3R - 47

REPORTS

DATE: 1993

ENVIROTECH INC.

UNDERGROUND TANK TESTING • SITE ASSESSMENT • SITE REMEDIATION

5796 U.S. HIGHWAY 64 - 3014
FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615

RECEIVED
NOV 17 1993
OIL CONSERVATION DIV.
SANTA FE

November 12, 1993

Mr. Buddy Shaw
Environmental Coordinator
Amoco Production Company
200 Amoco Court
Farmington, New Mexico 87401

RE: 3rd Monthly Monitoring Report, 1993 Project: 92140/ C4028

Dear Mr. Shaw:

Attached please find a copy of the 3rd Monthly Monitoring Report (MMR) for the San Juan Gravel A-1 - Tank Battery site which summarizes the sampling activity.

This MMR followed the field testing and sampling dictated or agreed upon by the New Mexico Oil Conservation Division (NMOCD) and Amoco Production Company.

If you have any questions regarding the summary report or this project, please contact us. Thank you for your cooperation and assistance with this project.

Respectfully submitted,
ENVIROTECH, INC.

Nelson Velez

Nelson Velez
Staff Geologist

Attachments: 3rd Monthly Monitoring Report, 1993

cc: Denny Foust - N.M. Oil Conservation Division, Aztec, N.M.
Bill Olsen - N.M. Oil Conservation Division, Santa Fe, N.M.

NV/nv TB3MMR93.CVL

ENVIROTECH INC.

UNDERGROUND TANK TESTING • SITE ASSESSMENT • SITE REMEDIATION

5796 U.S. HIGHWAY 64 - 3014
FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615

October 05, 1992

Mr. Bill Olsen
State of New Mexico Oil Conservation Division
P.O. Box 2088
State Land Office Building
Santa Fe, NM 87504

RE: Monthly Monitoring Report
San Juan Gravel A-1 Tank Battery
Amoco Production Company

Dear Mr. Olsen:

Attached please find one copy of "Monthly Monitoring Report, Amoco Production Corporation, San Juan Gravel A-1 - Tank Battery, Production Tank Pit Area, SE/4, SE/4 (P) Section 21, T29N, R13W, NMPM, Farmington, San Juan County, New Mexico",which is the second monthly monitoring report for the referenced site.

Please feel free to contact us at (505) 632-0615 if you have any questions or comments concerning this report.

Respectfully submitted,
ENVIROTECH, Inc.

Robert M. Young
Environmental Biologist

Attachment: Monthly Monitoring Report
RMY/rmy

C4028OCD.LTR

ENVIROTECH INC.

UNDERGROUND TANK TESTING • SITE ASSESSMENT • SITE REMEDIATION

5796 U.S. HIGHWAY 64 - 3014
FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615

August 6, 1993

Mr. Buddy Shaw
Environmental Coordinator
Amoco Production Company
200 Amoco Court
Farmington, New Mexico 87401

RE: Inital Monitoring Report, 1993 Project: 92140

Dear Mr. Shaw:

Attached please find a copy of the Initial Monitoring Report (IMR) for the San Juan Gravel A-1 - Tank Battery site which summarizes the sampling activity.

This IMR followed the field testing and sampling dictated or agreed upon by the New Mexico Oil Conservation Division (NMOCD) and Amoco Production Company.

If you have any questions regarding the summary report or this project, please contact us. Thank you for your cooperation and assistance with this project.

Respectfully submitted,
ENVIROTECH, INC.

Nelson Velez

Nelson Velez
Staff Geologist

Attachments: Initial Monitoring Report, 1993

cc: Denny Foust - N.M. Oil Conservation Division, Aztec, N.M.
Bill Olsen - N.M. Oil Conservation Division, Santa Fe, N.M.

NV/nv SJGTBI93.CVL

3R - 47

REPORTS

DEC DATE: 1993

ENVIROTECH INC.

RECEIVED
DEC 1 6 1993
OIL CONSERVATION DIV.
SANTA FE

QUARTERLY MONITORING REPORT
4th Quarter, 1993

AMOCO PRODUCTION CORPORATION
SAN JUAN GRAVEL A-1
PRODUCTION TANK PIT AREA

FARMINGTON, NEW MEXICO

Prepared For
Mr. Buddy Shaw
Environmental Coordinator
AMOCO Production Company

DECEMBER 1993

Project: 92140

5796 U.S. HIGHWAY 64 - 3014 • FARMINGTON, NEW MEXICO 87401 • PHONE: (505) 632-0615

ENVIROTECH INC.

UNDERGROUND TANK TESTING • SITE ASSESSMENT • SITE REMEDIATION

5796 U.S. HIGHWAY 64 - 3014
FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615

December 14, 1993

Mr. Buddy Shaw
Environmental Coordinator
Amoco Production Company
200 Amoco Court
Farmington, New Mexico 87401

RE: 4th Quarter Monitoring Report, 1993 Project: 92140/ C4028

Dear Mr. Shaw:

Attached please find a copy of the 4th Quarter Monitoring Report (QMR) for the San Juan Gravel A-1 - Tank Battery site which summarizes the sampling activity.

This QMR followed the field testing and sampling dictated or agreed upon by the New Mexico Oil Conservation Division (NMOCD) and Amoco Production Company.

If you have any questions regarding the summary report or this project, please contact us. Thank you for your cooperation and assistance with this project.

Respectfully submitted,
ENVIROTECH, INC.

Nelson Velez
Staff Geologist

Attachments: 4th Quarter Monitoring Report, 1993

cc: Denny Foust - N.M. Oil Conservation Division, Aztec, N.M.
Bill Olsen - N.M. Oil Conservation Division, Santa Fe, N.M.

NV/nv

TB4QMR93.CVL

QUARTERLY MONITORING REPORT
4th QUARTER, 1993
AMOCO PRODUCTION CORPORATION
SAN JUAN GRAVEL A-1 - TANK BATTERY
PRODUCTION TANK PIT AREA
SE/4, SE/4 (P) SECTION 21, T29N, R13W, NMPM
FARMINGTON, SAN JUAN COUNTY, NEW MEXICO

PREPARED FOR:
MR. BUDDY SHAW
ENVIRONMENTAL COORDINATOR
AMOCO PRODUCTION COMPANY

PROJECT/PIT NO.: 92140/C4028

DECEMBER 1993

ENVIROTECH, INC.
Environmental Scientist & Engineers
5796 U.S. Highway 64-3014
Farmington, New Mexico

(505) 632-0615

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SE/4, SE/4 (P) SECTION 21, T29N, R13W, NMPM
FARMINGTON, SAN JUAN COUNTY, NEW MEXICO

APPENDICES

DECEMBER 1993 PROJECT/PIT NO: 92140/C4028

QUARTERLY MONITORING REPORT
4th QUARTER, 1993
AMOCO PRODUCTION CORPORATION
SAN JUAN GRAVEL A-1 - TANK BATTERY
PRODUCTION TANK PIT AREA
SE/4, SE/4 (P) SECTION 21, T29N, R13W, NMPM
FARMINGTON, SAN JUAN COUNTY, NEW MEXICO

INTRODUCTION

Amoco Production Company has installed a pump and treat system as part of a proposed Remedial Action Plan (RAP) to abate groundwater contamination from the production equipment and storage system associated with the subject well located south of Farmington, in the Southeast 1/4 of the Southeast 1/4 of Section 21, Township 29N, Range 13W, NMPM, San Juan County, New Mexico (refer to Vicinity Map - Appendix A). Quarterly monitoring of the remediation system has been required by the New Mexico Oil Conservation Division (NMOCD) for the system operation.

This is the second quarterly monitoring report (QMR) that Envirotech, Inc. has produced for this site.

Included in the QMR are groundwater and treatment system analyses and an outline of the sampling schedule for the upcoming 1994 calendar year (located within the Discussion section).

PURPOSE AND SCOPE OF WORK

The purpose of this quarterly monitoring is to verify that the pump and treat system is effectively remediating groundwater contamination at the referenced site. Verification is conducted by monitoring the air stripper effluent and the monitor wells selected for this sampling event.

The scope of work includes collection of groundwater samples for benzene, toluene, ethylbenzene, and xylenes (BTEX) using appropriate EPA laboratory methods.

In addition, measurements of all standard field parameters (i.e. static water level, free product thickness, pH, specific conductivity, and water temperature) were collected as required by the NMOCD's RAP approval letter.

SAMPLING & ANALYTICAL RESULTS

For this quarterly monitoring, monitor wells #1, 3, 5, and 7 were purged by bailing until a minimum of three (3) well volumes had been removed. The influent and effluent were collected from sampling ports located directly off of the PVC piping near the air stripper. Field parameters were measured after purging and prior to collection of water samples. Groundwater samples were collected in laboratory supplied new 40 ml VOA vials and preserved with 5% $HgCl_2$ for BTEX analysis. The groundwater samples were placed on ice and transported to Envirotech's laboratory later that day. Sampling was preformed in accordance with USEPA SW-846 protocol.

The field and laboratory results are summarized as follows:

1. Table 1 summarizes the field sampling and groundwater conditions for this quarterly report.

2. Table 2 & 3 summarizes the laboratory analyses for the effluent and monitor wells.

3. Table 4 summarizes the Clean-up Standards for groundwater for the State of New Mexico.

Groundwater elevations were measured on November 19, 1993. The static water levels on all the monitor wells were measured with a Solinst Interface Meter, Model 121. Depths are from the top of the well casing to the static water level.

All analytical results for the laboratory analysis, laboratory QC/QA, and Chain-of-Custody for this quarterly sampling event are presented in Appendix B.

TABLE 1

SUMMARY OF SAMPLING & GROUNDWATER CONDITIONS
AMOCO PRODUCTION COMPANY
SAN JUAN GRAVEL A-1 - TANK BATTERY
PRODUCTION TANK PIT AREA

SAMPLING DATE: November 19, 1993

SAMPLING POINT	TOTAL DEPTH (ft.)	STATIC WATER LEVEL (ft.)	GROUND-WATER* ELEV. (ft.)	WELL BORE VOLUME (gals)	WATER CONDITIONS TEMP. (°C)	CONDUCT (μS)	pH	COMMENTS
MW-1	13.82	9.07	92.70	0.79	16.1	2300	7.3	murky, no odor
MW-2	12.80	7.20	92.32	0.93	NA	NA	NA	
MW-3	14.28	7.95	92.67	1.06	15.0	1500	7.1	murky, no odor
MW-4	14.00	7.54	93.01	1.08	NA	NA	NA	
MW-5	11.74	4.96	92.78	1.13	15.6	2300	7.2	black color, strong odor
MW-6	9.40	4.86	93.26	0.76	NA	NA	NA	
MW-7	14.65	7.80	93.52	1.14	15.0	1800	7.0	murky, no odor
Influent	NA	NA	NA	NA	15.0	2200	7.0	clear, no odor
Effluent	NA	NA	NA	NA	14.4	2000	8.1	clear, no odor

NOTE: NA - Indicates measurement not applicable.

*** - Groundwater elevation is a relative elevation.**

TABLE 2

RESULTS OF THE AIR STRIPPER INFLUENT & EFFLUENT LABORATORY ANALYSIS
AMOCO PRODUCTION CORPORATION
SAN JUAN GRAVEL A-1 - TANK BATTERY
PRODUCTION TANK PIT AREA

SAMPLING POINT	Benzene (μg/L)	Toluene (μg/L)	Ethyl-benzene (μg/L)	Total Zylenes (μg/L)
Influent	5.0	26.1	6.3	93.3
Effluent	2.6	25.9	1.8	32.6

NOTE: μg/L = parts per billion.

TABLE 3

RESULTS OF THE MONITOR WELLS LABORATORY ANALYSIS
AMOCO PRODUCTION CORPORATION
SAN JUAN GRAVEL A-1 - TANK BATTERY
PRODUCTION TANK PIT AREA

LABORATORY ANALYSES	MW - 1	MW - 3	MW - 5	MW - 7
Benzene, (μg/L)	ND	ND	0.4	0.5
Toluene, (μg/L)	ND	1.4	2.0	2.6
Ethylbenzene, (μg/L)	ND	ND	0.3	ND
Total Xylenes, (μg/L)	ND	1.1	3.9	2.0

NOTE: ND - Non detectable at the stated detection limit (see laboratory analyses)
μg/L = parts per billion.

Clean Up Standards:

The current maximum allowable concentrations for groundwater contamination as outlined by the State of New Mexico Water Quality Control Commission (August 18, 1991) are summarized and reported in Table 4.

TABLE 4

HYDROCARBON SOIL & GROUNDWATER CONTAMINATION STANDARDS
STATE OF NEW MEXICO
RANKING FOR THE SITE > 19

Parameter	Max. Allowable Limits Groundwater (µg/L)
Benzene	10
Toluene	750
Ethylbenzene	750
Total Xylene	620

Notes: 1) µg/L = equivalent to parts per billion.

DISCUSSION

Groundwater Flow Direction

Based upon groundwater elevation measurements taken on November 19, 1993, the groundwater flow direction appears to be towards the southwest (refer to Site Diagram - Appendix A). Measurements taken on July 6, 1993 indicated west-southwest trend. It should be noted that the water level has dropped approximately one half of a foot since the July 6, 1993 sampling event.

Laboratory Analyses

The laboratory analysis conducted during this sampling event indicates that monitor well #5 does not have a benzene level (0.4 parts per billion) exceeding regulatory standards. Monitor well #5 is located in the proximity of the plume center. The sampling event conducted on July 6, 1993 had recorded a benzene concentration of 229 ppb. Two postulations toward this dramatic decrease are; 1) microbial activity within the proximity of monitor well #5 has increased on a order of magnitude in order to dissolve the lighter hydrocarbon components, and/or 2) the system may have collected the lighter hydrocarbons, but not the medium to heavy hydrocarbons components (review laboratory gas chromatogram - Appendix B).

System Effectiveness

At this time, all data presented is insufficient to draw any conclusions concerning system effectiveness. However, the air stripper effluent can be regarded as effectively treating injected water from the recovery wells on the site.

The 1994 calendar year sampling schedule is as follows:

FUTURE SAMPLING SCHEDULE

	JAN-MAR, 94	APR-JUN, 94	JUL-SEP, 94	OCT-DEC, 94
MW - 1		X		X
MW - 2	X		X	
MW - 3		X		X
MW - 4	X		X	
MW - 5		X		X
MW - 6	X		X	
MW - 7		X		X
EFFLUENT	X	X	X	X

LIMITATIONS AND CLOSURE

The scope of Envirotech's services was limited to sampling of the designated monitor wells, the air stripper effluent, and measurements of the standard field parameters. All work has been performed in accordance with generally accepted professional practices in geotechnical/ environmental engineering and hydrogeology.

The Quarterly Monitoring Report has been prepared for the exclusive use of Amoco Production Company as it pertains to their San Juan Gravel A -1 - Tank Battery facility located on the SE/4 of the SE/4 of Section 21, Township 29N, Range 13W, NMPM, San Juan County, New Mexico.

I certify that I am personally familiar with the investigative work at the site, the site conditions, and the reported information as described and this document.

Respectfully Submitted,
ENVIROTECH, INC.

Nelson Velez
Staff Geologist

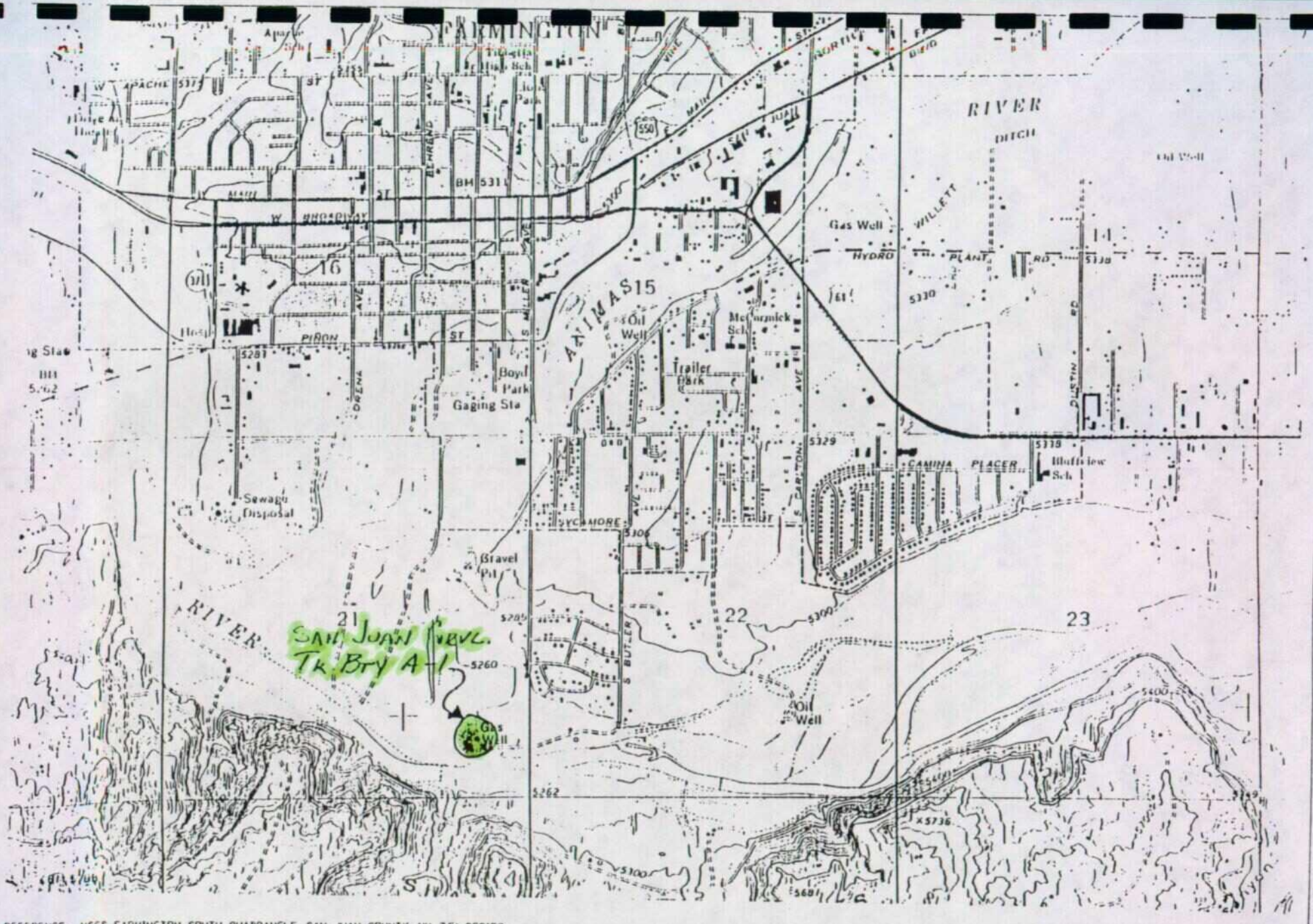
Reviewed by:

Michael K. Lane, P.E.
Geological Engineer

Appendices

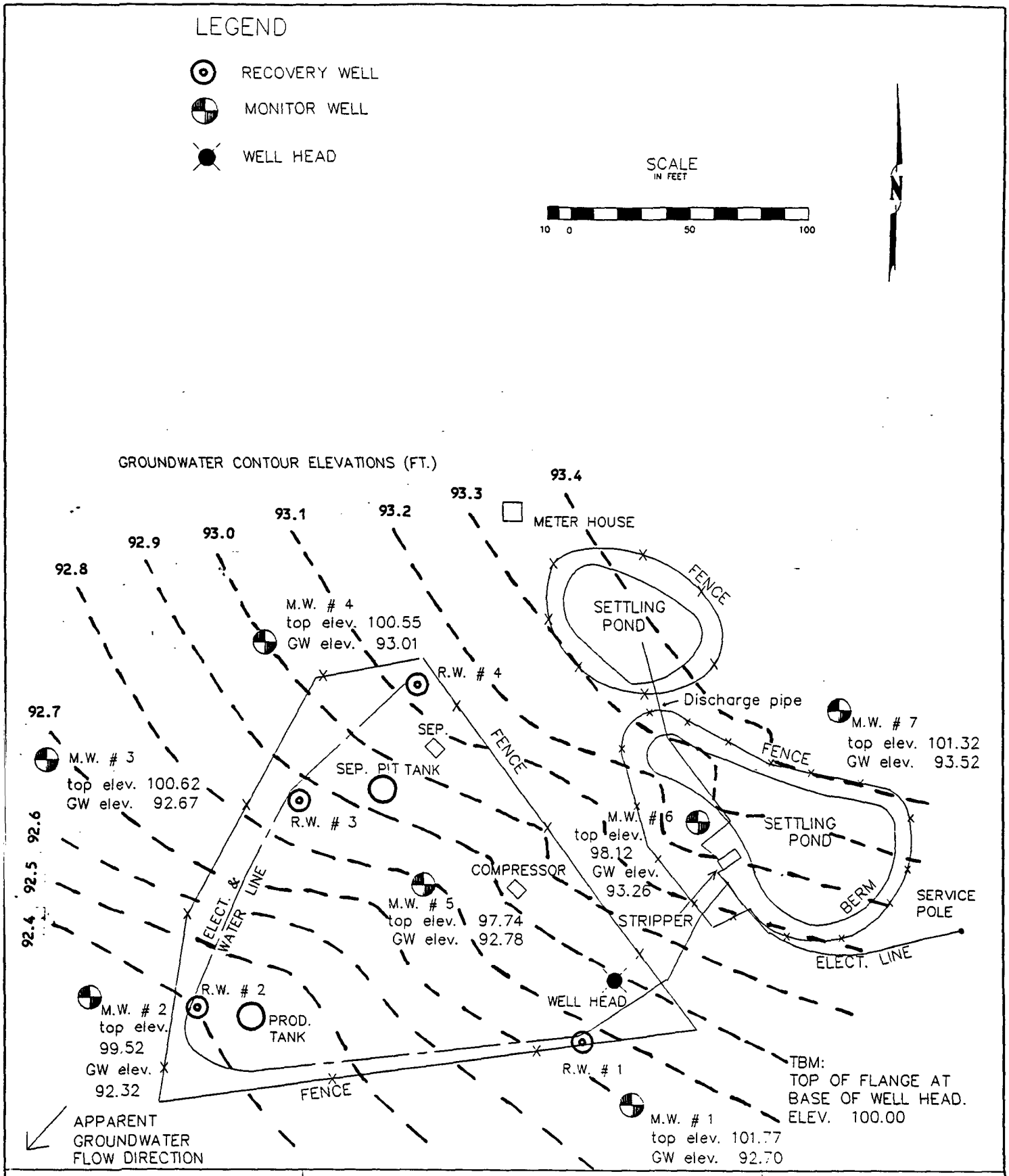
NV/nv

TB4QMR93.RPT



REFERENCE: USGS FARMINGTON SOUTH QUADRANGLE, SAN JUAN COUNTY, NM 75' SERIES.

SAN JUAN GRAVEL TANK BATTERY #1 SE/4, SE/4, SEC 21, T29N, R13W PRODUCTION TANK PIT AREA SITE DIAGRAM PLAN PROJECT NO: 92140/9408.29	AMOCO PRODUCTION COMPANY 200 AMOCO CT. FARMINGTON, NEW MEXICO	ENVIROTECH INC. ENVIRONMENTAL SCIENTISTS & ENGINEERS 5796 U.S. HIGHWAY 64-3014 FARMINGTON NEW MEXICO 87401 PHONE: (505) 632-0615	VICINITY MAP SHEET 1 9/30/92



SITE DIAGRAM
AMOCO PRODUCTION CO
SAN JUAN GRAVEL A1
TANK BATTERY
4th Quarter, 1993

PROJECT No. 92140/C4028

Envirotech, Inc.
ENVIRONMENTAL SCIENTISTS & ENGINEERS
5796 U.S. HIGHWAY 64-3014
FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615

ENGINEERED BY: DEF
EDITED BY: NV
DATE SURVEYED: 2/24/93
DATE DRAWN: 12/09/93
SHEET: # 2

ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	MW #1	Date Reported:	11-23-93
Laboratory Number:	6532	Date Sampled:	11-19-93
Sample Matrix:	Water	Date Received:	11-19-93
Preservative:	HgCl & Cool	Date Analyzed:	11-22-93
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	ND	0.2
Toluene	ND	0.5
Ethylbenzene	ND	0.2
p,m-Xylene	ND	0.3
o-Xylene	ND	0.3

SURROGATE RECOVERIES:

Parameter	Percent Recovery
Trifluorotoluene	100 %
Bromofluorobenzene	97 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: SJ Gvl A-1 Production Pit C4028

Analyst

Review

ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	MW #3	Date Reported:	11-23-93
Laboratory Number:	6533	Date Sampled:	11-19-93
Sample Matrix:	Water	Date Received:	11-19-93
Preservative:	HgCl & Cool	Date Analyzed:	11-22-93
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	ND	0.2
Toluene	1.4	0.5
Ethylbenzene	ND	0.2
p,m-Xylene	1.1	0.3
o-Xylene	ND	0.3

SURROGATE RECOVERIES:

Parameter	Percent Recovery
Trifluorotoluene	101 %
Bromofluorobenzene	99 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: SJ Gvl A-1 Production Pit C4028

Analyst

Review

ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	MW #5	Date Reported:	11-23-93
Laboratory Number:	6534	Date Sampled:	11-19-93
Sample Matrix:	Water	Date Received:	11-19-93
Preservative:	HgCl & Cool	Date Analyzed:	11-22-93
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	0.4	0.2
Toluene	2.0	0.5
Ethylbenzene	0.3	0.2
p,m-Xylene	3.1	0.3
o-Xylene	0.8	0.3

SURROGATE RECOVERIES:

Parameter	Percent Recovery
Trifluorotoluene	103 %
Bromofluorobenzene	94 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: SJ Gvl A-1 Production Pit C4028

Analyst

Review

ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	MW #7	Date Reported:	11-23-93
Laboratory Number:	6535	Date Sampled:	11-19-93
Sample Matrix:	Water	Date Received:	11-19-93
Preservative:	HgCl & Cool	Date Analyzed:	11-22-93
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	0.5	0.2
Toluene	2.6	0.5
Ethylbenzene	ND	0.2
p,m-Xylene	1.7	0.3
o-Xylene	0.3	0.3

SURROGATE RECOVERIES:

Parameter	Percent Recovery
Trifluorotoluene	94 %
Bromofluorobenzene	96 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: SJ Gvl A-1 Production Pit C4028

Analyst

Review

ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	Influent	Date Reported:	11-23-93
Laboratory Number:	6536	Date Sampled:	11-19-93
Sample Matrix:	Water	Date Received:	11-19-93
Preservative:	HgCl & Cool	Date Analyzed:	11-22-93
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	5.0	0.2
Toluene	26.1	0.5
Ethylbenzene	6.3	0.2
p,m-Xylene	61	0.3
o-Xylene	32.3	0.3

SURROGATE RECOVERIES:

Parameter	Percent Recovery
Trifluorotoluene	107 %
Bromofluorobenzene	101 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: SJ Gvl A-1 Production Pit C4028

Analyst

Review

ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	Effluent	Date Reported:	11-23-93
Laboratory Number:	6537	Date Sampled:	11-19-93
Sample Matrix:	Water	Date Received:	11-19-93
Preservative:	HgCl & Cool	Date Analyzed:	11-22-93
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	2.6	0.2
Toluene	25.9	0.5
Ethylbenzene	1.8	0.2
p,m-Xylene	27.4	0.3
o-Xylene	5.2	0.3

SURROGATE RECOVERIES:

Parameter	Percent Recovery
Trifluorotoluene	93 %
Bromofluorobenzene	105 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: SJ Gvl A-1 Production Pit C4028

Analyst

Review

MW #5 SJ GUL A1

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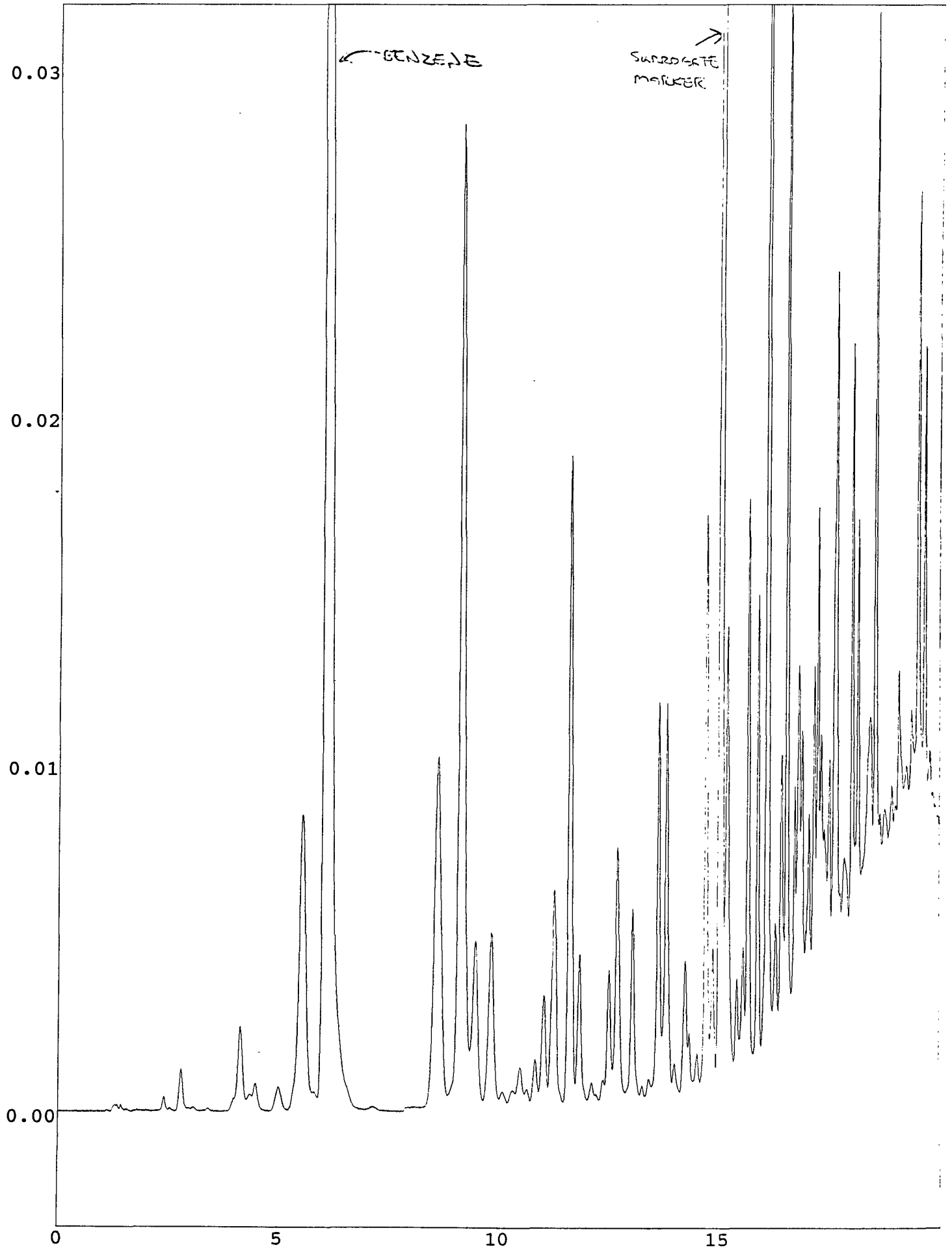

MW #5 SJ GUL A1

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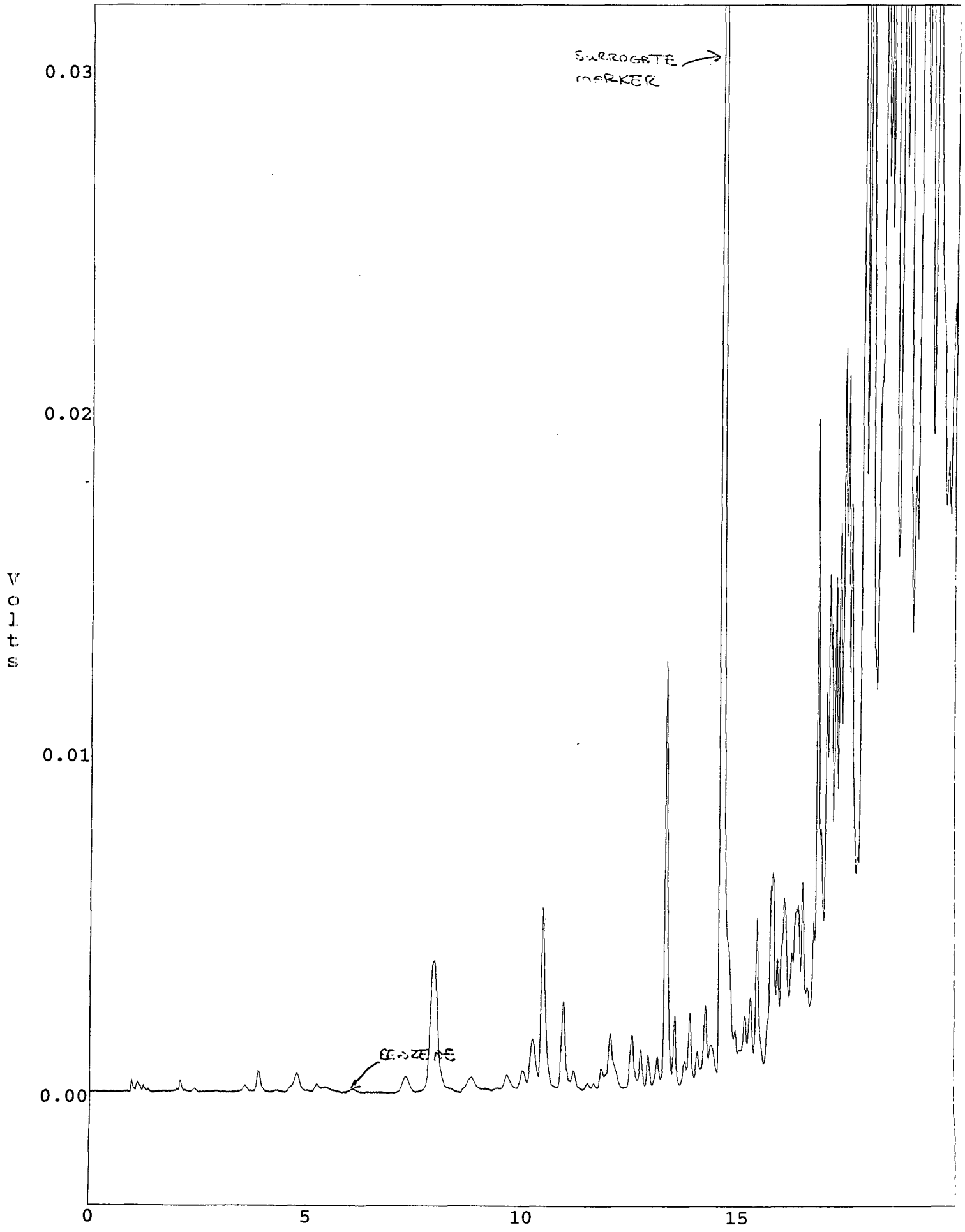


ENVIROTECH LABORATORIES

5796 U.S. HIGHWAY 64-3014
FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615

QUALITY ASSURANCE/QUALITY CONTROL

DOCUMENTATION

ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	NA	Project #:	NA
Sample ID:	Laboratory Blank	Date Reported:	11-23-93
Laboratory Number:	1122pm.blk	Date Sampled:	NA
Sample Matrix:	Water	Date Received:	NA
Preservative:	NA	Date Analyzed:	11-22-93
Condition:	NA	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	ND	0.2
Toluene	ND	0.5
Ethylbenzene	ND	0.2
p,m-Xylene	ND	0.3
o-Xylene	ND	0.3

SURROGATE RECOVERIES:

Parameter	Percent Recovery
Trifluorotoluene	92 %
Bromofluorobenzene	101 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

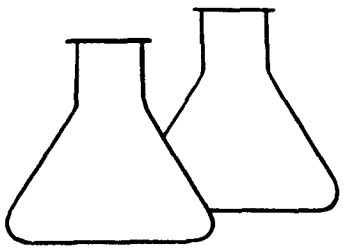
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments:

Analyst

Review



ENVIROTECH LABS

5796 US HIGHWAY 64-3014 • FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615 • FAX: (505) 632-1865

** QUALITY ASSURANCE EPA METHOD 8020
MATRIX SPIKE - AROMATIC VOLATILE ORGANICS

Client:	NA	Project #:	NA
Sample ID:	Sample Spike	Date Reported:	11-23-93
Laboratory Number:	6538-S-BTEX	Date Sampled:	11-19-93
Sample Matrix:	Water	Date Received:	11-22-93
Analysis Requested:	BTEX	Date Analyzed:	11-22-93
Condition:	NA		

Parameter	Sample Result (ug/L)	Spike Added (ug/L)	Spiked Sample Result (ug/L)	Det. Limit (ug/L)	Percent Recovery	SW-846 % Rec. Accept. Range
Benzene	9.2	20.0	26.5	0.2	91	39-150
Toluene	58	20.0	75	0.5	97	46-148
Ethylbenzene	10.8	20.0	30.0	0.2	97	32-160
p,m-Xylene	100	20.0	111	0.3	93	46-148
o-Xylene	46.0	20.0	63	0.3	95	46-148

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments:

Analyst

Review

3212

C4028

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location	ANALYSIS/PARAMETERS
Amoco 92140	PROD. PIT SJ GUL A-1	
Sampler: (Signature) Nelson Velez	Chain of Custody Tape No.	

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	BTEX (8020)						Remarks
MW #1	11/19/93	1407	6532	WATER	2	✓						
MW #3	11/19/93	1415	6533	WATER	2	✓						
MW #5	11/19/93	1435	6534	WATER	2	✓						
MW #7	11/19/93	1440	6535	WATER	2	✓						
INFLUENT	11/19/93	1450	6536	WATER	2	✓						
EFFLUENT	11/19/93	1528	6537	WATER	2	✓						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Nelson Velez	11/19/93	1600	Tony Mustang	11/19/93	1600
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

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