3R - 23

REPORTS

DATE:

July 16, 1996

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

July 16, 1996

Mr. William C. Olson, Hydrologist
New Mexico Oil Conservation Division
Environmental Bureau
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Re: Quarterly Monitoring Report
Amoco Production Company
Gallegos Canyon Unit Com F #162, Sec. 36-T29N-R12W
San Juan County, New Mexico

Dear Mr. Olson:

Amoco Production Company has retained Blagg Engineering, Inc. to conduct environmental monitoring of groundwater reclamation at Gallegos Canyon Unit Com F Well No. 162 (Figure 1). Following are quarterly monitoring results as required by the New Mexico Oil Conservation Division (NMOCD), pursuant to reclamation plan approval by the NMOCD with letter dated January 27, 1994.

The air injection/vapor extraction system at the site has remained in continuous operation. This system is designed to treat soils and groundwater that could not be accessed by excavation or other methods. This system, in conjunction with enhanced microbial placement that occurred in the fourth quarter of 1995, is effectively remediating hydrocarbon contamination at the site.

Summary Laboratory Analytical Results

Groundwater monitor wells at the site were sampled on June 27, 1996. A summary of laboratory analytical results for this and previous sample events is included in Table 1 on the following page and laboratory data reports are included in Appendix B. Analytical data indicates that groundwater impacts in excess of NMWQCC standards has not migrated down gradient to monitor wells MW-9 or MW-10.

Monitor well MW-7 previously contained free product. Quarterly monitoring beginning in December 1995 and continuing to the current monitoring indicates this product has dissipated and water quality test data shows stable to declining values for BTEX constituents. Water quality in monitor well MW-4, a down gradient well, has shown variable values of BTEX over time. These trends will be further evaluated during quarterly monitoring periods.

TABLE 1

Summary Laboratory Analytical Results
Amoco Production Company GCU Com "F" No. 162

Sample ID	Benzene ug/L	Toluene ug/L	Ethyl Benzene ug/L	Total Xylenes ug/L	Naptha-lene ug/L	Benzo(a) pyrene ug/L	Cations meq/L	Anions meq/L	As mg/L	Ba mg/L	Cd mg/L	Cr mg/L	Pb mg/L	Hg mg/L	Se mg/L	Ag mg/L
MW-3																
2/25/94	476	0.7	ND	1.9	ND	ND	15.80	15.49	ND	3.27	0.0001	ND	0.0034	ND	0.0011	ND
6/17/94	13.6	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/27/94	20.9	3.4	0.9	10.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/7/94	241.5	101.1	12.7	223.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Abandon																
MW-4																
2/25/94	240	3.1	40.2	469	ND	ND	17.74	18.50	0.0022	5.09	0.0016	ND	0.0373	ND	0.0015	ND
6/17/94	273	2.2	34.7	113	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/27/94	355	0.7	59.4	352	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/7/94	1694	7.6	241.3	1575	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/11/95	549	2.9	29.5	281.6												
3/7/96	143	3.9	13.0	79.3												
6/27/96	141	63.4	65.9	867												
MW-5																
2/25/94	ND	1.0	ND	2.2	ND	ND	34.59	33.50	0.0064	3.16	0.0034	ND	ND	ND	0.0037	ND
6/17/94	2.1	2.7	4.5	32.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/27/94	1.3	0.5	1.0	5.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/7/94	0.8	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/8/95	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/12/95	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/27/95	ND	ND	ND	ND												
12/11/95	ND	ND	ND	ND												
3/7/96	ND	ND	ND	ND												
6/27/96	ND	ND	ND	ND												
MW-6																
2/25/94	15.9	3.2	5.3	140	ND	ND	13.39	12.34	ND	2.68	0.0002	ND	ND	ND	0.0007	ND
6/17/94	15.3	1.9	2.6	98	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/27/94	70.1	3.7	1.9	109	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/7/94	154.8	44.9	0.2	212.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/8/95	7.0	ND	ND	8.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/12/95	2.38	0.86	ND	12.6												
9/27/95	12.0	ND	ND	15.33												
12/11/95	31.0	29.1	11.4	175.3												
3/7/96	42.1	4.5	3.1	51.3												
6/27/96	1.53	1.83	ND	5.77												

MW-7																
12/11/95	85.7	522	144	2,422												
3/7/96	95.0	421	226	4,075												
6/27/96	223	150	165	2,353												
MW-9																
2/25/94	ND	1.1	ND	1.4	ND	ND	13.73	13.47	ND	1.17	0.0011	ND	ND	ND	0.0012	ND
6/17/94	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/27/94	0.8	0.4	0.6	3.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/7/94	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/8/95	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/12/95	ND	ND	ND	ND												
9/27/95	ND	ND	ND	ND												
12/4/95	ND	ND	ND	ND												
3/7/96	ND	ND	ND	ND												
6/27/96	ND	ND	ND	ND												
MW-10																
2/25/94	ND	0.7	ND	1.7	ND	ND	15.04	15.45	ND	2.64	0.0140	ND	0.0012	ND	0.0018	ND
6/17/94	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
9/27/94	0.8	0.3	0.2	3.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/7/94	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/8/95	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/12/95	ND	ND	ND	ND												
9/27/95	ND	ND	ND	ND												
12/4/95	ND	ND	ND	4.2												
3/7/96	ND	ND	ND	ND												
6/27/96	ND	ND	ND	ND												
WQCC LIMITS	10	750	750	620	30	0.7	------	------	0.1	1.0	0.01	0.05	0.05	0.002	0.05	0.05

ug/L = micrograms per liter, equivalent to parts per billion (ppb) mg/L= milligrams per liter, equivalent to parts per million (ppm) ND=not detected NA=not analyzed

Water Table Elevations

Depth to groundwater measurements in each monitor well was measured during the June 27, 1996 sample event. Table 2 includes water depth measurements, surface casing relative elevations and groundwater elevations. A contour map of relative water table elevations for this sample event is included as Figure 2.

TABLE 2

Relative Groundwater Elevations
Amoco Production Company GCU Com "F" No. 162
June 27, 1996

Monitor Well	Total Depth (feet)	Depth to Fluid (feet)	Relative Casing Elevation (feet)	Relative Groundwater Elevation (feet)
MW-1	Well	abandoned	during	excavation
MW-2	23.1	na	100.16	na
MW-3	Well	abandoned	during	excavation
MW-4	24.1	21.60	98.87	77.27
MW-5	25.1	22.70	102.50	79.80
MW-6	26.8	20.81	98.68	77.87
MW-7	25.3	20.10	97.39	77.29
MW-8	Well	abandoned	during	excavation
MW-9	19.6	12.27	88.50	76.23
MW-10	16.3	13.75	90.25	76.50

na = water table elevation not measured

Current and Proposed Activities

Contaminated soil and groundwater at the GCU 162 site that could not be accessed by excavation is presently being remediated with the active air injection/vapor extraction system and through enhanced biodegradation. Operation of the air injection/vapor extraction system is on-going.

The effectiveness of proprietary microbe placement in and around hydrocarbon contaminated subsurface soils is presently being evaluated. Analytical results from future soil and groundwater sample events will be submitted in quarterly reports transmitted to NMOCD.

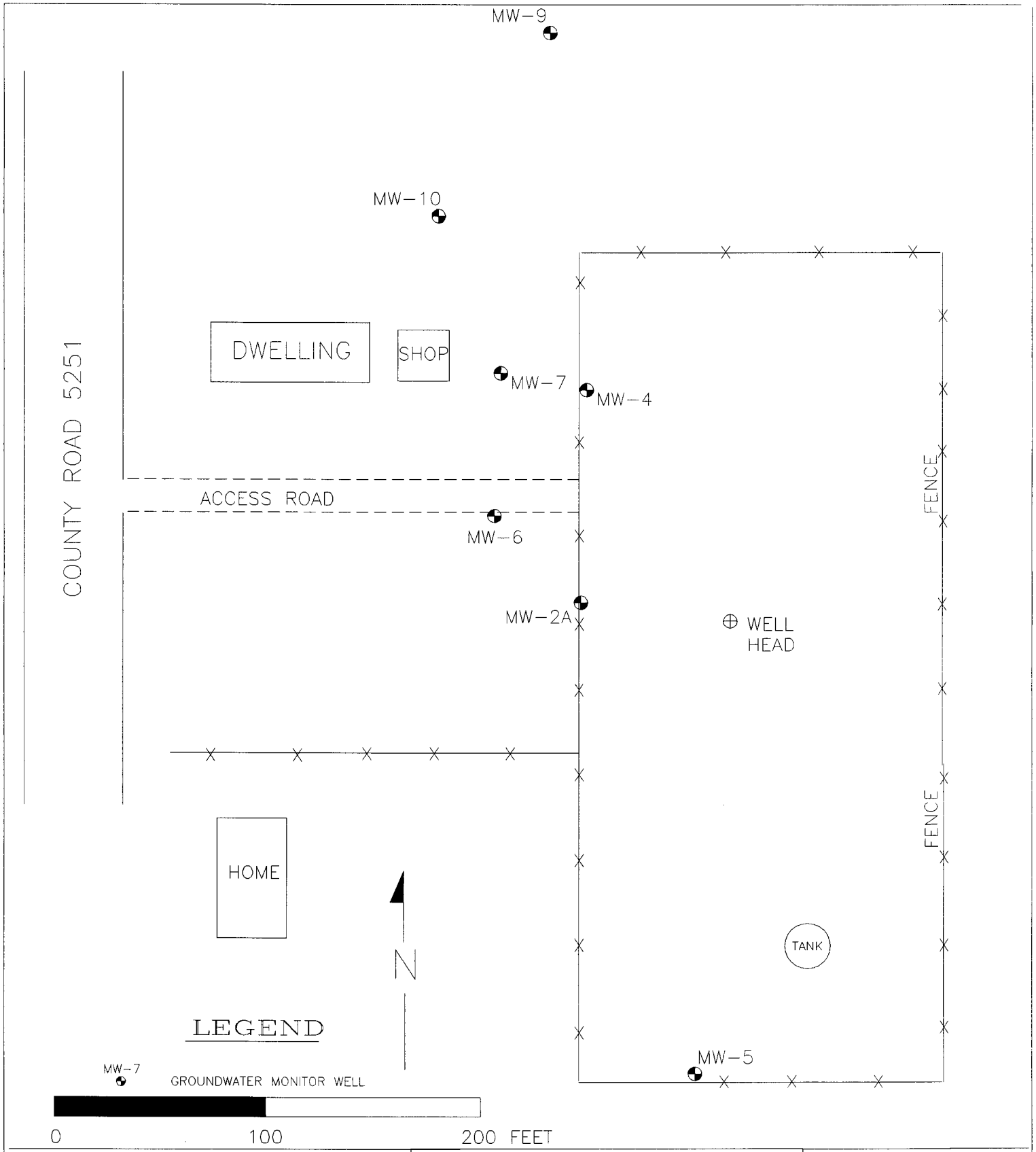
Summary

This report has been prepared by Blagg Engineering, Inc. on behalf of Amoco Production Company. Questions or comments may be directed to Jeff Blagg at (505)632-1199.

Respectfully submitted:
Blagg Engineering, Inc.

Jeffrey C. Blagg, P.E.
President

cc: Mr. Denny Foust, NMOCD
Mr. Buddy Shaw, Amoco Production Company



AMOCO PRODUCTION CO.
GCU 162 WELL SITE
SAN JUAN CO., NEW MEXICO

JUNE 1996

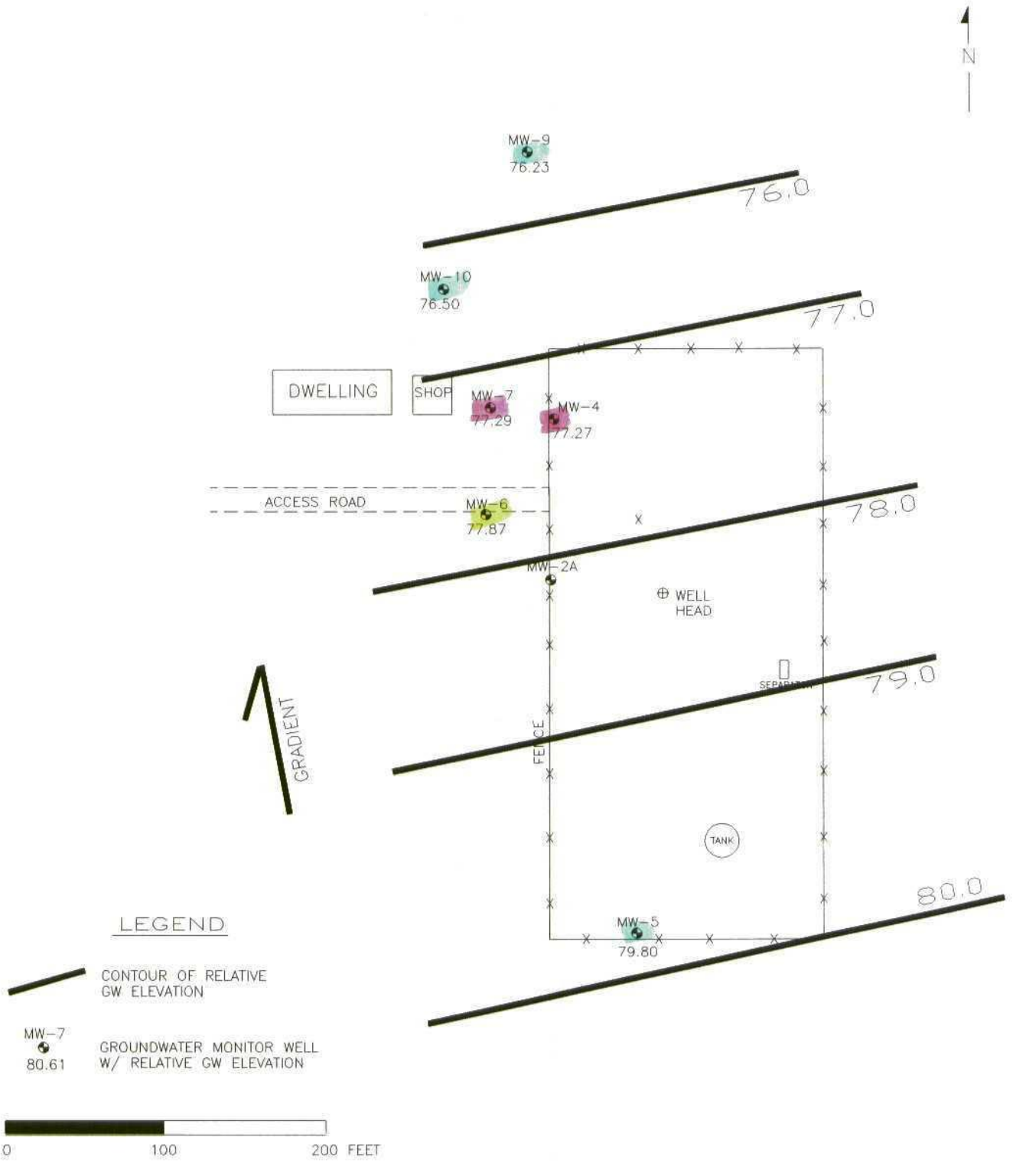
BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

SITE PLAN

FIGURE 1	DRWN. BY: JCB
162REV	PROJ. MGR: JCB



AMOCO PRODUCTION CO. GCU 162 WELL SITE SAN JUAN CO., NEW MEXICO JUNE 1996	BLAGG ENGINEERING, INC. CONSULTING ENGINEERING SERVICES P.O. BOX 87 BLOOMFIELD, NEW MEXICO 87413 PHONE:(505)632-1199	GW SURFACE CONTOUR 6/27/96 FIGURE 2 — DRWN BY: JCB 162SITE6 — PROJ MANG: JCB

BLAGG ENGINEERING INC.

MONITOR WELL QUARTERLY MONITORING DATA

DATE: 6/27/96 PROJECT NO: —

CLIENT: Amoco CHAIN-OF-CUSTODY NO: 2381

LOCATION: GCU com F 162

PROJECT MANAGER: TCB SAMPLER: NJV

MONITOR WELL DATA

WELL #	OVM (PPM)	pH	COND. (μMHO)	TEMP (°F)	D.T.W. (FT.)	T.D. (FT.)	BAILED (GAL.)	PRODUCT (IN.)	SAMPL TIME
4	—	7.0	1800	63.0	21.60	24.09	1.25	—	092
5	—	7.0	1800	61.0	22.70	25.08	1.20	—	085C
6	—	7.4	1800	64.0	20.81	26.77	3.00	—	1055
7	—	7.2	1666	64.0	20.10	25.30	2.75	—	1120
9	—	7.4	1800	60.0	12.27	19.60	3.75	—	0955
10	—	7.2	1300	62.0	13.75	16.29	1.25	—	1020
					LINE CUT. BAILER DOWN HOLE.				
					FISHED OUT. DTW NOT ACCURATE.				

Notes: DTW = Depth to water
TD = Total depth
Bailed = Volume of water bailed from well prior to sampling.
Ideally a minimum of 3 well volumes:
1.25" well = 0.76 quarts per foot of water.
2" well = 0.49 gallons per foot of water.
4" well = 1.95 gallons per foot of water.
Note well diameter if not standard 2".

ANAITAS
ENVIRONMENTAL LABS

July 1, 1996

Nelson Velez
Blagg Engineering, Inc.
PO Box 87
Bloomfield, NM 87413

Dear Mr. Velez:

Enclosed are the results for the analysis of the samples received June 27, 1996. The samples were from the GCU Com F 162 site. Analysis for Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) was performed on the samples, as per the accompanying chain of custody form.

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. Detectable levels of btex analytes were found in the samples, as reported.

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,

Denise A. Bohemier
Lab Director

807 SOUTH CARLTON • FARMINGTON, NM 87401• (505) 326-2395 PH • 326-2486 FAX

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ANAITAS ENVIRONMENTAL LABS

CHAIN OF CUSTODY

Page 1 of 1

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

PROJECT MANAGER: NJV
Anaitas Lab I.D.:

Company: BLAGG
Address:

Phone:
Fax:

Bill To: SAME AS ABOVE
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 # 4	6/27/96	0925	WATER					✓																						PRESERV. - COOL & w/ $HgCl_2$
MW # 5	"	0850	"					✓																						"
MW # 6	"	1055	"					✓																						"
MW # 7	"	1120	"					✓																						"
MW # 9	"	0955	"					✓																						"
MW #10	"	1020	"					✓																						"

Project Information	Sample Receipt
Proj. #:	No. Containers:
Proj. Name GCU com FKZ	Custody Seals: Y / N / NA
P. O. No:	Received Intact:
Shipped Via:	Received Cold:

Required Turnaround Time (Prior Authorization Required for Rush)

Sampled By:	Relinquished By:	Relinquished By:
Signature / Date: Nelson Velez 6/27/96	Signature / Date: Nelson Velez 6/27/96	Signature / Date:
Company: BLAGG	Company: BLAGG	Company:
Time: SEE SAMPLE ID	Time: 1318	Time:

Received By:	Received By:	Received By:
Signature / Date:	Signature / Date:	Signature / Date: 6/27/96
Company:	Company:	Company: Anaitas
Time:	Time:	Time: 12:18

Please Fill Out Thoroughly.

Shaded areas for lab use only.

White/Yellow: Anaitas
Pink: Client

ANAITAS ENVIRONMENTAL LABS

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	GCU Com F162	Report Date:	07/01/96
Sample ID:	MW #4	Date Sampled:	06/27/96
Lab ID:	4081	Date Received:	06/27/96
Sample Matrix:	Water	Date Analyzed:	06/27/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	141	5.00
Toluene	63.4	5.00
Ethylbenzene	65.9	5.00
m,p-Xylenes	695	20.0
o-Xylene	172	5.00
Total BTEX	1,140	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	96	88 - 110%
Bromofluorobenzene	95	86 - 115%

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

Comments:

Analyst

Review

ANAITAS ENVIRONMENTAL LABS

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	GCU Com F162	Report Date:	07/01/96
Sample ID:	MW #5	Date Sampled:	06/27/96
Lab ID:	4082	Date Received:	06/27/96
Sample Matrix:	Water	Date Analyzed:	06/27/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	1.00
o-Xylene	ND	0.50
Total BTEX	ND	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	102	88 - 110%
Bromofluorobenzene	101	86 - 115%

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

Comments:

Analyst

Review

ANAITAS ENVIRONMENTAL LABS

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	GCU Com F162	Report Date:	07/01/96
Sample ID:	MW #6	Date Sampled:	06/27/96
Lab ID:	4083	Date Received:	06/27/96
Sample Matrix:	Water	Date Analyzed:	06/27/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	1.53	1.25
Toluene	1.83	1.25
Ethylbenzene	ND	1.25
m,p-Xylenes	5.77	2.50
o-Xylene	ND	1.25

Total BTEX	9.12

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	96	88 - 110%
Bromofluorobenzene	94	86 - 115%

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

Comments:

Analyst

Review

ANAITAS ENVIRONMENTAL LABS

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	GCU Com F162	Report Date:	07/01/96
Sample ID:	MW #7	Date Sampled:	06/27/96
Lab ID:	4084	Date Received:	06/27/96
Sample Matrix:	Water	Date Analyzed:	06/27/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	223	25.0
Toluene	150	25.0
Ethylbenzene	165	25.0
m,p-Xylenes	1,760	50.0
o-Xylene	593	25.0
Total BTEX	2,890	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	95	88 - 110%
Bromofluorobenzene	103	86 - 115%

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

Comments:

Analyst

Review

ANAITAS ENVIRONMENTAL LABS

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	GCU Com F162	Report Date:	07/01/96
Sample ID:	MW #9	Date Sampled:	06/27/96
Lab ID:	4085	Date Received:	06/27/96
Sample Matrix:	Water	Date Analyzed:	06/27/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	1.00
o-Xylene	ND	0.50
Total BTEX	ND	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	101	88 - 110%
Bromofluorobenzene	102	86 - 115%

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

Comments:

Analyst

Review

ANAITAS ENVIRONMENTAL LABS

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID:	GCU Com F162	Report Date:	07/01/96
Sample ID:	MW #10	Date Sampled:	06/27/96
Lab ID:	4086	Date Received:	06/27/96
Sample Matrix:	Water	Date Analyzed:	06/27/96
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	1.00
o-Xylene	ND	0.50
Total BTEX	ND	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	93	88 - 110%
Bromofluorobenzene	93	86 - 115%

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	Report Date:	07/01/96
Lab ID:	MB35243	Date Analyzed:	06/27/96

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	1.00
o-Xylene	ND	0.50

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	107	88 - 110%
Bromofluorobenzene	103	86 - 115%

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

Comments:

Analyst

Review

Purgeable Aromatics

Duplicate Analysis

Lab ID:	3954Dup	Report Date:	7/1/96
Sample Matrix:	Water	Date Sampled:	6/17/96
Preservative:	Cool, HgCl2	Date Received:	6/17/96
Condition:	Intact	Date Analyzed:	6/27/96

Target Analyte	Original Conc. (ug/L)	Duplicate Conc. (ug/L)	Acceptance Range (ug/L)
Benzene	6,710	6,650	5,470 - 7,880
Toluene	10,570	10,860	8,790 - 12,600
Ethylbenzene	806	930	572 - 1,160
m,p-Xylenes	6,090	7,020	NE
o-Xylene	1,750	1,940	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	105	88 - 110%
	Bromofluorobenzene	104	86 - 115%

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

Comments:

Analyst

Review

Purgeable Aromatics

Matrix Spike Analysis

Lab ID:	3953Spk	Report Date:	7/1/96
Sample Matrix:	Water	Date Sampled:	6/17/96
Preservative:	Cool, HgCl2	Date Received:	6/17/96
Condition:	Intact	Date Analyzed:	6/27/96

Target Analyte	Spike Added (ug/L)	Original Conc. (ug/L)	Spiked Sample Conc. (ug/L)	% Recovery	Acceptance Limits (%)
Benzene	10	ND	10.8	105%	39 -150
Toluene	10	1.12	11.3	101%	46 - 148
Ethylbenzene	10	ND	10.8	104%	32 - 160
m,p-Xylenes	20	3.13	23.5	102%	NE
o-Xylene	10	1.11	11.4	102%	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	103	88 - 110%
Bromofluorobenzene	102	86 - 115%

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

Comments:

Analyst

Review