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

the IT group

September 22, 1999
Project 791655

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

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

Dear Reverend Phoenix:

Pinnacle Environmental Solutions, a member of The IT Group (Pinnacle), is submitting the attached copy of the laboratory analytical results for the groundwater sample collected from well MW-5 during the second 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 Products Company (ARCO) Service Station No. 2111, located at 1156 Davis Street, San Leandro, California.

Please call if you have questions.

Sincerely,

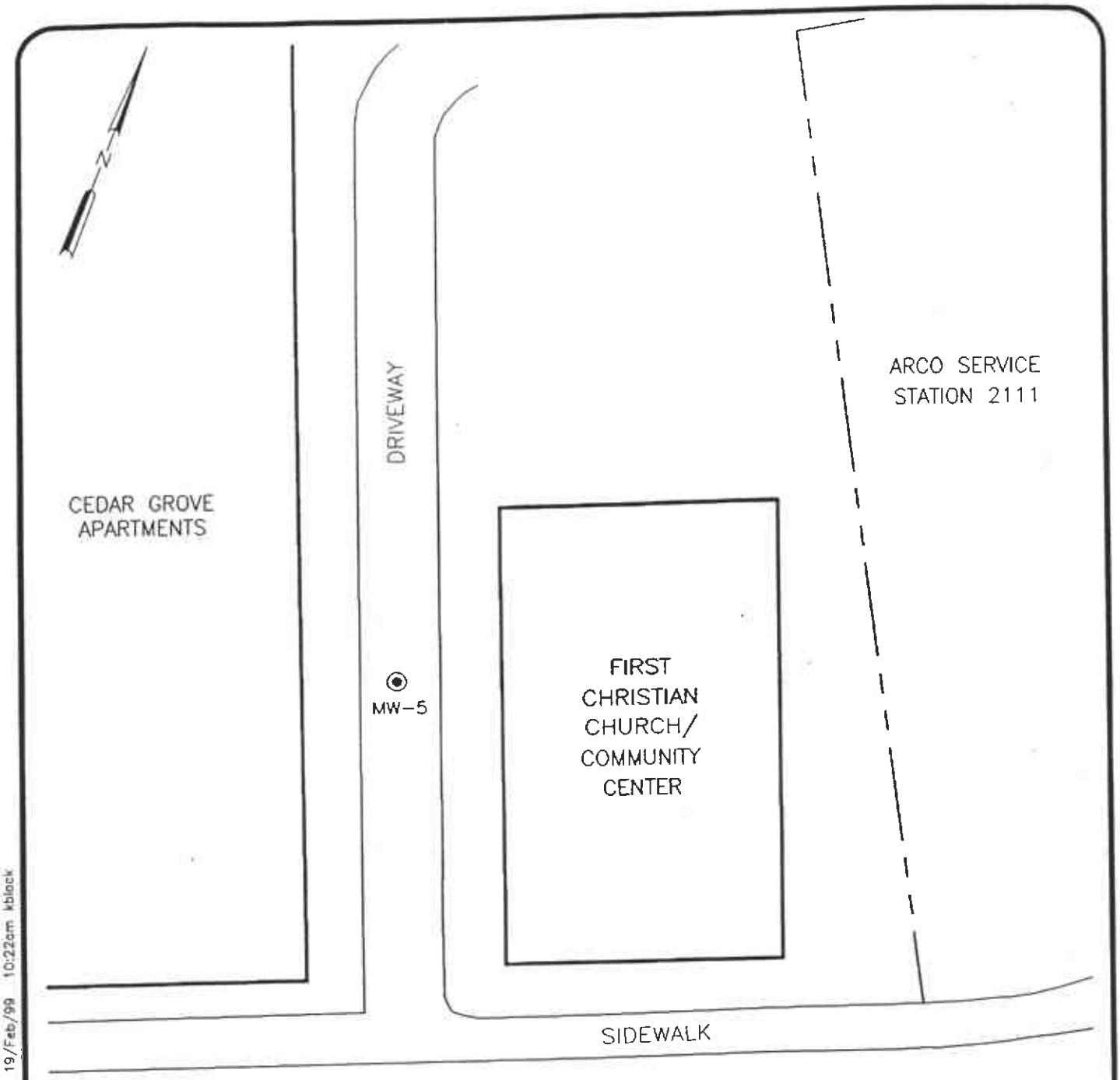
Pinnacle

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

OAK\S:\ARCO\2111\QTRLY\FCCQ299.DOC\uh:1



Pinnacle
ENVIRONMENTAL SOLUTIONS
A DIVISION OF EMCON

DATE FEB. 1999
DWN KAB
APP
REV
PROJECT NO.
20805-127.006

FIGURE 1
FIRST CHRISTIAN CHURCH
1190 DAVIS STREET
SAN LEANDRO, CALIFORNIA
SITE PLAN

APPENDIX A

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

Columbia Analytical Services INC.
An Employee-Owned Company

September 22, 1999

Service Request No.: S9901960

Mr. Glen Vanderveen
EMCON-Pinnacle
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 June 29, 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 question, please call me at (408) 748-9700.

Respectfully submitted,

Columbia Analytical Services, Inc.

Bernadette Tronsales
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
TTLC	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: S9901960
Date Collected: 6/25/99
Date Received: 6/29/99

BTEX, MTBE and TPH as Gasoline

Sample Name: MW-5(21)
Lab Code: S9901960-007
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	7/8/99	ND	
Benzene	EPA 5030	8020	0.5	1	NA	7/8/99	ND	
Toluene	EPA 5030	8020	0.5	1	NA	7/8/99	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	7/8/99	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	7/8/99	ND	
Methyl *tert*-Butyl Ether	EPA 5030	8020	3	20	NA	7/8/99	1300	

Approved By: Lori Zf Date: 9-22-99

1522/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

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

Service Request: S9901960
Date Collected: NA
Date Received: NA

BTEX, MTBE and TPH as Gasoline

Sample Name: Method Blank
Lab Code: S990707-WB1
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	7/7/99	ND	
Benzene	EPA 5030	8020	0.5	1	NA	7/7/99	ND	
Toluene	EPA 5030	8020	0.5	1	NA	7/7/99	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	7/7/99	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	7/7/99	ND	
Methyl *tert*-Butyl Ether	EPA 5030	8020	3	1	NA	7/7/99	ND	

Approved By: _____ Date: 9-22-99

1S22/020597D

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

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

Service Request: S9901960
Date Collected: NA
Date Received: NA

BTEX, MTBE and TPH as Gasoline

Sample Name: Method Blank
Lab Code: S990708-WB1
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	7/8/99	ND	
Benzene	EPA 5030	8020	0.5	1	NA	7/8/99	ND	
Toluene	EPA 5030	8020	0.5	1	NA	7/8/99	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	7/8/99	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	7/8/99	ND	
Methyl *tert*-Butyl Ether	EPA 5030	8020	3	1	NA	7/8/99	ND	

Approved By: Lori [illegible] Date: 9.22.99

1522/020397p

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: S9901960
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 CA/LUFT

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery 4-Bromofluorobenzene	Percent Recovery a,a,a-Trifluorotoluene
MW-5(21)	S9901960-007		99	92
BATCH QC	S9901958-001MS		98	111
BATCH QC	S9901958-001DMS		99	107
BATCH QC	S9901958-003MS		102	101
BATCH QC	S9901958-003DMS		99	111
Method Blank	S990707-WB1		99	102
Method Blank	S990708-WB1		100	101
CAS Acceptance Limits:			69-116	69-116

Approved By: _____ Date: 9-22-99

SUR2/020397p

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: S9901960
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 7/7/99

Matrix Spike/Duplicate Matrix Spike Summary
BTE

Units: ug/L (ppb)
Basis: NA

Sample Name: BATCH QC
Lab Code: S9901958-001MS, S9901958-001DMS
Test Notes:

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference
Benzene	EPA 5030	8020	0.5	25	25	ND	24	23	96	92	75-135	4
Toluene	EPA 5030	8020	0.5	25	25	ND	25	25	100	100	73-136	<1
Ethylbenzene	EPA 5030	8020	0.5	25	25	ND	25	23	100	92	69-142	8

Approved By: Lori Bjl Date: 9-22-99

DMS/020397p

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: S9901960
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 7/7/99

Matrix Spike/Duplicate Matrix Spike Summary
TPH as Gasoline

Sample Name: BATCH QC
Lab Code: S9901958-001MS, S9901958-001DMS
Test Notes:

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Gasoline	EPA 5030	CA/LUFT	50	250	250	ND	250	270	100	108	75-135	8	

Approved By: _____ Date: 9-22-99

DMS/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

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

Service Request: S9901960
Date Analyzed: 7/8/99

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 Acceptance Limits	Percent Recovery	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	250	250	90-110	100	
Benzene	EPA 5030	8020	25	23	85-115	92	
Toluene	EPA 5030	8020	25	25	85-115	100	
Ethylbenzene	EPA 5030	8020	25	23	85-115	92	
Xylenes, Total	EPA 5030	8020	75	68	85-115	91	
Methyl *tert*-Butyl Ether	EPA 5030	8020	25	28	85-115	112	

Approved By: _____ Date: 9-22-99

ICV032196

ARCO Products Company
Division of Atlantic/Richfield Company

Task Order No. 24118.00 S9901960

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	Fax no. (Consultant) (408) 437-9576
Consultant name EMCON	Address (Consultant) 2201 Broadway, #101 Oakland, CA 94612		Contract Number

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH *inclu. MTBE* EPA M602/8020/8015	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM 503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Semi Metals ☐ VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org/DHS ☐ Lead EPA 7420/7421 ☐			
MW-5	011	2	(1)	X		X	HCl	6/25/99	1113		X												

Method of shipment: Sampler will deliver

Special Detection Limit/reporting: Lowest Possible

Special QA/QC: As Normal

Remarks: RAT 8

2-40ml HCl VOAs

#209805-127.006

Lab Number

Turnaround Time:

- Priority Rush 1 Business Day ☐
- Rush 2 Business Days ☐
- Expedited 5 Business Days ☐
- Standard 10 Business Days ☒

Condition of sample: Iced

Temperature received: DUE: 7/14/99 R11 D3

Relinquished by sampler: Kimberly Miller	Date: 6/28/99	Time: 2:00	Received by
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by laboratory / Date / Time

Distribution: White Copy – Laboratory: Canary Copy – ARCO Environmental Engineering: Pink Copy – Consultant