EMCON
1921 Ringwood Avenue • San Jose, California 95131-1721 • (408) 453-7300 • Fax (408) 437-9526

August 26, 1997
Project 20805-127.005

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

Re: Second quarter 1997 laboratory analytical results, groundwater samples, First Christian Church, 1190 Davis Street, San Leandro, California

Dear Reverend Phoenix:

Enclosed please find copies of the laboratory analytical results for the groundwater sample collected from well MW-5 during the second quarter of 1997. This well is located at the First Christian Church, 1190 Davis Street, San Leandro, California. The groundwater samples were collected on May 28, 1997, during quarterly sampling of the ARCO Products Company service station 2111, 1156 Davis Street, San Leandro. The laboratory analytical results indicate that the groundwater sample concentrations were not detectable for total petroleum hydrocarbons as gasoline, and the gasoline constituents benzene, toluene, ethylbenzene, and total xylenes.

Please call if you have questions.

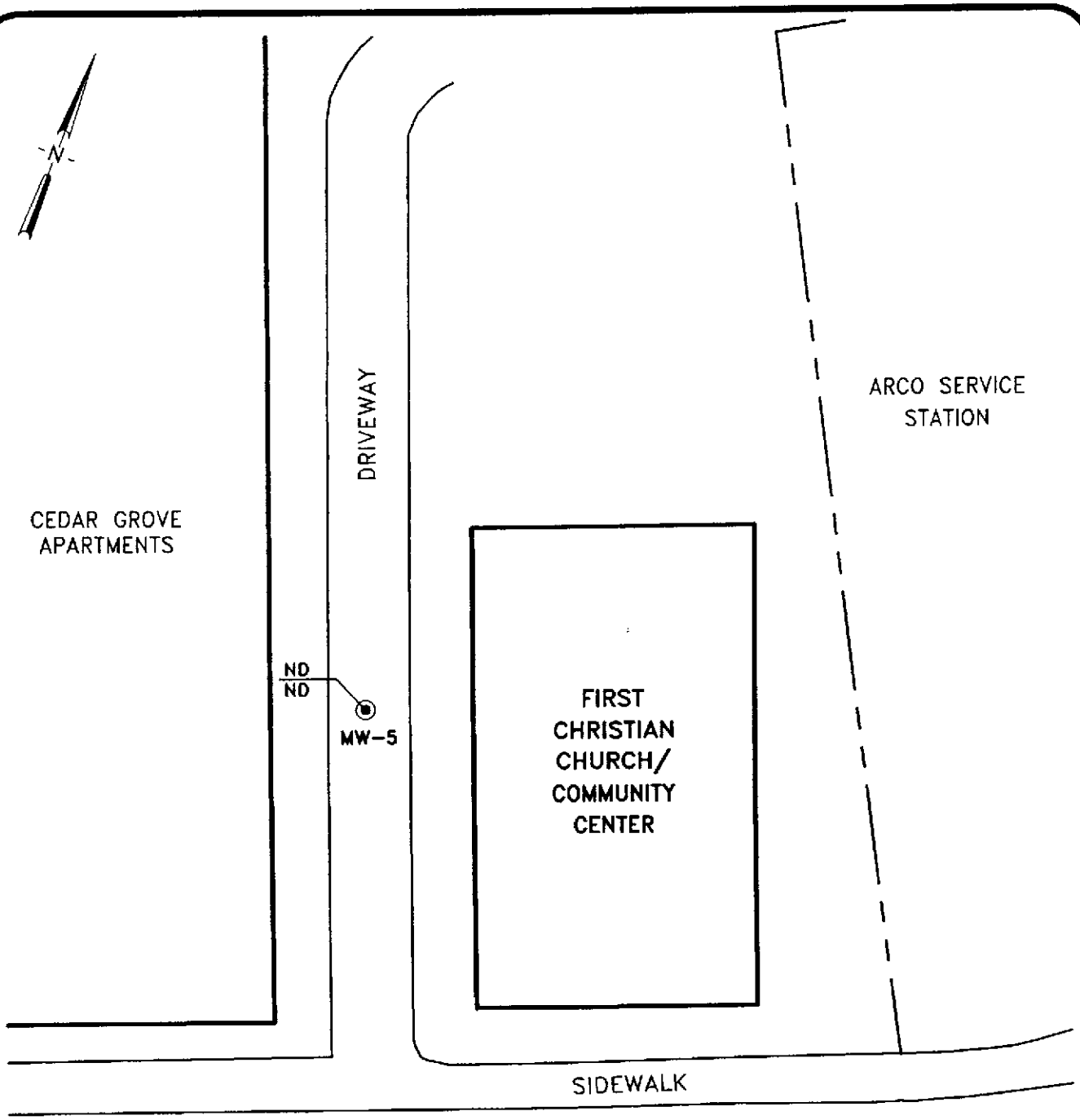
Sincerely,

EMCON

Gary P. Messerotes
Project Manager

Attachments: Figure 1 - Generalized Site Plan
Attachment A -Copy of Analytical Results and Chain-of-Custody Documentation, Well MW-5, Second Quarter 1997

cc: Kevin Tinsley, ACHCSA
Kevin Graves, RWQCB - SFBR
Paul Supple, ARCO Products Company
File



EMCON

DATE JUNE 1997
DWN KMM
APP
REV 0
PROJECT NO. 20805-127.005

FIGURE 1
FIRST CHRISTIAN CHURCH
1190 DAVIS STREET
SAN LEANDRO, CALIFORNIA
QUARTERLY GROUNDWATER MONITORING GENERALIZED SITE PLAN

EA-SANJOSE-CAD/DRAWINGS: G:\805-127\SJFIG1.dwg Xrefs: <NONE>
Scale: 1 = 20.00 DimScale: 1 = 20.00 Date: 6/5/97 Time: 12:44 PM Operator: KMM

ATTACHMENT A

COPY OF ANALYTICAL RESULTS AND CHAIN-OF-CUSTODY DOCUMENTATION, WELL MW-5, SECOND QUARTER 1997

Columbia Analytical Services inc.

June 16, 1997 Service Request No.: S9700983

Ms. Ivy Inouye
EMCON
1921 Ringwood Avenue
San Jose, CA 95131

RE: 20805-127.005/TO#21133.00/2111 SAN LEANDRO

Dear Ms. Inouye:

The following pages contain analytical results for sample(s) received by the laboratory on May 28, 1997. Results of sample analyses are followed by Appendix A which contains sample custody documentation and quality assurance deliverables requested for this project. The work requested has been assigned the Service Request No. listed above. To help expedite our service, please refer to this number when contacting the laboratory.

Analytical results were produced by procedures consistent with Columbia Analytical Services' (CAS) Quality Assurance Manual (with any deviations noted). Signature of this CAS Analytical Report below confirms that pages 2 through 8, following, have been thoroughly reviewed and approved for release in accord with CAS Standard Operating Procedure ADM-DatRev3.

Please feel welcome to contact me should you have questions or further needs.

Sincerely,

Steven L. Green
Project Chemist

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	**Service Request:**	S9700983
Project:	20805-127.005/TO#21133.00/2111 SAN LEANDRO	**Date Collected:**	5/28/97
Sample Matrix:	Water	**Date Received:**	5/28/97

BTEX, MTBE and TPH as Gasoline

Sample Name:	MW-5 (15)	Units:	ug/L (ppb)
Lab Code:	S9700983-004	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	50	2	NA	6/5/97	<100	C1
Benzene	EPA 5030	8020	0.5	2	NA	6/5/97	<1	C1
Toluene	EPA 5030	8020	0.5	2	NA	6/5/97	<1	C1
Ethylbenzene	EPA 5030	8020	0.5	2	NA	6/5/97	<1	C1
Xylenes, Total	EPA 5030	8020	0.5	2	NA	6/5/97	<1	C1
Methyl *tert*-Butyl Ether	EPA 5030	8020	3	2	NA	6/5/97	120	

C1 The MRL was elevated due to high analyte concentration requiring sample dilution.

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	ARCO Products Company	**Service Request:**	S9700983
Project:	20805-127.005/TO#21133.00/2111 SAN LEANDRO	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

BTEX, MTBE and TPH as Gasoline

Sample Name:	Method Blank	Units:	ug/L (ppb)
Lab Code:	S970605-WB1	Basis:	NA
Test Notes:			

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	6/5/97	ND	
Benzene	EPA 5030	8020	0.5	1	NA	6/5/97	ND	
Toluene	EPA 5030	8020	0.5	1	NA	6/5/97	ND	
Ethylbenzene	EPA 5030	8020	0.5	1	NA	6/5/97	ND	
Xylenes, Total	EPA 5030	8020	0.5	1	NA	6/5/97	ND	
Methyl *tert*-Butyl Ether	EPA 5030	8020	3	1	NA	6/5/97	ND	

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCO Products Company
Project: 20805-127.005/TO#21133.00/2111 SAN LEANDRO
Sample Matrix: Water

Service Request: S9700983
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 (15)	S9700983-004		101	110
BATCH QC	S9700984-003MS		97	110
BATCH QC	S9700984-003DMS		96	107
Method Blank	S970605-WB1		100	97
CAS Acceptance Limits:			69-116	69-116

SUR2/020397p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCO Products Company
Project: 20805-127.005/TO#21133.00/2111 SAN LEANDRO
Sample Matrix Water

Service Request: S9700983
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 6/4/97

Matrix Spike/Duplicate Matrix Spike Summary
TPH as Gasoline

Sample Name: BATCH QC
Lab Code: S9700984-003MS, S9700984-003DMS
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	91	310	320	88	92	75-135	3	

DMS/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCO Products Company
Project: 20805-127.005/TO#21133.00/2111 SAN LEANDRO

Service Request: S9700983
Date Analyzed: 6/4/97

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	240	90-110	96	
Benzene	EPA 5030	8020	25	26	85-115	104	
Toluene	EPA 5030	8020	25	26	85-115	104	
Ethylbenzene	EPA 5030	8020	25	27	85-115	108	
Xylenes, Total	EPA 5030	8020	75	80	85-115	107	
Methyl *tert*-Butyl Ether	EPA 5030	8020	25	27	85-115	108	

ICV/032196

ARCO Products Company
Division of AtlanticRichfieldCompany

Task Order No. 211330.00

Chain of Cus...

ARCO Facility no. 211	City (Facility) San Leandro	Project manager (Consultant) Paul Supple	Laboratory name CAS
ARCO engineer Paul Supple	Telephone no. (ARCO)	Telephone no. (Consultant) (408) 453-7300	Fax no. (Consultant) 408-453-0452
Consultant name Environ	Address (Consultant) 1921 Ringwood Ave. San Jose, CA 95131		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 EPA 8020/8015	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM5520E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals ☐ Semi VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐		
mw-1(18')	1	2		X		X	HCL	5/28/97	1025		X											
mw-4(14')	2	2		X		X	HCL		0940		X											
mw-3(17')	3	2		X		X	HCL		1040		X											
mw-5(15')	4	2		X		X	HCL		0955		X											
mw-6(15')	5	2		X		X	HCL		0925		X											
mw-2(16')	6	2		X		X	HCL		1010		X											
mw-7(16')	7	2		X		X	HCL	↓	0915		X											

Method of shipment: Sampler will deliver

Special detection Limit/reporting: Lowest possible.

Special QA/QC: AS Normal

Remarks: 2-40 mL HCl VOAs MTBE By 8020

#20805-127005

Lab number: S9700983

Turnaround time

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

Condition of sample: INTACT

Temperature received: Cool

	Date	Time	
Relinquished by sampler	5/28/97		Received by
Relinquished by			Received by
Relinquished by			Received by laboratory: OK — Date: 5/29/97 — Time: 11:25A

Distribution: White copy — Laboratory; Canary copy — ARCO Environmental Engineering; Pink copy — Consultant

APPC-3292 (2-91)

R8