



ENVIRONMENTAL
PROTECTION

99 SEP 23 PM 2:23

3858

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

September 21, 1999
Project 791644

Mr. Paul Supple
ARCO Products Company
PO Box 6549
Moraga, California 94570

Re: Verification Soil Sampling Report Associated with the Upgrade of Product Delivery Lines and Dispensers, ARCO Service Station No. 2035, Located at 1001 San Pablo Avenue, Albany, California

Dear Mr. Supple:

Pinnacle Environmental Solutions, a member of The IT Group (Pinnacle), is submitting this report documenting verification soil sampling activities associated with the removal and replacement of product delivery lines and dispensers at ARCO Products Company (ARCO) Service Station No. 2035, located at 1001 San Pablo Avenue, Albany, California. Soil samples were collected by a Pinnacle geologist under the direction of Lawrence Seto, of the Alameda County Health Care Services Agency (ACHCSA).

SOIL SAMPLING AND ANALYSIS

On July 30, 1999, a Pinnacle geologist collected nine verification soil samples from beneath the former product delivery lines (samples PL-1 through PL-5) and former dispensers (samples DL-1 through DL-4) at the locations shown on Figure 1. Product delivery line samples were collected at depths ranging from 3.5 to 4.0 feet below ground surface (bgs). Dispenser samples were collected at depths ranging from 2.5 to 3.0 feet bgs. Sample locations and sampling methodology were directed by the on-site ACHCSA representative. Sample tubes were driven into the soil with a slide hammer tool, sealed with Teflon[®] tape and plastic end caps, labeled, and placed on ice pending transport to the analytical laboratory.

Soil samples were transported, with chain-of-custody documentation, to Columbia Analytical Services (CAS), a state-certified analytical laboratory, and analyzed for total petroleum hydrocarbons as gasoline (TPHG) using CA/LUFT methodology; and for benzene, toluene, ethylbenzene, total xylenes (BTEX), and methyl tert-butyl ether (MTBE) using USEPA Method 8020.

Approximately 55 cubic yards of pea gravel and soil were excavated, stockpiled on-site and covered with visqueen. On August 2, 1999, a Pinnacle engineer collected four grab samples (SP1 through SP4) from the stockpile and submitted the samples to CAS. Samples SP1 through SP4 were composited four to one and analyzed for TPHG using CA/LUFT methodology, for BTEX and MTBE using USEPA Method 8020, and for total lead using USEPA Method 6010A.

On August 6, 1999, the soil stockpile was transported off-site by Dillard Environmental Services and disposed of at BFI/Vasco Landfill in Livermore, California. Stockpile disposal documentation is included as Appendix A.

ANALYTICAL RESULTS

Results of verification soil sample analysis and stockpile characterization are presented in the following sections. Copies of certified analytical reports and chain-of-custody documentation are presented in Appendix B.

Verification Soil Sample Results

Table 1 presents a summary of the verification soil sample analytical results. TPHG was detected in four of the nine soil samples at concentrations ranging from 4.7 milligrams per kilogram (mg/kg) (DL-1) to 26 mg/kg (DL-2). Benzene was detected in one of the nine samples at a concentration of 0.012 mg/kg (PL-1). MTBE was detected in five of the nine samples at concentrations ranging from 0.43 mg/kg (PL-5) to 6.1 mg/kg (PL-1).

Soil Stockpile Sample Results

Table 2 presents a summary of the soil stockpile analytical results. TPHG, benzene and MTBE were not detected. Total Xylenes were detected at a concentration of 0.007 mg/kg, and Lead was detected at a concentration of 5 mg/kg.

CONCLUSIONS

Four of the nine verification soil samples contained detectable concentrations of TPHG and BTEX constituents. Five verification soil samples contained detectable concentrations of MTBE. Residual petroleum hydrocarbons were detected at dispenser islands (DL-1 and DL-2) and at piping joints.

Mr. Paul Supple
September 21, 1999
Page 3

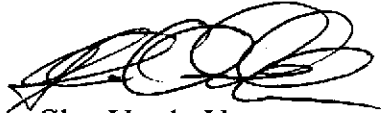
Project 791644

Approximately 55 yards of excavated soil and pea-gravel was transported for disposal to BFI/Vasco in Livermore, California.


Please call Glen VanderVeen at (510) 740-5807 if you have any questions or comments.

Sincerely,

Pinnacle



Glen VanderVeen
Project Manager



Mark Capps, R.G. 6561
Project Geologist

Attachments:	Table 1	Summary of Verification Soil Sample Results
	Table 2	Summary of Stockpile Sample Results
	Figure 1	Soil Sample Locations
	Appendix A	Stockpile Disposal Documentation
	Appendix B	Certified Analytical Reports and Chain-of-Custody Documentation

cc: Barney Chan, ACHCSA
Lawrence Seto, ACHCSA
James A. Lestrangle, Property Owner
Muriel & Emile Turpin, Trustees

**Table 1
Summary of Verification Soil Sample Results**

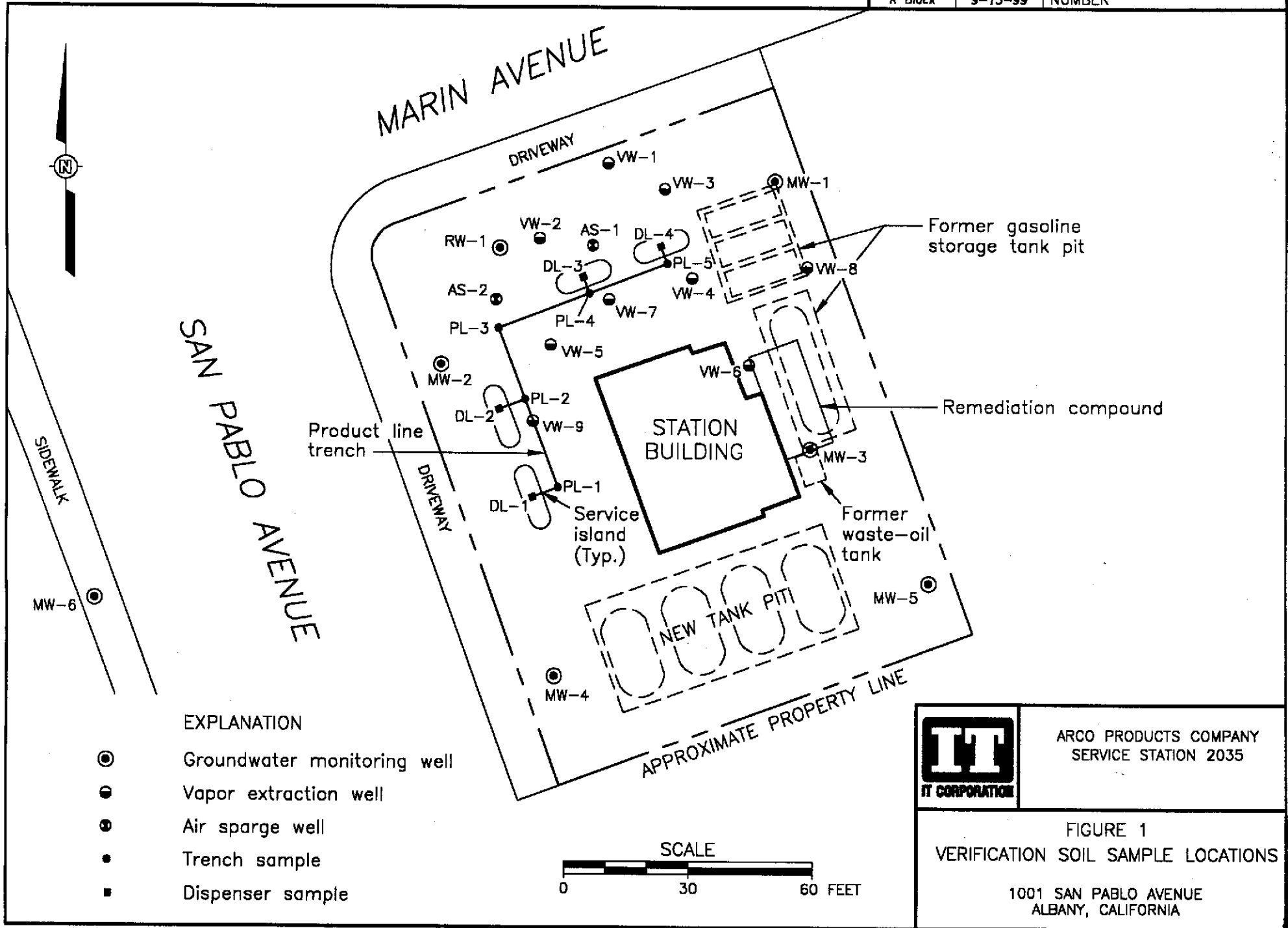
**Arco Service Station No. 2035
1001 San Pablo Avenue, Albany, California**

Sample No.	Sample Depth feet (bgs)	Date Collected	(Method CA/LUFT)	(Method 8020)				
			TPHG	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
Verification Soil Sample Results (mg/kg)								
PL-1	3.5-4.0	07/30/99	41	0.012	0.66	0.36	2.9	6.1
PL-2	3.5-4.0	07/30/99	<1	<0.005	<0.005	<0.005	<0.005	0.77
PL-3	3.5-4.0	07/30/99	<1	<0.005	<0.005	<0.005	<0.005	0.53
PL-4	3.5-4.0	07/30/99	<1	<0.005	<0.005	<0.005	<0.005	0.48
PL-5	3.5-4.0	07/30/99	5	<0.005	0.007	<0.005	0.028	0.43
DL-1	2.5-3.0	07/30/99	4.7	<0.005	0.013	0.021	0.20	<0.05
DL-2	2.5-3.0	07/30/99	26	<0.005	0.012	0.066	0.099	<0.05
DL-3	2.5-3.0	07/30/99	<1	<0.005	<0.005	<0.005	<0.005	<0.05
DL-4	2.5-3.0	07/30/99	<1	<0.005	<0.005	<0.005	<0.005	<0.05
NOTE:								
TPHG = Total petroleum hydrocarbons as gasoline.								
MTBE = Methyl tert-butyl ether.								
(bgs) = below ground surface								
< = Less than laboratory detection limit stated to the right								

Table 2

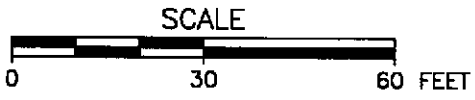
Summary of Stockpile Sample Results
 ARCO Service Station No. 2035
 1001 San Pablo Avenue, Albany, California

Sample No.	Date Collected	(Method CA/LUFT)	(Method 8020)					(Method 6010A)
		TPHG	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	Total Lead
Soil Stockpile Sample Results (mg/kg)								
SP1234	08/02/99	<1.0	<0.005	<0.005	<0.005	0.007	<0.05	5
NOTE: TPHG = Total petroleum hydrocarbons as gasoline MTBE = Methyl tert-butyl ether. < = Less than laboratory detection limit stated to the right								



EXPLANATION

- ⊙ Groundwater monitoring well
- Vapor extraction well
- ⊙ Air sparge well
- Trench sample
- Dispenser sample



ARCO PRODUCTS COMPANY
SERVICE STATION 2035

FIGURE 1
VERIFICATION SOIL SAMPLE LOCATIONS

1001 SAN PABLO AVENUE
ALBANY, CALIFORNIA

NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF IT CORPORATION

APPENDIX A
STOCKPILE DISPOSAL DOCUMENTATION

DILLARD TRUCKING, INC. dba
DILLARD ENVIRONMENTAL SERVICES

P.O. Box 579
Byron, CA 94514
Tel #: (925) 634-6850 Fax #: (925) 634-0569 Ops. (925) 634-0874 Acct. Dept.

Facsimile Transmittal

Attn: Dan Lescure Date: 8 / 11 / 99
Company: Pinnacle Fax #: (510) 663-3315

From the office of: **Matt Faias**

Total Number of Pages (including cover sheet)

2

Call if you have any questions Review, Sign & FAX back
 Original to follow via mail Per Your Request
 Enter for Review and Acceptance XXXXX Other (See Message)

Message: This is the completion letter for Arco #02035.

Thank you, Matt Faias.

This facsimile transmission is intended only for the addressee shown above. It may contain information that is privileged, confidential or otherwise protected from disclosure. Any review, dissemination or use of this transmission or its contents by persons other than the addressee is strictly prohibited.

If you have received this transmission in error, please notify us immediately by telephone and mail the original to us at the address listed above. Thank You.

Dillard Trucking, Inc. dba
Dillard Environmental Services

P.O. Box 579 · Byron, CA 94514
Phone (925) 634-6850 – Fax (925) 634-0569
EPA #CAD981692809 · D.T.S.C. #1715 · CA LIC #624665-A HAZ

August 11, 1999

Pinnacle

Attn: Dan Lescure

RE: Arco #02035/1001 San Pablo Ave., Albany, CA
Removed: 63.55 tons

Dear Mr. Dan Lescure:

Please be advised that 63.55 from the above referenced site has been removed. The soil was transported for disposal to BFI on August 6, 1999.

Should you have any questions, please do not hesitate to call.

Sincerely,

Dillard Trucking, Inc. dba,
DILLARD ENVIRONMENTAL SERVICES

Regan Cortez/dc
Regan Cortez
Customer Service Representative

Rc:dcc

cc:file

APPENDIX B

**COPIES OF CERTIFIED ANALYTICAL REPORTS,
AND CHAIN-OF-CUSTODY DOCUMENTATION**



August 20, 1999

Service Request No.: S9902293

Mr. Glen Vanderveen
EMCON-Pinnacle
2201 Broadway, Suite 101
Oakland, CA 94612

RE: TO#24482.00/RAT8/2035 ALBANY

Dear Mr. Vanderveen:

Enclosed are the results of the sample(s) submitted to our laboratory on July 30, 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 16, 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
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
Project: TO#24482.00/RAT8/2035 ALBANY
Sample Matrix: Soil

Service Request: S9902293
Date Collected: 7/30/99
Date Received: 7/30/99

BTEX, MTBE and TPH as Gasoline

Sample Name: PL-1
Lab Code: S9902293-001
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	20	8/11/99	8/13/99	41	
Benzene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	0.012	
Toluene	EPA 5030	8020	0.005	20	8/11/99	8/13/99	0.66	
Ethylbenzene	EPA 5030	8020	0.005	20	8/11/99	8/13/99	0.36	
Xylenes, Total	EPA 5030	8020	0.005	20	8/11/99	8/13/99	2.9	
Methyl tert-Butyl Ether	EPA 5030	8020	0.05	20	8/11/99	8/13/99	6.1	

Approved By: _____

PT

Date: _____

08/20/99

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
Project: TO#24482.00/RAT8/2035 ALBANY
Sample Matrix: Soil

Service Request: S9902293
Date Collected: 7/30/99
Date Received: 7/30/99

BTEX, MTBE and TPH as Gasoline

Sample Name: PL-2
Lab Code: S9902293-002
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	8/11/99	8/13/99	ND	
Benzene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Toluene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Ethylbenzene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Methyl tert-Butyl Ether	EPA 5030	8020	0.05	1	8/11/99	8/13/99	0.77	

Approved By: _____

ms

Date: _____

08/20/99

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
 Project: TO#24482.00/RAT8/2035 ALBANY
 Sample Matrix: Soil

Service Request: S9902293
 Date Collected: 7/30/99
 Date Received: 7/30/99

BTEX, MTBE and TPH as Gasoline

Sample Name: PL-3
 Lab Code: S9902293-003
 Test Notes:

Units: mg/Kg (ppm)
 Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	8/11/99	8/13/99	ND	
Benzene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Toluene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Ethylbenzene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Methyl tert-Butyl Ether	EPA 5030	8020	0.05	1	8/11/99	8/13/99	0.53	

Approved By: _____

BT

Date: _____

08/20/99

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
Project: TO#24482.00/RAT8/2035 ALBANY
Sample Matrix: Soil

Service Request: S9902293
Date Collected: 7/30/99
Date Received: 7/30/99

BTEX, MTBE and TPH as Gasoline

Sample Name: PL-4
Lab Code: S9902293-004
Test Notes:

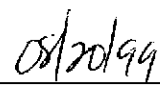
Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	8/11/99	8/13/99	ND	
Benzene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Toluene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Ethylbenzene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Methyl tert-Butyl Ether	EPA 5030	8020	0.05	1	8/11/99	8/13/99	0.48	

Approved By: _____



Date: _____



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
 Project: TO#24482.00/RAT8/2035 ALBANY
 Sample Matrix: Soil

Service Request: S9902293
 Date Collected: 7/30/99
 Date Received: 7/30/99

BTEX, MTBE and TPH as Gasoline

Sample Name: PL-5
 Lab Code: S9902293-005
 Test Notes:

Units: mg/Kg (ppm)
 Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	8/11/99	8/13/99	5	
Benzene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Toluene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	0.007	
Ethylbenzene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	8/11/99	8/13/99	0.028	
Methyl tert-Butyl Ether	EPA 5030	8020	0.05	1	8/11/99	8/13/99	0.43	

Approved By: _____

DS

Date: _____

08/20/99

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
Project: TO#24482.00/RAT8/2035 ALBANY
Sample Matrix: Soil

Service Request: S9902293
Date Collected: 7/30/99
Date Received: 7/30/99

BTEX, MTBE and TPH as Gasoline

Sample Name: DL-1
Lab Code: S9902293-006
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	8/11/99	8/13/99	4.7	
Benzene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Toluene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	0.013	
Ethylbenzene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	0.021	
Xylenes, Total	EPA 5030	8020	0.005	1	8/11/99	8/13/99	0.20	
Methyl tert-Butyl Ether	EPA 5030	8020	0.05	1	8/11/99	8/13/99	ND	

Approved By: _____



Date: _____

08/20/99

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
Project: TO#24482.00/RAT8/2035 ALBANY
Sample Matrix: Soil

Service Request: S9902293
Date Collected: 7/30/99
Date Received: 7/30/99

BTEX, MTBE and TPH as Gasoline

Sample Name: DL-2
Lab Code: S9902293-007
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	5	8/11/99	8/13/99	26	
Benzene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Toluene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	0.012	
Ethylbenzene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	0.066	
Xylenes, Total	EPA 5030	8020	0.005	1	8/11/99	8/13/99	0.099	
Methyl tert-Butyl Ether	EPA 5030	8020	0.05	1	8/11/99	8/13/99	ND	

Approved By: _____



Date: _____

08/20/99

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
Project: TO#24482.00/RAT8/2035 ALBANY
Sample Matrix: Soil

Service Request: S9902293
Date Collected: 7/30/99
Date Received: 7/30/99

BTEX, MTBE and TPH as Gasoline

Sample Name: DL-3
Lab Code: S9902293-008
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	8/11/99	8/13/99	ND	
Benzene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Toluene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Ethylbenzene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Methyl tert-Buryl Ether	EPA 5030	8020	0.05	1	8/11/99	8/13/99	ND	

Approved By: _____



Date: _____

08/20/99

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
 Project: TO#24482.00/RAT8/2035 ALBANY
 Sample Matrix: Soil

Service Request: S9902293
 Date Collected: 7/30/99
 Date Received: 7/30/99

BTEX, MTBE and TPH as Gasoline

Sample Name: DL-4
 Lab Code: S9902293-009
 Test Notes:

Units: mg/Kg (ppm)
 Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	8/11/99	8/13/99	ND	
Benzene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Toluene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Ethylbenzene	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	8/11/99	8/13/99	ND	
Methyl tert-Butyl Ether	EPA 5030	8020	0.05	1	8/11/99	8/13/99	ND	

Approved By: _____

Handwritten signature

Date: _____

08/20/99

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
Project: TO#24482.00/RAT8/2035 ALBANY
Sample Matrix: Soil

Service Request: S9902293
Date Collected: NA
Date Received: NA

BTEX, MTBE and TPH as Gasoline

Sample Name: Method Blank
Lab Code: S990812-SB1
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	8/11/99	8/14/99	ND	
Benzene	EPA 5030	8020	0.005	1	8/11/99	8/14/99	ND	
Toluene	EPA 5030	8020	0.005	1	8/11/99	8/14/99	ND	
Ethylbenzene	EPA 5030	8020	0.005	1	8/11/99	8/14/99	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	8/11/99	8/14/99	ND	
Methyl tert-Butyl Ether	EPA 5030	8020	0.05	1	8/11/99	8/14/99	ND	

Approved By: _____

PT

Date: _____

8/20/99

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCO Products Company
Project: TO#24482.00/RAT8/2035 ALBANY
Sample Matrix: Soil

Service Request: S9902293
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
 BTEX and TPH as Gasoline

Prep Method: EPA 5030
Analysis Method: CA/LUFT

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery	
			4-Bromofluorobenzene	a,a,a-Trifluorotoluene
PL-1	S9902293-001		66	119
PL-2	S9902293-002		102	108
PL-3	S9902293-003		103	108
PL-4	S9902293-004		102	110
PL-5	S9902293-005		106	109
DL-1	S9902293-006		108	105
DL-2	S9902293-007		67	114
DL-3	S9902293-008		105	100
DL-4	S9902293-009		99	117
Batch QC	S9902266-001 MS		104	115
Batch QC	S9902266-001 DMS		99	117
Method Blank	S990812-SB1		105	114

CAS Acceptance Limits: 51-137 51-137

Approved By: _____

MT

Date: _____

08/20/99

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCO Products Company
 Project: TO#24482.00/RAT8/2035 ALBANY
 Sample Matrix: Soil

Service Request: S9902293
 Date Collected: NA
 Date Received: NA
 Date Extracted: 8/11/99
 Date Analyzed: 8/15/99

Matrix Spike/Duplicate Matrix Spike Summary
 BTE

Sample Name: Batch QC
 Lab Code: S9902266-001 MS, S9902266-001 DMS
 Test Notes:

Units: mg/Kg (ppm)
 Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery		CAS Acceptance Limits	Relative Percent Difference	Result Notes
				MS	DMS		MS	DMS	MS	DMS			
Benzene	EPA 5030	8020	0.005	0.5	0.5	ND	0.5	0.5	100	100	57-154	<1	
Toluene	EPA 5030	8020	0.005	0.5	0.5	ND	0.5	0.5	100	100	60-142	<1	
Ethylbenzene	EPA 5030	8020	0.005	0.5	0.5	ND	0.5	0.5	100	100	46-150	<1	

Approved By: _____

HS

Date: _____

08/20/99

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCO Products Company
 Project: TO#24482.00/RAT8/2035 ALBANY
 Sample Matrix: Soil

Service Request: S9902293
 Date Collected: NA
 Date Received: NA
 Date Extracted: 8/11/99
 Date Analyzed: 8/15/99

Matrix Spike/Duplicate Matrix Spike Summary
 TPH as Gasoline

Sample Name: Batch QC
 Lab Code: S9902266-001 MS,
 Test Notes:

S9902266-001 DMS

Units: mg/Kg (ppm)
 Basis: Wet

Analyte	Prep Method	Analysis Method	Percent Recovery								CAS Acceptance Limits	Relative Percent Difference	Result Notes	
			Spike Level			Sample Result	Spike Result		MS					DMS
			MRL	MS	DMS	Result	MS	DMS	MS	DMS	MS	DMS		
Gasoline	EPA 5030	CA/LUFT	1	10	10	ND	9.6	10	96	100	67-121		4	

Approved By: _____



Date: _____

08/20/99

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCO Products Company
 Project: TO#24482.00/RAT8/2035 ALBANY

Service Request: S9902293
 Date Analyzed: 8/13/99

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

Sample Name: ICV
 Lab Code: ICV1
 Test Notes:

Units: mg/Kg (ppm)
 Basis: Wet

ICV Source:

Analyte	Prep Method	Analysis Method	True Value	Result	CAS		Result Notes
					Percent Recovery	Percent Recovery	
					Acceptance Limits		
TPH as Gasoline	EPA 5030	CA/LUFT	250	270	90-110	108	
Benzene	EPA 5030	8020	25	27	85-115	108	
Toluene	EPA 5030	8020	25	26	85-115	104	
Ethylbenzene	EPA 5030	8020	25	26	85-115	104	
Xylenes, Total	EPA 5030	8020	75	76	85-115	101	
Methyl tert -Butyl Ether	EPA 5030	8020	25	27	85-115	108	

Approved By: _____

MT

Date: _____

8/20/99



3334 Victor Court • Santa Clara, CA 95054
(408) 748-9700 • FAX (408) 748-9860

CHAIN OF CUSTODY/LABORATORY ANALYSIS REPORT FORM

SERVICE REQUEST NO. 24482.00 P.O.# S9902293 PAGE 1 OF 1

PROJECT NAME ARW 2035 # 20805-123-007
 PROJECT MGR. Celen VanderVeen
 COMPANY Pinnacle Environmental
 ADDRESS 2201 Broadway Suite 101
Oakland CA 94612 PHONE _____ FAX _____
 SAMPLER'S SIGNATURE Mark Christian

NUMBER OF CONTAINERS	ANALYSIS REQUESTED														REMARKS *
	PRESERVATIVE	HCl	HCl	HCl	NP	NP	NP	HCl	HNO ₃	NP	H ₂ SO ₄	NaOH			
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Volatile Organics By GCMS 624 <input type="checkbox"/> 8240 <input type="checkbox"/> 8260 <input type="checkbox"/> Halogenated or Aromatic Volatiles 601/8010 <input type="checkbox"/> 802/8020 <input type="checkbox"/> 8021 <input type="checkbox"/> TPH as Gas/BTEX <input type="checkbox"/> TPH as Gas/BTEX/MTBE <input type="checkbox"/> HBHC <input type="checkbox"/> Base/New/Acid Organics / GCMS 625 <input type="checkbox"/> 8270 <input type="checkbox"/> Pesticides & PCBs 608/8082 <input type="checkbox"/> Pesticides only 8081 <input type="checkbox"/> PCBs 8082 <input type="checkbox"/> TRPH - 418.1 <input type="checkbox"/> Oil and Grease Method Metals Indicate below Total <input type="checkbox"/> Dissolved <input type="checkbox"/> pH, Cond, Cl, SO ₄ , F, TDS, TSS Alk, NO ₃ , NO ₂ (circle) NH ₃ -N, COD, Total-P, TKN, TOC NO ₃ / NO ₂ Phenols (circle) Cyanide														

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX
PL-1	7/30	100	①	Soil
PL-2	7/30		②	
PL-3	7/30		③	
PL-4	7/30		④	
PL-5	7/30		⑤	
DL-1	7/30		⑥	
DL-2	7/30		⑦	
DL-3	7/30		⑧	
DL-4	7/30	▼	⑨	▼

RELINQUISHED BY:
 Signature Mark Christian
 Printed Name Mark Christian
 Firm Pinnacle
 Date/Time 7/30/99 1:50 pm

RECEIVED BY:
 Signature Brian Fuller
 Printed Name Brian Fuller
 Firm CMS
 Date/Time 7/30/99 1:50 pm

RELINQUISHED BY:
 Signature _____
 Printed Name _____
 Firm _____
 Date/Time _____

RECEIVED BY:
 Signature _____
 Printed Name _____
 Firm _____
 Date/Time _____

TURNAROUND REQUIREMENTS
 ___ 1 day ___ 2 day ___ 3 day
 ___ 5 day ___ Other
 Standard (10 working days)
 Results Due 8/13/99

REPORT REQUIREMENTS
 I. Routine Report
 ___ II. Report (includes MS. MSD, as required, may be charged as samples)
 ___ III. Data Validation Report (includes All Raw Data)
 ___ MDLs/POLs/Trace #
 ___ Electronic Data Deliverables

RELINQUISHED BY:
 Signature _____
 Printed Name _____
 Firm _____
 Date/Time _____
 Shipped Via/Tracking # _____

RECEIVED BY:
 Signature _____
 Printed Name _____
 Firm _____
 Date/Time _____

SAMPLE RECEIPT: Condition _____ Custody Seals _____
 SPECIAL INSTRUCTIONS/COMMENTS:
 Circle which metals are to be analyzed:
 Metals: Al Sb Ba Be B Cd Ca Cr Co Cu Fe Mg Mn Mo Ni K Ag Na Sn V Zn
 As Pb Se Tl Hg
R3 DOE: 8/13/99
 Storage: _____

*All sample results to be used in connection with drinking water regulations? Yes No If yes, you must so indicate by writing "DW" for each such sample.

ARCO Products Company

Division of AtlanticRichfieldCompany

Task Order No. **24482.00**

Chain of Custody

ARCO Facility no. 2035	City (Facility) Albany	Project manager (Consultant) Glen Vanderveen	Laboratory name CAS
ARCO engineer Paul Supple	Telephone no. (ARCO)	Telephone no. (Consultant) (510) 740-5807	Contract number
Consultant name		Address (Consultant)	Method of shipment

Sample I.D.	Lab no.	Container no.	Matrix			Preservation		Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH + MTBE EPA 1362/8020/8015	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/SM508E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals <input type="checkbox"/> VOA <input type="checkbox"/> VOA <input type="checkbox"/>	Semi Metals <input type="checkbox"/> VOA <input type="checkbox"/> VOA <input type="checkbox"/>	CMM Metals EPA 601/7000 TLC <input type="checkbox"/> STLC <input type="checkbox"/>	Lead Org./DHS Lead EPA 7420/7421 <input type="checkbox"/>	
			Soil	Water	Other	Ice	Acid															
PL-1			X					07/30/95	1:00		X											
PL-2			X					↓	↓		X											
PL-3			X					↓	↓		X											
PL-4			X					↓	↓		X											
PL-5			X					↓	↓		X											
DL-1			X					↓	↓		X											
DL-2			X					↓	↓		X											
DL-3			X					↓	↓		X											
DL-4			X					↓	↓		X											

Special detection Limit/reporting

Special QA/QC

Remarks
**RATS; ARCO
COC filled
out by BT
08/3/95**

Lab number
S9902293

- 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	Date	Time	Received by
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by laboratory
			Date
			Time



August 3, 1999

Service Request No.: S9902324

Mr. Glen Vanderveen
EMCON-Pinnacle
2201 Broadway, Suite 101
Oakland, CA 94612

RE: TO#24482.00/RAT8/2035 ALBANY/REPIPE

Dear Mr. Vanderveen:

Enclosed are the results of the sample(s) submitted to our laboratory on August 2, 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 11, 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).

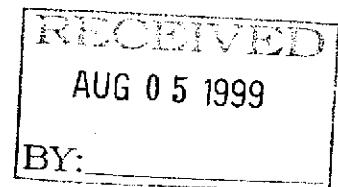
If you have any questions, please call me at (408) 748-9700.

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
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
Project: TO#24482.00/RAT8/2035 ALBANY/REPIPE
Sample Matrix: Soil

Service Request: S9902324
Date Collected: 8/2/99
Date Received: 8/2/99

Lead

Prep Method: EPA 3050BM
Analysis Method: 6010A
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Sample Name	Lab Code	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
SP1234	S9902324-005	5	1	8/3/99	8/3/99	5	
Method Blank	S990803-MB	5	1	8/3/99	8/3/99	ND	

Approved By: _____

PJT

Date: _____

08/03/99

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCO Products Company
 Project: TO#24482.00/RAT8/2035 ALBANY/REPIPE
 Sample Matrix: Soil

Service Request: S9902324
 Date Collected: NA
 Date Received: NA
 Date Extracted: 8/3/99
 Date Analyzed: 8/3/99

Matrix Spike/Duplicate Matrix Spike Summary
 Lead

Sample Name: SP1234
 Lab Code: S9902324-005MS, S9902324-005DMS
 Test Notes:

Units: mg/Kg (ppm)
 Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Spike Level		Sample Result	Spike Result		Percent Recovery		CAS Acceptance Limits	Relative Percent Difference	Result Notes
				MS	DMS		MS	DMS	MS	DMS			
Lead	EPA 3050BM	6010A	5	100	100	5	99	96	94	91	75-125	3	

Approved By: _____

MS

Date: _____

08/03/99

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
Project: TO#24482.00/RAT8/2035 ALBANY/REPIPE
Sample Matrix: Soil

Service Request: S9902324
Date Collected: 8/2/99
Date Received: 8/2/99

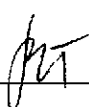
BTEX, MTBE and TPH as Gasoline

Sample Name: SP1234
Lab Code: S9902324-005
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	8/3/99	8/3/99	ND	
Benzene	EPA 5030	8020	0.005	1	8/3/99	8/3/99	ND	
Toluene	EPA 5030	8020	0.005	1	8/3/99	8/3/99	ND	
Ethylbenzene	EPA 5030	8020	0.005	1	8/3/99	8/3/99	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	8/3/99	8/3/99	0.007	
Methyl tert-Butyl Ether	EPA 5030	8020	0.05	1	8/3/99	8/3/99	ND	

Approved By: _____



Date: _____

08/03/99

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
Project: TO#24482.00/RAT8/2035 ALBANY/REPIPE
Sample Matrix: Soil

Service Request: S9902324
Date Collected: NA
Date Received: NA

BTEX, MTBE and TPH as Gasoline

Sample Name: Method Blank
Lab Code: S990731-SB1
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	7/31/99	7/31/99	ND	
Benzene	EPA 5030	8020	0.005	1	7/31/99	7/31/99	ND	
Toluene	EPA 5030	8020	0.005	1	7/31/99	7/31/99	ND	
Ethylbenzene	EPA 5030	8020	0.005	1	7/31/99	7/31/99	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	7/31/99	7/31/99	ND	
Methyl tert-Butyl Ether	EPA 5030	8020	0.05	1	7/31/99	7/31/99	ND	

Approved By: _____

PCT

Date: _____

08/03/99

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: ARCO Products Company
Project: TO#24482.00/RAT8/2035 ALBANY/REPIPE
Sample Matrix: Soil

Service Request: S9902324
Date Collected: NA
Date Received: NA

BTEX, MTBE and TPH as Gasoline

Sample Name: Method Blank
Lab Code: S990803-SB1
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
TPH as Gasoline	EPA 5030	CA/LUFT	1	1	8/3/99	8/3/99	ND	
Benzene	EPA 5030	8020	0.005	1	8/3/99	8/3/99	ND	
Toluene	EPA 5030	8020	0.005	1	8/3/99	8/3/99	ND	
Ethylbenzene	EPA 5030	8020	0.005	1	8/3/99	8/3/99	ND	
Xylenes, Total	EPA 5030	8020	0.005	1	8/3/99	8/3/99	ND	
Methyl tert-Butyl Ether	EPA 5030	8020	0.05	1	8/3/99	8/3/99	ND	

Approved By: _____



Date: _____

08/03/99

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCO Products Company
Project: TO#24482.00/RAT8/2035 ALBANY/REPIPE
Sample Matrix: Soil

Service Request: S9902324
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
BTEX 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	a,a,a-Trifluorotoluene
SP1234	S9902324-005		109	110
BATCH QC	S9902276-006MS		101	115
BATCH QC	S9902276-006DMS		99	110
BATCH QC	S9902276-006MS		94	129
BATCH QC	S9902276-006DMS		94	126
Method Blank	S990731-SB1		98	102
Method Blank	S990803-SB1		105	104

CAS Acceptance Limits: 51-137 51-137

Approved By: _____



Date: _____

08/03/99

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCO Products Company
 Project: TO#24482.00/RAT8/2035 ALBANY/REPIPE
 Sample Matrix: Soil

Service Request: S9902324
 Date Collected: NA
 Date Received: NA
 Date Extracted: 7/31/99
 Date Analyzed: 8/1/99

Matrix Spike/Duplicate Matrix Spike Summary
 TPH as Gasoline

Sample Name: BATCH QC
 Lab Code: S9902276-006MS,
 Test Notes:

S9902276-006DMS

Units: mg/Kg (ppm)
 Basis: Wet

Analyte	Prep Method	Analysis Method	Percent Recovery								CAS Acceptance Limits	Relative Percent Difference	Result Notes
			Spike Level			Sample Result	Spike Result		MS				
			MRL	MS	DMS			MS	DMS	MS	DMS		
Gasoline	EPA 5030	CA/LUFT	1	10	10	ND	11	12	110	120	67-121	9	

Approved By: _____

Handwritten signature

Date: _____

08/03/99

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCO Products Company
Project: TO#24482.00/RAT8/2035 ALBANY/REPIPE

Service Request: S9902324
Date Analyzed: 8/3/99

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

Sample Name: ICV Units: mg/Kg (ppm)
 Lab Code: ICV1 Basis: Wet
 Test Notes:

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	270	90-110	108	
Benzene	EPA 5030	8020	25	25	85-115	100	
Toluene	EPA 5030	8020	25	25	85-115	100	
Ethylbenzene	EPA 5030	8020	25	25	85-115	100	
Xylenes, Total	EPA 5030	8020	75	71	85-115	95	
Methyl <i>tert</i> -Butyl Ether	EPA 5030	8020	25	25	85-115	100	

Approved By: _____

JS

Date: _____

08/03/99

ICV/032196

ARCO Products Company
Division of AtlanticRichfieldCompany

Task Order No. **24482.00**

59902324 "Repipe"

Chain of Custody

ARCO Facility no. **2075** City (Facility) **ALBANY** Project manager (Consultant) **GLEN VANDERVEEN** Laboratory name **CAS**
 ARCO engineer **PAUL SUPPLE** Telephone no. (ARCO) **510 299 2891** Telephone no. (Consultant) **510 740 5407** Fax no. (Consultant) **510 603 7345** Contract number
 Consultant name **IT GROUP (EMCON)** Address (Consultant) **2201 BROADWAY #101 OAKLAND CA 94612**

Sample I.D.	Lab no.	Container no.	Matrix			Preservation		Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH/MXES EPA M602/6020/8015	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/SM503E	EPA 601/8010	EPA 624/8240	EPA 825/8270	TCLP Metals <input type="checkbox"/> VOA <input type="checkbox"/> VOA <input type="checkbox"/> Semi <input type="checkbox"/>	CAN Metals EPA 601/7000 TLC <input type="checkbox"/> STLC <input type="checkbox"/>	Lead Org./DHS <input type="checkbox"/> Lead EPA 7420/7421 <input type="checkbox"/> TOTAL	
			Soil	Water	Other	Ice	Acid														
5A1	①		✓			✓		8/2/99	1:30 PM		✓										✓
5A2	②		✓			✓		8/2/99	1:32 PM		✓										✓
5A3	③		✓			✓		8/2/99	1:34 PM		✓										✓
5A4	④		✓			✓		8/2/99	1:36 PM		✓										✓
			COMPOSITE ⑤																		

Method of shipment

Special detection Limit/reporting

Special QA/QC
RAT 8
PT 08/03/99

Remarks
ON 24 APR T.A.T. RUN 5010 VP TPH IS 50 NG/KG OR GREATER, RUN STILL IF TOTAL LEAD ≥ 50 NG/KG, RUN WET IF BENZENE ≥ 10 NG/KG
A:1 COMPOSITE

Lab number

Turnaround time
Priority Rush 1 Business Day

Rush 2 Business Days

Expedited 5 Business Days

Standard 10 Business Days

Condition of sample: Temperature received: **DUE: 8/3/99 R3**

Relinquished by sampler **[Signature]** Date **8/2/99** Time **4:20** Received by **Brian Fultz** Date **8/2/99** Time **4:18**

Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____

Relinquished by _____ Date _____ Time _____ Received by laboratory Date _____ Time _____