



ENVIRONMENTAL
PROTECTION

99 NOV 18 PM 3:48

2201 Broadway, Suite 101
Oakland, CA 94612-3023
Tel. 510.740.5800
Fax. 510.663.3315

November 17, 1999
Project 791655

SHD
744

Reverend Sura D. Phoenix
First Christian Church
1190 Davis Street
San Leandro, California 94577

Re: Quarterly Groundwater Monitoring Report, Third Quarter 1999, for
First Christian Church, Located at 1190 Davis Street, San Leandro, California

Dear Reverend Phoenix:

On behalf of ARCO Products Company (ARCO), Pinnacle Environmental Solutions, a member of The IT Group (Pinnacle), is submitting the attached copies of the laboratory analytical results for the groundwater sample collected from well MW-5 during the third quarter of 1999. This well is located at the First Christian Church, 1190 Davis Street, San Leandro, California. The groundwater sample was collected during quarterly sampling of the ARCO Service Station No. 2111, located at 1156 Davis Street, San Leandro, California.

Please call if you have questions.

Sincerely,

Pinnacle

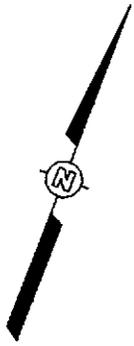
Glen VanderVeen
Project Manager

Attachments: Figure 1 - Generalized Site Plan
Appendix A - Copy of Certified Analytical Report and Chain-of-Custody
Documentation

cc: Amir Gholami, ACHCSA
Paul Supple, ARCO Products Company
File

PROJECT NUMBER 791655

DRAWN BY K. Block 10-26-99



CEDAR GROVE APARTMENTS

DRIVEWAY

MW-5

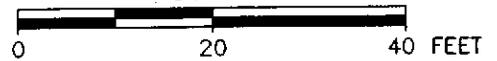
FIRST CHRISTIAN CHURCH/
COMMUNITY CENTER

ARCO SERVICE STATION 2111

SIDEWALK

DAVIS STREET

SCALE



EXPLANATION

● Groundwater monitoring well



FIRST CHRISTIAN CHURCH

FIGURE 1
SITE PLAN

1190 DAVIS STREET
SAN LEANDRO, CALIFORNIA

APPENDIX A

**COPY OF CERTIFIED ANALYTICAL REPORT,
AND CHAIN-OF-CUSTODY DOCUMENTATION**



September 7, 1999

Service Request No.: S9902608

Mr. Glen Vanderveen
IT/EMCON
2201 Broadway, Suite 101
Oakland, CA 94612

RE: TO#24118.00/RAT#8/2111 SAN LEANDRO

Dear Mr. Vanderveen:

Enclosed are the results of the sample(s) submitted to our laboratory on August 25, 1999. All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply to the sample(s) analyzed. Columbia Analytical Services is not responsible for use of less than the complete report. Signature of this CAS Analytical Report confirms that pages 2 through 9, following, have been thoroughly reviewed and approved for release.

Columbia Analytical Services is certified for environmental analyses by the California Department of Health Services (certificate number: 1496, expiration: January 31, 2001).

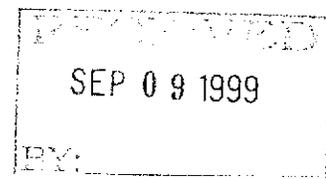
If you have any questions, please call me at (408) 748-9700.

Respectfully submitted,

Columbia Analytical Services, Inc.

Bernadette Troncales
Project Chemist

Greg Jordan
Laboratory Director



COLUMBIA ANALYTICAL SERVICES, Inc.

Acronyms

A2LA	American Association for Laboratory Accreditation
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAM	California Assessment Metals
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
COD	Chemical Oxygen Demand
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
J	Estimated concentration. The value is less than the MRL, but greater than or equal to the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MCL	Maximum Contaminant Level. The highest permissible concentration of a substance allowed in drinking water as established by the U. S. EPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl tert-Butyl Ether
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the paper industry for Air and Stream Improvement
ND	Not Detected at or above the method reporting/detection limit (MRL/MDL)
NIOSH	National Institute for Occupational Safety and Health
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992
STLC	Solubility Threshold Limit Concentration
SW	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Ed., 1986 and as amended by Updates I, II, IIA, and IIB.
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
tr	Trace level. The concentration of an analyte that is less than the PQL but greater than or equal to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.
TRPH	Total Recoverable Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLIC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
Project: TO#24118.00/RAT#8/2111 SAN LEANDRO
Sample Matrix: Water

Service Request: S9902608
Date Collected: 8/25/99
Date Received: 8/25/99

BTEX, MTBE and TPH as Gasoline

Sample Name: MW-5(23)
Lab Code: S9902608-001
Test Notes:

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	9/2/99	ND	
Benzene	EPA 5030	8020	0.5	1	NA	9/2/99	ND	
Toluene	EPA 5030	8020	0.5	1	NA	9/2/99	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	9/2/99	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	9/2/99	ND	
Methyl <i>tert</i> -Butyl Ether	EPA 5030	8020	3	20	NA	9/2/99	6700	

Approved By: _____



Date: _____

09/07/99

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
Project: TO#24118.00/RAT#8/2111 SAN LEANDRO
Sample Matrix: Water

Service Request: S9902608
Date Collected: NA
Date Received: NA

BTEX, MTBE and TPH as Gasoline

Sample Name: Method Blank
Lab Code: S990902-WB1 GC 03
Test Notes:

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	9/2/99	ND	
Benzene	EPA 5030	8020	0.5	1	NA	9/2/99	ND	
Toluene	EPA 5030	8020	0.5	1	NA	9/2/99	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	9/2/99	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	9/2/99	ND	
Methyl <i>tert</i> -Butyl Ether	EPA 5030	8020	3	1	NA	9/2/99	ND	

Approved By: _____



Date: _____

09/07/99

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
Project: TO#24118.00/RAT#8/2111 SAN LEANDRO
Sample Matrix: Water

Service Request: S9902608
Date Collected: NA
Date Received: NA

BTEX, MTBE and TPH as Gasoline

Sample Name: Method Blank
Lab Code: S990901-WB1 (GC 06)
Test Notes:

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	1	NA	9/1/99	ND	
Benzene	EPA 5030	8020	0.5	1	NA	9/1/99	ND	
Toluene	EPA 5030	8020	0.5	1	NA	9/1/99	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	9/1/99	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	9/1/99	ND	
Methyl <i>tert</i> -Butyl Ether	EPA 5030	8020	3	1	NA	9/1/99	ND	

Approved By: _____



Date: _____

09/07/99

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCO Products Company
Project: TO#24118.00/RAT#8/2111 SAN LEANDRO
Sample Matrix: Water

Service Request: S9902608
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
BTEX, MTBE and TPH as Gasoline

Prep Method: EPA 5030
Analysis Method: 8020 CALUFT

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery	
			4-Bromofluorobenzene	a,a,a-Trifluorotoluene
MW-5(23)	S9902608-001		95	92
BATCH QC	S9902628-003MS		104	92
BATCH QC	S9902628-003DMS		106	89
BATCH QC	S9902628-003MS		106	85
BATCH QC	S9902628-003DMS		102	93
Method Blank	S990901-WB1		102	89
Method Blank	S990902-WB1		93	115

CAS Acceptance Limits: 69-116 72-139

Approved By: _____

PT

Date: _____

09/07/99

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCO Products Company
 Project: TO#24118.00/RAT#8/2111 SAN LEANDRO

Service Request: S9902608
 Date Analyzed: 9/1/99

Initial Calibration Verification (ICV) Summary
 BTEX, MTBE and TPH as Gasoline

Sample Name: ICV
 Lab Code: ICV1
 Test Notes:

Units: ug/L (ppb)
 Basis: NA

ICV Source:

Analyte	Prep Method	Analysis Method	True Value	Result	CAS Percent Recovery		Result Notes
					Acceptance Limits	Percent Recovery	
TPH as Gasoline	EPA 5030	CA/LUFT	250	280	85-115	112	
Benzene	EPA 5030	8020	25	26	85-115	104	
Toluene	EPA 5030	8020	25	26	85-115	104	
Ethylbenzene	EPA 5030	8020	25	26	85-115	104	
Xylenes, Total	EPA 5030	8020	75	75	85-115	100	
Methyl <i>tert</i> -Butyl Ether	EPA 5030	8020	25	25	85-115		

Approved By: _____

MT

Date: _____

09/07/99

ICV/032196

ARCO Products Company

Division of Atlantic/Richfield Company

59902608

Task Order No.

74118.00

Chain of Custody

ARCO Facility no. 2111	City (Facility) San Leandro	Project manager (Consultant) Glen VanderVeen	Laboratory Name CAS
ARCO engineer Paul Supple	Telephone no. (ARCO)	Telephone no. (Consultant) (408)453-7300	Contract Number
Consultant name EMCON	Address (Consultant) 2701 Broadway #101 Oakland, CA 94612		

Sample I.D.	Lab no.	Container no.	Matrix			Preservation		Sampling date	Sampling time	BTEX 602EPA 8020	BTEX/TPH/Vol. HCB EPA Method 8210/15	TPH Modified 8015 Gas <input type="checkbox"/> Diesel <input type="checkbox"/>	Oil and Grease 413.1 <input type="checkbox"/> 413.2 <input type="checkbox"/>	TPH EPA 418.1/SM 503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TC/TP Semi Metals <input type="checkbox"/> VOAC <input type="checkbox"/> VOAC <input type="checkbox"/>	CAM Metals EPA 6010/7000 TLLC <input type="checkbox"/> STLC <input type="checkbox"/>	Lead Org/DHSD Lead EPA 7420/7421 <input type="checkbox"/>	Method of shipment	
			Soil	Water	Other	Ice	Acid															
MW-5(23)	Z	①	X			X	HCL	8/25/99	1329		X											Sampler will deliver
																						Special Detection Limit/reporting Lowest Possible
																						Special QA/QC As Normal
																						Remarks RAT 8 Z-40ml HCL VCAs # 791655

Condition of sample:	Temperature received: Due: 9/9/99 R11/D3
Relinquished by sampler [Signature]	Date 8/25/99 Time 1455
Relinquished by	Date Time Received by Joseph Pacheco CAS 8/25/99 1450
Relinquished by	Date Time Received by laboratory

Turnaround Time:

Priority Rush 1 Business Day

Rush 2 Business Days

Expedited 5 Business Days

Standard 10 Business Days