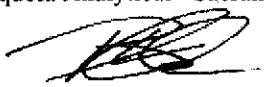
Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/16/02 15:23

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP-1,2,3,4-020412 (Composite)	S204214-01	Soil	04/12/02 11:30	04/12/02 14:00

Sequoia Analytical - Sacramento



Ron Chew, Client Services Representative

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

Sequoia Analytical

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Sacramento, CA 95834
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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/16/02 15:23

Total Purgeable Hydrocarbons and BTEX by DHS LUFT

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-1,2,3,4-020412 (Composite) (S204214-01) Soil Sampled: 04/12/02 11:30 Received: 04/12/02 14:00									
Purgeable Hydrocarbons	**0.91**	0.50	mg/kg	1	2040160	04/12/02	04/12/02	DHS LUFT	HC-12
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	**0.0096**	0.0050	"	"	"	"	"	"	
Xylenes (total)	**0.012**	0.0050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*114 %*	*60-140*		"	"	"	"	

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/16/02 15:23

Total Metals by EPA 6000/7000 Series Methods

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SP-1,2,3,4-020412 (Composite) (S204214-01) Soil Sampled: 04/12/02 11:30 Received: 04/12/02 14:00									
Lead	ND	10	mg/kg	4	2040164	04/15/02	04/16/02	EPA 6010B	R-01

Sequoia Analytical

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Sacramento, CA 95834
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www.sequoialabs.com

Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/16/02 15:23

Total Purgeable Hydrocarbons and BTEX by DHS LUFT - Quality Control

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2040160 - EPA 5030B (P/T)										
Blank (2040160-BLK1)				Prepared & Analyzed: 04/12/02						
Purgeable Hydrocarbons	ND	0.50	mg/kg							
Benzene	ND	0.0050	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Surrogate: a,a,a-Trifluorotoluene	*0.0220*		"	*0.0200*		*110*	*60-140*			
LCS (2040160-BS1)				Prepared & Analyzed: 04/12/02						
Benzene	0.0153	0.0050	mg/kg	0.0200		76.5	70-130			
Toluene	0.0176	0.0050	"	0.0200		88.0	70-130			
Ethylbenzene	0.0218	0.0050	"	0.0200		109	70-130			
Xylenes (total)	0.0633	0.0050	"	0.0600		106	70-130			
Surrogate: a,a,a-Trifluorotoluene	*0.0229*		"	*0.0200*		*114*	*60-140*			
Matrix Spike (2040160-MS1)		**Source: S204147-11**		Prepared & Analyzed: 04/12/02						
Benzene	0.0141	0.0050	mg/kg	0.0200	ND	70.5	60-140			
Toluene	0.0164	0.0050	"	0.0200	ND	82.0	60-140			
Ethylbenzene	0.0200	0.0050	"	0.0200	ND	100	60-140			
Xylenes (total)	0.0591	0.0050	"	0.0600	ND	98.5	60-140			
Surrogate: a,a,a-Trifluorotoluene	*0.0189*		"	*0.0200*		*94.5*	*60-140*			
Matrix Spike Dup (2040160-MSD1)		**Source: S204147-11**		Prepared & Analyzed: 04/12/02						
Benzene	0.0142	0.0050	mg/kg	0.0200	ND	71.0	60-140	0.707	25	
Toluene	0.0168	0.0050	"	0.0200	ND	84.0	60-140	2.41	25	
Ethylbenzene	0.0203	0.0050	"	0.0200	ND	102	60-140	1.49	25	
Xylenes (total)	0.0591	0.0050	"	0.0600	ND	98.5	60-140	0.00	25	
Surrogate: a,a,a-Trifluorotoluene	*0.0202*		"	*0.0200*		*101*	*60-140*			

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/16/02 15:23

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 2040164 - EPA 3050B										
Blank (2040164-BLK1)				Prepared: 04/15/02 Analyzed: 04/16/02						
Lead	ND	2.5	mg/kg							
LCS (2040164-BS1)				Prepared: 04/15/02 Analyzed: 04/16/02						
Lead	49.2	2.5	mg/kg	50.0		98.4	80-120			
Matrix Spike (2040164-MS1)		**Source: S204214-01**		Prepared: 04/15/02 Analyzed: 04/16/02						
Lead	51.6	10	mg/kg	50.0	ND	86.8	80-120			
Matrix Spike Dup (2040164-MSD1)		**Source: S204214-01**		Prepared: 04/15/02 Analyzed: 04/16/02						
Lead	52.6	10	mg/kg	50.0	ND	88.8	80-120	1.92	20	

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/16/02 15:23

Notes and Definitions

HC-12	Hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.
R-01	The Reporting Limit for this analyte has been raised to account for matrix interference.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Chain of Custody Record

bp

Project Name ARCO Station No. 4977
BP BU/GEM CO Portfolio: ______
BP Laboratory Contract Number: ______
Date: 4/12/02
Requested Due Date (mm/dd/yy) Two day TAT

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Send To:	BP/GEM Facility No.: ARCO Station No. 4977	Consultant/Contractor: Delta Environmental Consultants, Inc.
Lab Name: Sequoia Analytical	BP/GEM Facility Address: 2770 Castro Valley Road, Castro	Address: 3164 Gold Camp Drive, Suite 200
Lab Address:	Site ID No.	Rancho Cordova, CA 95670-6021
	Site Lat/Long:	e-mail EDD:
	California Global ID #:	Consultant/Contractor Project No.: D000-345
Lab PM:	BP/GEM PM Contact: Paul Supple	Consultant/Contractor Tele/Fax: 916-536-2613 / 638-9395
Tele/Fax:	Address: P.O. Box 6349, Moraga, CA 94570	Consultant/Contractor PM: Steve Meeks
Report Type & QC Level:		Invoice to: Consultant/Contractor or BP/GEM (Circle one)
BP/GEM Account No.:	Tele/Fax:	BP/GEM Work Release No:
Lab Bottle Order No:		

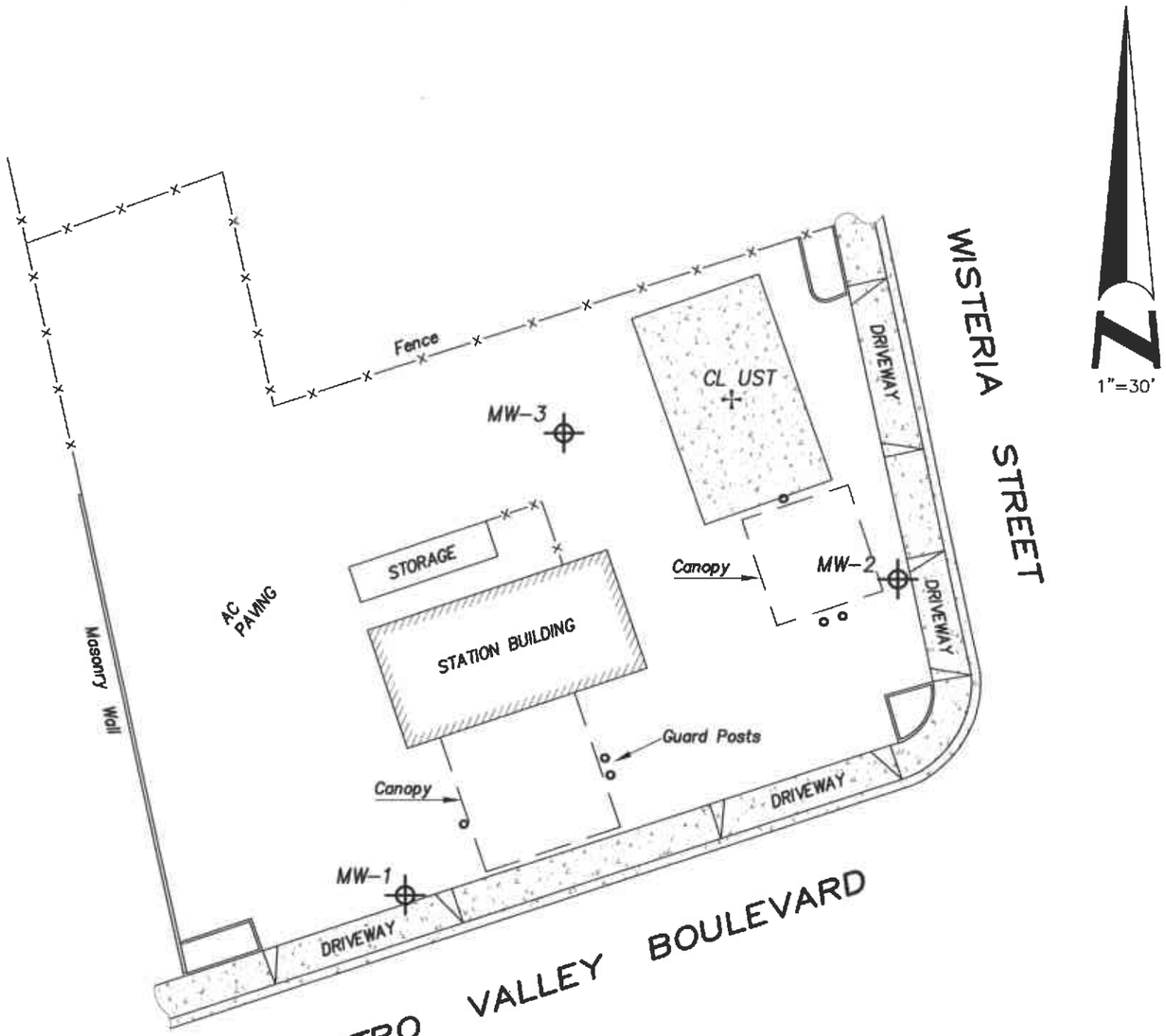
Item No.	Sample Description	Time	Matrix: Soil/Solid	Water/Liquid	Sediments	Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	ICE		Requested Analysis: BTEX 8021	BTEX/TPH	EPA 8260	EPA 8270	TPHg 5030/8015	BTEX 5030/8021	Total Lead				Sample Point Lat/Long and Comments
1	SP-1,2,3,4-020412	1130	/				S204214-01	4					/						/	/	/				Composite 4:1
2																									
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									

Sampler's Name: Brett Bardsley	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company: Delta Environmental Con.	Brett Bardsley / Delta	4/12/02	1400	Monica Gregson / Sequoia	4/12/02	1400
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						

Special Instructions:

Custody Seals In Place Yes ____ No ____ Temperature Blank Yes ____ No ____ Cooler Temperature on Receipt ____ °F/C Trip Blank Yes ____ No ____

Distribution: White Copy - Laboratory / Yellow Copy - BP/GEM / Pink Copy - Consultant/Contractor



1"=30'

DESCRIPTION	NORTHING	EASTING	ELEV (PVC)	ELEV (BOX)
MW-1	2079338.4	6102984.1	161.11	161.63
MW-2	2079404.4	6103086.8	161.87	162.15
MW-3	2079435.0	6103017.3	162.14	162.60
CL UST	2079442.1	6103052.2		

	LATITUDE	LONGITUDE
MW-1	37.6947960	-122.0853834
MW-2	37.6949820	-122.0850324
MW-3	37.6950629	-122.0852745
CL UST	37.6950838	-122.0851543

BASIS OF COORDINATES AND ELEVATIONS:

COORDINATES ARE CALIFORNIA STATE PLANE ZONE 3 COORDINATES FROM GPS OBSERVATIONS USING UNIVERSITY OF CALIFORNIA BAY AREA DEFORMATION CORS STATION OBSERVATION FILES AND BASED ON THE CALIFORNIA SPATIAL REFERENCE CENTER DATUM, REFERENCE EPOCH 2000.35.

COORDINATE DATUM IS NAD 83(1986).

DATUM ELLIPSOID IS GRS80.

REFERENCE GEOID IS NGS99.

CORS STATIONS USED WERE CNDR AND PTRB.

ELEVATIONS ARE BASED ON ALAMEDA COUNTY BENCHMARK "L.C.R.-CHAP", BRASS DISC TOP OF CURB, 1' NORTHERLY OF NORTH EDGE OF DRIVEWAY INTO "CHAPEL OF THE VALLEY MORTUARY" AND ACROSS LAKE CHABOT ROAD FROM EDEN MEDICAL BUILDING & ROXALL DRUGS.
ELEVATION = 164.63'

MONITORING WELL EXHIBIT

Prepared for:

DELTA ENVIRONMENTAL CONSULTANTS, INC.

30 0 15 30

(IN FEET)
1 inch = 30 ft.

ARCO FACILITY NO. 4977
2770 Castro Valley Boulevard
Hayward
Alameda County
California

Morrow Surveying

1450 Harbor Blvd. Ste. D
West Sacramento
California 95691
(916) 372-8124
tom@morrowsurveying.com

Date: April 30, 2002
Scale: 1" = 30'
Sheet 1 of 1
Revised:
Field Book: MW-7
Dwg. No. 1275-048 SJP

ENCLOSURE F

Groundwater Sampling Field Data Sheets

Delta Environmental Consultants, Inc.

3164 Gold Camp Drive, Suite 200
Rancho Cordova, California 95670
Direct: (916) 638-2085
Fax: (916) 638-8385

Site Address: 2770 Castro Valley Road
Castro Valley, California
Sampled By: Delta

Site Name: ARCO 4977
Delta Project No.: D000-845
Date: 04/17/02

Water Level Data					Purge Volume Calculations					Sampling Analytes					Sample Record	
Well ID	4/17/02 - Time	Depth to Water (feet)	Depth to Bottom (feet)	D.O. (mg/L)	Casing Water Column*	Well Diameter (inches)	Multiplier Value (**)	Ten Casing Volumes (gallons)	Actual Water Purged (gallons)	BTEX (8021) VOA	TPH-g (8015M) VOA	MTBE (8260) VOA		Other	Sample I.D.	04/17/02 Sample Time
MW-1	1035	9.28	15.0		5.72	4 inch	0.65	37.0	9	☐	☐	☐	☐	☐		
MW-2	1043	5.36	15.0		8.51	4 inch	0.65	62.0	20	☐	☐	☐	☐	☐		
MW-3	1039	6.49	15.0		9.64	4 inch	0.65	55.0	42	☐	☐	☐	☐	☐		
										☐	☐	☐	☐	☐		
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										☐	☐	☐	☐	☐		

Purge Method: ☑ Pump ☑ Bailer ☐ Sample Port

***Casing Water Column:** Depth to Bottom - Depth to Water

****Multiplier Values:** (2" Well: 0.16) (4" Well: 0.65) (6" Well: 1.47)

Sampling Notes: ____________________

Original Copies of Field Sampling Sheets are Located in Project File

Delta Environmental Consultants, Inc.

3164 Gold Camp Drive, Suite 200
Rancho Cordova, California 95670
Direct: (916) 638-2085
Fax: (916) 638-8385

Site Address: 2770 Castro Valley Road
Castro Valley, California
Sampled By: Delta

Site Name: ARCO #4977
Delta Project No.: D000-845
Date: 04/19/02

Water Level Data					Purge Volume Calculations					Sampling Analytes					Sample Record	
Well ID	4/19/02 - Time	Depth to Water (feet)	Depth to Bottom (feet)	D.O. (mg/L)	Casing Water Column*	Well Diameter (inches)	Multiplier Value (**)	Three Casing Volumes (gallons)	Actual Water Purged (gallons)	BTEX (8021) VOA	TPH-g (8015M) VOA	MTBE (8260) VOA		Other	Sample I.D.	04/19/02 Sample Time
MW-1	0802	11.21	15.0		3.79	4 inch	2.0	7.58	7	☑	☑	☑	☐	☐	MW-1	0913
MW-2	0804	6.59	15.0		8.41	4 inch	2.0	16.82	16	☑	☑	☑	☐	☐	MW-2	0845
MW-3	0759	6.94	15.0		8.06	4 inch	2.0	16.12	16	☑	☑	☑	☐	☐	MW-3	0839
										☐	☐	☐	☐	☐		
										☐	☐	☐	☐	☐		
										☐	☐	☐	☐	☐		
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										☐	☐	☐	☐	☐		

Purge Method: ☐ Pump ☑ Bailer ☐ Sample Port

***Casing Water Column:** Depth to Bottom - Depth to Water

****Multiplier Values:** (2" Well: 0.5) (4" Well: 2.0) (6" Well: 4.4)

Sampling Notes: ______

Original Copies of Field Sampling Sheets are Located in Project File

Delta Environmental Consultants, Inc.

3164 Gold Camp Drive, Suite 200
Rancho Cordova, California 95670
Direct: (916) 638-2085
Fax: (916) 638-8385

Site Address: **2770 Castro Valley Road**
Castro Valley, California
Sampled By: Delta

Site Name: **ARCO #4977**
Delta Project No.: **D000-845**
Date: **04/19/02**

Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons
MW-1	0900	19.0	7.07	1113	3												
Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons
MW-2	0820	18.8	6.38	760	5												
	0835	17.6	6.84	820	10												
	0840	18.7	6.26	791	12												
Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons
MW-3	0816	19.1	6.42	780	5												
	0825	17.6	6.74	797	10												
	0833	18.1	6.65	795	16												
Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons
Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons
Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons
Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons

ENCLOSURE G

Groundwater Sample Laboratory Analytical Results
With Chain-of-Custody Documentation

Sequoia
Analytical

819 Striker Avenue, Suite 8
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(916) 921-9600
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30 April, 2002

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

RE: ARCO 4977, Castro Valley, CA
Sequoia Report: S204366

Enclosed are the results of analyses for samples received by the laboratory on 04/19/02 17:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lito Diaz
Laboratory Director

CA ELAP Certificate #1624

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/30/02 17:47

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	S204366-01	Water	04/19/02 09:13	04/19/02 17:20
MW-2	S204366-02	Water	04/19/02 08:45	04/19/02 17:20
MW-3	S204366-03	Water	04/19/02 08:39	04/19/02 17:20

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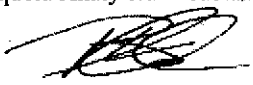

Ron Chew, Client Services Representative

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

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/30/02 17:47

Total Purgeable Hydrocarbons and BTEX by DHS LUFT

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (S204366-01) Water Sampled: 04/19/02 09:13 Received: 04/19/02 17:20									
Purgeable Hydrocarbons	**660**	50	ug/l	1	2040362	04/29/02	04/29/02	DHS LUFT	
Benzene	**12**	0.50	"	"	"	"	"	"	
Toluene	**1.3**	0.50	"	"	"	"	"	"	
Ethylbenzene	**4.3**	0.50	"	"	"	"	"	"	
Xylenes (total)	**0.80**	0.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*106 %*	*60-140*		"	"	"	"	
MW-2 (S204366-02) Water Sampled: 04/19/02 08:45 Received: 04/19/02 17:20									
Purgeable Hydrocarbons	**28000**	5000	ug/l	100	2040362	04/29/02	04/29/02	DHS LUFT	
Benzene	**970**	50	"	"	"	"	"	"	
Toluene	**120**	50	"	"	"	"	"	"	
Ethylbenzene	**860**	50	"	"	"	"	"	"	
Xylenes (total)	**6900**	50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*94.5 %*	*60-140*		"	"	"	"	
MW-3 (S204366-03) Water Sampled: 04/19/02 08:39 Received: 04/19/02 17:20									
Purgeable Hydrocarbons	**1200**	50	ug/l	1	2040362	04/29/02	04/29/02	DHS LUFT	
Benzene	**29**	0.50	"	"	"	"	"	"	
Toluene	**1.1**	0.50	"	"	"	"	"	"	
Ethylbenzene	**43**	0.50	"	"	"	"	"	"	
Xylenes (total)	**62**	0.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*111 %*	*60-140*		"	"	"	"	

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/30/02 17:47

MTBE by EPA Method 8260B

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (S204366-01) Water	**Sampled: 04/19/02 09:13**	**Received: 04/19/02 17:20**							
Methyl tert-butyl ether	**38**	0.50	ug/l	1	2040274	04/24/02	04/24/02	EPA 8260B	
Surrogate: 1,2-DCA-d4		*103 %*	*60-140*		"	"	"	"	
MW-2 (S204366-02) Water	**Sampled: 04/19/02 08:45**	**Received: 04/19/02 17:20**							**A-01a**
Methyl tert-butyl ether	**760**	5.0	ug/l	10	2040274	04/24/02	04/24/02	EPA 8260B	
Surrogate: 1,2-DCA-d4		*98.0 %*	*60-140*		"	"	"	"	
MW-3 (S204366-03) Water	**Sampled: 04/19/02 08:39**	**Received: 04/19/02 17:20**							**A-01**
Methyl tert-butyl ether	**1700**	25	ug/l	50	2040334	04/26/02	04/27/02	EPA 8260B	
Surrogate: 1,2-DCA-d4		*101 %*	*60-140*		"	"	"	"	

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/30/02 17:47

Total Purgeable Hydrocarbons and BTEX by DHS LUFT - Quality Control

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2040362 - EPA 5030B (P/T)										
Blank (2040362-BLK1)				Prepared & Analyzed: 04/29/02						
Purgeable Hydrocarbons	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Surrogate: a,a,a-Trifluorotoluene	*9.89*		"	*10.0*		*98.9*	*60-140*			
LCS (2040362-BS1)				Prepared & Analyzed: 04/29/02						
Benzene	10.9	0.50	ug/l	10.0		109	70-130			
Toluene	10.8	0.50	"	10.0		108	70-130			
Ethylbenzene	10.6	0.50	"	10.0		106	70-130			
Xylenes (total)	32.3	0.50	"	30.0		108	70-130			
Surrogate: a,a,a-Trifluorotoluene	*10.5*		"	*10.0*		*105*	*60-140*			
Matrix Spike (2040362-MS1)	**Source: S204366-03**			Prepared & Analyzed: 04/29/02						
Benzene	38.6	0.50	ug/l	10.0	29	96.0	60-140			
Toluene	12.6	0.50	"	10.0	1.1	115	60-140			
Ethylbenzene	49.1	0.50	"	10.0	43	61.0	60-140			
Xylenes (total)	99.2	0.50	"	30.0	62	124	60-140			
Surrogate: a,a,a-Trifluorotoluene	*11.0*		"	*10.0*		*110*	*60-140*			
Matrix Spike Dup (2040362-MSD1)	**Source: S204366-03**			Prepared & Analyzed: 04/29/02						
Benzene	39.9	0.50	ug/l	10.0	29	109	60-140	3.31	25	
Toluene	13.1	0.50	"	10.0	1.1	120	60-140	3.89	25	
Ethylbenzene	48.8	0.50	"	10.0	43	58.0	60-140	0.613	25	QM-07
Xylenes (total)	99.2	0.50	"	30.0	62	124	60-140	0.00	25	
Surrogate: a,a,a-Trifluorotoluene	*10.5*		"	*10.0*		*105*	*60-140*			

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/30/02 17:47

MTBE by EPA Method 8260B - Quality Control

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2040274 - EPA 5030B [P/T]										
Blank (2040274-BLK1)				Prepared & Analyzed: 04/24/02						
Methyl tert-butyl ether	ND	0.50	ug/l							
Surrogate: 1,2-DCA-d4	*26.5*		"	*25.0*		*106*	*60-140*			
LCS (2040274-BS1)				Prepared & Analyzed: 04/24/02						
Methyl tert-butyl ether	21.6	0.50	ug/l	25.0		86.4	70-130			
Surrogate: 1,2-DCA-d4	*25.1*		"	*25.0*		*100*	*60-140*			
Matrix Spike (2040274-MS1)		**Source: S204286-03RE1**		Prepared & Analyzed: 04/24/02						
Methyl tert-butyl ether	22.4	0.50	ug/l	25.0	ND	89.6	60-140			
Surrogate: 1,2-DCA-d4	*25.5*		"	*25.0*		*102*	*60-140*			
Matrix Spike Dup (2040274-MSD1)		**Source: S204286-03RE1**		Prepared & Analyzed: 04/24/02						
Methyl tert-butyl ether	22.2	0.50	ug/l	25.0	ND	88.8	60-140	0.897	25	
Surrogate: 1,2-DCA-d4	*26.6*		"	*25.0*		*106*	*60-140*			
Batch 2040334 - EPA 5030B [P/T]										
Blank (2040334-BLK1)				Prepared & Analyzed: 04/26/02						
Methyl tert-butyl ether	ND	0.50	ug/l							
Surrogate: 1,2-DCA-d4	*26.8*		"	*25.0*		*107*	*60-140*			
LCS (2040334-BS1)				Prepared & Analyzed: 04/26/02						
Methyl tert-butyl ether	23.9	0.50	ug/l	25.0		95.6	70-130			
Surrogate: 1,2-DCA-d4	*26.2*		"	*25.0*		*105*	*60-140*			
Matrix Spike (2040334-MS1)		**Source: S204377-01**		Prepared & Analyzed: 04/26/02						
Methyl tert-butyl ether	26.8	0.50	ug/l	25.0	4.1	90.8	60-140			
Surrogate: 1,2-DCA-d4	*26.1*		"	*25.0*		*104*	*60-140*			

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 4977, Castro Valley, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/30/02 17:47

MTBE by EPA Method 8260B - Quality Control

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2040334 - EPA 5030B [P/T]										
Matrix Spike Dup (2040334-MSD1)	**Source: S204377-01**			Prepared & Analyzed: 04/26/02						
Methyl tert-butyl ether	27.9	0.50	ug/l	25.0	4.1	95.2	60-140	4.02	25	
Surrogate: 1,2-DCA-d4	*25.8*		"	*25.0*		*103*	*60-140*			

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3164 Gold Camp Drive Ste. 200	Project Number: 4977, Castro Valley, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	04/30/02 17:47

Notes and Definitions

A-01	The sample was diluted due to the presence of high levels of target analytes resulting in elevated reporting limits.
A-01a	The sample was diluted due to the presence of high levels of target analytes resulting in elevated repoting limits.
QM-07	The spike recovery was outside control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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

Page ___ of ___

bp

Chain of Custody Record

Project Name: ARCO Station No. 4977
BP BU/GEM CO Portfolio:
BP Laboratory Contract Number:
Date: 4/19/02
Requested Due Date (mm/dd/yy): Standard TAT

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Send To:	BP/GEM Facility No.: ARCO Station No. 4977	Consultant/Contractor: Delta Environmental Consultants
Lab Name: Sequoia Analytical	BP/GEM Facility Address: 2770 Castro Valley Road, Castro Valley	Address: 3164 Gold Camp Drive, Suite 200 Rancho Cordova, CA 95670-6021
Lab Address:	Site ID No.	e-mail EDD:
	Site Lat/Long:	Consultant/Contractor Project No.: D000-845
	California Global ID #:	Consultant/Contractor Tele/Fax: 916-536-2613/638-8385
Lab PM:	BP/GEM PM Contact: Paul Supple	Consultant/Contractor PM: Steve Meeks
Tele/Fax:	Address: P.O. Box 6549, Moraga, CA 94570	Invoice to: Consultant/Contractor or BP/GEM (Circle one)
Report Type & QC Level:		BP/GEM Work Release No:
BP/GEM Account No.:	Tele/Fax:	
Lab Bottle Order No:		

Item No.	Sample Description	Time	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Sediments	Matrix: Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl			BTEX 8021	~~BTEX~~/TPH 8015M	EPA 8260 MTBE	EPA 8270							Sample Point Lat/Long and Comments
1	MW-1	0913		W			S204366-01	6				X			X	X	X								
2	MW-2	0945		W			-02	6				X			X	X	X								
3	MW-3	0839		W			-03	6				X			X	X	X								
4																									
5																									
6																									
7																									
8																									
9																									
10																									

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: Brett Bardsley Brett Bardsley	Brett Bardsley / Delta	4/19/02	520	Monica Gegen / Sequoia	4/19/02	1720
Sampler's Company: Delta						
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						

Special Instructions:

Custody Seals In Place Yes ___ No ___ Temperature Blank Yes ___ No ___ Cooler Temperature on Receipt 6.9 °C °F/C Trip Blank Yes ___ No ___

Distribution: White Copy - Laboratory / Yellow Copy - BP/GEM / Pink Copy - Consultant/Contractor

BP COC Rev. 1 2/5/02

DILLARD TRUCKING, INC. dba
DILLARD ENVIRONMENTAL SERVICES
P. O. Box 579
Byron, CA 94514
Phone (925) 634-6850 Fax (925) 634-0874

Via email: bbardsley@deltaenv.com

May 13, 2002

Attn: Brett Bardsley
Delta Environmental

RE: **ARCO #4977**
2770 Castro Valley Blvd.
Castro Valley, CA

Dear Mr. Bardsley:

Non-hazardous soil was transported and disposed of at Forward Landfill, Manteca, as follows:

05/01/02 3.15 tons

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

Sincerely,

Dillard Trucking, Inc. dba,
DILLARD ENVIRONMENTAL SERVICES

Patty Dillard
Patty Dillard
President