3R - 19

REPORTS

DATE:

Feb 21-22, 1996

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413
Phone: (505) 632-1199 Fax: (505) 632-3903

February 27, 1996

Mr. William C. Olson
Hydrogeologist
Environmental Bureau
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

RE: Groundwater Sampling
Amoco GCU Com I 181 Well Location
San Juan County, New Mexico
Unit F, Section 34, T29N, R12W

Dear Mr. Olson:

On behalf of Amoco Production Company, Blagg Engineering, Inc. has prepared this quarterly monitoring report for the above referenced site. Table 1 of this report includes the latest and previous quarterly groundwater sampling results. Figure 1 shows the current monitor well locations, groundwater elevations, and contours.

We trust this information will be of assistance in evaluating the remediation process used at this site. If you have any further questions regarding this report, or we can be of assistance in any other matters, please contact Blagg Engineering at 632-1199.

Respectfully submitted,
BLAGG ENGINEERING, INC.

Robert E. O'Neill

Robert E. O'Neill, M.S.
Civil engineering, Environmental

Attachments: Table 1 - Sampling Results
Figure 1 - Site Diagram
Laboratory Reports
QA/QC

xc: Buddy Shaw, Amoco
Denny Foust, NMOCD Aztec Office

REO/reo

MAR96-WO.RPT

TABLE 1
AMOCO PRODUCTION COMPANY
GCU COM I 181
GROUNDWATER SAMPLING
FEBRUARY 21-22, 1996

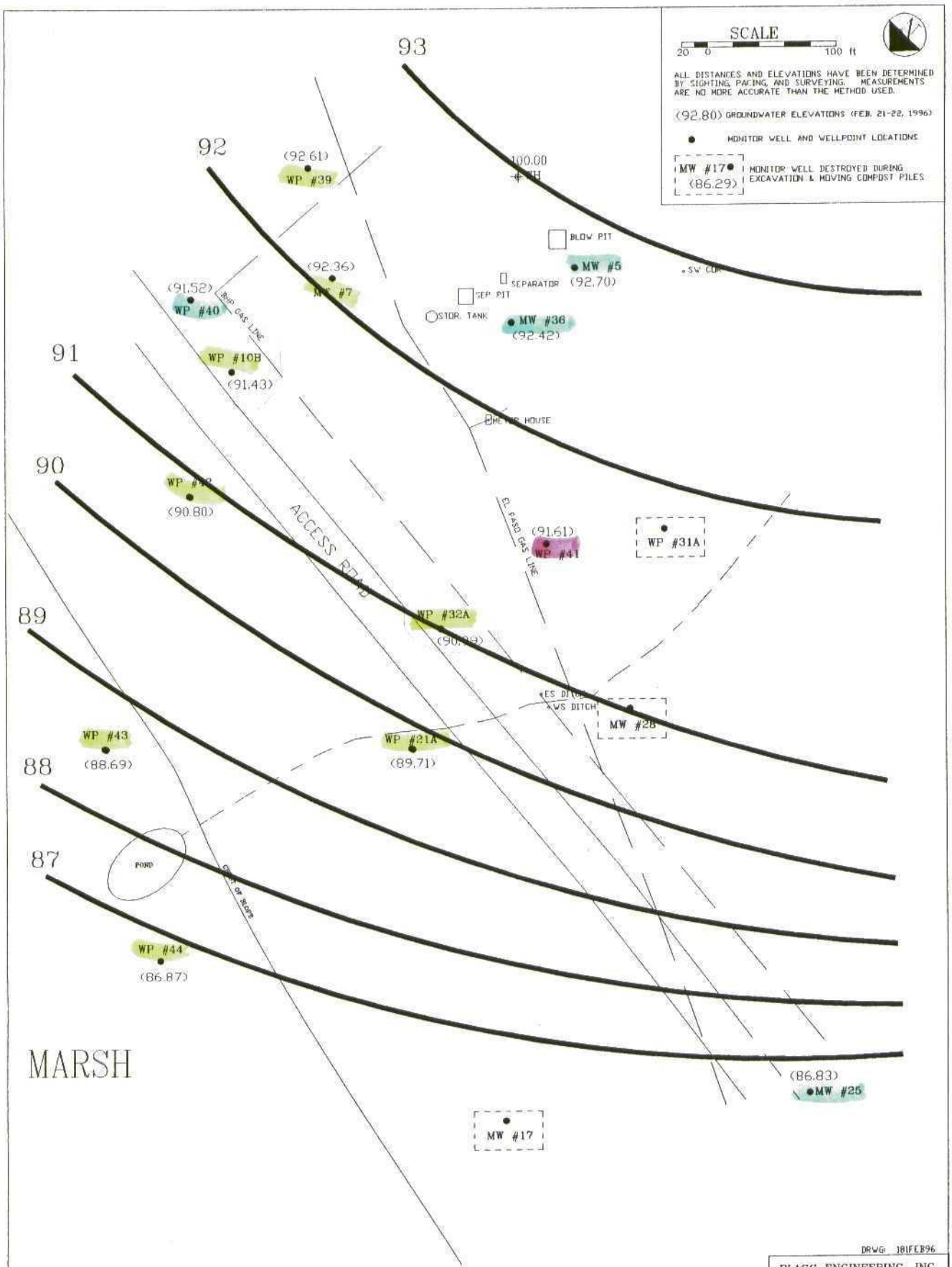
SAMPLE I.D.	DATE	pH	COND. umhos/cm	BENZENE ppb	TOLUENE ppb	E-BENZ. ppb	T-XYL. ppb	NITRATE NITROGEN mg/L	FCB/ 100 mls COLONIES
MW #5	02/09/94	7.0	6300	ND	0.5	ND	3.1		
	06/13/94	7.0	7800	<1	<1	<1	<1		
	09/26/94	7.1	5200	ND	ND	ND	ND		
	06/05/95	7.1	7700	ND	ND	2.1	ND		
	08/29/95	6.9	5500	ND	ND	ND	ND		
	11/20/95	7.0	4200	ND	ND	ND	ND		
	02/22/96	7.0	3600	ND	ND	ND	ND		
MW #7	02/09/94	7.0	10100	12.9	16.7	580.0	1300.3		
	06/13/94	7.0	11000	<1	10.0	<1	1480.0		
	09/26/94	7.2	9000	12.8	ND	606.0	73.3		
	06/05/95	7.2	10200	2.1	33.1	375.8	12.9		
	08/29/95	7.0	9000	9.2	21.7	200.0	21.6		
	11/20/95	7.2	7600	8.5	25.1	47.0	28.3		
	02/22/96	7.2	5600	6.6	40.7	26.9	68.6		
WP #10B	06/05/95	7.2	15600	1.7	ND	ND	4.6		
	08/29/95	6.1	9000	1.2	1.0	0.8	2.4		
	11/20/95	6.4	7900	ND	0.6	0.6	1.9		
	02/21/96	6.2	7200	0.2	0.5	0.3	0.9		
MW #17	11/03/94	7.2	4000	ND	ND	ND	ND		
	06/05/95	7.4	3400	ND	ND	ND	0.8		
	08/29/95	7.0	3800	ND	ND	ND	ND		
	11/20/95	6.9	3200	ND	ND	ND	ND		
		WELL DESTROYED WHILE REMOVING COMPOST PILES							
WP #21A	06/05/95			DRY					
	08/29/95	6.9	4300	ND	1.0	0.5	0.4		
	11/20/95	6.8	3200	ND	1.3	0.8	ND		
	01/03/96	6.8	3200	ND	ND	ND	4.4		
	02/21/96	6.7	3600	0.6	1.0	0.5	7.6		
MW #25	02/09/94	7.0	5500	ND	ND	0.3	1.8		
	06/13/94	7.0	5700	<1	<1	<1	<1		
	09/26/94	7.3	5100	ND	ND	ND	ND		
	06/05/95	7.3	5800	ND	ND	ND	0.7		
	08/29/95	7.0	5900	ND	ND	ND	ND		
	11/20/95	6.9	4700	ND	ND	ND	ND		
	02/22/96	7.2	3900	ND	ND	ND	ND		
MW #28	02/09/94	7.0	3800	0.4	1.8	ND	8.8	0.07	0
	06/14/94	7.0	4000	<1	<1	<1	<1	0.18	<1
	09/26/94	7.1	3900	ND	ND	0.4	ND	1	0
	06/05/95	7.4	3500	ND	ND	ND	0.7		
	08/29/95	7.2	3200	ND	ND	0.3	ND		
	11/20/95	7.0	3700	ND	ND	ND	ND		
		WELL DESTROYED WHILE REMOVING COMPOST PILES							
WP #31A	02/09/94	7.0	4800	ND	ND	ND	0.4		
	06/13/94	7.0	4500	<1	<1	<1	<1		
	09/26/94	6.8	4800	ND	0.5	ND	ND		
	06/05/95	7.1	4500	ND	ND	ND	0.5		
	08/29/95	6.4	4100	ND	1.7	ND	ND		
	11/20/95	6.7	4200	ND	ND	ND	ND		
		WELL DESTROYED WHILE REMOVING COMPOST PILES							
WP #32A	06/05/95	7.1	14000	3.2	ND	ND	2.8		
	08/29/95	6.1	8200	3.2	0.7	1.3	2.0		
	11/20/95	6.2	6500	0.8	0.6	0.8	ND		
	02/21/96	6.2	6300	0.4	0.4	0.5	0.6		
MW #36	02/09/94	7.0	5100	ND	ND	0.6	3.6		
	06/13/94	7.0	5600	<1	<1	<1	<1		
	09/26/94	7.2	4300	ND	ND	1.7	2.0		
	06/05/95	7.2	5600	ND	ND	ND	ND		
	08/29/95	6.9	4000	ND	ND	0.6	ND		
	11/20/95	7.0	3800	ND	ND	ND	ND		
	02/22/96	7.0	3200	ND	ND	ND	ND		

TABLE 1
AMOCO PRODUCTION COMPANY
GCU COM I 181
GROUNDWATER SAMPLING
FEBRUARY 21-22, 1996

SAMPLE I.D.	DATE	pH	COND. umhos/cm	BENZENE ppb	TOLUENE ppb	E-BENZ. ppb	T-XYL. ppb	NITRATE NITROGEN mg/L	FCB/ 100 mls COLONIES
WP #39	02/09/94	7.0	3400	ND	ND	ND	0.2	0.05	0
	06/13/94	7.0	3400	<1	<1	<1	<1		
	09/26/94	7.0	3200	ND	0.2	ND	0.7		
	06/05/95	7.0	3800	ND	ND	ND	0.5		
	08/29/95	6.8	3000	ND	ND	ND	ND		
	11/20/95	6.8	3100	ND	ND	ND	ND		
	02/21/96	6.8	2600	ND	0.4	ND	ND		
WP #40	02/09/94	7.0	3700	ND	ND	ND	3.8		
	06/13/94	7.0	3900	<1	<1	<1	<1		
	09/26/94	7.0	3900	ND	0.4	ND	0.4		
	06/05/95	6.7	3700	ND	ND	ND	ND		
	08/29/95	6.8	3500	ND	ND	ND	ND		
	11/20/95	6.9	2800	ND	ND	ND	ND		
	02/21/96	6.8	2600	ND	ND	ND	ND		
WP #41	02/09/94	7.0	6900	171.0	7400.0	810.0	12060.0	0.88	0
	06/14/94	7.0	12200	1026.0	1061.0	14803.0	8939.0	11.8	<1
	09/26/94	7.0	9500	83.5	18.3	414.0	7811.0	1.18	0
	06/05/95	6.7	13000	ND	86.5	95.4	2151.8		
	08/29/95	6.9	12800	ND	168.0	159.0	2570.0		
	11/20/95	7.0	11000	ND	371.0	355.0	5454.0		
	02/22/96	6.7	6900	62.4	324.0	333.0	6164.0		
WP #42	06/05/95	6.6	11500	1.0	1.9	ND	7.5		
	08/29/95	6.9	4500	ND	ND	1.2	1.3		
	11/20/95	6.8	3200	ND	3.7	2.0	1.1		
	01/03/96	6.9	3400	ND	ND	ND	6.8		
	02/21/96	6.7	3400	ND	3.1	2.4	2.3		
WP #43	01/08/96	7.0	2400	ND	0.5	0.4	ND		
	02/21/96	6.7	2900	ND	0.4	0.5	0.6		
WP # 44	01/08/96	7.2	3400	ND	0.8	1.2	2.5		
	02/21/96	6.7	3600	ND	0.7	1.4	0.8		

Notes: MW = Monitor Well FCB = Fecal Coliform Bacteria. EPA Method 600/4-79-020
WP= Wellpoint

Benzene, Toluene, Ethyl-benzene, Total Xylenes, per EPA Method 8020



AMOCO PRODUCTION COMPANY GCU COM I 181 SEC. 34 TWP 29N RNG 12W SAN JUAN COUNTY, NEW MEXICO	WELL LOCATIONS & GROUNDWATER CONTOURS	FIGURE: 1 REVISED: 2/26/96 REO PRJ MGR: REO	BLAGG ENGINEERING, INC. P.O. BOX 87 BLOOMFIELD, NM 87413 PHONE: 632-1199 FAX: 632-3903

ANALYTICA
ENVIRONMENTAL LABORATORY

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	Amoco/ GCU COM I 181	Report Date:	02/27/96
Sample ID:	MW - 5	Date Sampled:	02/22/96
Lab ID:	2714	Date Received:	02/22/96
Sample Matrix:	Water	Date Analyzed:	02/25/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.20
Toluene	ND	0.20
Ethylbenzene	ND	0.20
m,p-Xylenes	ND	0.40
o-Xylene	ND	0.20
Total BTEX	**ND**	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	93	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	Amoco/ GCU COM I 181	Report Date:	02/27/96
Sample ID:	MW - 7	Date Sampled:	02/22/96
Lab ID:	2715	Date Received:	02/22/96
Sample Matrix:	Water	Date Analyzed:	02/25/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	6.61	2.00
Toluene	40.7	2.00
Ethylbenzene	26.9	2.00
m,p-Xylenes	51.6	4.00
o-Xylene	17.0	2.00
Total BTEX	**143**	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	117	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments: High toluene-d8 recovery is due to matrix interference at the d8 retention time.

Analyst

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	Amoco/ GCU COM I 181	Report Date:	02/27/96
Sample ID:	WP - 10B	Date Sampled:	02/21/96
Lab ID:	2706	Date Received:	02/22/96
Sample Matrix:	Water	Date Analyzed:	02/23/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	0.22	0.20
Toluene	0.47	0.20
Ethylbenzene	0.31	0.20
m,p-Xylenes	0.66	0.40
o-Xylene	0.28	0.20
Total BTEX	**1.94**	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	100	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	Amoco/ GCU COM I 181	Report Date:	02/27/96
Sample ID:	WP - 21A	Date Sampled:	02/21/96
Lab ID:	2707	Date Received:	02/22/96
Sample Matrix:	Water	Date Analyzed:	02/26/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	0.59	0.20
Toluene	1.03	0.20
Ethylbenzene	0.54	0.20
m,p-Xylenes	6.73	0.40
o-Xylene	0.89	0.20
Total BTEX	**9.78**	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	95	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	Amoco/ GCU COM I 181	Report Date:	02/27/96
Sample ID:	MW - 25	Date Sampled:	02/22/96
Lab ID:	2716	Date Received:	02/22/96
Sample Matrix:	Water	Date Analyzed:	02/25/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.20
Toluene	ND	0.20
Ethylbenzene	ND	0.20
m,p-Xylenes	ND	0.40
o-Xylene	ND	0.20
Total BTEX	**ND**	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	91	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	Amoco/ GCU COM I 181	Report Date:	02/27/96
Sample ID:	WP - 32A	Date Sampled:	02/21/96
Lab ID:	2708	Date Received:	02/22/96
Sample Matrix:	Water	Date Analyzed:	02/25/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	0.40	0.20
Toluene	0.41	0.20
Ethylbenzene	0.45	0.20
m,p-Xylenes	0.57	0.40
o-Xylene	ND	0.20
Total BTEX	**1.82**	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	94	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	Amoco/ GCU COM I 181	Report Date:	02/27/96
Sample ID:	MW - 36	Date Sampled:	02/22/96
Lab ID:	2717	Date Received:	02/22/96
Sample Matrix:	Water	Date Analyzed:	02/25/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.20
Toluene	ND	0.20
Ethylbenzene	ND	0.20
m,p-Xylenes	ND	0.40
o-Xylene	ND	0.20
Total BTEX	**ND**	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	95	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	Amoco/ GCU COM I181	Report Date:	02/27/96
Sample ID:	WP - 39	Date Sampled:	02/21/96
Lab ID:	2709	Date Received:	02/22/96
Sample Matrix:	Water	Date Analyzed:	02/25/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.20
Toluene	0.37	0.20
Ethylbenzene	ND	0.20
m,p-Xylenes	ND	0.40
o-Xylene	ND	0.20
Total BTEX	**0.37**	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	95	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	Amoco/ GCU COM I 181	Report Date:	02/27/96
Sample ID:	WP - 40	Date Sampled:	02/21/96
Lab ID:	2710	Date Received:	02/22/96
Sample Matrix:	Water	Date Analyzed:	02/25/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.20
Toluene	ND	0.20
Ethylbenzene	ND	0.20
m,p-Xylenes	ND	0.40
o-Xylene	ND	0.20
Total BTEX	**ND**	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	99	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	Amoco/ GCU COM I 181	Report Date:	02/27/96
Sample ID:	WP - 41	Date Sampled:	02/22/96
Lab ID:	2718	Date Received:	02/22/96
Sample Matrix:	Water	Date Analyzed:	02/23/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	62.4	40.0
Toluene	324	40.0
Ethylbenzene	333	40.0
m,p-Xylenes	5,430	80.0
o-Xylene	734	40.0
Total BTEX	**6,880**	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	102	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	Amoco/ GCU COM I 181	Report Date:	02/27/96
Sample ID:	WP - 42	Date Sampled:	02/21/96
Lab ID:	2711	Date Received:	02/22/96
Sample Matrix:	Water	Date Analyzed:	02/25/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.20
Toluene	3.13	0.20
Ethylbenzene	2.36	0.20
m,p-Xylenes	0.79	0.40
o-Xylene	1.47	0.20
Total BTEX	**7.75**	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	99	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	Amoco/ GCU COM I 181	Report Date:	02/27/96
Sample ID:	WP - 43	Date Sampled:	02/21/96
Lab ID:	2712	Date Received:	02/22/96
Sample Matrix:	Water	Date Analyzed:	02/26/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.20
Toluene	0.39	0.20
Ethylbenzene	0.54	0.20
m,p-Xylenes	ND	0.40
o-Xylene	0.55	0.20
Total BTEX	**1.48**	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	97	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

ANALYTICA
ENVIRONMENTAL LABORATORY

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	Amoco/ GCU COM I 181	Report Date:	02/27/96
Sample ID:	WP - 44	Date Sampled:	02/21/96
Lab ID:	2713	Date Received:	02/22/96
Sample Matrix:	Water	Date Analyzed:	02/26/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.20
Toluene	0.72	0.20
Ethylbenzene	1.41	0.20
m,p-Xylenes	0.43	0.40
o-Xylene	0.39	0.20

Total BTEX	**2.95**

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	99	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

ANALYTICA

ENVIRONMENTAL LABORATORY

February 27, 1996

Bob O'Neill
Blagg Engineering, Inc.
PO Box 87
Bloomfield, NM 87413

Dear Mr. O'Neill:

Enclosed are the results for the analysis of the samples from location GCU COM I 181 received February 22, 1996. Analysis for Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) was performed on the samples, as per the accompanying chain of custody form.

BTEX analysis was performed on the samples according to EPA Method 602, using a Hewlett-Packard 5890 gas chromatograph equipped with an OI Analytical purge and trap (model 4560) and a photoionization detector. The samples had detectable levels of BTEX as stated on the reports.

Quality control reports appear at the end of the analytical package and can be identified by title. Should you have any questions regarding the analysis, feel free to call.

Sincerely,

Dr. Denise A. Bohemier
Laboratory Manager

807 SOUTH CARLTON • FARMINGTON, NEW MEXICO 87401 • (505) 326-2395

PURGEABLE AROMATICS

Quality Control Report

Method Blank Analysis

Sample Matrix: Water
Lab ID: MB35118

Report Date: 02/27/96
Date Analyzed: 02/23/96

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.20
Toluene	ND	0.20
Ethylbenzene	ND	0.20
m,p-Xylenes	ND	0.40
o-Xylene	ND	0.20

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	100	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

PURGEABLE AROMATICS

Quality Control Report

Method Blank Analysis

Sample Matrix: Water
Lab ID: MB35120

Report Date: 02/27/96
Date Analyzed: 02/25/96

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.20
Toluene	ND	0.20
Ethylbenzene	ND	0.20
m,p-Xylenes	ND	0.40
o-Xylene	ND	0.20

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	96	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

PURGEABLE AROMATICS

Quality Control Report

Method Blank Analysis

Sample Matrix: Water
Lab ID: MB35121

Report Date: 02/27/96
Date Analyzed: 02/26/96

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.20
Toluene	ND	0.20
Ethylbenzene	ND	0.20
m,p-Xylenes	ND	0.40
o-Xylene	ND	0.20

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	94	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

Purgeable Aromatics

Matrix Spike Analysis

Lab ID:	2706Spk	Report Date:	02/27/96
Sample Matrix:	Water	Date Sampled:	02/21/96
Preservative:	Cool, HgCl2	Date Received:	02/22/96
Condition:	Intact	Date Analyzed:	02/23/96

Target Analyte	Spike Added (ug/L)	Original Conc. (ug/L)	Spiked Sample Conc. (ug/L)	% Recovery	Acceptance Limits (%)
Benzene	10	0.22	9.17	89%	39 -150
Toluene	10	0.47	9.45	90%	46 - 148
Ethylbenzene	10	0.31	9.40	91%	32 - 160
m,p-Xylenes	20	0.66	18.5	89%	NE
o-Xylene	10	0.28	9.24	90%	NE

ND - Analyte not detected at the stated detection limit.
NA - Not applicable or not calculated.
NE - Spike acceptance range not established by the EPA.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	97	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

Purgeable Aromatics

Matrix Spike Analysis

Lab ID:	2710Spk	Report Date:	02/27/96
Sample Matrix:	Water	Date Sampled:	02/21/96
Preservative:	Cool, HgCl2	Date Received:	02/22/96
Condition:	Intact	Date Analyzed:	02/25/96

Target Analyte	Spike Added (ug/L)	Original Conc. (ug/L)	Spiked Sample Conc. (ug/L)	% Recovery	Acceptance Limits (%)
Benzene	10	ND	10.5	105%	39 -150
Toluene	10	ND	10.4	102%	46 - 148
Ethylbenzene	10	ND	10.3	102%	32 - 160
m,p-Xylenes	20	ND	20.8	103%	NE
o-Xylene	10	ND	10.4	104%	NE

ND - Analyte not detected at the stated detection limit.
NA - Not applicable or not calculated.
NE - Spike acceptance range not established by the EPA.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	98	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

Purgeable Aromatics

Matrix Spike Analysis

Lab ID:	2707Spk	Report Date:	02/27/96
Sample Matrix:	Water	Date Sampled:	02/21/96
Preservative:	Cool, HgCl2	Date Received:	02/22/96
Condition:	Intact	Date Analyzed:	02/26/96

Target Analyte	Spike Added (ug/L)	Original Conc. (ug/L)	Spiked Sample Conc. (ug/L)	% Recovery	Acceptance Limits (%)
Benzene	10	0.59	11.6	111%	39 -150
Toluene	10	1.03	11.5	104%	46 - 148
Ethylbenzene	10	0.54	10.8	102%	32 - 160
m,p-Xylenes	20	6.73	28.6	110%	NE
o-Xylene	10	0.89	11.8	109%	NE

ND - Analyte not detected at the stated detection limit.
NA - Not applicable or not calculated.
NE - Spike acceptance range not established by the EPA.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	97	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

Purgeable Aromatics

Duplicate Analysis

Lab ID:	2718Dup	Report Date:	02/27/96
Sample Matrix:	Water	Date Sampled:	02/22/96
Preservative:	Cool, HgCl2	Date Received:	02/22/96
Condition:	Intact	Date Analyzed:	02/23/96

Target Analyte	Original Conc. (ug/L)	Duplicate Conc. (ug/L)	Acceptance Range (ug/L)
Benzene	62.4	49.8	44.8 - 67.4
Toluene	324	325	265 - 384
Ethylbenzene	333	325	216 - 442
m,p-Xylenes	5,430	5,370	NE
o-Xylene	734	721	NE

ND - Analyte not detected at the stated detection limit.
NA - Not applicable or not calculated.
NE - Duplicate acceptance range not established by the EPA.

	Surrogate	Percent Recovery	Acceptance Limits
Quality Control:	Trifluorotoluene	102	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

VOLATILE AROMATIC HYDROCARBONS

Matrix Spike Duplicate Analysis

Lab ID:	2710Spkdup	Report Date:	02/27/96
Sample Matrix:	Water	Date Sampled:	02/21/96
Preservative:	Cool, HgCl2	Date Received:	02/22/96
Condition:	Intact	Date Analyzed:	02/25/96

Target Analyte	Spike Added (ug/L)	Sample Spike Recovery (%)	Duplicate Spike Recovery (%)	Acceptance Limits (%)
Benzene	10	105%	100%	83 - 122
Toluene	10	102%	98%	81 - 119
Ethylbenzene	10	102%	97%	65 - 134
m,p-Xylenes	20	103%	97%	NE
o-Xylene	10	104%	98%	NE

ND - Analyte not detected at the stated detection limit.
NA - Not applicable or not calculated.
NE - Spike acceptance range not established by the EPA.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	93	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

Purgeable Aromatics

Duplicate Analysis

Lab ID:	2705Dup	Report Date:	02/27/96
Sample Matrix:	Water	Date Sampled:	02/21/96
Preservative:	Cool, HgCl2	Date Received:	02/22/96
Condition:	Intact	Date Analyzed:	02/26/96

Target Analyte	Original Conc. (ug/L)	Duplicate Conc. (ug/L)	Acceptance Range (ug/L)
Benzene	418	434	348 - 504
Toluene	ND	ND	NA
Ethylbenzene	455	500	314 - 640
m,p-Xylenes	3,710	3,690	NE
o-Xylene	960	889	NE

ND - Analyte not detected at the stated detection limit.
NA - Not applicable or not calculated.
NE - Duplicate acceptance range not established by the EPA.

	Surrogate	Percent Recovery	Acceptance Limits
Quality Control:	Trifluorotoluene	94	88 - 110%

Reference: Method 602.2, Purgeable Aromatics; Federal Register, Vol. 49, No. 209, Oct. 1984.

Comments:

Analyst

Review

ANALYTICA
ENVIRONMENTAL LABORATORY
807 S. CARLTON • FARMINGTON, NM 87401 • (505) 326-2395

CHAIN OF CUSTODY

PROJECT MANAGER:
Analytica Lab I.D.:

Company: BLAGG ENGR.
Address:

Phone: 632-1199
Fax:

Bill To: SAME
Company:
Address:

Sample ID	Date	Time	Matrix	Lab ID	Petroleum Hydrocarbons (418.1)	Gasoline / Diesel (mod. 8015)	Gasoline (GRO)	Aromatic HOs BTEX/MTBE (602 / 8020)	Chlorinated Hydrocarbons (8010)	SDWA Volatiles (502.1 / 503.1)	Chlorinated Pesticides / PCBs (608 / 8080)	Herbicides (615 / 8150)	Volatiles GC/MS (624 / 8240 / 8260)	Base / Neutral / Acid GC/MS (625 / 8270)	Polynuclear Aromatic Hydrocarbons (8100)	TCLP Extraction	Other (specify):	Cation / Anion	Specific Cations (specify):	Specific Anions (specify):	BOD / Fecal / Total Coliform	Solids: TDS / TSS / SS	Nutrients: NH4+ / NO2– / NO3– / TKN	Oil and Grease	Other (specify):	Priority Pollutants	RCRA Metals (Total)	RCRA Metals TCLP (1311)	Other (specify):	COMMENTS
WP-10 B	2-21	1500	WATER					✓																						PRES:
WP-21 A	2-21	1315	"					✓																						HgCl₂ - cool
WP-32 A	2-21	1510	"					✓																						"
WP-39	2-21	1445	"					✓																						"
WP-40	2-21	1430	"					✓																						"
WP-42	2-21	1335	"					✓																						"
WP-43	2-21	1350	"					✓																						"
WP-44	2-21	1410	"					✓																						"

Project Information	Sample Receipt
Proj. #: AMOCO	No. Containers:
Proj. Name: GCU COM	Custody Seals: Y / N / NA
~~P. O. No.:~~ I 181	Received Intact:
Shipped Via: DELTA	Received Cold:

Required Turnaround Time (Prior Authorization Required for Rush)

Sampled By:	Relinquished By:	Relinquished By:
Signature / Date: R. F. O'Neill 2-21-96	Signature / Date: R. F. O'Neill 2-22 96	Signature / Date:
Company: BEI / Time: —	Company: BEI / Time: 1030	Company: / Time:
Received By:	**Received By:**	**Received By:**
Signature / Date:	Signature / Date:	Signature / Date: Laura Lavan 2/22
Company: / Time:	Company: / Time:	Company: Analytica / Time: 1030

Please Fill Out Thoroughly.

Shaded areas for lab use only.

White/Yellow: Analytica
Pink: Client

ANALYTICA
ENVIRONMENTAL LABORATORY
807 S. CARLTON • FARMINGTON, NM 87401 • (505) 326-2395

CHAIN OF CUSTODY

PROJECT MANAGER:
Analytica Lab I.D.:

Company: BLAGG ENGR.
Address:

Phone: 632-1199
Fax:

Bill To: SAME
Company:
Address:

Sample ID	Date	Time	Matrix	Lab ID	Petroleum Hydrocarbons (418.1)	Gasoline / Diesel (mod. 8015)	Gasoline (GRO)	Aromatic HCs BTEX/MTBE (602 / 8020)	Chlorinated Hydrocarbons (8010)	SDWA Volatiles (502.1 / 503.1)	Chlorinated Pesticides / PCBs (608 / 8080)	Herbicides (615 / 8150)	Volatiles GC/MS (624 / 8240 / 8260)	Base / Neutral / Acid GC/MS (625 / 8270)	Polynuclear Aromatic Hydrocarbons (8100)	TCLP Extraction	Other (specify):	Cation / Anion	Specific Cations (specify):	Specific Anions (specify):	BOD / Fecal / Total Coliform	Solids: TDS / TSS / SS	Nutrients: NH4+ / NO2– / NO3– / TKN	Oil and Grease	Other (specify):	Priority Pollutants	RCRA Metals (Total)	RCRA Metals TCLP (1311)	Other (specify):	COMMENTS
MW-5	2-22	0915	WATER					✓																						PRES: $HgCl_2$ - cool
MW-7	2-22	1000	"					✓																						"
MW-25	2-22	1015	"					✓																						"
MW-36	2-22	0930	"					✓																						"
WP-41	2-22	0845	"					✓																						"

ORGANIC ANALYSES | WATER ANALYSES | METALS | COMMENTS

Project Information	Sample Receipt
Proj. #: AMOCO	No. Containers:
Proj. Name: GC4 com	Custody Seals: Y / N / NA
~~P.O. No.:~~ I 181	Received Intact:
Shipped Via: DELD	Received Cold:

Required Turnaround Time (Prior Authorization Required for Rush)

Sampled By:	Relinquished By:	Relinquished By:
Signature / Date: R. E. O'Neill 2-22-96	Signature / Date: R. E. O'Neill 2-22-96	Signature / Date:
Company: BEI / Time: —	Company: BEI / Time: 1030	Company: / Time:
Received By:	**Received By:**	**Received By:**
Signature / Date:	Signature / Date:	Signature / Date: Laura Lauman 2/22
Company: / Time:	Company: / Time:	Company: / Time: Analytica 10:30

Please Fill Out Thoroughly.

Shaded areas for lab use only.

White/Yellow: Analytica
Pink: Client