



3854

3164 Gold Camp Drive, Suite 200
Rancho Cordova, California 95670
Direct Phone: (916) 536-2613
Fax: (916) 638-8385

FAX TRANSMITTAL FORM**DATE:** June 29, 2000**RECIPIENT:** Mr. Barney M. Chan**COMPANY:** ACHCS**RECIPIENT FAX NO:** (510) 337-9335**SENDER:** Steven Meeks**NO. OF PAGES TO FOLLOW:****SUBJECT:** Telephone conversation follow-up

Re. ARCO Station # 4494

DELTA PROJECT NO: D000-319**Message:**

This facsimile is to follow-up our telephone conversation today with regard to an additional extension you granted for the MtBE sampling results report for ARCO Station # 4494 located at 566 Hegenberger Rd. Oakland, CA. As mentioned, the site was sampled on June 20, 2000. The additional extension was granted due to pending analytical results, the 4th of July holiday, and draft and final report preparation. It is anticipated that the final report will be mailed out during the week of July 17, 2000. However, after the analytical results have been received and reviewed by Delta and ARCO, the results may be made available to you for discussion prior to the final results report.

If you have any questions please contact me at (916) 536-2613.

Thanks,
Steven Meeks



3164 Gold Camp Drive, Suite 200
 Rancho Cordova, California 95670
 Direct Phone: (916) 536-2613
 Fax: (916) 638-8385

FAX TRANSMITTAL FORM

DATE: July 12, 2000

RECIPIENT: Mr. Barney M. Chan

COMPANY: ACHCS

3854

RECIPIENT FAX NO: (510) 337-9335

SENDER: Steven Meeks

NO. OF PAGES TO FOLLOW: 15

SUBJECT: Second Quarter 2000 Quarterly
 GW results and site map

Re. ARCO Station # 4494

STID# 3854

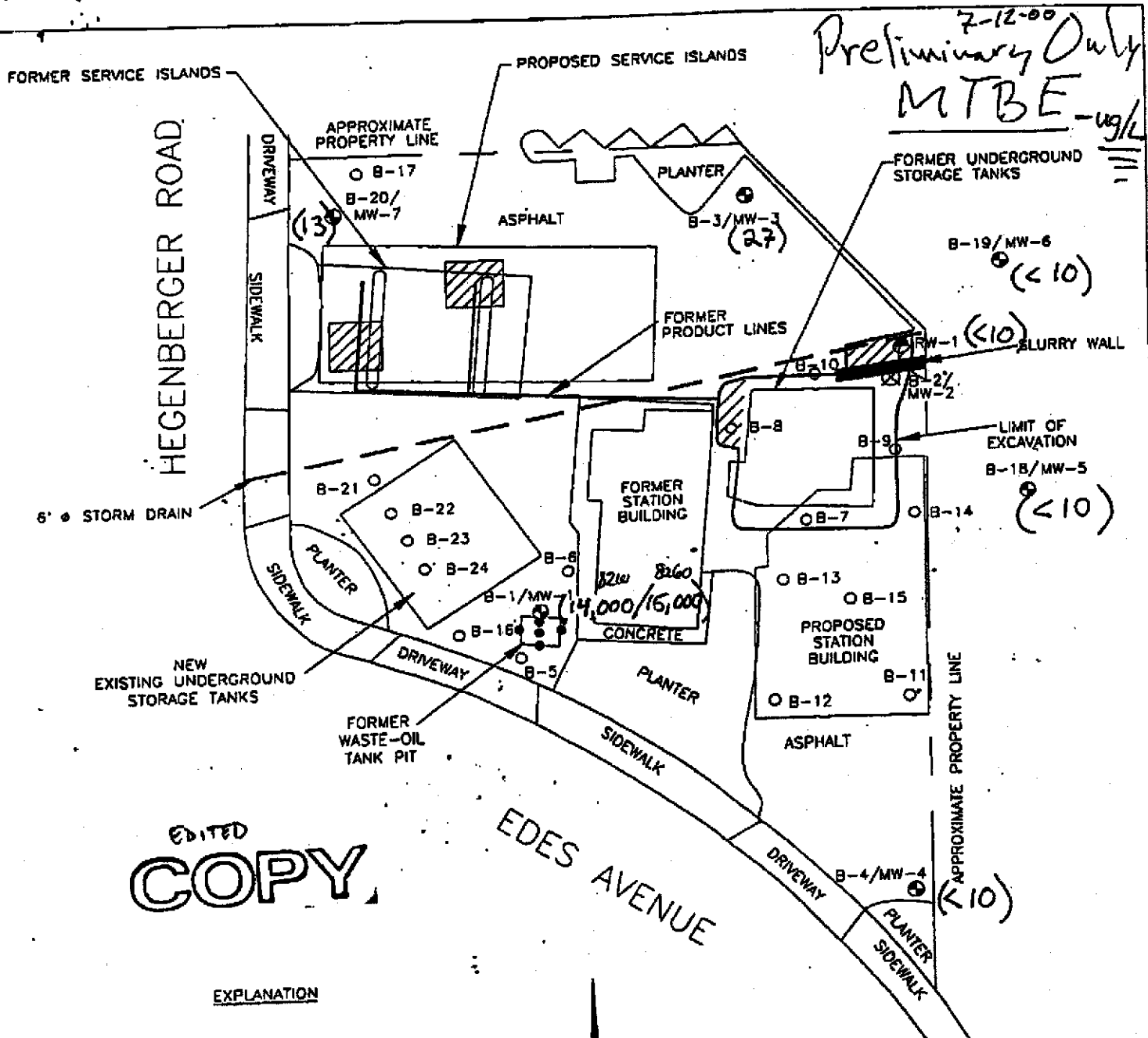
DELTA PROJECT NO: D000-319

Message:

This facsimile presents the Quarterly Ground Water Monitoring Analytical Results Report, preliminary MiBE/site map, and a preliminary ground water gradient and contour map for the Second Quarter 2000 sampling event requested by your office.

If you have any questions please contact me at (916) 536-2613.

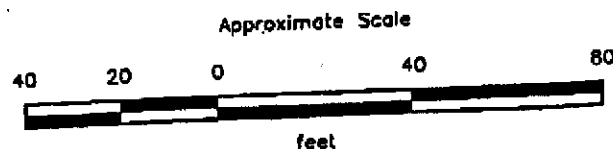
Thanks,
 Steven Meeks



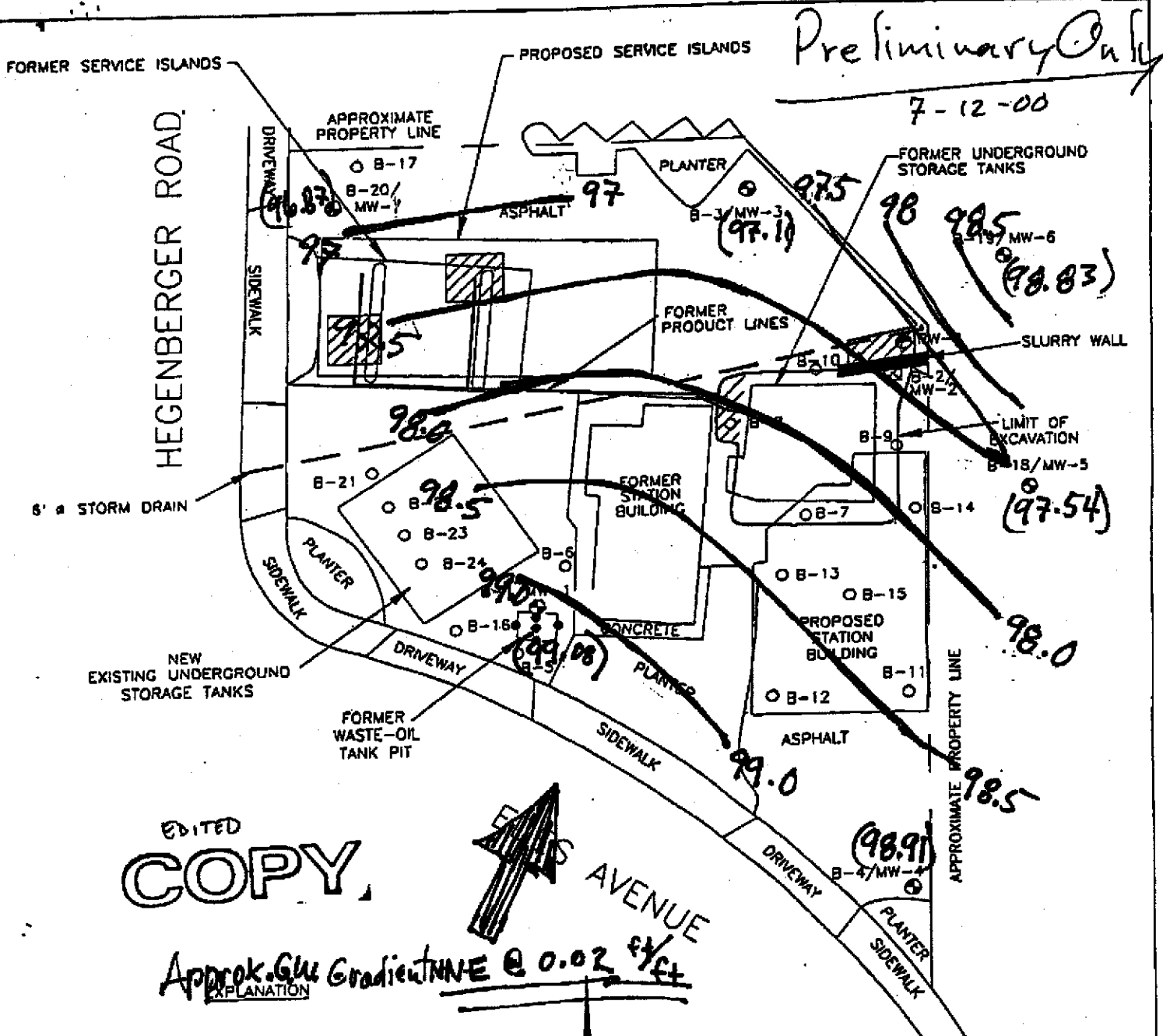
EDITED COPY

EXPLANATION

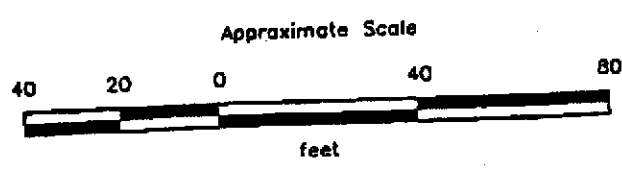
- = Waste-oil tank excavation soil samples (Pacific Environmental Group, January 1989)
- RW-1 ● = Recovery well installed during slurry wall construction (RESNA April 1993)
- B-20/MW-7 ● = Monitoring wells (Applied GeoSystems, October 1989, August 1990; and RESNA, July 1992)
- B-2/MW-2 ⊗ = Destroyed monitoring well (December 1992)
- B-24 ○ = Soil boring (Applied GeoSystems, August 1990, March 1991; and RESNA, December 1992)
- ▨ = Approximate location of over-excavated areas



Source: Surveyed by John Koch, Licensed Land surveyor.



- = Waste-oil tank excavation soil samples (Pacific Environmental Group, January 1989)
- RW-1 ● = Recovery well installed during slurry wall construction (RESNA April 1993)
- B-20/MW-7 ● = Monitoring wells (Applied GeoSystems, October 1989, August 1990; and RESNA, July 1992)
- B-2/MW-2 ⊗ = Destroyed monitoring well (December 1992)
- B-24 ○ = Soil boring (Applied GeoSystems, August 1990)



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
Project: WA#2623700/RAT#8/4494 OAKLAND
Sample Matrix: Water

Service Request: L2002170
Date Collected: 6/20/00
Date Received: 6/22/00

MTBE, BTEX and TPH as Gasoline

Sample Name: MW-1-7
Lab Code: L2002170-001
Test Notes: † / C2A

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	20	NA	6/30/00	<10	
Toluene	EPA 5030	8021B	0.5	20	NA	6/30/00	<10	
Ethylbenzene	EPA 5030	8021B	0.5	20	NA	6/30/00	<10	
Xylenes, Total	EPA 5030	8021B	1.0	20	NA	6/30/00	<20	
TPH as Gasoline	EPA 5030	8015M	50	20	NA	6/30/00	<1000	
Methyl tert-Butyl Ether	EPA 5030	8021B	10	20	NA	6/30/00	14000	

†
 C2A
 TPH as Gasoline does not include MTBE.
 MRL is elevated because of matrix interferences and because the sample required diluting.

Approved By: _____ **Date:** _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
 Project: WA#2623700/RAT#8/4494 OAKLAND
 Sample Matrix: Water

Service Request: L2002170
 Date Collected: 6/20/00
 Date Received: 6/22/00

MTBE, BTEX and TPH as Gasoline

Sample Name: MW-3-9
 Lab Code: L2002170-002
 Test Notes: †

Units: ug/L (ppb)
 Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	6/30/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	6/30/00	ND	
Methyl <i>tert</i> -Butyl Ether	EPA 5030	8021B	10	1	NA	6/30/00	27	

† TPH as Gasoline does not include MTBE.

Approved By: _____ Date: _____

1822/020397p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
 Project: WA#2623700/RAT#8/4494 OAKLAND
 Sample Matrix: Water

Service Request: L2002170
 Date Collected: 6/20/00
 Date Received: 6/22/00

MTBE, BTEX and TPH as Gasoline

Sample Name: MW-4-H
 Lab Code: L2002170-003
 Test Notes: †

Units: ug/L (ppb)
 Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	6/30/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	6/30/00	ND	
Methyl <i>tert</i> -Butyl Ether	EPA 5030	8021B	10	1	NA	6/30/00	ND	

† TPH as Gasoline does not include MTBE.

Approved By: _____

Date: _____

1822/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
 Project: WA#2623700/RAT#8/4494 OAKLAND
 Sample Matrix: Water

Service Request: L2002170
 Date Collected: 6/20/00
 Date Received: 6/22/00

MTBE, BTEX and TPH as Gasoline

Sample Name: MW-5-7
 Lab Code: L2002170-004
 Test Notes: †

Units: ug/L (ppb)
 Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	6/30/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	6/30/00	ND	
Methyl <i>tert</i> -Butyl Ether	EPA 5030	8021B	10	1	NA	6/30/00	ND	

† TPH as Gasoline does not include MTBE.

Approved By: _____ Date: _____

1822/0202971)

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
 Project: WA#2623700/RAT#8/4494 OAKLAND
 Sample Matrix: Water

Service Request: L2002170
 Date Collected: 6/20/00
 Date Received: 6/22/00

MTBE, BTEX and TPH as Gasoline

Sample Name: MW-6-6
 Lab Code: L2002170-005
 Test Notes: †

Units: ug/L (ppb)
 Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	6/30/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	6/30/00	ND	
Methyl tert-Butyl Ether	EPA 5030	8021B	10	1	NA	6/30/00	ND	

†

TPH as Gasoline does not include MTBE.

Approved By: _____ Date: _____

1822/0205979

0141901.000 - Sample (S) 7/7/00

Page No.:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
 Project: WA#2623700/RAT#8/4494 OAKLAND
 Sample Matrix: Water

Service Request: L2002170
 Date Collected: 6/20/00
 Date Received: 6/22/00

MTBE, BTEX and TPH as Gasoline

Sample Name: MW-7-8
 Lab Code: L2002170-006
 Test Notes: †

Units: ug/L (ppb)
 Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	6/30/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	6/30/00	ND	
Methyl tert-Butyl Ether	EPA 5030	8021B	10	1	NA	6/30/00	13	

† TPH as Gasoline does not include MTBE.

Approved By: _____ Date: _____

(922/20397)

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
 Project: WA#2623700/RAT#8/4494 OAKLAND
 Sample Matrix: Water

Service Request: L2002170
 Date Collected: 6/20/00
 Date Received: 6/22/00

MTBE, BTEX and TPH as Gasoline

Sample Name: RW-1-8
 Lab Code: L2002170-007
 Test Notes: †

Units: ug/L (ppb)
 Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	6/30/00	1.1	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	6/30/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	6/30/00	ND	
Methyl <i>tert</i> -Butyl Ether	EPA 5030	8021B	10	1	NA	6/30/00	ND	

† TPH as Gasoline does not include MTBE.

Approved By: _____

Date: _____

1:12:020597p

019K12LR - Sample (1) 7/7/00

Page No.:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
 Project: WA#2623700/RAT#8/4494 OAKLAND
 Sample Matrix: Water

Service Request: L2002170
 Date Collected: 6/19/00
 Date Received: 6/22/00

MTBE, BTEX and TPH as Gasoline

Sample Name: TB
 Lab Code: L2002170-K08
 Test Notes: †

Units: ug/L (ppb)
 Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	7/3/00	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	7/3/00	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	7/3/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	7/3/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	7/3/00	ND	
Methyl <i>tert</i> -Butyl Ether	EPA 5030	8021B	10	1	NA	7/3/00	ND	

† TPH as Gasoline does not include MTBE.

Approved By: _____ Date: _____

L2002/0203971

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
 Project: WAN2623700/RAT#8/4494 OAKLAND
 Sample Matrix: Water

Service Request: L2002170
 Date Collected: 6/20/00
 Date Received: 6/22/00

Methyl *tert*-Butyl Ether

Prep Method: EPA 5030
 Analysis Method: 8260B
 Test Notes:

Units: ug/L (ppb)
 Basis: NA

Sample Name	Lab Code	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MW-1-7	L2002170-001	5	200	NA	7/2/00	15000	
MW-3-9	L2002170-002	5	1	NA	7/2/00	27	
MW-7-8	L2002170-006	5	1	NA	7/2/00	13	
Method Blank	L200702-MB2	5	1	NA	7/2/00	ND	

Approved By: _____ Date: _____

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
 Project: WA#2623700/RAT#8/4494 OAKLAND
 Sample Matrix: Water

Service Request: L2002170
 Date Collected: NA
 Date Received: NA

MTBE, BTEX and TPH as Gasoline

Sample Name: Method Blank
 Lab Code: L200630-MB
 Test Notes: †

Units: ug/L (ppb)
 Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	6/30/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	6/30/00	ND	
Methyl tert-Butyl Ether	EPA 5030	8021B	10	1	NA	6/30/00	ND	

† TPH as Gasoline does not include MTBE.

Approved By: _____

Date: _____

1522/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
Project: WA#2623700/RAT#8/4494 OAKLAND
Sample Matrix: Water

Service Request: L2002170
Date Collected: NA
Date Received: NA

MTBE, BTEX and TPH as Gasoline

Sample Name: Method Blank
Lab Code: L200703-MB
Test Notes: †

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	7/3/00	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	7/3/00	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	7/3/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	7/3/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	7/3/00	ND	
Methyl tert-Butyl Ether	EPA 5030	8021B	10	1	NA	7/3/00	ND	

† TPH as Gasoline does not include MTBE.

Approved By: _____ **Date:** _____

1822020397b

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCO Products Company
 Project: WA#2623700/RAT#8/4494 OAKLAND
 Sample Matrix: Water

Service Request: L2002170
 Date Collected: NA
 Date Received: NA
 Date Extracted: NA
 Date Analyzed: NA

Surrogate Recovery Summary
 MTBE, BTEX and TPH as Gasoline

Prep Method: EPA 5030
 Analysis Method: 8021B/8015M

Units: PERCENT
 Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery	
			4-Bromofluorobenzene	4-Bromofluorobenzene
MW-1-7	L2002170-001		86	79
MW-3-9	L2002170-002		85	80
MW-4-8	L2002170-003		83	81
MW-5-7	L2002170-004		85	84
MW-6-6	L2002170-005		87	86
MW-7-8	L2002170-006		84	83
RW-1-8	L2002170-007		86	86
TB	L2002170-008		85	78
Method Blank	L200630-MB		77	72
MW-3-9	L2002170-002MS		95	91
MW-3-9	L2002170-002DMS		96	96
Lab Control Sample	L200630-LCS		99	92
Method Blank	L200703-MB		79	68
Batch QC	L2002173-002MS		91	83
Batch QC	L2002173-002DMS		93	84
Lab Control Sample	L200703-LCS		105	88

CAS Acceptance Limits:

60-130

60-140

Approved By: _____ Date: _____

ARCO Facility no. 4494	City (Facility) Oakland	Project manager (Consultant) Steve Neep	Laboratory name Columbia
ARCO engineer Paul Supple	Telephone no. (ARCO)	Telephone no. (Consultant) 916 638 2164	Contract number
Consultant name Delta	Address (Consultant) 3164 Gold Camp Dr Suite 200 Rancho Cordova CA		

Sample I.D.	Lab no.	Container no.	Matrix			Preservation		Sampling date	Sampling time	BTEX EPA 801/802	STATION/MTBE EPA 1631/1631.5	TPH Modified 8015 Gas <input type="checkbox"/> Diesel <input type="checkbox"/>	Oil and Grease 415.1 <input type="checkbox"/> 415.2 <input type="checkbox"/>	TPH EPA 418.1/418.2/418.3	EPA 801/8070	EPA 804/8040	EPA 821/8270	TCLP Metal <input type="checkbox"/> VOC <input type="checkbox"/> VOA <input type="checkbox"/>	Semi Metal <input type="checkbox"/> VOA <input type="checkbox"/>	Cadm Heavy EPA 816/817/818 TCLP <input type="checkbox"/> STLC <input type="checkbox"/>	Lead Org/DHS <input type="checkbox"/> Lead EPA 7450/7451 <input type="checkbox"/>	
			Soil	Water	Other	Ice	Acid															
MW-17	①	4		X		X	X	6-20-00	1642		X											
MW-29	②								1541													
MW-18	③								1638													
MW-5-7	④								1605													
MW-6-6	⑤								1522													
MW-7-8	⑥								1732													
RW-18	⑦	1							1631													
TB	⑧	2		V		V	V	6-19-00	800		V											

Method of shipment
UPS

Special detection
Limit/reporting

Special QA/QC

Remarks
**verify MTBE
Hits by
8260**

Lab number
S2001819

Turnaround time

Priority Rush
1 Business Day

Rush
2 Business Days

Expedited
5 Business Days

Standard
10 Business Days

Condition of sample:				Temperature received:			
Relinquished by sampler Paul Supple	Date	Time	Received by Joseph Machado CAS	Date 6/22/00	Time 1000		
Relinquished by	Date	Time	Received by				
Relinquished by	Date	Time	Received by laboratory	Date	Time		

07/12/2000 13:45 FAX 016