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REPORTS

DATE:

JAN. 28, 1998

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

January 28, 1998

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

Re: Annual 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 annual 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 and revised with an area wide plan submitted on October 22, 1996.

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 at the site, is effectively remediating hydrocarbon contamination at the site.

Summary Laboratory Analytical Results

Groundwater monitor wells at the site were sampled in March, June, September and December, 1997. A summary of laboratory analytical results for these and previous sample events are 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 wells MW-2A and MW-7 previously contained free product. Quarterly monitoring results for 1997 indicate this product has dissipated and water quality test data shows stable to declining values for BTEX constituents. These trends will be further evaluated during future 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-2A																
9/22/97	7.7	84.3	16.2	161.7												
12/19/97	1.1	45.8	7.0	68.5												
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												
9/6/96	188	54.6	142	1,387												
12/24/96	42.3	14.6	39.2	430												
3/20/97	ND	0.71	ND	14.05												
6/25/97	1.0	ND	11.8	270.9												
9/22/97	27.4	1.9	68.2	660												
12/19/97	ND	2.0	60.2	33.7												

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												
9/6/96	ND	ND	ND	ND												
12/24/96	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												
9/6/96	1.64	ND	ND	84.7												
12/24/96	0.67	ND	ND	1.24												
3/20/97	ND	2.05	ND	7.72												
6/25/97	ND	2.9	1.7	21.0												
9/22/97	ND	0.6	0.6	11.6												
12/19/97	1.3	6.7	2.4	12.5												
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												
9/6/96	142	104	132	1,728												
12/24/96	34.3	15.3	14.5	159.8												
6/25/97	174	12.5	44.8	637												
9/22/97	577	105	248	835												
12/19/97	330	9.4	81.9	600												

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												
9/6/96	ND	ND	ND	ND												
12/24/96	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												
9/6/96	ND	ND	ND	ND												
12/24/96	ND	ND	ND	ND												
3/20/97	ND	ND	ND	ND												
6/25/97	0.4	ND	ND	0.9												
9/22/97	ND	1.7	2.9	17.9												
12/19/97	1.6	0.2	0.9	6.0												
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 each quarterly sample event. Table 2 includes water depth measurements, surface casing relative elevations and groundwater elevations for the December 19, 1997 sample event. 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
December 19, 1997

Monitor Well	Total Depth (feet)	Depth to Fluid (feet)	Relative Casing Elevation (feet)	Relative Groundwater Elevation (feet)
MW-1	Well	abandoned	during	excavation
MW-2A	23.1	21.63	100.16	78.53
MW-3	Well	abandoned	during	excavation
MW-4	24.1	21.21	98.87	77.66
MW-5	25.1	na	102.50	na
MW-6	26.8	20.51	98.68	78.17
MW-7	25.3	19.80	97.39	77.59
MW-8	Well	abandoned	during	excavation
MW-9	19.6	na	88.50	na
MW-10	16.3	13.58	90.25	76.67

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.

Expansion of the air injection/vapor extraction system in the area of monitor well MW-7 is presently being evaluated. Results of this possible system expansion will be presented in the next annual report on the site.

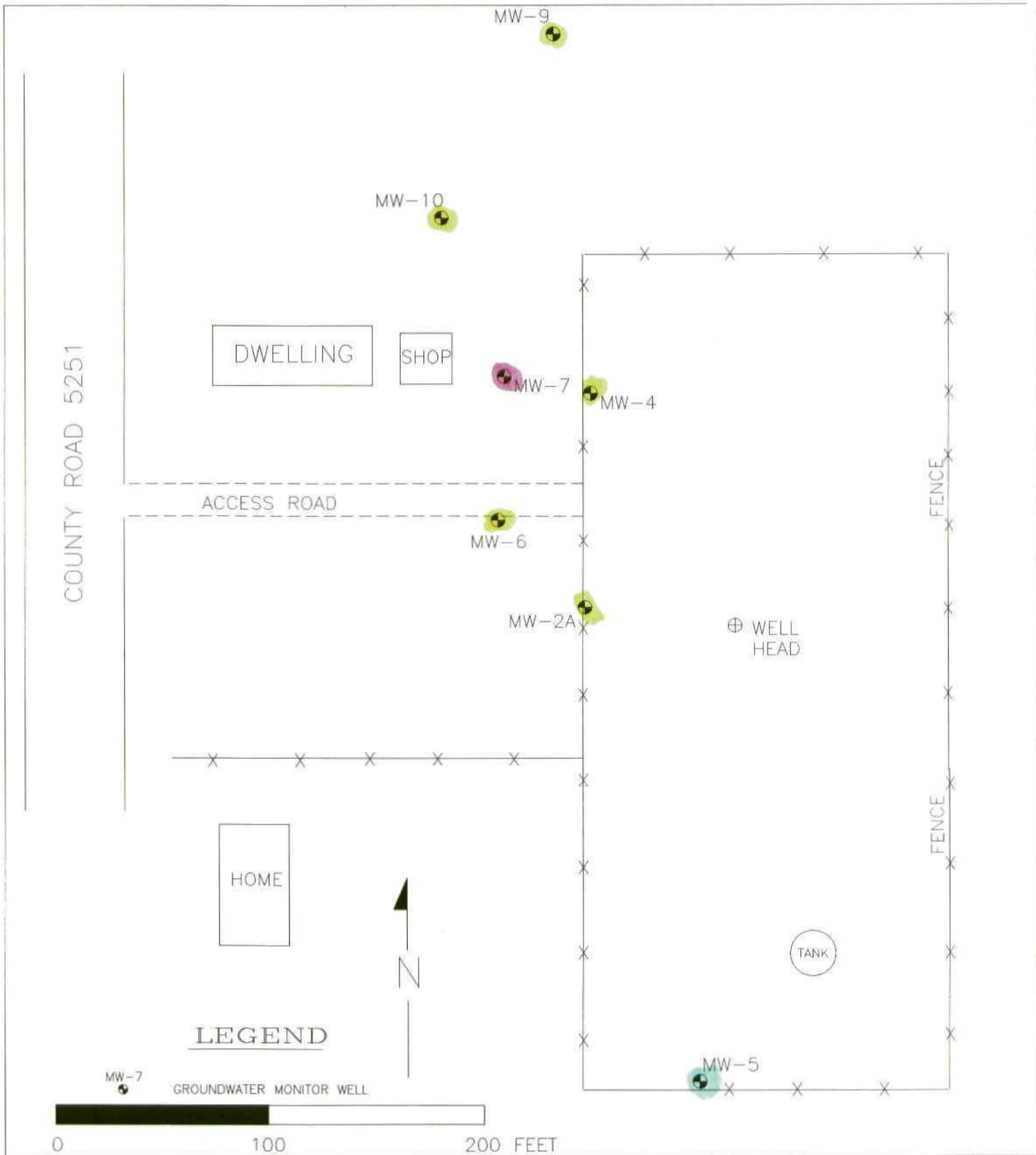
Summary

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

December 1997

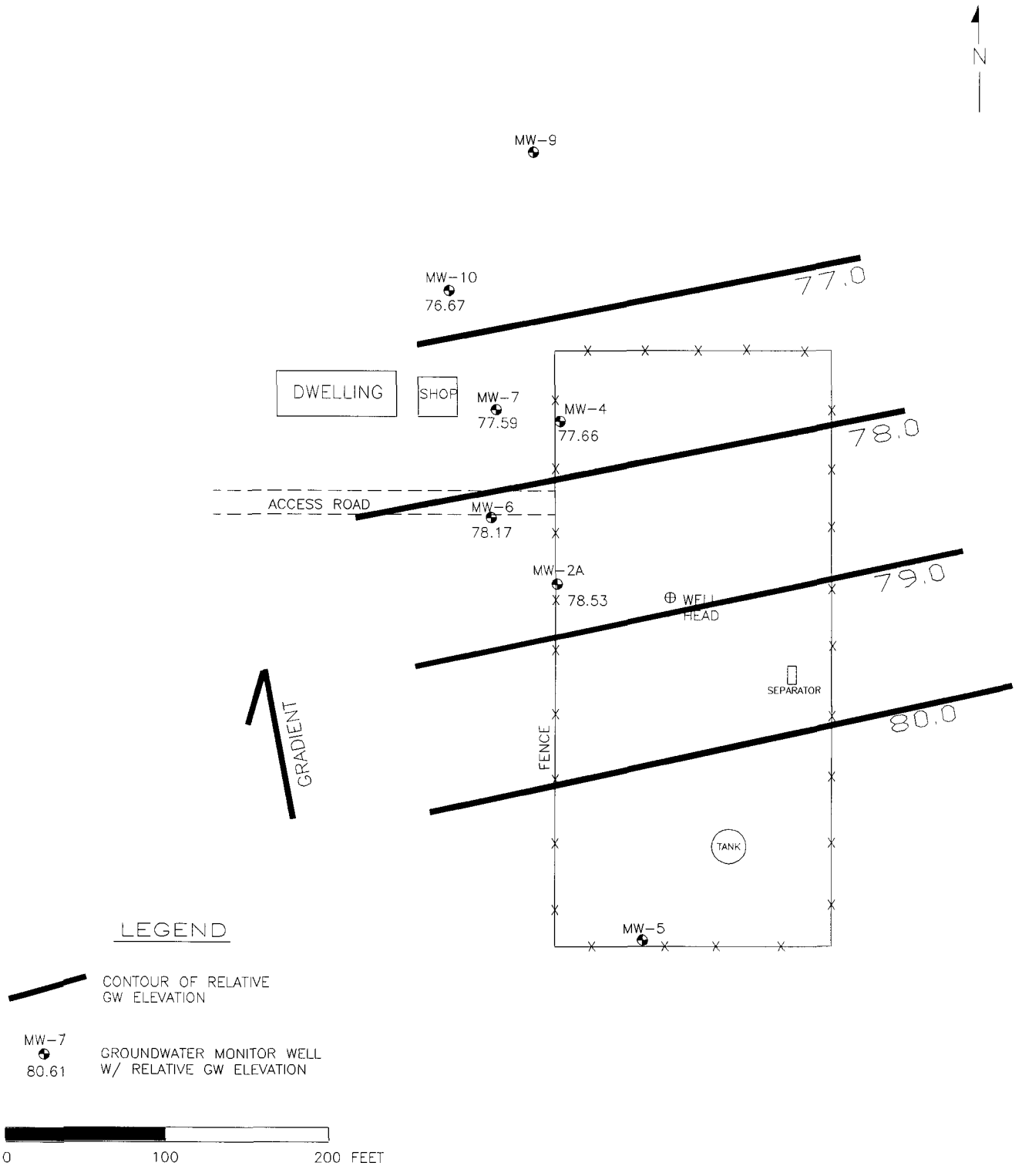
BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES

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 December 1997	BLAGG ENGINEERING, INC. CONSULTING ENGINEERING SERVICES P.O. BOX 87 BLOOMFIELD, NEW MEXICO 87413 PHONE:(505)632-1199	GW SURFACE CONTOUR 12/19/97 FIGURE 2 | DRWN BY: JCB 162SITE6 | PROJ MANG: JCB

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location
BLAGG / AMOCO	GCU COM F #162
Sampler: (Signature)	**Chain of Custody Tape No.**
Nelson Velez	0403410

ANALYSIS/PARAMETERS

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	BTEX (8020)					Remarks
MW #2A	12/19/97	1140	C721	WATER	2	✓					PRESERV. $HgCl_2$ & COOL
MW #4	12/19/97	1120	C722	WATER	2	✓					↓
MW #6	12/19/97	1100	C723	WATER	2	✓					↓
MW #7	12/19/97	1210	C724	WATER	2	✓					↓
MW #10	12/19/97	1240	C725	WATER	2	✓					✓

SAMPLES RECEIVED COOL & INTACT DLA

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Nelson Velez	12/19/97	1253	Denise L. Aguirre	12-19-97	1253
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

Ref COC's 5662-5664

ENVIROTECH INC.
5796 U.S. Highway 64-3014
Farmington, New Mexico 87401
(505) 632-0615

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	MW # 2A	Date Reported:	12-23-97
Chain of Custody:	5664	Date Sampled:	12-19-97
Laboratory Number:	C721	Date Received:	12-19-97
Sample Matrix:	Water	Date Analyzed:	12-22-97
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**1.1**	**1**	**0.2**
Toluene	**45.8**	**1**	**0.2**
Ethylbenzene	**7.0**	**1**	**0.2**
p,m-Xylene	**51.1**	**1**	**0.2**
o-Xylene	**17.4**	**1**	**0.1**
Total BTEX	**122**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**99 %**
	Bromofluorobenzene	**99 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **GCU COM F #162.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	MW # 4	Date Reported:	12-23-97
Chain of Custody:	5664	Date Sampled:	12-19-97
Laboratory Number:	C722	Date Received:	12-19-97
Sample Matrix:	Water	Date Analyzed:	12-22-97
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**ND**	**1**	**0.2**
Toluene	**2.0**	**1**	**0.2**
Ethylbenzene	**60.2**	**1**	**0.2**
p,m-Xylene	**ND**	**1**	**0.2**
o-Xylene	**33.7**	**1**	**0.1**
Total BTEX	**95.9**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**97 %**
	Bromofluorobenzene	**97 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **GCU COM F #162.**

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	MW # 6	Date Reported:	12-23-97
Chain of Custody:	5664	Date Sampled:	12-19-97
Laboratory Number:	C723	Date Received:	12-19-97
Sample Matrix:	Water	Date Analyzed:	12-22-97
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**1.3**	**1**	**0.2**
Toluene	**6.7**	**1**	**0.2**
Ethylbenzene	**2.4**	**1**	**0.2**
p,m-Xylene	**9.3**	**1**	**0.2**
o-Xylene	**3.2**	**1**	**0.1**
Total BTEX	**22.9**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**101 %**
	Bromofluorobenzene	**101 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **GCU COM F #162.**

Analyst

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	MW # 7	Date Reported:	12-23-97
Chain of Custody:	5664	Date Sampled:	12-19-97
Laboratory Number:	C724	Date Received:	12-19-97
Sample Matrix:	Water	Date Analyzed:	12-22-97
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**330**	**1**	**0.2**
Toluene	**9.4**	**1**	**0.2**
Ethylbenzene	**81.9**	**1**	**0.2**
p,m-Xylene	**407**	**1**	**0.2**
o-Xylene	**193**	**1**	**0.1**
Total BTEX	**1,021**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**100 %**
	Bromofluorobenzene	**100 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **GCU COM F #162.**

Analyst

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	MW # 10	Date Reported:	12-23-97
Chain of Custody:	5664	Date Sampled:	12-19-97
Laboratory Number:	C725	Date Received:	12-19-97
Sample Matrix:	Water	Date Analyzed:	12-22-97
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**1.6**	**1**	**0.2**
Toluene	**0.2**	**1**	**0.2**
Ethylbenzene	**0.9**	**1**	**0.2**
p,m-Xylene	**4.4**	**1**	**0.2**
o-Xylene	**1.6**	**1**	**0.1**
Total BTEX	**8.7**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**96 %**
	Bromofluorobenzene	**96 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **GCU COM F #162.**

Analyst

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	N/A	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	12-23-97
Laboratory Number:	12-22-BTEX.BLANK	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	12-22-97
Condition:	N/A	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	**ND**	**0.2**
Toluene	**ND**	**0.2**
Ethylbenzene	**ND**	**0.2**
p,m-Xylene	**ND**	**0.2**
o-Xylene	**ND**	**0.1**

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**101 %**
	Bromofluorobenzene	**102 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **QA/QC for samples C717- C725.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	12-23-97
Laboratory Number:	C717	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	HgCl and Cool	Date Analyzed:	12-22-97
Condition:	Cool and Intact	Analysis Requested:	BTEX

Parameter	Sample Result (ug/L)	Duplicate Result (ug/L)	Percent Diff.	Det. Limit (ug/L)	Dilution Factor
Benzene	**1.5**	**1.5**	**0.0%**	**0.2**	**1**
Toluene	**1.4**	**1.4**	**0.0%**	**0.2**	**1**
Ethylbenzene	**3.9**	**3.9**	**0.0%**	**0.2**	**1**
p,m-Xylene	**20.2**	**19.9**	**1.4%**	**0.2**	**1**
o-Xylene	**2.1**	**2.1**	**0.0%**	**0.1**	**1**

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria:	Parameter	Maximum Difference
	8020 Compounds	**30 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **QA/QC for samples C717- C725.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Spike	Date Reported:	12-23-97
Laboratory Number:	C717	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	Cool	Date Analyzed:	12-22-97
Condition:	Cool and Intact		

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	**1.5**	**50.0**	**51.7**	**0.2**	**100%**	**39-150**
Toluene	**1.4**	**50.0**	**51.9**	**0.2**	**101%**	**46-148**
Ethylbenzene	**3.9**	**50.0**	**54.9**	**0.2**	**102%**	**32-160**
p,m-Xylene	**20.2**	**100**	**121**	**0.2**	**100%**	**46-148**
o-Xylene	**2.1**	**50.0**	**52.2**	**0.1**	**100%**	**46-148**

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **QA/QC for samples C717- C725.**

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CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location	ANALYSIS/PARAMETERS
BLAGG / Amoco	GCU Com F #162	

Sampler: (Signature)	Chain of Custody Tape No.
Nelson Velez	04034-10

Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	BTEX (8020)						Remarks
												ALL SAMPLES PRESERV. - COOL & $HgCl_2$
mw #6	9/22/97	0935	C105	WATER	2	✓						
mw #4	9/22/97	1005	C106	WATER	2	✓						
mw #10	9/22/97	1145	C107	WATER	2	✓						
mw #7	9/22/97	1100	C108	WATER	2	✓						
mw #2A	9/22/97	1030	C109	WATER	2	✓						
				Samples received cool & intact								

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Nelson Velez	9/22/97	1316	Allen P. Quinn	9-22-97	1516
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

Ref COC 5409

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	MW #2A	Date Reported:	09-23-97
Chain of Custody:	5410	Date Sampled:	09-22-97
Laboratory Number:	C109	Date Received:	09-22-97
Sample Matrix:	Water	Date Analyzed:	09-22-97
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**7.7**	**1**	**0.2**
Toluene	**84.3**	**1**	**0.2**
Ethylbenzene	**16.2**	**1**	**0.2**
p,m-Xylene	**116**	**1**	**0.2**
o-Xylene	**45.7**	**1**	**0.1**
Total BTEX	**270**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**96 %**
	Bromofluorobenzene	**96 %**

References: 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. 1994.

Comments: **GCU COM F #162.**

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	MW #4	Date Reported:	09-23-97
Chain of Custody:	5410	Date Sampled:	09-22-97
Laboratory Number:	C106	Date Received:	09-22-97
Sample Matrix:	Water	Date Analyzed:	09-22-97
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**27.4**	**1**	**0.2**
Toluene	**1.9**	**1**	**0.2**
Ethylbenzene	**68.2**	**1**	**0.2**
p,m-Xylene	**479**	**1**	**0.2**
o-Xylene	**181**	**1**	**0.1**
Total BTEX	**757**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**100 %**
	Bromofluorobenzene	**100 %**

References: 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. 1994.

Comments: **GCU COM F #162.**

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	MW #6	Date Reported:	09-23-97
Chain of Custody:	5410	Date Sampled:	09-22-97
Laboratory Number:	C105	Date Received:	09-22-97
Sample Matrix:	Water	Date Analyzed:	09-22-97
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**ND**	**1**	**0.2**
Toluene	**0.6**	**1**	**0.2**
Ethylbenzene	**0.6**	**1**	**0.2**
p,m-Xylene	**8.5**	**1**	**0.2**
o-Xylene	**3.1**	**1**	**0.1**
Total BTEX	**12.8**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**96 %**
	Bromofluorobenzene	**96 %**

References: 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. 1994.

Comments: **GCU COM F #162.**

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	MW #7	Date Reported:	09-23-97
Chain of Custody:	5410	Date Sampled:	09-22-97
Laboratory Number:	C108	Date Received:	09-22-97
Sample Matrix:	Water	Date Analyzed:	09-22-97
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**577**	**10**	**1.8**
Toluene	**105**	**10**	**1.7**
Ethylbenzene	**248**	**10**	**1.5**
p,m-Xylene	**358**	**10**	**2.2**
o-Xylene	**477**	**10**	**1.0**
Total BTEX	**1,764**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**100 %**
	Bromofluorobenzene	**100 %**

References: 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. 1994.

Comments: **GCU COM F #162.**

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	MW #10	Date Reported:	09-23-97
Chain of Custody:	5410	Date Sampled:	09-22-97
Laboratory Number:	C107	Date Received:	09-22-97
Sample Matrix:	Water	Date Analyzed:	09-22-97
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**ND**	**1**	**0.2**
Toluene	**1.7**	**1**	**0.2**
Ethylbenzene	**2.9**	**1**	**0.2**
p,m-Xylene	**9.2**	**1**	**0.2**
o-Xylene	**8.7**	**1**	**0.1**
Total BTEX	**22.5**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**101 %**
	Bromofluorobenzene	**101 %**

References: 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. 1994.

Comments: **GCU COM F #162.**

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	N/A	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	09-23-97
Laboratory Number:	09-22-PM-BTEX.BLANK	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	09-22-97
Condition:	N/A	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	**ND**	**0.2**
Toluene	**ND**	**0.2**
Ethylbenzene	**ND**	**0.2**
p,m-Xylene	**ND**	**0.2**
o-Xylene	**ND**	**0.1**

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**96 %**
	Bromofluorobenzene	**97 %**

References: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.
USEPA, Sept. 1994.

Comments: **QA/QC for samples C105 - C110.**

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	09-23-97
Laboratory Number:	C105	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	HgCl and Cool	Date Analyzed:	09-22-97
Condition:	Cool and Intact	Analysis Requested:	BTEX

Parameter	Sample Result (ug/L)	Duplicate Result (ug/L)	Percent Diff.	Det. Limit (ug/L)	Dilution Factor
Benzene	**ND**	**ND**	**0.0%**	**0.2**	**1**
Toluene	**0.6**	**0.6**	**0.0%**	**0.2**	**1**
Ethylbenzene	**0.6**	**0.6**	**0.0%**	**0.2**	**1**
p,m-Xylene	**8.5**	**8.4**	**1.4%**	**0.2**	**1**
o-Xylene	**3.1**	**3.1**	**1.0%**	**0.1**	**1**

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria:	Parameter	Maximum Difference
	8020 Compounds	**30 %**

References: 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. 1994.

Comments: **QA/QC for samples C105 - C110.**

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Spike	Date Reported:	09-23-97
Laboratory Number:	C105	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	Cool	Date Analyzed:	09-22-97
Condition:	Cool and Intact		

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	**ND**	**50.0**	**47.9**	**0.2**	**96%**	**39-150**
Toluene	**0.6**	**50.0**	**48.9**	**0.2**	**97%**	**46-148**
Ethylbenzene	**0.6**	**50.0**	**49.3**	**0.2**	**97%**	**32-160**
p,m-Xylene	**8.5**	**100**	**104**	**0.2**	**96%**	**46-148**
o-Xylene	**3.1**	**50.0**	**50.9**	**0.1**	**96%**	**46-148**

ND - Parameter not detected at the stated detection limit.

References: 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. 1994.

Comments: **QA/QC for samples C105 - C110.**

Analyst

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CHAIN OF CUSTODY RECORD

Client/Project Name: BLAGG / AMOCO

Project Location: GCU COM F #162

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 #4	6/25/97	0945	B512	WATER	2	✓						ALL SAMPLES PRESERV.
MW #6	6/25/97	1015	B513	WATER	2	✓						COOL & w/ HgCl2
MW #7	6/25/97	1045	B514	WATER	2	✓						
MW #10	6/25/97	1120	B515	WATER	2	✓						

Samples received cool & intact

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Nelson Velez	6/25/97	1416	Dean L. [illegible]	6-25-97	1416
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Blagg / Amoco	Project #:	04034-10
Sample ID:	MW #4	Date Reported:	06-27-97
Chain of Custody:	5120	Date Sampled:	06-25-97
Laboratory Number:	B512	Date Received:	06-25-97
Sample Matrix:	Water	Date Analyzed:	06-26-97
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**1.0**	**1**	**0.2**
Toluene	**ND**	**1**	**0.2**
Ethylbenzene	**11.8**	**1**	**0.2**
p,m-Xylene	**203.0**	**1**	**0.2**
o-Xylene	**67.9**	**1**	**0.1**
Total BTEX	**284**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**99 %**
	Bromofluorobenzene	**99 %**

References: 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. 1994.

Comments: **GCU COM F #162.**

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Blagg / Amoco	Project #:	04034-10
Sample ID:	MW #6	Date Reported:	06-27-97
Chain of Custody:	5120	Date Sampled:	06-25-97
Laboratory Number:	B513	Date Received:	06-25-97
Sample Matrix:	Water	Date Analyzed:	06-26-97
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**ND**	**1**	**0.2**
Toluene	**2.9**	**1**	**0.2**
Ethylbenzene	**1.7**	**1**	**0.2**
p,m-Xylene	**15.8**	**1**	**0.2**
o-Xylene	**5.2**	**1**	**0.1**
Total BTEX	**25.6**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**96 %**
	Bromofluorobenzene	**98 %**

References: 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. 1994.

Comments: **GCU COM F #162.**

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Blagg / Amoco	Project #:	04034-10
Sample ID:	MW #7	Date Reported:	06-27-97
Chain of Custody:	5120	Date Sampled:	06-25-97
Laboratory Number:	B514	Date Received:	06-25-97
Sample Matrix:	Water	Date Analyzed:	06-26-97
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**174**	**10**	**1.8**
Toluene	**12.5**	**10**	**1.7**
Ethylbenzene	**44.8**	**10**	**1.5**
p,m-Xylene	**475**	**10**	**2.2**
o-Xylene	**162**	**10**	**1.0**
Total BTEX	**869**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**97 %**
	Bromofluorobenzene	**99 %**

References: 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. 1994.

Comments: **GCU COM F #162.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS

Client:	Blagg / Amoco	Project #:	04034-10
Sample ID:	MW #10	Date Reported:	06-27-97
Chain of Custody:	5120	Date Sampled:	06-25-97
Laboratory Number:	B515	Date Received:	06-25-97
Sample Matrix:	Water	Date Analyzed:	06-26-97
Preservative:	HgCl2 & Cool	Analysis Requested:	BTEX
Condition:	Cool & Intact		

Parameter	Concentration (ug/L)	Dilution Factor	Det. Limit (ug/L)
Benzene	**0.4**	**1**	**0.2**
Toluene	**ND**	**1**	**0.2**
Ethylbenzene	**ND**	**1**	**0.2**
p,m-Xylene	**0.7**	**1**	**0.2**
o-Xylene	**0.2**	**1**	**0.1**
Total BTEX	**1.3**		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**98 %**
	Bromofluorobenzene	**99 %**

References: 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. 1994.

Comments: **GCU COM F #162.**

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PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Laboratory Blank	Date Reported:	06-27-97
Laboratory Number:	06-26-BTEX.BLANK	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	06-26-97
Condition:	N/A	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	**ND**	**0.2**
Toluene	**ND**	**0.2**
Ethylbenzene	**ND**	**0.2**
p,m-Xylene	**ND**	**0.2**
o-Xylene	**ND**	**0.1**

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	**100 %**
	Bromofluorobenzene	**100 %**

References: 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. 1994.

Comments: **QA/QC for samples B511 - B520.**

Analyst

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Duplicate	Date Reported:	06-27-97
Laboratory Number:	B511	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	HgCl and Cool	Date Analyzed:	06-26-97
Condition:	Cool and Intact	Analysis Requested:	BTEX-8020

Parameter	Sample Result (ug/L)	Duplicate Result (ug/L)	Percent Diff.	Det. Limit (ug/L)	Dilution Factor
Benzene	**164**	**164**	**0.0%**	**0.2**	**1**
Toluene	**0.6**	**0.6**	**0.0%**	**0.2**	**1**
Ethylbenzene	**59.0**	**58.5**	**0.8%**	**0.2**	**1**
p,m-Xylene	**34.4**	**34.4**	**0.0%**	**0.2**	**1**
o-Xylene	**0.7**	**0.7**	**0.0%**	**0.1**	**1**

ND - Parameter not detected at the stated detection limit.

QA/QC Acceptance Criteria:	Parameter	Maximum Difference
	8020 Compounds	**30 %**

References: 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. 1994.

Comments: **QA/QC for samples B511 - B520.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020
AROMATIC VOLATILE ORGANICS
QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	Matrix Spike	Date Reported:	06-27-97
Laboratory Number:	B511	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	Cool	Date Analyzed:	06-26-97
Condition:	Cool and Intact		

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	**164**	**50.0**	**214**	**0.2**	**100%**	**39-150**
Toluene	**0.6**	**50.0**	**50.4**	**0.2**	**100%**	**46-148**
Ethylbenzene	**59.0**	**50.0**	**110**	**0.2**	**101%**	**32-160**
p,m-Xylene	**34.4**	**100**	**134**	**0.2**	**100%**	**46-148**
o-Xylene	**0.7**	**50.0**	**50.9**	**0.1**	**100%**	**46-148**

ND - Parameter not detected at the stated detection limit.

References: 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. 1994.

Comments: **QA/QC for samples B511 - B520.**

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ANAITAS ENVIRONMENTAL LABS

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CHAIN OF CUSTODY

Page 1 of 1

PROJECT MANAGER:
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):
MW #4	3/20/97	10:30	WATER					✓																				
MW #6	3/20/97	9:25	WATER					✓																				
MW #7	3/20/97		WATER					✓	JW			3/21/97																
MW #10	3/20/97	10:00	WATER					✓																				

ORGANIC ANALYSES | WATER ANALYSES | METALS

COMMENTS: ALL SAMPLES PRESERV. - COOL & HgCl

Project Information	Sample Receipt
Proj. #:	No. Containers:
Proj. Name: Scu com F 162	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: Nathan Vef	Signature: Nathan Vef	Signature:
Date: 3/20/97	Date: 3/24/97	Date:
Company: BLAGG	Company: BLAGG	Company:
Time: SEE SAMPLE ID	Time: 10:50	Time:
Received By:	**Received By:**	**Received By:**
Signature:	Signature:	Signature:
Date:	Date:	Date: 3/24/97
Company:	Company:	Company: Anaitas
Time:	Time:	Time: 1055

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 F 162	Report Date:	03/28/97
Sample ID:	MW - 4	Date Sampled:	03/20/97
Lab ID:	6472	Date Received:	03/24/97
Sample Matrix:	Water	Date Analyzed:	03/26/97
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.50
Toluene	0.71	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	11.4	1.00
o-Xylene	2.65	0.50
Total BTEX	**14.8**	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	104	88 - 110%
Bromofluorobenzene	99	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 F 162	Report Date:	03/28/97
Sample ID:	MW - 6	Date Sampled:	03/20/97
Lab ID:	6473	Date Received:	03/24/97
Sample Matrix:	Water	Date Analyzed:	03/26/97
Preservative:	Cool, $HgCl_2$		
Condition:	Intact		

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.50
Toluene	2.05	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	7.72	1.00
o-Xylene	ND	0.50
Total BTEX	**9.77**	

ND - Analyte not detected at the stated detection limit.

Quality Control:

Surrogate	Percent Recovery	Acceptance Limits
Trifluorotoluene	104	88 - 110%
Bromofluorobenzene	112	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 F 162	Report Date:	03/28/97
Sample ID:	MW - 10	Date Sampled:	03/20/97
Lab ID:	6474	Date Received:	03/24/97
Sample Matrix:	Water	Date Analyzed:	03/26/97
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