



A RESNA Company

**RESNA**

Working To Restore Nature

3315 Almaden Expressway, Suite 34  
San Jose, CA 95118  
Phone: (408) 264-7723  
Fax: (408) 264-2435

# 3850

February 26, 1992

Mr. Larry Seto  
Alameda County Health Care Services Agency  
Hazardous Materials Division  
80 Swan Way, Room 200  
Oakland, California 94621

Subject: Requested Information for ARCO Station 2035, 1001 San Pablo Avenue,  
Albany, California.

Dear Mr. Seto:

Enclosed is a copy of the laboratory analysis results for groundwater as requested in your letter dated January 27, 1992. As we discussed in our telephone conversation on January 30, 1992, the soil sample results from the new tank pit are included in the Underground tank removal and replacement report (RESNA, September 1991). The entire subsurface investigation report will be submitted to you shortly. If you have any questions or comments, please contact us at (408) 264-7723.

Sincerely,  
RESNA

Joel Coffman  
Project Geologist

cc: Chuck Carmel, ARCO

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



RECEIVED

JAN 30 1992

RESNA  
CALIFORNIA

DEPARTMENT OF ENVIRONMENTAL HEALTH  
Hazardous Materials Program  
80 Swan Way, Rm. 200  
Oakland, CA 94621  
(415)

January 27, 1992

Mr. Chuck Carmel  
Arco Products Company  
P.O. Box 5811  
San Mateo, CA 94402

**RE: Arco, 1001 San Pablo Avenue, Albany, CA**

Dear Mr. Carmel:

Please submit a copy of Sequoia Analytical's chemical analysis for the soil samples taken in July '91 from the new tank location.

In addition, please submit a copy of the chemical analysis of the groundwater samples taken from your monitoring wells in October '91.

If you have any questions, please contact me at (510) 271-4320.

Sincerely,

  
Larry Seto

Hazardous Materials Specialist

cc: Gil Jensen, Alameda County District Attorney's Office  
Eddie So, RWQCB  
Howard Hatayama, DTSC  
Rafat Shahid, Assistant Agency Director, Environmental Health  
Joel Coffman, Applied GeoSystems, Inc.  
Files



# SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063  
(415) 364-9600 • FAX (415) 364-9233

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NOV 13 1991

RESNA  
SAN JOSE

RESNA  
3315 Almaden Expwy., Suite 34  
San Jose, CA 95112  
Attention: Robert Campbell

Project: ARCO 2035, Albany

Enclosed are the results from 3 water samples received at Sequoia Analytical on October 30, 1991. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
1105538	Water, W-11-MW1	10/29/91	EPA 5030/8015/8020 Hazardous Waste Bioassay
1105539	Water, W-11-MW2	10/29/91	EPA 5030/8015/8020
1105540	Water, W-11-MW3	10/29/91	Cd, Cr, Pb, Ni, Zn EPA 5030/8015/8020 EPA 624 SM 5520 B&F (Gravimetric)

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

  
Maria Lee  
Project Manager



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RESNA  
3315 Almaden Expwy., Suite 34  
San Jose, CA 95112  
Attention: Robert Campbell

Client Project ID: ARCO 2035, Albany  
Matrix Descript: Water  
Analysis Method: EPA 5030/8015/8020  
First Sample #: 110-5538

Sampled: Oct 29, 1991  
Received: Oct 30, 1991  
Analyzed: Nov 1, 1991  
Reported: Nov 12, 1991

## TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons		Toluene $\mu\text{g/L}$ (ppb)	Ethyl Benzene $\mu\text{g/L}$ (ppb)	Xylenes $\mu\text{g/L}$ (ppb)
		$\mu\text{g/L}$ (ppb)	Benzene $\mu\text{g/L}$ (ppb)			
110-5538	W-11-MW1	620	76	69	15	60

### Detection Limits:

60

0.60

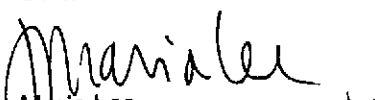
0.60

0.60

0.60

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.  
Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

### SEQUOIA ANALYTICAL

  
Maria Lee  
Project Manager



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RESNA  
3315 Almaden Expwy., Suite 34  
San Jose, CA 95112  
Attention: Robert Campbell

Client Project ID: ARCO 2035, Albany  
Matrix Descript: Water  
Analysis Method: EPA 5030/8015/8020  
First Sample #: 110-5539

Sampled: Oct 29, 1991  
Received: Oct 30, 1991  
Analyzed: 10/30 - 11/1/91  
Reported: Nov 12, 1991

## TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons		Toluene $\mu\text{g/L}$ (ppb)	Ethyl Benzene $\mu\text{g/L}$ (ppb)	Xylenes $\mu\text{g/L}$ (ppb)
		$\mu\text{g/L}$ (ppb)	Benzene $\mu\text{g/L}$ (ppb)			
110-5539	W-11-MW2	N.D.	2.4	4.6	0.48	2.3
110-5540	W-11-MW3	32	2.1	2.8	0.35	1.8

### Detection Limits:

60

0.60

0.60

0.60

0.60

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.  
Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL

*Maria Lee*  
Maria Lee  
Project Manager

1105538.RRR <2>



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RESNA  
3315 Almaden Expwy., Suite 34  
San Jose, CA 95112  
Attention: Robert Campbell

Client Project ID: ARCO 2035, Albany

QC Sample Group: 1105538-40

Reported: Nov 12, 1991

## QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	S. Gill	S. Gill	S. Gill	S. Gill
Reporting Units:	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	Oct 31, 1991	Oct 31, 1991	Oct 31, 1991	Oct 31, 1991
QC Sample #:	GBLK103191	GBLK103191	GBLK103191	GBLK103191
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10	30
Conc. Matrix Spike:	9.8	10	10	30
Matrix Spike % Recovery:	98	100	100	100
Conc. Matrix Spike Dup.:	10	11	11	32
Matrix Spike Duplicate % Recovery:	100	110	110	107
Relative % Difference:	2.0	9.5	9.5	6.5

SEQUOIA ANALYTICAL

*Maria Lee*  
Maria Lee  
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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RESNA  
3315 Almaden Expwy., Suite 34  
San Jose, CA 95112  
Attention: Robert Campbell

Client Project ID: ARCO 2035, Albany

QC Sample Group: 1105538-40

Reported: Nov 12, 1991

## QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	S. Gill	S. Gill	S. Gill	S. Gill
Reporting Units:	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	Nov 1, 1991	Nov 1, 1991	Nov 1, 1991	Nov 1, 1991
QC Sample #:	GBLK110191	GBLK110191	GBLK110191	GBLK110191
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10	30
Conc. Matrix Spike:	12	12	12	35
Matrix Spike % Recovery:	120	120	120	117
Conc. Matrix Spike Dup.:	12	12	12	35
Matrix Spike Duplicate % Recovery:	120	120	120	117
Relative % Difference:	0.0	0.0	0.0	0.0

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*Maria Lee*  
Maria Lee  
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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RESNA  
3315 Almaden Expwy., Suite 34  
San Jose, CA 95112  
Attention: Robert Campbell

Client Project ID: ARCO 2035, Albany  
Matrix Descript: Water  
Analysis Method: SM 5520 B&F (Gravimetric)  
First Sample #: 110-5540

Sampled: Oct 29, 1991  
Received: Oct 30, 1991  
Extracted: Nov 5, 1991  
Analyzed: Nov 6, 1991  
Reported: Nov 12, 1991

## TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/L (ppm)
110-5540	W-11-MW3	N.D.

Detection Limits:

5.0

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

*Maria Lee*  
Maria Lee  
Project Manager

1105538.RRR <5>





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RESNA  
3315 Almaden Expwy., Suite 34  
San Jose, CA 95112  
Attention: Robert Campbell

Client Project ID: ARCO 2035, Albany

QC Sample Group: 110-9940

Reported: Nov 12, 1991

## QUALITY CONTROL DATA REPORT

**ANALYTE**

TRPH

Method: SM 5520 B&F  
Analyst: A. Do  
Reporting Units: mg/L  
Date Analyzed: Nov 6, 1991  
QC Sample #: BLK110691

Sample Conc.: N.D.

Spike Conc.  
Added: 200

Conc. Matrix  
Spike: 180

Matrix Spike  
% Recovery: 90

Conc. Matrix  
Spike Dup.: 180

Matrix Spike  
Duplicate  
% Recovery: 90

Relative  
% Difference: 0.0

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*Maria Lee*  
Maria Lee  
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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RESNA  
3315 Almaden Expwy., Suite 34  
San Jose, CA 95112  
Attention: Robert Campbell

Client Project ID: ARCO 2035, Albany  
Sample Descript: Water, W-11-MW3  
Analysis Method: EPA 624  
Lab Number: 110-5540

Sampled: Oct 29, 1991  
Received: Oct 30, 1991  
Analyzed: Nov 11, 1991  
Reported: Nov 12, 1991

## PURGEABLES by GC/MS (EPA 624)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acetone.....	10	N.D.
Benzene.....	2.0	N.D.
Bromodichloromethane.....	2.0	N.D.
Bromoform.....	2.0	N.D.
Bromomethane.....	2.0	N.D.
2-Butanone.....	10	N.D.
Carbon disulfide.....	2.0	N.D.
Carbon tetrachloride.....	2.0	N.D.
Chlorobenzene.....	2.0	N.D.
Chloroethane.....	2.0	N.D.
2-Chloroethyl vinyl ether.....	10	N.D.
Chloroform.....	2.0	N.D.
Chloromethane.....	2.0	N.D.
Dibromochloromethane.....	2.0	N.D.
1,1-Dichloroethane.....	2.0	N.D.
1,2-Dichloroethane.....	2.0	N.D.
1,1-Dichloroethene.....	2.0	N.D.
cis-1,2-Dichloroethene.....	2.0	N.D.
trans-1,2-Dichloroethene.....	2.0	N.D.
1,2-Dichloropropane.....	2.0	N.D.
cis-1,3-Dichloropropene.....	2.0	N.D.
trans-1,3-Dichloropropene.....	2.0	N.D.
Ethylbenzene.....	2.0	N.D.
2-Hexanone.....	10	N.D.
Methylene chloride.....	2.0	N.D.
4-Methyl-2-pentanone.....	10	N.D.
Styrene.....	2.0	N.D.
1,1,2,2-Tetrachloroethane.....	2.0	N.D.
Tetrachloroethene.....	2.0	N.D.
<b>Toluene.....</b>	<b>2.0</b>	<b>3.0</b>
1,1,1-Trichloroethane.....	2.0	N.D.
1,1,2-Trichloroethane.....	2.0	N.D.
Trichloroethene.....	2.0	N.D.
Trichlorofluoromethane.....	2.0	N.D.
Vinyl acetate.....	2.0	N.D.
Vinyl chloride.....	2.0	N.D.
Total Xylenes.....	2.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

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*Maria Lee*  
Maria Lee  
Project Manager



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RESNA  
3315 Almaden Expwy., Suite 34  
San Jose, CA 95112  
Attention: Robert Campbell

Client Project ID: ARCO 2035, Albany  
Method (units): EPA 8240 (µg/L purged)  
Analyst(s): T. Fowler  
QC Sample #: VBLK110491

Q.C. Sample Dates

Analyzed: Nov 4, 1991  
Reported: Nov 12, 1991

## QUALITY CONTROL DATA REPORT

Analyte	Sample Conc.	Spike Conc. Added	Conc. Matrix Spike	Matrix Spike % Recovery	Conc. Matrix Spike Duplicate	Matrix Spike % Recovery	Relative % Difference
1,1-Dichloroethene	N.D.	50	50	100	51	102	2.0
Trichloroethene	N.D.	50	55	110	56	112	1.8
Benzene	N.D.	50	48	96	50	100	4.1
Toluene	N.D.	50	54	108	53	106	1.9
Chlorobenzene	N.D.	50	54	108	56	112	3.6

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*Maria Lee*  
Maria Lee  
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



# SEQUOIA ANALYTICAL

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(415) 364-9600 • FAX (415) 364-9233

RESNA	Client Project ID: ARCO 2035, Albany	Sampled: Oct 29, 1991
3315 Almaden Expwy., Suite 34	Sample Descript: Water, W-11-MW3	Received: Oct 30, 1991
San Jose, CA 95112		Analyzed: Nov 8, 1991
Attention: Robert Campbell	Lab Number: 110-5540	Reported: Nov 12, 1991

## LABORATORY ANALYSIS

Analyte	Detection Limit mg/L	Sample Results mg/L
Cadmium.....	0.010	N.D.
Chromium.....	0.010	N.D.
Lead.....	0.0050	N.D.
Nickel.....	0.050	N.D.
Zinc.....	0.010	0.045

Analytes reported as N.D. were not present above the stated limit of detection.

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*Maria Lee*  
 Maria Lee  
 Project Manager





A RESNA Company



Working To Restore Nature

3315 Almaden Expressway, Suite 34  
San Jose, CA 95118  
Phone: (408) 264-7723  
Fax: (408) 264-2435

**TRANSMITTAL**

99 FEB 27 11:30:00

TO: MR. LARRY SETO  
ALAMEDA COUNTY HEALTH CARE  
SERVICES AGENCY - DEH  
80 SWAN WAY, ROOM 200  
OAKLAND, CALIFORNIA 94621

DATE: 2/26/92  
PROJECT NUMBER: 69036.02  
SUBJECT: ARGO STATION 2035 AT  
1001 SAN PABLO AVENUE, ALBANY, CALIF.

FROM: JOEL COFFMAN  
TITLE: PROJECT GEOLOGIST

WE ARE SENDING YOU  Attached  Under separate cover via \_\_\_\_\_ the following items:  
 Shop drawings  Prints  Reports  Specifications  
 Letters  Change Orders  \_\_\_\_\_

COPIES	DATED	NO.	DESCRIPTION
1	2/26/92		REQUESTED INFORMATION FOR THE ABOVE SUBJECT SITE.

THESE ARE TRANSMITTED as checked below:

- For review and comment  Approved as submitted  Resubmit \_\_\_ copies for approval
- As requested  Approved as noted  Submit \_\_\_ copies for distribution
- For approval  Return for corrections  Return \_\_\_ corrected prints
- For your files  \_\_\_\_\_

REMARKS: CC: MR. CHUCK CARMEL, ARGO PRODUCTS COMPANY  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Copies: 1 to project file no. 69036.02

\*Revision Date: 11/21/91  
\*File Name: TRANSMT.PRJ