

3R - 378

REPORTS

DATE:

FEB. 2001

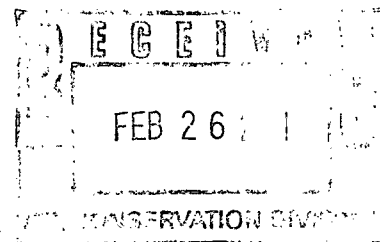
BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

February 22, 2001

Mr. William C. Olson, Hydrologist
New Mexico Oil Conservation Division-NMOCD
Environmental Bureau
1220 St. Francis Drive
Santa Fe, New Mexico 87505



**Re: BP Amoco (formerly Amoco Production Company)
Groundwater Monitoring Report
McCoy GC A # 1A, Unit F, Sec. 18, T31N, R10W, NMPM
San Juan County, New Mexico**

Dear Mr. Olson:

BP Amoco has retained Blagg Engineering, Inc. to conduct environmental monitoring of groundwater at the McCoy GC A # 1A well site. The attached report discloses the findings from a 1992 site assessment, the 1993 pit closure activities, the 1996 monitor well sampling, and the 2000 monitor well general water quality sampling. No permanent closure is requested at this time.

If you have any questions concerning this document, please contact either myself or Jeffrey C. Blagg at the address or phone number listed above. Thank you for your cooperation and assistance.

Respectfully submitted:
Blagg Engineering, Inc.

Nelson J. Velez
Staff Geologist

cc: Mr. Denny Foust, Environmental Geologist, NMOCD District III Office, Aztec, NM
Mr. Buddy Shaw, Environmental Coordinator, BP Amoco, Farmington, NM (without lab documents)

BP AMOCO

McCOY GC A #1A - Separator pit

Se/4 Nw/4 Sec. 18, T31N, R10W

Site Assessment Date:

May 12, '92

Pit Closure Dates:

Jul. 26, '93, Aug. 9 & 30, '93, Sept. 10 & 22, '93

Monitor Well Installation Dates:

Jun. 13, '96

Pit Closure Information:

Pit closure for the separator pit was conducted by Envirotech, Inc. in July through September, 1993 (*Figure 1*). The initial testing of the separator pit (July 26, 1993) presents **BTEX** (benzene, toluene, ethylbenzene, and total xylenes) values below New Mexico Water Quality Control Commission (**NMWQCC**) allowable concentration for groundwater. However, test holes advanced in the suspected groundwater gradient direction(s) (*designated T 1 and T 2*) revealed benzene or total xylenes exceeded NMWQCC standards. Based on this information, BP Amoco proceeded with aggressive cleanup with what is referred to as "trench remediation method or TRM", in which a series of trenches is advanced, exposing the groundwater to the atmosphere for accelerated release of the volatile hydrocarbons encountered. In addition, the groundwater is also pumped and disposed via water hauling trucks to an approve facility. After several removals and recharge of the groundwater, the pit and trenches were sampled for BTEX on August 9, 1993. The laboratory analysis revealed BTEX values for the pit were again below the NMWQCC standards, but exceeded for benzene in two (2) of the three (3) trenches [named the east and center (ctr.) trench]. Based on the second sampling event, TRM was expanded with another seven (7) trenches. It is assumed that water disposal was conducted within four (4) of the trenches based on subsequent samples collected after their initial sampling on August 30, 1993. *Figure 1* displays the approximate pit area as well as Blagg Engineering, Inc.'s (**BEI**) best interpretation of the test hole locations and the trenching layout, *please to note that the information and/or diagrams presented within the pit closure documents do not correlate to the exact locations illustrated in the schematic due to conflicting data from Envirotech, Inc.'s field notes*. The following summary table discloses all of the BTEX results from the remedial effort during the pit closure activities.

GW Sampling ID	Sample Date	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Total Xylenes (ppb)
PIT @ 5 ft.	7/26/93	1.3	3.3	3.6	135.4
T 1 @ 5 ft.	7/26/93	14.0	1.6	1.2	3.7
T 2 @ 6.5 ft.	7/26/93	19.7	82	234	1,082
PIT WATER	8/9/93	ND	1.5	1.7	34.0
E. TRENCH	8/9/93	372	366	7.0	565
W. TRENCH	8/9/93	0.3	4.9	2.4	40.5
CTR. TRENCH	8/9/93	35.8	60	4.6	442
TRENCH 1	8/30/93	ND	0.6	0.3	4.2
TRENCH 2 No.	8/30/93	ND	1.1	ND	2.6
TRENCH 2 So.	8/30/93	10.2	830	9.4	1,840
TRENCH 2 So.	9/10/93	5.1	125	45.4	663
TRENCH 3	8/30/93	11.9	179	ND	805
TRENCH 3	9/10/93	ND	0.4	ND	3.0
TRENCH 4	8/30/93	184	520	ND	1,063
TRENCH 4	9/10/93	44.0	117	ND	605
TRENCH 4	9/22/93	28.1	3.2	10.1	464

GW Sampling ID	Sample Date	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Total Xylenes (ppb)
TRENCH 5	8/30/93	88	278	5.5	601
TRENCH 5	9/10/93	0.3	2.2	2.4	56.0
TRENCH 6	8/30/93	0.4	2.4	ND	11.4
TRENCH 7	8/30/93	0.3	2.3	2.1	46.6

NOTE: GW = groundwater; ND indicated non-detect at detection limits, ppb indicates parts per billion.

Groundwater Monitor Well Installation:

Four (4) monitor wells were installed on June 13, 1996 utilizing a backhoe due to the cobbles encountered during previous activities (*Figure 2*). Boring logs and monitor well construction and completion schematics are included in this report.

Groundwater Monitor Well Sampling Procedures:

Groundwater samples were collected from site monitor wells following US EPA: SW-846 protocol. The samples were collected using new disposable bailers and placed in new laboratory supplied forty (40) milliliter glass vials with teflon septa caps. Samples were analyzed for BTEX per US EPA Method 8020. Additional groundwater was collected and placed in laboratory supplied and cleaned 500 ml plastic containers and analyzed for general water quality per approved US EPA methods and quality assurance/quality control (QA/QC).

The samples were preserved cool (BTEX samples also preserved with mercuric chloride or hydrochloric acid) and hand delivered to a qualified laboratory for testing. Waste generated during monitor well sampling and development was disposed of utilizing the separator tank pit located on the well site.

Groundwater Quality & Flow Direction Information:

The following summary table discloses the BTEX levels reported within the four (4) monitor wells during the June 18, 1996 sampling event.

Monitor Well	Sample Date	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Total Xylenes (ppb)
1	6/18/96	ND	ND	ND	ND
2	6/18/96	ND	1	ND	1
3	6/18/96	ND	ND	ND	ND
4	6/18/96	ND	ND	ND	ND

NOTE: ppb indicates parts per billion, ND indicates non-detect at detection limits.

The general chemistry laboratory data can be reviewed at the end of the text portion of this report. The initial testing in June, 1996 reported total dissolve solids (TDS) in excess of the NMWQCC's regulatory standards (1,000 mg/L) within MW #2 (8,370), MW #3 (2,300), and MW #4 (1,040). However, test results from the May, 2000 sampling event reports substantially decreased TDS level in MW #2 (4,560) and slightly lowered values in MW #3 (1,530) and #4 (747). The chloride level in MW #2 (1,290 mg/L) also excess regulatory standards (250 mg/L), but was significantly diminished to below regulatory standards (240 mg/L) during May, 2000 sampling event.

Groundwater contour maps of relative water table elevations for the June, 1996 and May, 2000 sampling events are shown in *Figure 3 and 4* respectively. The general flow direction was in the south direction during the June, 1996 sampling event and in the south-southwest direction during the May, 2000 sampling event.

Summary and Recommendations:

Based on the pit closure documentation and the monitor well test results, it appears that the separator pit has effectively been remediated. However, verification is needed in the south and down gradient direction in the vicinity of T 2. Based on the groundwater flow direction documented, contamination encountered due east of the pit and south of the well head does not appear to be associated with the separator pit. Therefore it is possible that one or more source areas may have existed in these specific localities (east and center trenches and trenches 3, 4, and 5 sampling areas - see notes on Figure 1).

Recommendations for future investigation(s) and/or monitoring at the site are as follows.

1. Investigate via test hole advancement or monitor well installation in the proximity of T 2. If all BTEX and general water quality meet background or NMWQCC standards during the initial sampling event, then it is proposed to request closure of the separator pit with an attached risk based assessment addressing the localization of the TDS level encountered in MW #2.
2. Conduct further investigation via test hole advancements or monitor well installations in those areas previously identified of exceeding NMWQCC standards for BTEX east and southeast of the separator pit. Once verification has been conducted, request for closure will adhere to the criteria established in BP Amoco's NMOCD approved groundwater management plan.

GENERAL WATER QUALITY 1996 - 2000 COMPARISON

BP AMOCO

McCOY GC A # 1A

UNIT F , SEC. 18 , T31N , R10W

PARAMETERS	MW # 1 06/18/96	MW # 1 05/30/00	MW # 2 06/18/96	MW # 2 05/30/00	MW # 3 06/18/96	MW # 3 05/30/00	MW # 4 06/18/96	MW # 4 05/30/00	Units
LAB pH	7.9	7.02	7.2	7.25	8.0	7.35	8.2	7.48	s. u.
LAB CONDUCTIVITY @ 25 C	1,310	1,640	10,800	9,130	3,500	3,070	1,750	1,520	umhos / cm
TOTAL DISSOLVED SOLIDS @ 180 C	845	800	8,370	4,560	2,300	1,530	1,100	756	mg / L
TOTAL DISSOLVED SOLIDS (Calc)	810	789	6,380	4,510	2,110	1,510	1,040	747	mg / L
SODIUM ABSORPTION RATIO	-	0.4	-	7.7	-	3.8	-	2.4	ratio
TOTAL ALKALINITY AS CaCO3	382	768	2,050	838	573	608	478	452	mg / L
TOTAL HARDNESS AS CaCO3	468	652	3,010	1,790	915	704	428	380	mg / L
BICARBONATE as CaCO3	382	768	2,050	838	573	608	478	452	mg / L
CARBONATE AS CaCO3	NA	< 0.1	NA	< 0.1	NA	< 0.1	NA	< 0.1	mg / L
HYDROXIDE AS CaCO3	-	< 0.1	-	< 0.1	-	< 0.1	-	< 0.1	mg / L
NITRATE NITROGEN	NA	2.0	NA	< 0.1	NA	0.3	NA	0.3	mg / L
NITRITE NITROGEN	NA	0.158	NA	< 0.001	NA	0.004	NA	0.003	mg / L
CHLORIDE	40.0	17.1	1,290	240	202	21.7	20.0	12.8	mg / L
FLUORIDE	-	0.66	-	1.63	-	1.84	-	1.32	mg / L
PHOSPHATE	-	0.5	-	0.9	-	0.1	-	0.6	mg / L
SULFATE	261	43.4	1,700	2,360	883	645	379	213	mg / L
IRON	-	7.2	-	10.5	-	0.075	-	0.017	mg / L
CALCIUM	156	195	694	446	271	179	116	115	mg / L
MAGNESIUM	19.3	40.0	312	165	58.0	62.5	33.8	22.5	mg / L
POTASSIUM	5.00	0.7	240	32.5	13.0	0.9	< 5.0	1.0	mg / L
SODIUM	100	23.2	920	750	340	230	200	106	mg / L
CATION / ANION DIFFERENCE	1.36	0.00	2.88	0.63	3.09	0.01	1.89	0.49	%

FIGURE 1



ANIMAS RIVER

ACCESS RD.

TRENCH LOCATIONS
INTERPRETATED
FROM ENVIROTECH, INC.
FIELD REPORTS

SCRUBS
&
TREES

PROD
TANK

TANK
PIT

FENCE

FENCE

SEP

SEP

FUTURE
MW #3

ALL SAMPLES
FROM PIT AREA
BELOW REGS.
FOR BTEX

FUTURE
MW #2
ORIGINAL
PIT
EXCAVATION
(approximated)

FUTURE
MW #1

FUTURE
TANK PIT &
FENCE LOCATION

WELL
HEAD

B #1
WELL
HEAD

ALL SAMPLES (3)
EXCEEDED REGS.
FOR BTEX

T 1

NO SUBSEQUENT
SAMPLES COLLECTED
BOTH SAMPLE PTS
EXCEEDED REGS.
FOR BTEX

FUTURE
MW #4

SCRUBS
&
WEEDS

W. TRENCH

CTR. TRENCH

E. TRENCH

NO SUBSEQUENT
SAMPLES COLLECTED
BOTH SAMPLE PTS
EXCEEDED REGS.
FOR BTEX

TRENCH 5

TRENCH 3

TRENCH 2

TRENCH 1

SAMPLE POINT
DESIGNATION

TRENCH 7

INITIAL SAMPLES EXCEEDED
REGS. FOR BTEX, SUBSEQUENT
WERE BELOW

NOTE: TRENCH REMEDIATION
METHOD (TRM)

MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE
AS THE INSTRUMENTS USED IN OBTAINING THE
FOOTAGE AND BEARING FROM THE WELL HEAD
(BRUNTON, COMPASS AND LASER RANGE FINDER).
ALL OTHER STRUCTURES DISPLAYED ON THE SITE
MAP ARE SOLELY FOR REFERENCE AND ARE NOT TO
SCALE.

0 50 100 FT.

BP AMOCO

McCOY GC A1A

SE/4 NW/4 SEC. 18, T31N, R10W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 832-1196

PROJECT: REMEDIATION

DRAWN BY: NJ/V

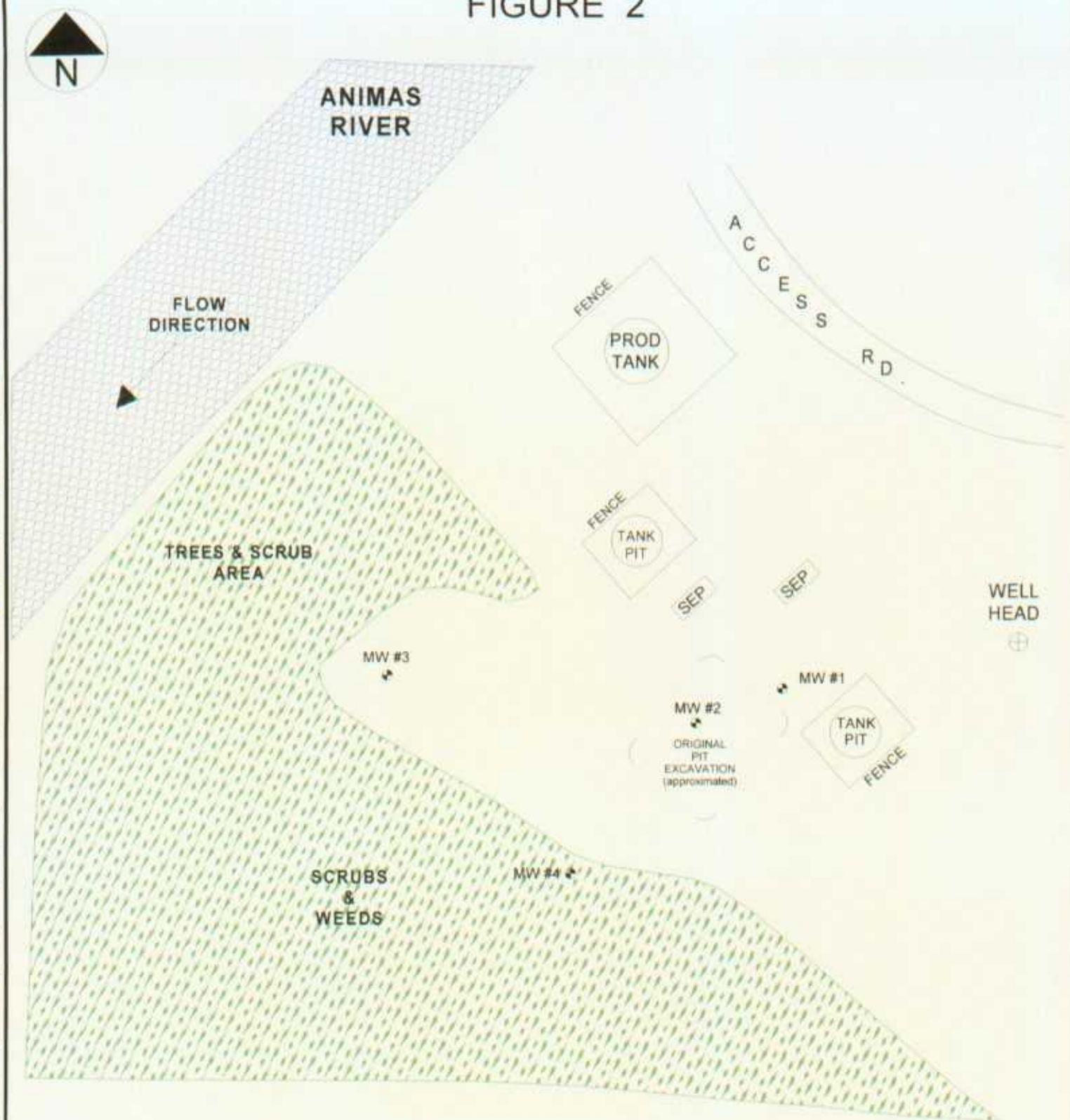
FILENAME: TRENCH-1

REVISED: 2/14/01 NJ/V

ESTIMATED
TRENCH
CONFIGURATION

8/93

FIGURE 2



MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND ARE NOT TO SCALE.

0 50 100 FT.

BP AMOCO

McCOY GC A1A

SE/4 NW/4 SEC. 18, T31N, R10W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

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PHONE (505) 832-1199

PROJECT: MW MONITORING

DRAWN BY: NJV

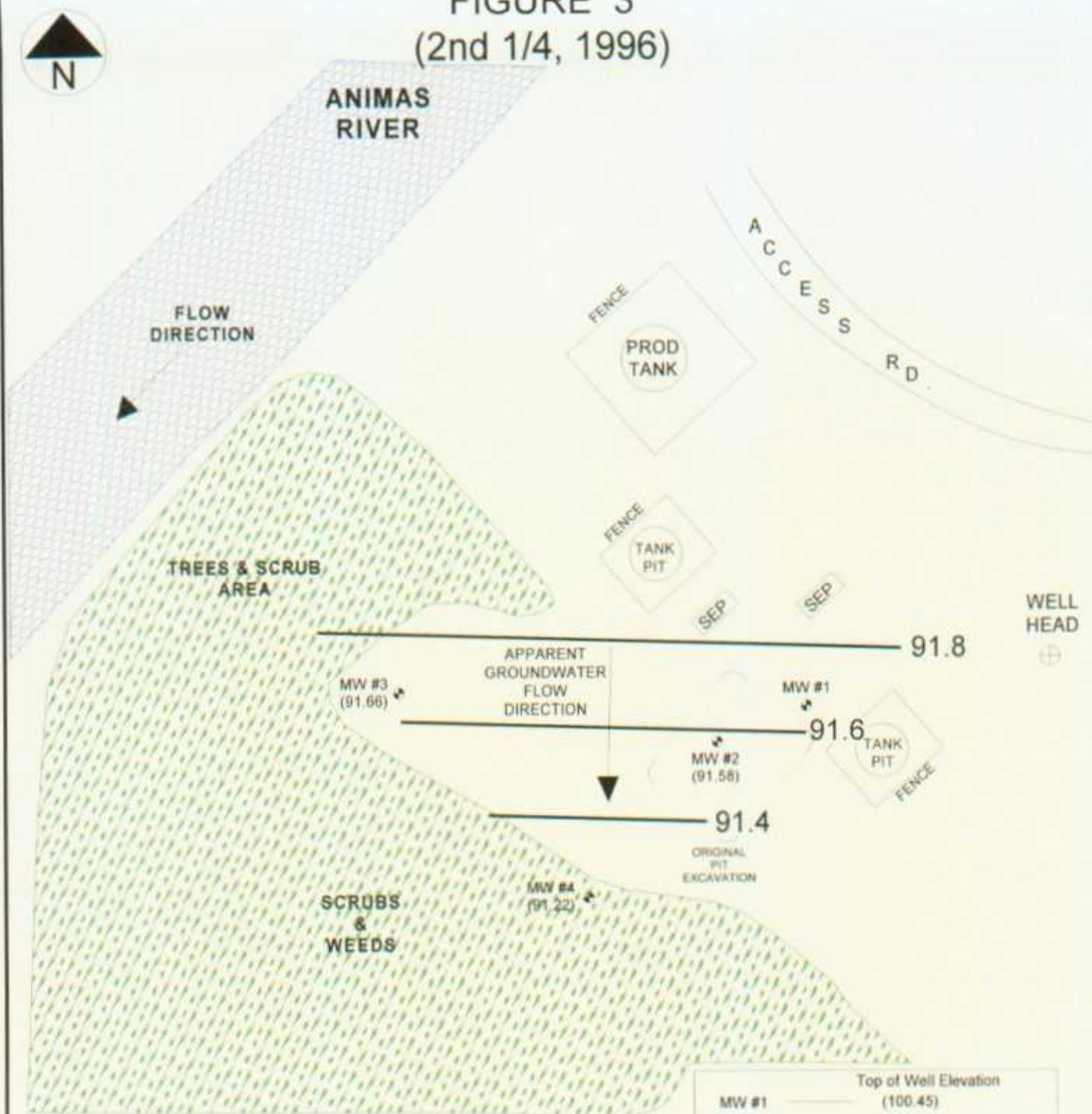
FILENAME: SITE-MAP

REVISED: 2/14/01 NJV

**SITE
MAP**

5/00

FIGURE 3
(2nd 1/4, 1996)



NOTE: TRENCH REMEDIATION METHOD (TRM) USED ON LOCATION

MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND ARE NOT TO SCALE.

Top of Well Elevation	
MW #1	(100.45)
MW #2	(98.45)
MW #3	(99.06)
MW #4	(98.27)
MW #1	Groundwater Elevation as of 6/18/96.

0 50 100 FT.

BP AMOCO

McCOY GC A1A

SE/4 NW/4 SEC. 18, T31N, R10W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1188

PROJECT: MW INSTALL.

DRAWN BY: NJV

FILENAME: 05-18-GW

REVISED: 2/15/01 NJV

**GROUNDWATER
GRADIENT
MAP
6/96**

FIGURE 4
(2nd 1/4, 2000)



ANIMAS RIVER

FLOW DIRECTION

TREES & SCRUB AREA

FENCE

PROD TANK

ACCESS RD

FENCE

TANK PIT

SEP

SEP

WELL HEAD

APPARENT GROUNDWATER FLOW DIRECTION

MW #3 (93.11) 93.25

93.00

MW #2

ORIGINAL PIT EXCAVATION

MW #1 (93.76)

TANK PIT

FENCE

92.75

SCRUBS & WEEDS

MW #4 (92.65)

NOTE: TRENCH REMEDIATION METHOD (TRM) USED ON LOCATION

MONITOR WELL LOCATIONS ARE ONLY AS ACCURATE AS THE INSTRUMENTS USED IN OBTAINING THE FOOTAGE AND BEARING FROM THE WELL HEAD (BRUNTON COMPASS AND LASER RANGE FINDER). ALL OTHER STRUCTURES DISPLAYED ON THE SITE MAP ARE SOLELY FOR REFERENCE AND ARE NOT TO SCALE.

	Top of Well Elevation
MW #1	(100.45)
MW #2	(98.45)
MW #3	(99.06)
MW #4	(98.27)
MW #1 (93.76)	Groundwater Elevation as of 5/30/00

0 50 100 FT.

BP AMOCO

McCOY GC A1A

SE/4 NW/4 SEC. 18, T31N, R10W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW MONITORING

DRAWN BY: NJV

FILENAME: 05-30-GW

REVISED: 2/15/01 NJV

GROUNDWATER GRADIENT MAP
5/00

BLAGG ENGINEERING, Inc.

P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

BORE / TEST HOLE REPORT

LOCATION NAME: McCOY GC A # 1A
CLIENT: AMOCO PRODUCTION COMPANY
CONTRACTOR: BLAGG ENGINEERING, INC. / PAUL & SONS
EQUIPMENT USED: BACKHOE
BORING LOCATION: S79W, 89 FEET FROM WELL HEAD.

BORING #..... BH - 1
MW #..... 1
PAGE #..... 1
DATE STARTED 6/13/96
DATE FINISHED 6/13/96
OPERATOR..... BM
PREPARED BY NJV

DEPTH
FEET

INTERVAL

LITHOLOGY
INTERVAL

MW
SCHEMATIC

FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 1.87 FT. ABOVE GROUND SURFACE.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

TOS

3.13

TD

8.13

DARK YELLOWISH BROWN SAND, NON COHESIVE, SLIGHTLY MOIST,
FIRM, NO APPARENT HYDROCARBON ODOR OBSERVED (0.0 - 5.5 FT. INTERVAL).

▼ GW DEPTH ON 6/18/96 = 6.14 FT. (APPROX.) FROM GROUND SURFACE.

DARK YELLOWISH BROWN SAND & GRAVEL, NON COHESIVE, SLIGHTLY MOSIT TO
SATURATED (AT GROUNDWATER), FIRM TO LOOSE, NO APPARENT HYDROCARBON
ODOR OBSERVED (5.5 - 8.13 FT. INTERVAL).

NOTES:



- SAND.



- SAND & GRAVEL (VARYING SIZES).

TOS - TOP OF SCREEN FROM GROUND SURFACE.

TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.

GW - GROUND WATER.

DRAWING: MCCOY-1

DATE: 3/5/97

DWN BY: NJV

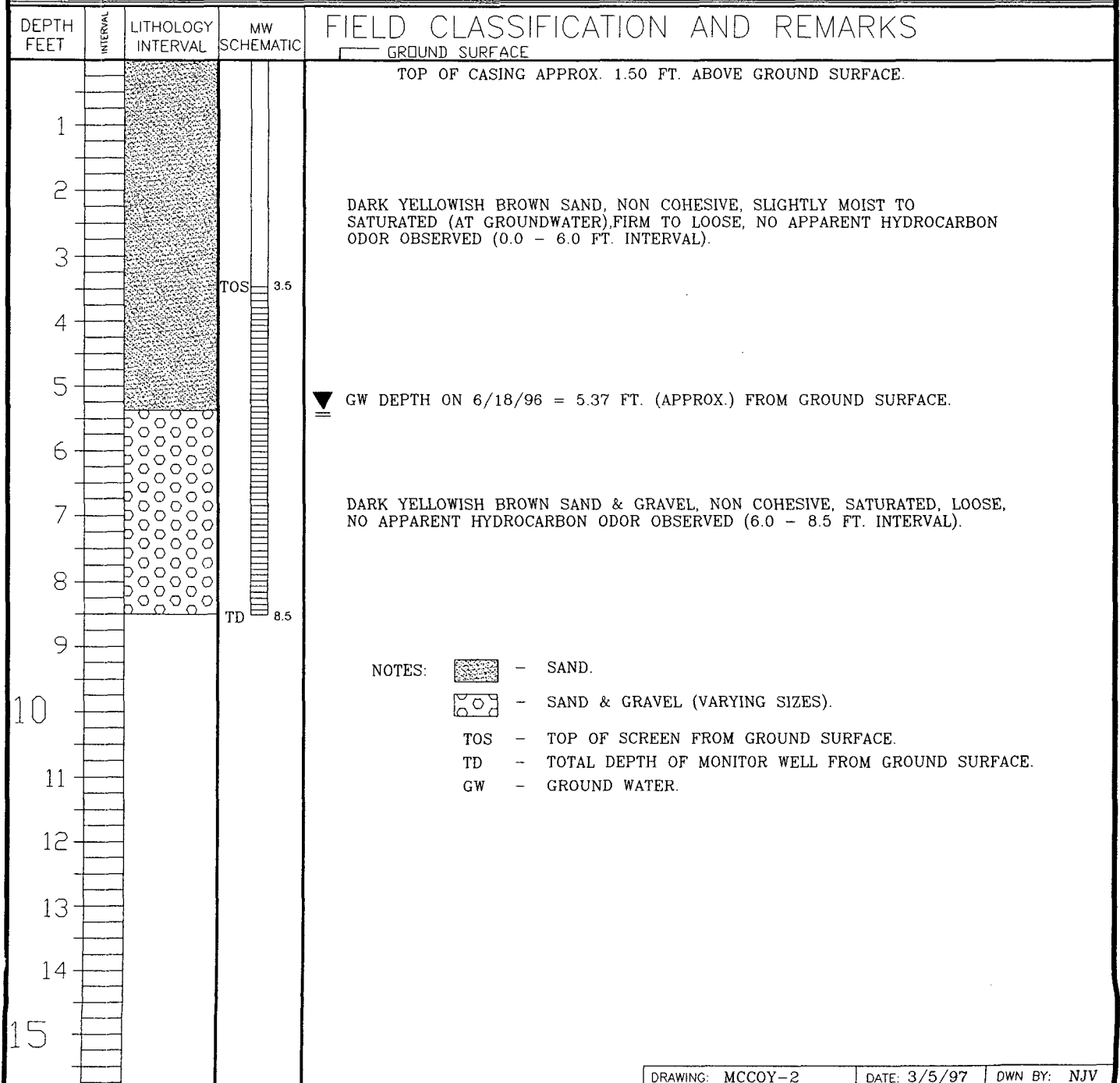
BLAGG ENGINEERING, Inc.

P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

BORE / TEST HOLE REPORT

LOCATION NAME: McCOY GC A # 1A
CLIENT: AMOCO PRODUCTION COMPANY
CONTRACTOR: BLAGG ENGINEERING, INC. / PAUL & SONS
EQUIPMENT USED: BACKHOE
BORING LOCATION: S76W, 123 FEET FROM WELL HEAD.

BORING #..... BH - 2
MW #..... 2
PAGE #..... 2
DATE STARTED 6/13/96
DATE FINISHED 6/13/96
OPERATOR..... BM
PREPARED BY NJV



DRAWING: MCCOY-2

DATE: 3/5/97

DWN BY: NJV

BLAGG ENGINEERING, Inc.

P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

BORE / TEST HOLE REPORT

LOCATION NAME: McCOY GC A # 1A
CLIENT: AMOCO PRODUCTION COMPANY
CONTRACTOR: BLAGG ENGINEERING, INC. / PAUL & SONS
EQUIPMENT USED: BACKHOE
BORING LOCATION: S87W, 234 FEET FROM WELL HEAD.

BORING #..... BH - 3
MW #..... 3
PAGE #..... 3
DATE STARTED 6/13/96
DATE FINISHED 6/13/96
OPERATOR..... BM
PREPARED BY NJV

DEPTH FEET	INTERVAL	LITHOLOGY INTERVAL	MW SCHEMATIC	FIELD CLASSIFICATION AND REMARKS
				GROUND SURFACE
				TOP OF CASING APPROX. 2.40 FT. ABOVE GROUND SURFACE.
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

TOS 2.6

▼ GW DEPTH ON 6/18/96 = 5.00 FT. (APPROX.) FROM GROUND SURFACE.

TD 7.6

DARK YELLOWISH BROWN SAND, NON COHESIVE, SLIGHTLY MOIST TO SATURATED (AT GROUNDWATER), FIRM TO LOOSE, NO APPARENT HYDROCARBON ODOR OBSERVED (0.0 - 5.0 FT. INTERVAL).

DARK YELLOWISH BROWN SAND & GRAVEL, NON COHESIVE, SATURATED, LOOSE. NO APPARENT HYDROCARBON ODOR OBSERVED (5.0 - 7.6 FT. INTERVAL).

NOTES:

-  - SAND.
-  - SAND & GRAVEL (VARYING SIZES).
- TOS - TOP OF SCREEN FROM GROUND SURFACE.
- TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.
- GW - GROUND WATER.

BLAGG ENGINEERING, Inc.

P.O. BOX 87
BLOOMFIELD, NM 87413
(505) 632-1199

BORE / TEST HOLE REPORT

LOCATION NAME: McCOY GC A # 1A
CLIENT: AMOCO PRODUCTION COMPANY
CONTRACTOR: BLAGG ENGINEERING, INC. / PAUL & SONS
EQUIPMENT USED: BACKHOE
BORING LOCATION: S63W, 186 FEET FROM WELL HEAD.

BORING #..... BH - 4
MW #..... 4
PAGE #..... 4
DATE STARTED 6/13/96
DATE FINISHED 6/13/96
OPERATOR..... BM
PREPARED BY NJV

DEPTH
FEET

INTERVAL

LITHOLOGY
INTERVAL

MW
SCHEMATIC

FIELD CLASSIFICATION AND REMARKS

GROUND SURFACE

TOP OF CASING APPROX. 1.80 FT. ABOVE GROUND SURFACE.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

TOS

1.13

TD

6.13

DARK YELLOWISH BROWN SAND, NON COHESIVE, SLIGHTLY MOIST TO SATURATED (AT GROUNDWATER), FIRM TO LOOSE, NO APPARENT HYDROCARBON ODOR OBSERVED (0.0 - 4.5 FT. INTERVAL).

▼ GW DEPTH ON 6/18/96 = 5.25 FT. (APPROX.) FROM GROUND SURFACE.

DARK YELLOWISH BROWN SAND & GRAVEL, NON COHESIVE, SATURATED, LOOSE, NO APPARENT HYDROCARBON ODOR OBSERVED (4.5 - 6.13 FT. INTERVAL).

NOTES:  - SAND.

 - SAND & GRAVEL (VARYING SIZES).

TOS - TOP OF SCREEN FROM GROUND SURFACE.

TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.

GW - GROUND WATER.

DRAWING: MCCOY-4

DATE: 3/5/97

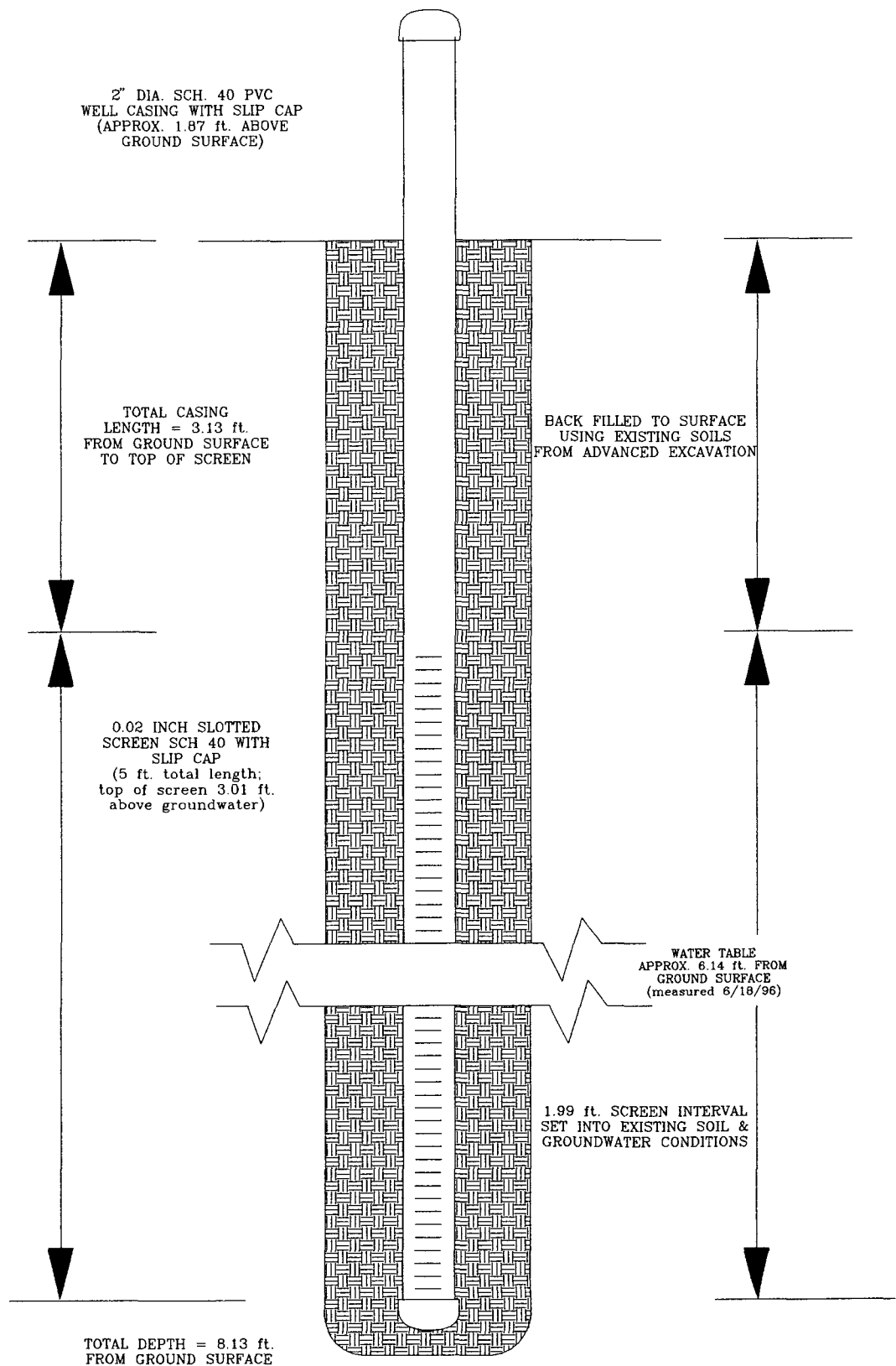
DWN BY: NJV

MONITOR WELL #1

AMOCO PRODUCTION COMPANY
MCCOY GC A # 1A
MONITOR WELL CONSTRUCTION & COMPLETION
INSTALLED WITH BACKHOE

BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199

MONITOR WELL SCHEMATIC
DRAFTED BY: NJV
DATE: MAR. '97
FILENAME: MW-1

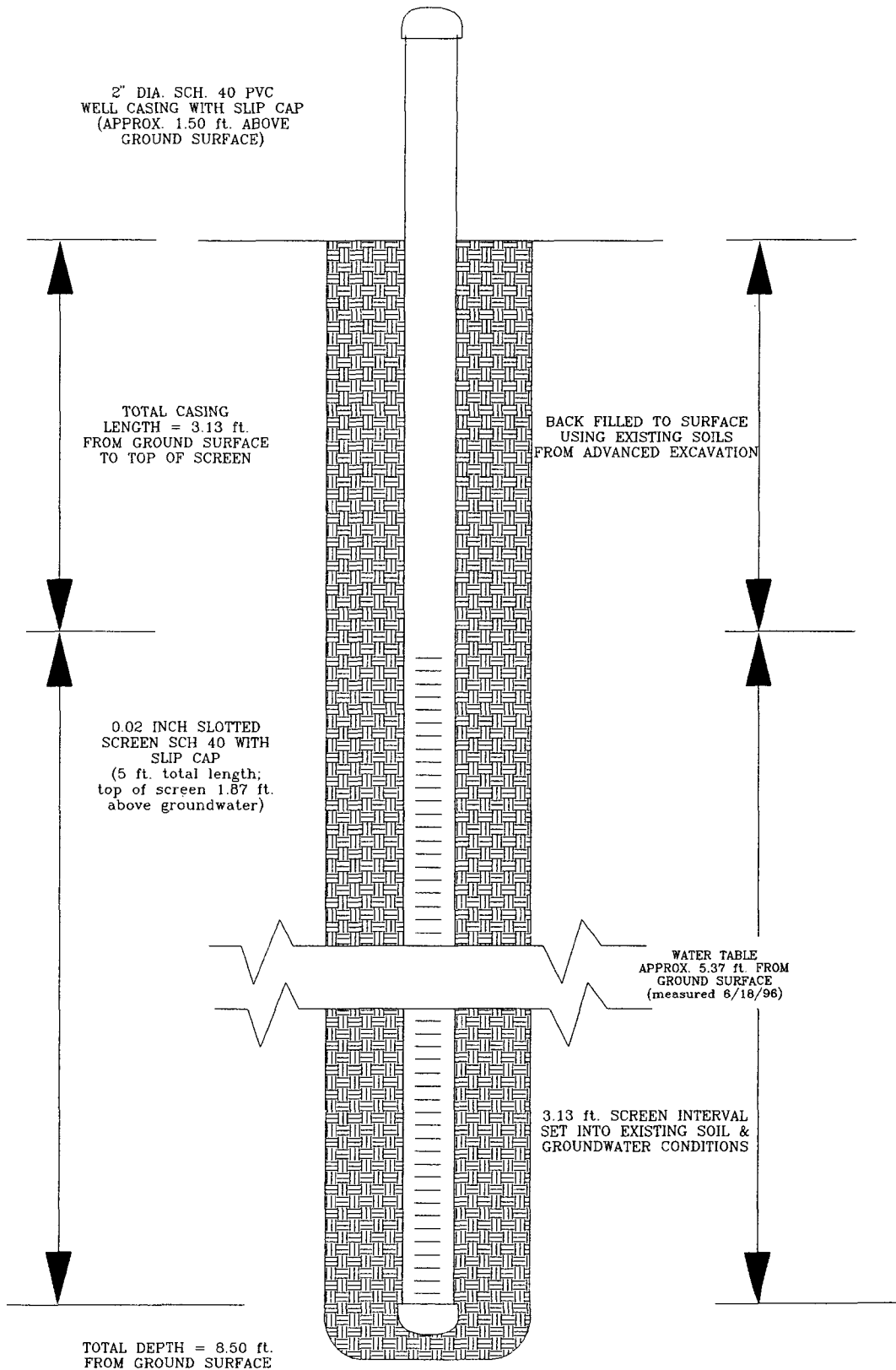


MONITOR WELL #2

AMOCO PRODUCTION COMPANY
McCoy GC A # 1A
MONITOR WELL CONSTRUCTION & COMPLETION
INSTALLED WITH BACKHOE

BLAGG ENGINEERING, INC.
CONSULTING PETROLEUM / RECLAMATION SERVICES
P.O. BOX 87
BLOOMFIELD, NEW MEXICO 87413
PHONE: (505) 632-1199

MONITOR WELL SCHEMATIC
DRAFTED BY: NJV
DATE: MAR. '97
FILENAME: MW-2



MONITOR WELL #3

AMOCO PRODUCTION COMPANY

McCOY GC A # 1A

MONITOR WELL CONSTRUCTION & COMPLETION

INSTALLED WITH BACKHOE

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

MONITOR WELL SCHEMATIC

DRAFTED BY: NJV

DATE: MAR. '97

FILENAME: MW-3

2" DIA. SCH. 40 PVC
WELL CASING WITH SLIP CAP
(APPROX. 2.40 ft. ABOVE
GROUND SURFACE)

TOTAL CASING
LENGTH = 2.60 ft.
FROM GROUND SURFACE
TO TOP OF SCREEN

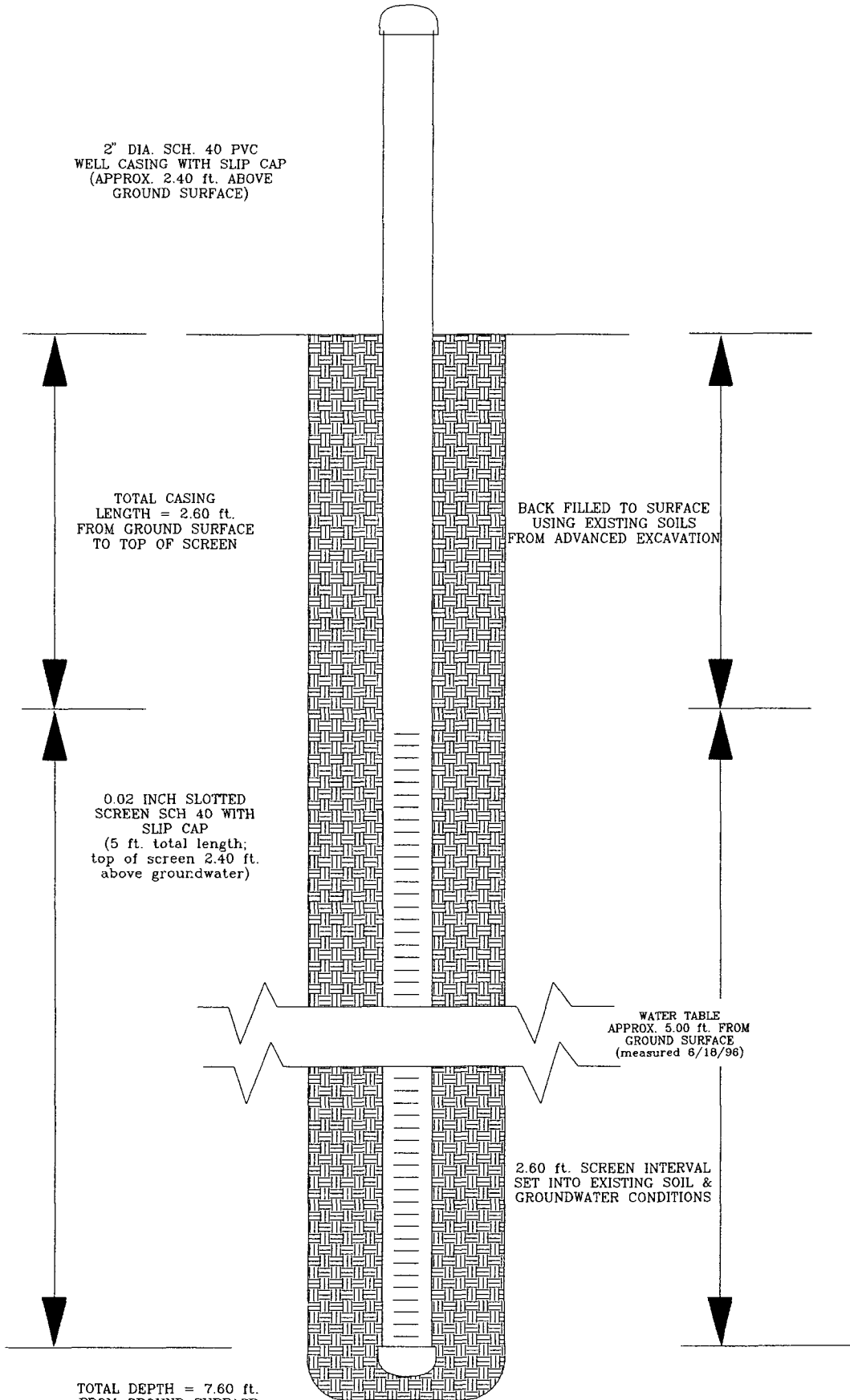
0.02 INCH SLOTTED
SCREEN SCH 40 WITH
SLIP CAP
(5 ft. total length;
top of screen 2.40 ft.
above groundwater)

BACK FILLED TO SURFACE
USING EXISTING SOILS
FROM ADVANCED EXCAVATION

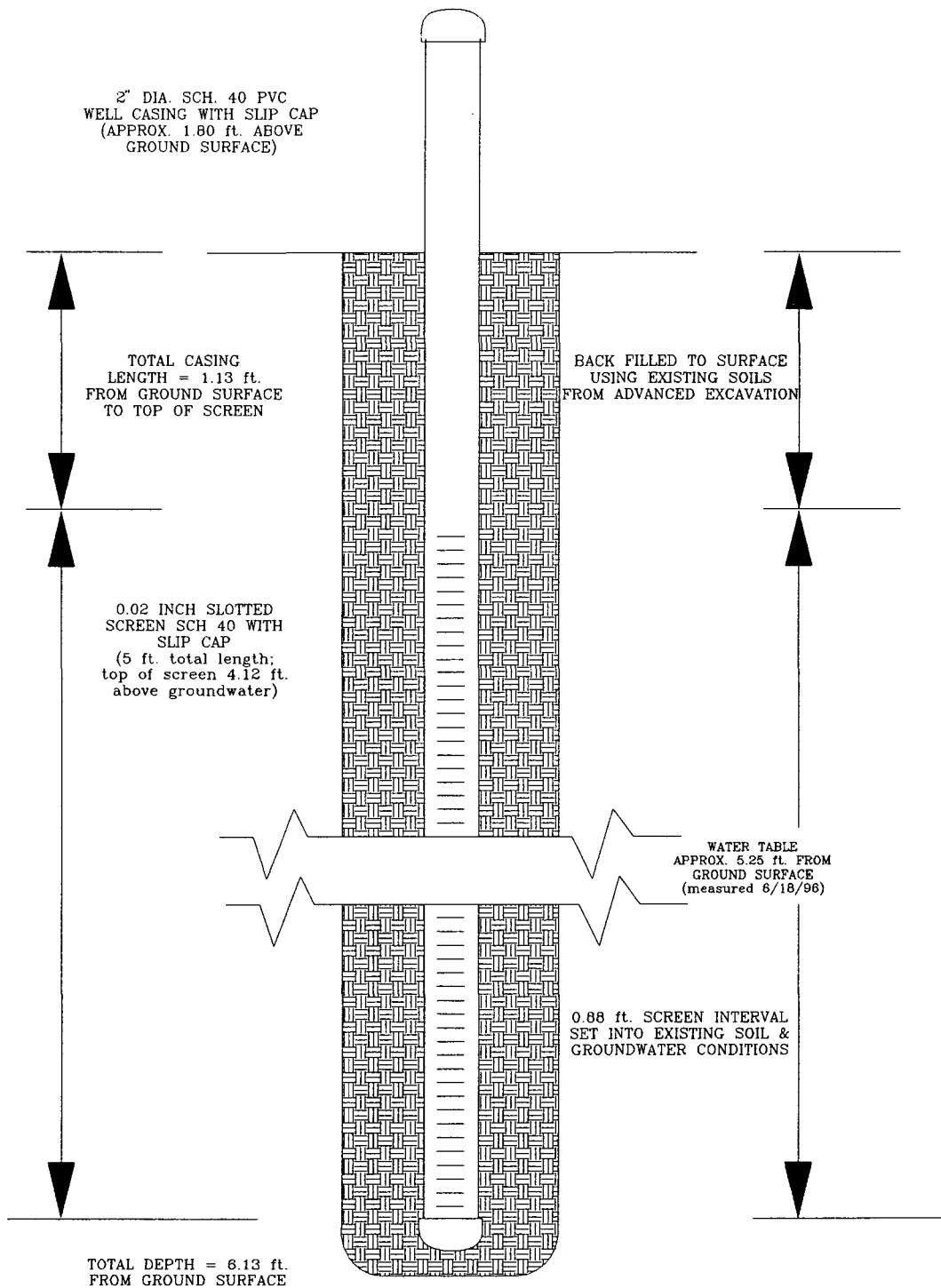
WATER TABLE
APPROX. 5.00 ft. FROM
GROUND SURFACE
(measured 8/18/96)

2.60 ft. SCREEN INTERVAL
SET INTO EXISTING SOIL &
GROUNDWATER CONDITIONS

TOTAL DEPTH = 7.60 ft.
FROM GROUND SURFACE



MONITOR WELL #4



AMOCO PRODUCTION COMPANY

MCCOY GC A # 1A

MONITOR WELL CONSTRUCTION & COMPLETION

INSTALLED WITH BACKHOE

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

MONITOR WELL SCHEMATIC

DRAFTED BY: NJV

DATE: MAR. '97

FILENAME: MW-4

BLAGG ENGINEERING, INC.**MONITOR WELL SAMPLING DATA**CLIENT : AMOCO PRODUCTION CO.CHAIN-OF-CUSTODY # : 2379

McCOY GC A #1A - BLOW & SEP. PITS
UNIT F, SEC. 18, T31N, R10W

LABORATORY (S) USED : ANAITASDate : June 18, 1996SAMPLER : REOFilename : 06-18-96.WK4PROJECT MANAGER : REO

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1	100.45	92.44	8.01	10.00	0815	7.2	1,200	1.00	-
2	98.45	91.58	6.87	10.00	0830	6.2	5,000	1.50	-
3	99.06	91.66	7.40	10.00	0850	7.2	2,500	1.25	
4	98.27	91.22	7.05	7.93	0910	7.1	1,400	0.50	-

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$.(i.e. 2" MW $r = (1/12) \text{ ft}$. $h = 1 \text{ ft}$.) (i.e. 4" MW $r = (2/12) \text{ ft}$. $h = 1 \text{ ft}$.)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 "Collected BTEX & anion / cation samples for all MW's listed above .

PURGEABLE AROMATICS**Blagg Engineering, Inc.**

Project ID: McCoy GC A 1A
Sample ID: MW - 1
Lab ID: 4000
Sample Matrix: Water
Preservative: Cool, HgCl₂
Condition: Intact

Report Date: 07/03/96
Date Sampled: 06/18/96
Date Received: 06/18/96
Date Analyzed: 07/02/96

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

Total BTEX	ND
------------	----

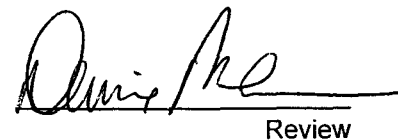
ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	104	88 - 110%
	Bromofluorobenzene	98	86 - 115%

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

Comments:


Analyst


Review

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID: McCoy GC A 1A
Sample ID: MW - 2
Lab ID: 4001
Sample Matrix: Water
Preservative: Cool, HgCl₂
Condition: Intact

Report Date: 07/03/96
Date Sampled: 06/18/96
Date Received: 06/18/96
Date Analyzed: 07/02/96

Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.50
Toluene	1.81	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	1.00
o-Xylene	1.07	0.50

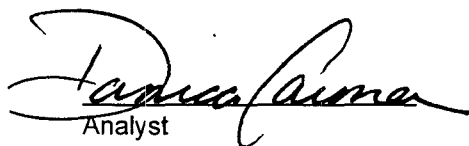
Total BTEX	2.88
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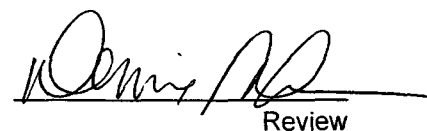
ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	106	88 - 110%
	Bromofluorobenzene	99	86 - 115%

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

Comments:


Analyst


Review

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID: McCoy GC A 1A
Sample ID: MW - 3
Lab ID: 4002
Sample Matrix: Water
Preservative: Cool, HgCl₂
Condition: Intact

Report Date: 07/03/96
Date Sampled: 06/18/96
Date Received: 06/18/96
Date Analyzed: 07/02/96

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

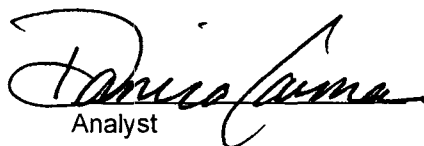
Total BTEX	ND
------------	----

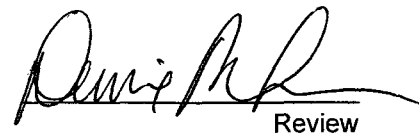
ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	104	88 - 110%
	Bromofluorobenzene	100	86 - 115%

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

Comments:


Analyst


Review

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID: McCoy GC A 1A
Sample ID: MW - 4
Lab ID: 4003
Sample Matrix: Water
Preservative: Cool, HgCl₂
Condition: Intact

Report Date: 07/03/96
Date Sampled: 06/18/96
Date Received: 06/18/96
Date Analyzed: 07/02/96

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

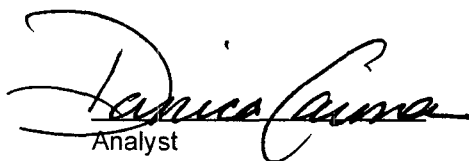
Total BTEX	ND
------------	----

ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	95	88 - 110%
	Bromofluorobenzene	91	86 - 115%

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

Comments:


Analyst


Review

General Water Quality
Blagg Engineering, Inc.

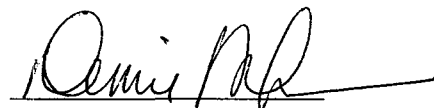
Project ID: McCoy GC A 1A
Sample ID: MW - 1
Laboratory ID: 4000
Sample Matrix: Water

Date Reported: 07/03/96
Date Sampled: 06/18/96
Time Sampled: 8:15
Date Received: 06/18/96

Parameter	Analytical Result	Units
General		
Lab pH.....	7.9	s.u.
Lab Conductivity @ 25° C.....	1,310	µmhos/cm
Total Dissolved Solids @ 180°C.....	845	mg/L
Total Dissolved Solids (Calc).....	810	mg/L
Anions		
Total Alkalinity as CaCO ₃	382	mg/L
Bicarbonate Alkalinity as CaCO ₃	382	mg/L
Carbonate Alkalinity as CaCO ₃	NA	mg/L
Hydroxide Alkalinity as CaCO ₃	NA	mg/L
Chloride.....	40.0	mg/L
Sulfate.....	261	mg/L
Nitrate + Nitrite - N.....	NA	
Nitrate - N.....	NA	
Nitrite - N.....	NA	
Cations		
Total Hardness as CaCO ₃	468	mg/L
Calcium.....	156	mg/L
Magnesium.....	19.3	mg/L
Potassium.....	5.00	mg/L
Sodium.....	100	mg/L

Data Validation		Acceptance Level
Cation/Anion Difference.....	1.36	+/- 5 %
TDS (180):TDS (calculated).....	1.0	1.0 - 1.2

Reference U.S.E.P.A. 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, 1983.
Standard Methods For The Examination Of Water And Wastewater, 18th ed., 1992.


Review

General Water Quality
Blagg Engineering, Inc.

Project ID: McCoy GC A 1A
Sample ID: MW - 2
Laboratory ID: 4001
Sample Matrix: Water

Date Reported: 07/03/96
Date Sampled: 06/18/96
Time Sampled: 8:30
Date Received: 06/18/96

Parameter	Analytical Result	Units
General		
Lab pH.....	7.2	s.u.
Lab Conductivity @ 25° C.....	10,800	µmhos/cm
Total Dissolved Solids @ 180°C.....	8,370	mg/L
Total Dissolved Solids (Calc).....	6,380	mg/L
Anions		
Total Alkalinity as CaCO ₃	2,050	mg/L
Bicarbonate Alkalinity as CaCO ₃	2,050	mg/L
Carbonate Alkalinity as CaCO ₃	NA	mg/L
Hydroxide Alkalinity as CaCO ₃	NA	mg/L
Chloride.....	1,290	mg/L
Sulfate.....	1,700	mg/L
Nitrate + Nitrite - N.....	NA	
Nitrate - N.....	NA	
Nitrite - N.....	NA	
Cations		
Total Hardness as CaCO ₃	3,010	mg/L
Calcium.....	694	mg/L
Magnesium.....	312	mg/L
Potassium.....	240	mg/L
Sodium.....	920	mg/L

Data Validation

		<u>Acceptance Level</u>
Cation/Anion Difference.....	2.88	+/- 5 %
TDS (180):TDS (calculated).....	1.3	1.0 - 1.2

Reference

U.S.E.P.A. 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, 1983.
Standard Methods For The Examination Of Water And Wastewater, 18th ed., 1992.


Review

General Water Quality

Blagg Engineering, Inc.

Project ID: McCoy GC A 1A
 Sample ID: MW - 3
 Laboratory ID: 4002
 Sample Matrix: Water

Date Reported: 07/03/96
 Date Sampled: 06/18/96
 Time Sampled: 8:50
 Date Received: 06/18/96

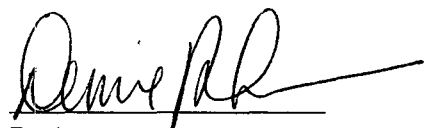
Parameter	Analytical Result	Units
General		
Lab pH.....	8.0	s.u.
Lab Conductivity @ 25° C.....	3,500	µmhos/cm
Total Dissolved Solids @ 180°C.....	2,300	mg/L
Total Dissolved Solids (Calc).....	2,110	mg/L
Anions		
Total Alkalinity as CaCO ₃	573	mg/L
Bicarbonate Alkalinity as CaCO ₃	573	mg/L
Carbonate Alkalinity as CaCO ₃	NA	mg/L
Hydroxide Alkalinity as CaCO ₃	NA	mg/L
Chloride.....	202	mg/L
Sulfate.....	883	mg/L
Nitrate + Nitrite - N.....	NA	
Nitrate - N.....	NA	
Nitrite - N.....	NA	
Cations		
Total Hardness as CaCO ₃	915	mg/L
Calcium.....	271	mg/L
Magnesium.....	58.0	mg/L
Potassium.....	13.0	mg/L
Sodium.....	340	mg/L

Data Validation
Acceptance Level

Cation/Anion Difference.....	3.09	+/- 5 %
TDS (180):TDS (calculated).....	1.1	1.0 - 1.2

Reference

U.S.E.P.A. 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, 1983.
Standard Methods For The Examination Of Water And Wastewater, 18th ed., 1992.



Review

General Water Quality

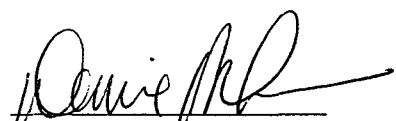
Blagg Engineering, Inc.

Project ID: McCoy GC A 1A
 Sample ID: MW - 4
 Laboratory ID: 4003
 Sample Matrix: Water

Date Reported: 07/03/96
 Date Sampled: 06/18/96
 Time Sampled: 9:10
 Date Received: 06/18/96

Parameter	Analytical Result	Units
General		
Lab pH.....	8.2	s.u.
Lab Conductivity @ 25° C.....	1,750	µmhos/cm
Total Dissolved Solids @ 180°C.....	1,100	mg/L
Total Dissolved Solids (Calc).....	1,040	mg/L
Anions		
Total Alkalinity as CaCO ₃	478	mg/L
Bicarbonate Alkalinity as CaCO ₃	478	mg/L
Carbonate Alkalinity as CaCO ₃	NA	mg/L
Hydroxide Alkalinity as CaCO ₃	NA	mg/L
Chloride.....	20.0	mg/L
Sulfate.....	379	mg/L
Nitrate + Nitrite - N.....	NA	
Nitrate - N.....	NA	
Nitrite - N.....	NA	
Cations		
Total Hardness as CaCO ₃	428	mg/L
Calcium.....	116	mg/L
Magnesium.....	33.8	mg/L
Potassium.....	< 5.0	mg/L
Sodium.....	200	mg/L
Data Validation		<u>Acceptance Level</u>
Cation/Anion Difference.....	1.89	+/- 5 %
TDS (180):TDS (calculated).....	1.1	1.0 - 1.2

Reference U.S.E.P.A. 600/4-79-020, Methods for Chemical Analysis of Water and Wastes, 1983.
Standard Methods For The Examination Of Water And Wastewater, 18th ed., 1992.


 Review



July 5, 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 received June 18, 1996. The samples were from the McCoy GC A1A site. Analyses for Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) and general water quality parameters were 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.

Water parameters were determined for the samples according to the appropriate methodologies as outlined in Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992.

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,

A handwritten signature in black ink, appearing to read "Denise A. Bohemier". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Denise A. Bohemier
Lab Director

PURGEABLE AROMATICS

Quality Control Report

Method Blank Analysis

Sample Matrix: Water
Lab ID: MB35248

Report Date: 07/03/96
Date Analyzed: 07/02/96

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:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	100	88 - 110%
	Bromofluorobenzene	100	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: 4002Spk
Sample Matrix: Water
Preservative: Cool, HgCl₂
Condition: Intact

Report Date: 07/03/96
Date Sampled: 06/18/96
Date Received: 06/18/96
Date Analyzed: 07/02/96

Target Analyte	Spike Added (ug/L)	Original Conc. (ug/L)	Spiked Sample Conc. (ug/L)	% Recovery	Acceptance Limits (%)
Benzene	10	ND	9.29	93%	39 - 150
Toluene	10	ND	9.41	92%	46 - 148
Ethylbenzene	10	ND	9.40	94%	32 - 160
m,p-Xylenes	20	ND	18.6	92%	NE
o-Xylene	10	ND	9.45	93%	NE

ND - Analyte not detected at the stated detection limit.

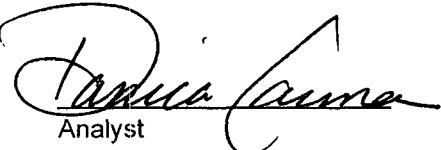
NA - Not applicable or not calculated.

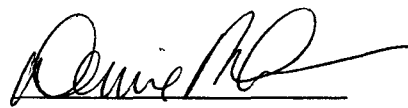
NE - Spike acceptance range not established by the EPA.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	98	88 - 110%
	Bromofluorobenzene	98	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: 3998Dup
Sample Matrix: Water
Preservative: Cool, HgCl₂
Condition: Intact

Report Date: 7/3/96
Date Sampled: 6/18/96
Date Received: 6/18/96
Date Analyzed: 7/2/96

Target Analyte	Original Conc (ug/L)	Duplicate Conc. (ug/L)	Acceptance Range (ug/L)
Benzene	5.45	5.89	3.47 - 7.87
Toluene	2.25	2.88	1.14 - 3.99
Ethylbenzene	0.40	0.62	0 - 1.60
m,p-Xylenes	1.78	2.53	NE
o-Xylene	3.50	3.82	NE

ND - Analyte not detected at the stated detection limit.

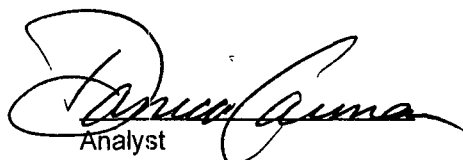
NA - Not applicable or not calculated.

NE - Duplicate acceptance range not established by the EPA.

	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
Quality Control:	Trifluorotoluene	94	88 - 110%
	Bromofluorobenzene	101	86 - 115%

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

Comments:


Analyst


Review

General Water Quality Quality Control Report

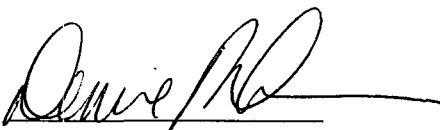
Blagg Engineering, Inc.

Report Date: 7/3/96

Parameter	Analytical Result	Certified Value	Acceptance Range	Units
Laboratory pH	9.07	9.09	8.89 - 9.29	s.u.
Conductivity	1263	1220	1040 - 1400	μmhos/cm
Total Dissolved Solids	880	913	794 - 1030	mg/L
Total Alkalinity	179	180	160 - 200	mg/L
Chloride	140	138	128 - 148	mg/L
Sulfate	115	124	107 - 141	mg/L
Total Hardness	269	254	218 - 290	mg/L
Calcium	59.8	54.6	47.0 - 62.2	mg/L
Magnesium	NA	NA	NA	mg/L
Potassium	120	123	105 - 141	mg/L
Sodium	170	173	147 - 199	mg/L

Reference: U.S.E.P.A. 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983. Standard Methods For The Examination Of Water And Wastewater, 18th ed., 1992.

Comments:



Review

CHAIN OF CUSTODY

ANALITAS

ENVIRONMENTAL LABS

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

PROJECT MANAGER:

Anaitas Lab I.D.:

Company:

Address:

Phone:

Fax:

Bill To:

Company:

Address:

Sample ID	Date	Time	Matrix	Lab ID
MW-1	6-18	0815	water	
MW-2	"	0830	"	
MW-3	"	0850	"	
MW-4	"	0910	"	
Project Information				Sample Receipt
Proj. #:		No. Containers:		
Proj. Name:	Amoco	Custody Seals:	Y / N / NA	
P.O. No:		Received intact:		
Shipped Via:	DEL'D	Received Cold:		
Required Turnaround Time (Prior Authorization Required for Rush)				

[illegible]

Please Fill Out Thoroughly.

Shaded areas
for lab use only.

White/Yellow: Anaitas
Pink: Client

BLAGG ENGINEERING, INC.
MONITOR WELL SAMPLING DATA

CLIENT : **BP AMOCO**

CHAIN-OF-CUSTODY # : 7014

McCOY GC A #1A - BLOW & SEP. PITS
UNIT F, SEC. 18, T31N, R10W

LABORATORY (S) USED : ENVIROTECH

Date : May 30, 2000

SAMPLER : NJV

Filename : 05-30-00.WK4

PROJECT MANAGER : NJV

WELL #	WELL ELEV. (ft)	WATER ELEV. (ft)	DEPTH TO WATER (ft)	TOTAL DEPTH (ft)	SAMPLING TIME	pH	CONDUCT (umhos)	VOLUME PURGED (gal.)	FREE PRODUCT (ft)
1	100.45	93.76	6.69	10.00	1005	7.0	1,200	1.75	-
2	98.45	92.72	5.73	10.00	1015	7.2	4,000	2.25	-
3	99.06	93.11	5.95	10.00	1030	7.2	1,900	2.00	-
4	98.27	92.65	5.62	8.00	1045	7.3	1,100	1.25	-

NOTES : Volume of water purged from well prior to sampling: $V = \pi \times r^2 \times h \times 7.48 \text{ gal./ft}^3 \times 3 \text{ (wellbores)}$.
(i.e. 2" MW $r = (1/12) \text{ ft}$. $h = 1 \text{ ft}$.) (i.e. 4" MW $r = (2/12) \text{ ft}$. $h = 1 \text{ ft}$.)

Ideally a minimum of three (3) wellbore volumes:

1.25 " well diameter = 0.19 gallons per foot of water (or 24 oz.).

2 bails per foot - small teflon bailer.

3 bails per foot - 3 / 4 " teflon bailer.

2.00 " well diameter = 0.49 gallons per foot of water.

4.00 " well diameter = 1.95 gallons per foot of water.

Comments or note well diameter if not standard 2 ".

Collected anion / cation samples from all MW's listed above . MW #1 & #2 poor recovery .

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

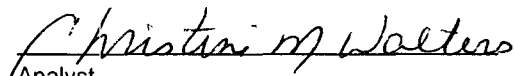
Client: Blagg / BP Amoco
Sample ID: MW #1
Laboratory Number: H362
Chain of Custody: 7014
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

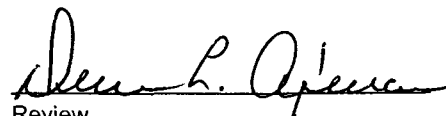
Project #: 403410
Date Reported: 05-31-00
Date Sampled: 05-30-00
Date Received: 05-30-00
Date Extracted: N/A
Date Analyzed: 05-31-00

Parameter	Analytical Result	Units		Units
pH	7.02	s.u.		
Conductivity @ 25° C	1,640	umhos/cm		
Total Dissolved Solids @ 180C	800	mg/L		
Total Dissolved Solids (Calc)	789	mg/L		
SAR	0.4	ratio		
Total Alkalinity as CaCO3	768	mg/L		
Total Hardness as CaCO3	652	mg/L		
Bicarbonate as HCO3	768	mg/L	12.59	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	2.0	mg/L	0.03	meq/L
Nitrite Nitrogen	0.158	mg/L	0.00	meq/L
Chloride	17.1	mg/L	0.48	meq/L
Fluoride	0.66	mg/L	0.03	meq/L
Phosphate	0.5	mg/L	0.02	meq/L
Sulfate	43.4	mg/L	0.90	meq/L
Iron	7.2	mg/L		
Calcium	195	mg/L	9.74	meq/L
Magnesium	40.0	mg/L	3.29	meq/L
Potassium	0.7	mg/L	0.02	meq/L
Sodium	23.2	mg/L	1.01	meq/L
Cations			14.06	meq/L
Anions			14.06	meq/L
Cation/Anion Difference			0.00%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Water And Waste Water", 18th ed., 1992.

Comments: McCoy GC A #1A.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

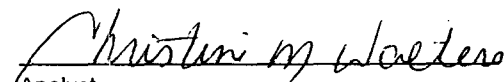
Client: Blagg / BP Amoco
Sample ID: MW #2
Laboratory Number: H363
Chain of Custody: 7014
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

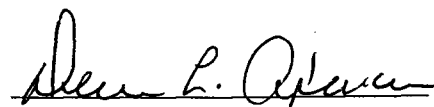
Project #: 403410
Date Reported: 05-31-00
Date Sampled: 05-30-00
Date Received: 05-30-00
Date Extracted: N/A
Date Analyzed: 05-31-00

Parameter	Analytical Result	Units		Units
pH	7.25	s.u.		
Conductivity @ 25° C	9,130	umhos/cm		
Total Dissolved Solids @ 180C	4,560	mg/L		
Total Dissolved Solids (Calc)	4,510	mg/L		
SAR	7.7	ratio		
Total Alkalinity as CaCO3	838	mg/L		
Total Hardness as CaCO3	1,790	mg/L		
Bicarbonate as HCO3	838	mg/L	13.73	meq/L
Carbonate as CO3	<0.1	mg/L	0.00	meq/L
Hydroxide as OH	<0.1	mg/L	0.00	meq/L
Nitrate Nitrogen	<0.1	mg/L	0.00	meq/L
Nitrite Nitrogen	<0.001	mg/L	0.00	meq/L
Chloride	240	mg/L	6.77	meq/L
Fluoride	1.63	mg/L	0.09	meq/L
Phosphate	0.9	mg/L	0.03	meq/L
Sulfate	2,360	mg/L	49.14	meq/L
Iron	10.5	mg/L		
Calcium	446	mg/L	22.28	meq/L
Magnesium	165	mg/L	13.59	meq/L
Potassium	32.5	mg/L	0.83	meq/L
Sodium	750	mg/L	32.63	meq/L
Cations			69.32	meq/L
Anions			69.75	meq/L
Cation/Anion Difference			0.63%	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Water And Waste Water", 18th ed., 1992.

Comments: McCoy GC A #1A.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

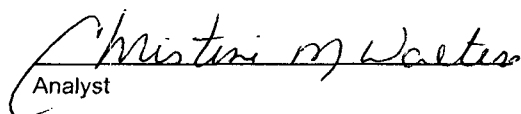
Client: Blagg / BP Amoco
Sample ID: MW #3
Laboratory Number: H364
Chain of Custody: 7014
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

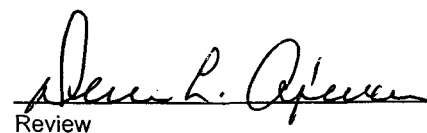
Project #: 403410
Date Reported: 05-31-00
Date Sampled: 05-30-00
Date Received: 05-30-00
Date Extracted: N/A
Date Analyzed: 05-31-00

Parameter	Analytical Result	Units	Units
pH	7.35	s.u.	
Conductivity @ 25° C	3,070	umhos/cm	
Total Dissolved Solids @ 180C	1,530	mg/L	
Total Dissolved Solids (Calc)	1,510	mg/L	
SAR	3.8	ratio	
Total Alkalinity as CaCO3	608	mg/L	
Total Hardness as CaCO3	704	mg/L	
Bicarbonate as HCO3	608	mg/L	9.97 meq/L
Carbonate as CO3	<0.1	mg/L	0.00 meq/L
Hydroxide as OH	<0.1	mg/L	0.00 meq/L
Nitrate Nitrogen	0.3	mg/L	0.00 meq/L
Nitrite Nitrogen	0.004	mg/L	0.00 meq/L
Chloride	21.7	mg/L	0.61 meq/L
Fluoride	1.84	mg/L	0.10 meq/L
Phosphate	0.1	mg/L	0.00 meq/L
Sulfate	645	mg/L	13.43 meq/L
Iron	0.075	mg/L	
Calcium	179	mg/L	8.94 meq/L
Magnesium	62.5	mg/L	5.14 meq/L
Potassium	0.9	mg/L	0.02 meq/L
Sodium	230	mg/L	10.01 meq/L
Cations			24.11 meq/L
Anions			24.11 meq/L
Cation/Anion Difference			0.01%

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Water And Waste Water", 18th ed., 1992.

Comments: McCoy GC A #1A.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

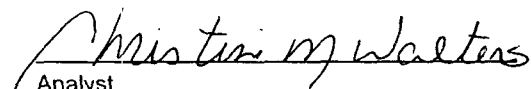
Client: Blagg / BP Amoco
Sample ID: MW #4
Laboratory Number: H365
Chain of Custody: 7014
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

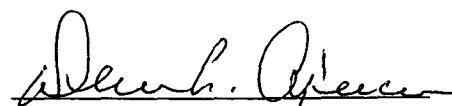
Project #: 403410
Date Reported: 05-31-00
Date Sampled: 05-30-00
Date Received: 05-30-00
Date Extracted: N/A
Date Analyzed: 05-31-00

Parameter	Analytical Result	Units	Units
pH	7.48	s.u.	
Conductivity @ 25° C	1,520	umhos/cm	
Total Dissolved Solids @ 180C	756	mg/L	
Total Dissolved Solids (Calc)	747	mg/L	
SAR	2.4	ratio	
Total Alkalinity as CaCO3	452	mg/L	
Total Hardness as CaCO3	380	mg/L	
Bicarbonate as HCO3	452	mg/L	7.41 meq/L
Carbonate as CO3	<0.1	mg/L	0.00 meq/L
Hydroxide as OH	<0.1	mg/L	0.00 meq/L
Nitrate Nitrogen	0.3	mg/L	0.00 meq/L
Nitrite Nitrogen	0.003	mg/L	0.00 meq/L
Chloride	12.8	mg/L	0.36 meq/L
Fluoride	1.32	mg/L	0.07 meq/L
Phosphate	0.6	mg/L	0.02 meq/L
Sulfate	213	mg/L	4.43 meq/L
Iron	0.017	mg/L	
Calcium	115	mg/L	5.75 meq/L
Magnesium	22.5	mg/L	1.85 meq/L
Potassium	1.0	mg/L	0.03 meq/L
Sodium	106	mg/L	4.61 meq/L
Cations			12.24 meq/L
Anions			12.30 meq/L
Cation/Anion Difference			0.49%

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Water And Waste Water", 18th ed., 1992.

Comments: McCoy GC A #1A.


Analyst


Review

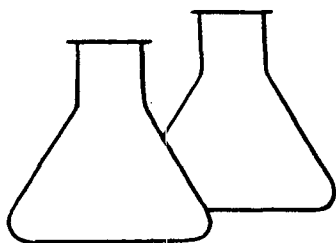
CHAIN OF CUSTODY RECORD

7014

Client / Project Name		Project Location		ANALYSIS / PARAMETERS																					
BLUES / BP Amoco		Mc Coy GC A #1A																							
Sampler: NTJ		Client No. 403410																							
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	Ad 100	Ad 125							Remarks											
MW # 1	5/16/00	1005	H362	WATER	1	✓								ALL SAMPLES PRESERV. - COOL											
MW # 2	5/16/00	1015	H363	WATER	1	✓																			
MW # 3	5/16/00	1030	H364	WATER	1	✓																			
MW # 4	5/16/00	1045	H365	WATER	1	✓																			
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		Date		Time																	
John Vef		5/16/00 1359		Dennis R. Cipres		5/20/00		1359																	
Relinquished by: (Signature)				Received by: (Signature)																					
Relinquished by: (Signature)				Received by: (Signature)																					
Sample Receipt																									
<table border="1"> <tr> <td>Y</td> <td>N</td> <td>N/A</td> </tr> <tr> <td>✓</td> <td></td> <td></td> </tr> <tr> <td colspan="3">Received Intact</td> </tr> <tr> <td colspan="3">Cool - Ice/Blue Ice</td> </tr> </table>														Y	N	N/A	✓			Received Intact			Cool - Ice/Blue Ice		
Y	N	N/A																							
✓																									
Received Intact																									
Cool - Ice/Blue Ice																									

ENVIROTECH INC.

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



ENVIROTECH LABS

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

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client: AMOCO
Sample ID: T-1 @ 7'
Laboratory Number: 0633
Sample Matrix: Soil
Preservative: Cool
Condition: Cool & Intact

Project #: 92140
Date Reported: 06-15-92
Date Sampled: 05-12-92
Date Received: NA
Date Analyzed: 06-04-92
Analysis Needed: TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	177	5.0

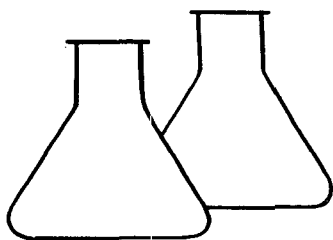
Method: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

ND - Parameter not detected at the stated detection limit.

Comments: McCoy G.C. A1A Separator Pit 94143

Tony Tristano
Analyst

Neil Farnsworth
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:	T 1 @ 7'	Date Reported:	09-24-92
Laboratory Number:	0633	Date Sampled:	05-12-92
Sample Matrix:	Soil	Date Received:	05-12-92
Preservative:	Cool	Date Extracted:	06-04-92
Condition:	Cool & Intact	Date Analyzed:	09-23-92
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	700	120
Toluene	1,090	70
Ethylbenzene	2,130	20.0
p,m-Xylene	6,500	70
o-Xylene	237	60

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	76 %
	Bromfluorobenzene	101 %

Method: Method 5030, Purge-and-Trap, Test Methods for
Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

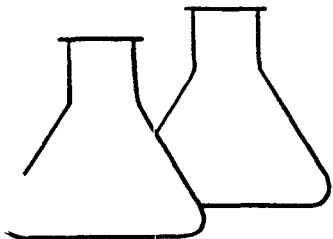
Method 8020, Aromatic Volatile Organics, Test Methods
for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

ND - Parameter not detected at the stated detection limit.

Comments: McCoy GC A 1A Separator Pit 94143

Wesley L. Cramer
Analyst

Monica S. Young
Review



ENVIROTECH LABS

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

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client: AMOCO
Sample ID: T-1 @ 7'
Laboratory Number: 0635
Sample Matrix: Water
Preservative: Cool
Condition: Cool & Intact

Project #: 92140
Date Reported: 06-17-92
Date Sampled: 05-12-92
Date Received: 05-12-92
Date Analyzed: 05-18-92
Analysis Needed: TPH

Parameter -----	Concentration (mg/L) -----	Det. Limit (mg/L) -----
TPH	ND	10.0

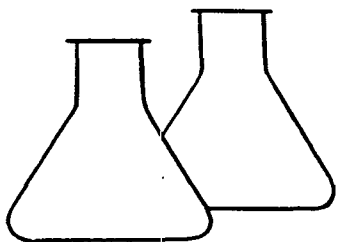
Method: Method 418.1, Total Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

ND - Parameter not detected at the stated detection limit.

Comments: McCoy GC Ala Separator Pit 94143


Analyst


Review



ENVIROTECH LABS

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

EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client: AMOCO
Sample ID: T-6 @ 6'
Laboratory Number: 0636
Sample Matrix: Soil
Preservative: Cool
Condition: Cool & Intact

Project #: 92140
Date Reported: 06-15-92
Date Sampled: 05-12-92
Date Received: NA
Date Analyzed: 06-04-92
Analysis Needed: TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----	-----	-----
Total Petroleum Hydrocarbons	240	5.0

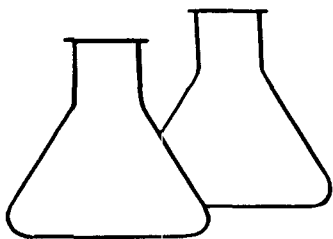
Method: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

ND - Parameter not detected at the stated detection limit.

Comments: McCoy G.C. A1A Separator Pit 94143

Tony Tristano
Analyst

Neil Lumsden
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:	T 6 @ 6'	Date Reported:	09-24-92
Laboratory Number:	0636	Date Sampled:	05-12-92
Sample Matrix:	Soil	Date Received:	05-12-92
Preservative:	Cool	Date Extracted:	06-05-92
Condition:	Cool & Intact	Date Analyzed:	09-23-92
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	120
Toluene	5,800	70
Ethylbenzene	ND	20.0
p,m-Xylene	38,300	70
o-Xylene	14,200	60

SURROGATE RECOVERIES:	Parameter	Percent Recovery
-----------------------	-----------	------------------

Bromfluorobenzene	103 %
-------------------	-------

Method: Method 5030, Purge-and-Trap, Test Methods for
Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

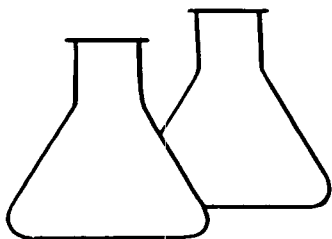
Method 8020, Aromatic Volatile Organics, Test Methods
for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

ND - Parameter not detected at the stated detection limit.

Comments: McCoy CG A 1A Separator Pit 94143

Shawn L. Cramer
Analyst

Marion D. Young
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:	T6 @ 7'	Date Reported:	08-21-92
Laboratory Number:	0637	Date Sampled:	05-12-92
Sample Matrix:	Water	Date Received:	05-12-92
Preservative:	HgCl & Cool	Date Analyzed:	06-25-92
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	18,900	40.0
Toluene	61,100	260
Ethylbenzene	5,900	60
p,m-Xylene	53,900	140
o-Xylene	10,600	80

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	83.5 %
	Bromfluorobenzene	89.2 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

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: McCoy GC A1A---Separator Pit---94143

Robert M Young
Analyst

Robert M Young
Review

1234

CHAIN OF CUSTODY RECORD

94143

[illegible]

ENVIROTECH Inc.

5796 US HWY. 64, FARMINGTON, NM 87401
(505) 832-0815

94143

FIELD REPORT: SITE ASSESSMENT

JOB No: 92140
PAGE No: 1 of 2

PROJECT: PIT ASSESSMENTS & CLOSURE
CLIENT: AMOCO PRODUCTION COMPANY
CONTRACTOR: ENVIROTECH INC.
EQUIPMENT USED: BACKHOE

DATE STARTED: 5/12/92
DATE FINISHED: 5/12/92
ENVIRO. SPCLT: PV
OPERATOR: BW
ASSISTANT: PV

LOCATION: LSE: McCoy WELL: GC AIA QD: SE/4 NW/4 (4F)
SEC: 18 TWP: 31N RNG: 10W PM: Nm CNTY: SAN JUAN ST: Nm PIT: SEP.

LAND USE: RANGE

SURFACE CONDITIONS: SAND: w/ GRAVEL UNLINED, TREES & SCRUBS WITHIN FENCED AREA

FIELD NOTES & REMARKS: FINE TO MED. SAND, BROWN TO BLACK. CONTAMINATION VERY APPARENT.
WITHIN PIT AREA. @ T2 & T4 DARK MED - COARSE SAND.

SAMPLE INVENTORY:

SAMPL ID:	SAMPL TYPE:	LABORATORY ANALYSIS:
T1@6'	SOIL	TPH 1820
T1@7'	WATER	TPH
T1@7'	WATER	8020 (2)
T6@6'	SOIL	TPH 8020
T6@7'	WATER	8020 (2)

PIT LOCATION: APPROX. 200-250 FT. FROM ANIMAS R.
100 FT. SOUTH, 20 FT WEST OF WELL HEAD.
(USED WELL W/ GREEN POST SURROUNDING IT,
2 WELLS ON LOCATION).

NOTE: @ T6 OPERATOR STRUCK A LARGE BOUNDER, CREATING
AN IGNITION & FLASH FIRE.

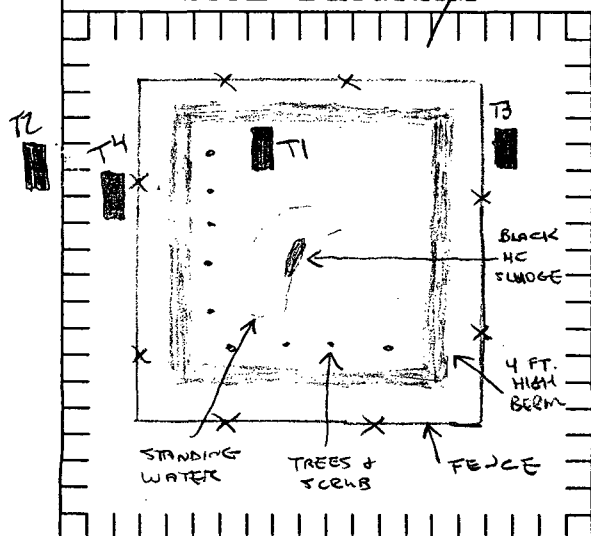
TEST HOLE LOGS:

TH#:	SOIL TYPE:	SAMPL TYPE:	OVN/TYPE:	TPH
TH# 1	SOIL	TPH	1628	1307
TH# 2	SOIL	TPH	0.0	0.0
TH# 3	SOIL	TPH	56	7F3
TH# 4	SOIL	TPH	442	0.0
TH# 1	TD	-	7'	-
TH# 1	GW	-	6'	-
TH# 2	TD	-	7'	-
TH# 2	GW	-	5'	-
TH# 3	TD	-	8'	-
TH# 3	GW	-	7'	-
TH# 4	TD	-	7'	-
TH# 4	GW	-	5'	-

SCALE

0 25 FEET

SITE DIAGRAM



SOIL TYPE: C - Clay, M - Silty, S - Sand, G - Gravel, Plasticity: L - None, H - Plastic, Grading: P - Poorly, W - Well

5796 US HWY. 64, FARMINGTON, NM 87401
(505) 832-0815

JOB No: _____
PAGE No: _____ of _____

DATE STARTED: _____
DATE FINISHED: _____
ENVIRONMENTAL
SPECIALIST: _____

FIELD NOTES & REMARKS:

0

FEET

PIT PERIMETER

0

FEET

PIT PROFILE

[illegible]

TRAVEL NOTES: CALLOUT: _____ ONSITE: _____

5796 US HWY. 64, FARMINGTON, NM 87401
(505) 832-0615

JOB No: 92140
PAGE No: 2 of 2

DATE STARTED: 5/2/92
DATE FINISHED: 5/12/92
ENVIRO. SPCLT: JV
OPERATOR: BW
ASSISTANT: PV

LAND USE: RANGE
SURFACE CONDITIONS:

SAMPLE INVENTORY:

[illegible]

SCALE



0

FEET

SITE DIAGRAM

TH#: 5			TH#: 6			TH#:			TH#:		
SOIL TYPE:	SMPL TYPE:	OVM/TPH	SOIL TYPE:	SMPL TYPE:	OVM/TPH	SOIL TYPE:	SMPL TYPE:	OVM/TPH	SOIL TYPE:	SMPL TYPE:	OVM/TPH
		56 1172			56 1442						
		1208			354						
TD	-	8'	TD	-	8'						
GW	-	7'	GW	-	7'						

SOIL TYPE: C - Clay, M - Sil, S - Sand, G - Gravel

Pictonia, L. - None, H. - Picotee

Grading: P - Poorly, W - Well

5796 US HWY. 64, FARMINGTON, NM 87401
(505) 832-0815

FIELD REPORT: CLOSURE VERIFICATION

PAGE No: ____ of ____

LOCATION: LEASE: WELL: QD:
SEC: TWP: RNG: BM: CNTY: ST: PIT:
CONTRACTOR:
EQUIPMENT USED:

DATE FINISHED: _____

ENVIRONMENTAL
SPECIALIST: _____

SOIL REMEDIATION: QUANTITY: _____
DISPOSAL FACILITY: _____
LAND USE: _____
SURFACE CONDITIONS: _____

FIELD NOTES & REMARKS:

[illegible]

0

FEET

PIT PERIMETER

0

FEET

PIT PROFILE

[illegible]

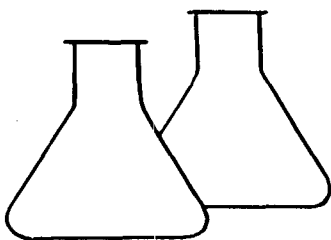
TRAVEL NOTES: CALLOUT: _____ ONSITE: _____

C.O.C. # 2848

ENVIRONMENTAL SPECIALIST: REO

SURFACE CONDITIONS: PIT EXCAVATED PRIOR TO ARRIVAL - NOTE ENVIROTECH ASSESSMENT # 94143

TRAVEL NOTES: CALLOUT: 7-26-93 ONSITE: 7-26-93 0930 HRS.



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:	Pit @ 5'	Date Reported:	07-27-93
Laboratory Number:	5745	Date Sampled:	07-26-93
Sample Matrix:	Water	Date Received:	07-26-93
Preservative:	HgCl & Cool	Date Analyzed:	07-27-93
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	1.3	0.2
Toluene	3.3	0.4
Ethylbenzene	3.6	0.2
p,m-Xylene	115	0.3
o-Xylene	20.4	0.3

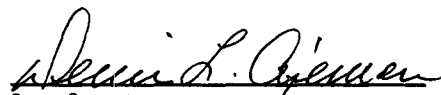
SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	98 %
	Bromofluorobenzene	101 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

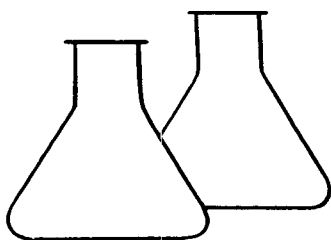
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: McCoy GC A #1A Separator Pit C4143


Analyst


Review



ENVIROTECH LABS

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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	T 1 @ 5'	Date Reported:	07-27-93
Laboratory Number:	5746	Date Sampled:	07-26-93
Sample Matrix:	Water	Date Received:	07-26-93
Preservative:	HgCl & Cool	Date Analyzed:	07-27-93
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	14.0	0.2
Toluene	1.6	0.4
Ethylbenzene	1.2	0.2
p,m-Xylene	2.5	0.3
o-Xylene	1.2	0.3

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	88 %
	Bromofluorobenzene	93 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

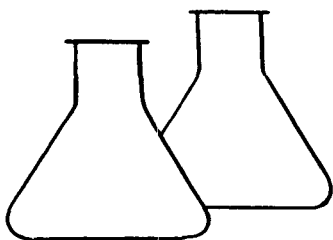
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: McCoy GC A #1A Separator Pit C4143

Dennis L. Gerner
Analyst

Marion D. Young
Review



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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	T 2 @ 6.5'	Date Reported:	07-27-93
Laboratory Number:	5747	Date Sampled:	07-26-93
Sample Matrix:	Water	Date Received:	07-26-93
Preservative:	HgCl & Cool	Date Analyzed:	07-27-93
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	19.7	0.2
Toluene	82	0.4
Ethylbenzene	234	0.2
p,m-Xylene	910	0.3
o-Xylene	172	0.3

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	92 %
	Bromofluorobenzene	94 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating
Solid Waste, SW-846, USEPA, Sept. 1986

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: McCoy GC A #1A Separator Pit C4143

Kevin L. Cisneros
Analyst

Maris D. Young
Review

ENVIROTECH Inc.

5796 US HWY. 64. FARMINGTON, NM 87401
(505) 632-0615

COC 2907
C4143

FIELD REPORT: CLOSURE VERIFICATION

JOB No: 92140
PAGE No: 1 of 1

LOCATION: LEASE: MCCOY GAS COM "A" WELL: 1A QD: SE/4 NW/4 (F)
SEC: 18 TWP: 31N RNG: 10W BM: NMPM CNTY: SS ST: NM PIT: SEP?
CONTRACTOR: MOSS EXCAVATION
EQUIPMENT USED: TRACK HIRE

DATE STARTED: 8-9-93
DATE FINISHED: 8-9-93

ENVIRONMENTAL SPECIALIST: *Remy*

SOIL REMEDIATION: QUANTITY: _____
DISPOSAL FACILITY: OFF-SITE LANDFARM
LAND USE: RESIDENTIAL AREA (RURAL), FORESTED
SURFACE CONDITIONS: TRENCHES ON SITE, NO VISIBLE CONTAMINATION.

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 40 YARDS S60°W FROM WELLHEAD.

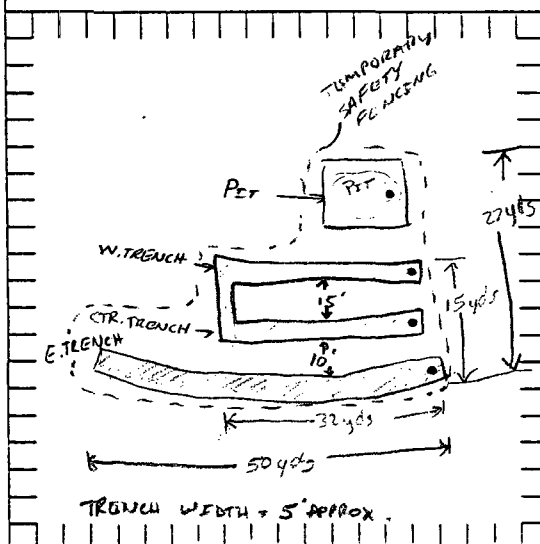
DEPTH TO GROUNDWATER: 7'
NEAREST WATER SOURCE: UDK
NEAREST SURFACE WATER: 300' (ANIMAS RIVER)

LAB SAMPLES TAKEN FOR BTEX
E. TRENCH WATER
CTR. TRENCH WATER
W. TRENCH WATER
PIT WATER
TRACES OF OILY FREE PRODUCT OBSERVED COVERING APPROX 50%-75% OF WATER SURFACE.
HEAVY COVERING OF LARGE ORGANIC DEBRIS, COULD NOT OBSERVE SURFACE OF WATER.

FIELD 418.1 CALCULATIONS

SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm

SCALE
0 FEET
PIT PERIMETER



OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)

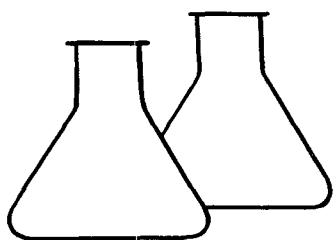
PIT PROFILE

TRENCH PROFILE
1'-6" SW/ML
MODERATE TO PALE
YELLOWISH BROWN
SILTY SAND. FIRM.
SL. COHESIVE. NON-PLASTIC.
NO VISIBLE CONTAMINATION
OR APPARENT ODOR

6'-7" SW/SW
WELL GRADED COBBLES/GRAVELS
AND SANDS. VARIOUS COLORS.

TRAVEL NOTES: CALLOUT: _____ ONSITE: _____
NO VISIBLE STAINING OR APPARENT ODOR

AREA W/ LINDS (GROUNDWATER)
• SAMPLE POINT.



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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	Pit Water	Date Reported:	08-11-93
Laboratory Number:	5861	Date Sampled:	08-09-93
Sample Matrix:	Water	Date Received:	08-10-93
Preservative:	HgCl and Cool	Date Analyzed:	08-10-93
Condition:	Cool and Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	ND	0.2
Toluene	1.5	0.3
Ethylbenzene	1.7	0.2
p,m-Xylene	28.7	0.3
o-Xylene	5.3	0.3

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	90 %
	Bromofluorobenzene	94 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

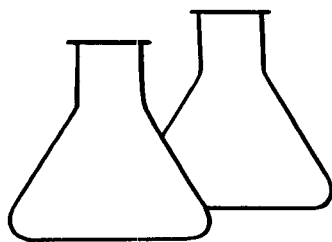
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: McCoy GC "A" 1A, Separator Pit, C4143.

An Chaharby
Analyst

Maris D. Yang
Review



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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	E.Trench Water	Date Reported:	08-11-93
Laboratory Number:	5862	Date Sampled:	08-09-93
Sample Matrix:	Water	Date Received:	08-10-93
Preservative:	HgCl and Cool	Date Analyzed:	08-10-93
Condition:	Cool and Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	372	0.2
Toluene	366	0.3
Ethylbenzene	7.0	0.2
p,m-Xylene	362	0.3
o-Xylene	203	0.3

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	101 %
	Bromofluorobenzene	91 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

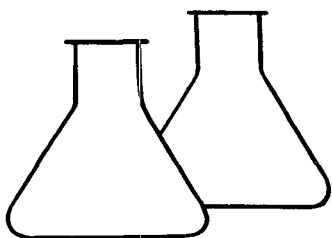
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: McCoy GC "A" 1A, Separator Pit, C4143.

A. Chahar
Analyst

Mavis D. Young
Review



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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	W.Trench Water	Date Reported:	08-11-93
Laboratory Number:	5863	Date Sampled:	08-09-93
Sample Matrix:	Water	Date Received:	08-10-93
Preservative:	HgCl and Cool	Date Analyzed:	08-10-93
Condition:	Cool and Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	0.3	0.2
Toluene	4.9	0.3
Ethylbenzene	2.4	0.2
p,m-Xylene	37.6	0.3
o-Xylene	2.9	0.3

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	91 %
	Bromofluorobenzene	105 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

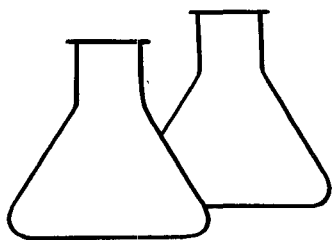
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: McCoy GC "A" 1A, Separator Pit, C4143.

An Chaharbay
Analyst

Morris D. Young
Review



ENVIROTECH LABS

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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	Ctr Trench Water	Date Reported:	08-11-93
Laboratory Number:	5864	Date Sampled:	08-09-93
Sample Matrix:	Water	Date Received:	08-10-93
Preservative:	HgCl and Cool	Date Analyzed:	08-10-93
Condition:	Cool and Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	35.8	0.2
Toluene	60	0.4
Ethylbenzene	4.6	0.2
p,m-Xylene	315	0.4
o-Xylene	127	0.3

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	98 %
	Bromofluorobenzene	112 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

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: McCoy GC "A" 1A, Separator Pit, C4143.

Ar Chaharbanj
Analyst

Marin D. Young
Review

CHAIN OF CUSTODY RECORD

Client/Project Name		Project Location		ANALYSIS/PARAMETERS										Date		Time	
Amoro 92140		Sep Pit		C4143										8-10-93		0805	
Sampler: (Signature)		Chain of Custody Tape No.		Sample No./ Identification		Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers					Remarks		
Robert M Young																	
PET WATER		8-9-93	1115	5861	WATER	2											
E. TRENCH WATER		8-9-93	1100	5862	WATER	2											
W. TRENCH WATER		8-9-93	1108	5863	WATER	2											
CTR TRENCH WATER		8-9-93	1104	5864	WATER	2											
Relinquished by: (Signature)		Date		Time		Received by: (Signature)		Time		Date		Time					
Robert M Young		8-10-93		0745		Lee Chahabery				8-10-93		0805					
Relinquished by: (Signature)						Received by: (Signature)											
Relinquished by: (Signature)						Received by: (Signature)											

ENVIROTECH INC.

5796 U.S. Highway 64-3014

Farmington, New Mexico 87401

(505) 632-0615

LAB RESUME: 10/10/98 to 10/10/98 by RMC

5796 US HWY. 64. FARMINGTON, NM 87401
(505) 632-0615

Coc 2996
 Coc 2955
 C 9143

JOB No: 92140
PAGE No: 1 of 1

DATE STARTED: 8-30-93
DATE FINISHED: 8-30-93

ENVIRONMENTAL SPECIALIST: *Rmy*

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 1 YARDS 1 FROM WELLHEAD.

TRENCH 1/ S 55° E FOR 43 yds (18 yds Long, NO VISIBLE CONTAM, ORIENTED N 30° E)

TRENCH 2/ S 0° E FOR 38 yds (63 yds Long, split by core 21 approx 1/2 of distance from NORTH END, SAMPLED SOUTH SIDE, VISIBLE CONTAM AND RESIDUAL PH, ORIENTED N 30° E)

TRENCH 3/ S 40° W FOR 13 yds (22 yds Long, FREE PRODUCT VISIBLE, ORIENTED N 15° W)

TRENCH 4/ S 70° W FOR 20 yds (38 yds Long, MINOR TRACES OF FREE PRODUCT, ORIENTED N 10° W)

TRENCH 5/ S 60° W FOR 40 yds (37 yards Long, NO VISIBLE CONTAM, ORIENTED N 20° W)

TRENCH 6/ S 65° W FOR 43 yds (37 yds Long, MINOR TRACES OF FREE PRODUCT, ORIENTED N 10° W)

TRENCH 7/ S 35° W FOR 80 yds (20 yds Long, NO VISIBLE CONTAM, ORIENTED N 0° E)

GROUNDWATER¹ SAMPLES TAKEN FOR BTEX ANALYSIS.
NO RECOMMENDATIONS

FIELD 418.1 CALCULATIONS

SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
9-17-93 Telephone W/E, Randalman.						
Says added 6 days worth of oil to the motor.						

~~My drog earnings~~
~~SCALE~~

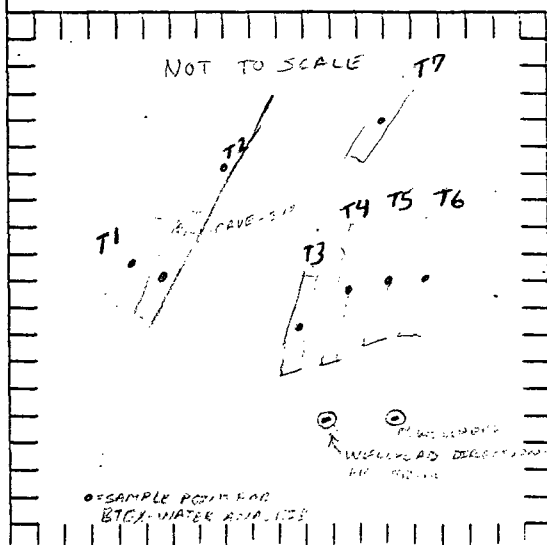
10/10/2016

0 FEET

PIT PERIMETER

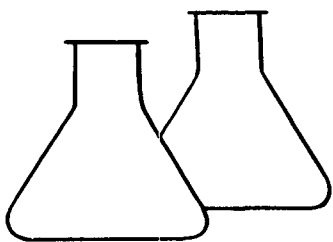
OVM RESULTS

PIT PROFILE

[illegible]

REFER TO PAPER
NO. 1000000000
FOR SOIL PROFILES

TRAVEL NOTES: CALLOUT: _____ ONSITE: _____



ENVIROTECH LABS

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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	Trench 1	Date Reported:	08-31-93
Laboratory Number:	5973	Date Sampled:	08-30-93
Sample Matrix:	Water	Date Received:	08-30-93
Preservative:	HgCl & Cool	Date Analyzed:	08-31-93
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	ND	0.2
Toluene	0.6	0.4
Ethylbenzene	0.3	0.2
p,m-Xylene	2.6	0.3
o-Xylene	1.6	0.2

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	92 %
	Bromofluorobenzene	92 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating
Solid Waste, SW-846, USEPA, Sept. 1986

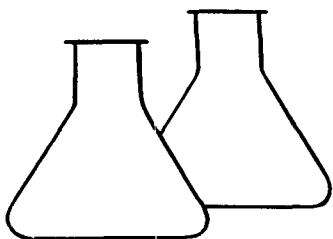
Method 8020, Aromatic Volatile Organics, Test Methods for
Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: McCoy GC "A" 1A Separator Pit C4143

Kevin L. Givner
Analyst

Marvin D. Young
Review



ENVIROTECH LABS

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PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	Trench 2 - North	Date Reported:	08-31-93
Laboratory Number:	5974	Date Sampled:	08-30-93
Sample Matrix:	Water	Date Received:	08-30-93
Preservative:	HgCl & Cool	Date Analyzed:	08-31-93
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	ND	0.2
Toluene	1.1	0.4
Ethylbenzene	ND	0.2
p,m-Xylene	1.4	0.3
o-Xylene	1.2	0.2

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	90 %
	Bromofluorobenzene	99 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

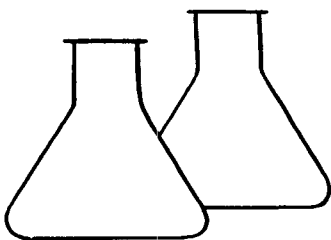
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: McCoy GC "A" 1A Separator Pit C4143

David L. Gower
Analyst

Maris D. Young
Review



ENVIROTECH LABS

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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	Trench 2 - South	Date Reported:	08-31-93
Laboratory Number:	5975	Date Sampled:	08-30-93
Sample Matrix:	Water	Date Received:	08-30-93
Preservative:	HgCl & Cool	Date Analyzed:	08-31-93
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	10.2	0.4
Toluene	830	0.8
Ethylbenzene	9.4	0.4
p,m-Xylene	1,330	0.6
o-Xylene	510	0.4

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	91 %
	Bromofluorobenzene	98 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

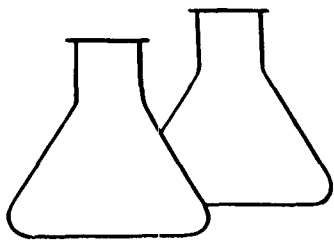
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: McCoy GC "A" 1A Separator Pit C4143

Kevin L. Jensen
Analyst

Marisa D. Young
Review



ENVIROTECH LABS

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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	Trench 2 - South	Date Reported:	09-14-93
Laboratory Number:	6072	Date Sampled:	09-10-93
Sample Matrix:	Water	Date Received:	09-10-93
Preservative:	HgCl and Cool	Date Analyzed:	09-14-93
Condition:	Cool and Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	5.1	0.2
Toluene	125	0.4
Ethylbenzene	45.4	0.2
p,m-Xylene	510	0.3
o-Xylene	153	0.2

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	98 %
	Bromofluorobenzene	102 %

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

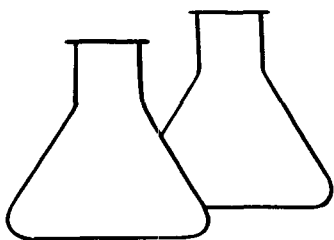
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: McCoy GC "A" 1A C4143

Dennis L. Gerner
Analyst

Maris D. Young
Review



ENVIROTECH LABS

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PHONE: (505) 632-0615 • FAX: (505) 632-1865

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	Trench 3	Date Reported:	08-31-93
Laboratory Number:	5976	Date Sampled:	08-30-93
Sample Matrix:	Water	Date Received:	08-30-93
Preservative:	HgCl & Cool	Date Analyzed:	08-31-93
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	11.9	0.2
Toluene	179	0.4
Ethylbenzene	ND	0.2
p,m-Xylene	560	0.3
o-Xylene	245	0.2

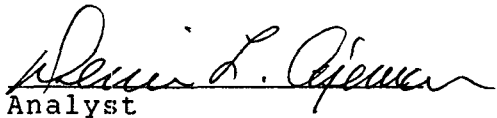
SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	91 %
	Bromofluorobenzene	101 %

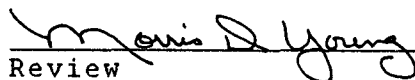
Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating
Solid Waste, SW-846, USEPA, Sept. 1986

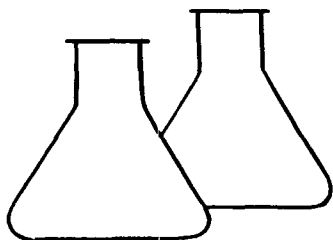
Method 8020, Aromatic Volatile Organics, Test Methods for
Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: McCoy GC "A" 1A Separator Pit C4143


Analyst


Review



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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	Trench 3	Date Reported:	09-14-93
Laboratory Number:	6073	Date Sampled:	09-10-93
Sample Matrix:	Water	Date Received:	09-10-93
Preservative:	HgCl and Cool	Date Analyzed:	09-14-93
Condition:	Cool and Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	ND	0.2
Toluene	0.4	0.4
Ethylbenzene	ND	0.2
p,m-Xylene	1.8	0.3
o-Xylene	1.2	0.2

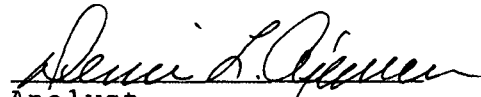
SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	103 %
	Bromofluorobenzene	106 %

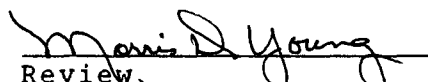
Method: Method 5030A, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992

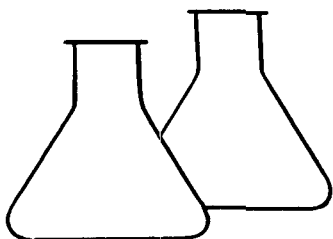
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: McCoy GC "A" 1A C4143


Analyst


Review



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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	Trench 4	Date Reported:	08-31-93
Laboratory Number:	5977	Date Sampled:	08-30-93
Sample Matrix:	Water	Date Received:	08-30-93
Preservative:	HgCl & Cool	Date Analyzed:	08-31-93
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	184	0.2
Toluene	520	0.4
Ethylbenzene	ND	0.2
p,m-Xylene	690	0.3
o-Xylene	373	0.2

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	93 %
	Bromofluorobenzene	95 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

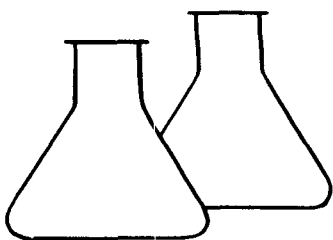
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: McCoy GC "A" 1A Separator Pit C4143

Kevin P. Cramer
Analyst

Marion D. Young
Review



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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	Trench 4	Date Reported:	09-14-93
Laboratory Number:	6074	Date Sampled:	09-10-93
Sample Matrix:	Water	Date Received:	09-10-93
Preservative:	HgCl and Cool	Date Analyzed:	09-14-93
Condition:	Cool and Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	44.0	0.2
Toluene	117	0.4
Ethylbenzene	ND	0.2
p,m-Xylene	435	0.3
o-Xylene	170	0.2

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	104 %
	Bromofluorobenzene	99 %

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

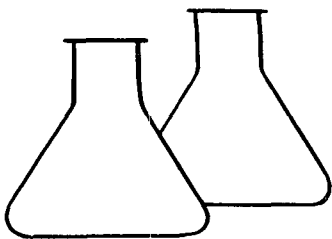
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: McCoy GC "A" 1A C4143

Seni L. Grew
Analyst

Marie L. Young
Review



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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	Trench 4	Date Reported:	09-23-93
Laboratory Number:	6167	Date Sampled:	09-22-93
Sample Matrix:	Water	Date Received:	09-22-93
Preservative:	HgCl and Cool	Date Analyzed:	09-23-93
Condition:	Cool and Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	28.1	0.2
Toluene	3.2	0.3
Ethylbenzene	10.1	0.2
p,m-Xylene	356	0.2
o-Xylene	108	0.2

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	98 %
	Bromofluorobenzene	97 %

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

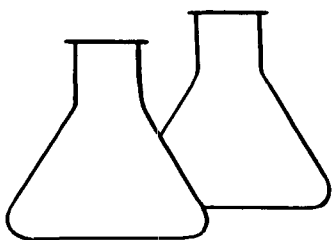
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: McCoy Gas Com A - 1A Separator Pit C4143

Shawn L. Cienca
Analyst

Margaret D. Young
Review



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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	Trench 5	Date Reported:	09-01-93
Laboratory Number:	5978	Date Sampled:	08-30-93
Sample Matrix:	Water	Date Received:	08-30-93
Preservative:	HgCl and Cool	Date Analyzed:	09-01-93
Condition:	Cool and Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	88	0.2
Toluene	278	0.5
Ethylbenzene	5.5	0.2
p,m-Xylene	404	0.6
o-Xylene	197	0.3

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	96 %
	Bromofluorobenzene	98 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

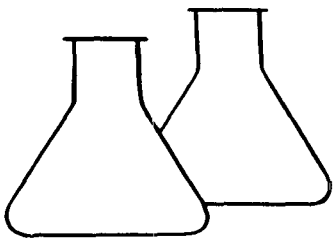
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: McCoy GC "A" 1A Separator Pit C4143

Dennis L. Cramer
Analyst

Maris D. Young
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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	Trench 5	Date Reported:	09-14-93
Laboratory Number:	6075	Date Sampled:	09-10-93
Sample Matrix:	Water	Date Received:	09-10-93
Preservative:	HgCl and Cool	Date Analyzed:	09-14-93
Condition:	Cool and Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	0.3	0.2
Toluene	2.2	0.4
Ethylbenzene	2.4	0.2
p,m-Xylene	51	0.3
o-Xylene	5.0	0.2

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	103 %
	Bromofluorobenzene	101 %

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

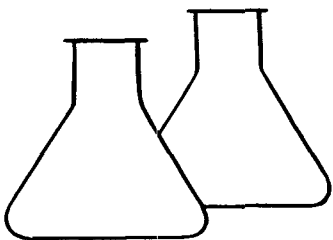
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: McCoy GC "A" 1A C4143

Kevin L. Jensen
Analyst

Marvin D. Young
Review



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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	Trench 6	Date Reported:	09-01-93
Laboratory Number:	5979	Date Sampled:	08-30-93
Sample Matrix:	Water	Date Received:	08-30-93
Preservative:	HgCl and Cool	Date Analyzed:	09-01-93
Condition:	Cool and Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	0.4	0.2
Toluene	2.4	0.5
Ethylbenzene	ND	0.2
p,m-Xylene	7.1	0.6
o-Xylene	4.3	0.3

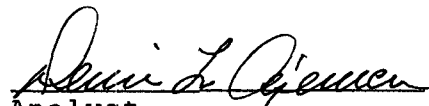
SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	97 %
	Bromofluorobenzene	103 %

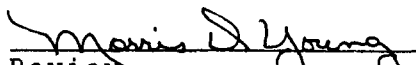
Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

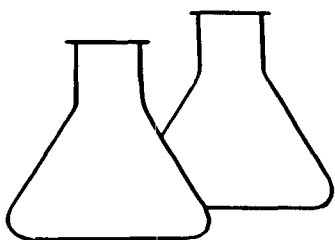
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

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Comments: McCoy GC "A" 1A Separator Pit C4143


Analyst


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EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	Trench 7	Date Reported:	09-01-93
Laboratory Number:	5980	Date Sampled:	08-30-93
Sample Matrix:	Water	Date Received:	08-30-93
Preservative:	HgCl and Cool	Date Analyzed:	09-01-93
Condition:	Cool and Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	0.3	0.2
Toluene	2.3	0.5
Ethylbenzene	2.1	0.2
p,m-Xylene	36.4	0.6
o-Xylene	10.2	0.3

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	102 %
	Bromofluorobenzene	104 %

Method: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

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: McCoy GC "A" 1A Separator Pit C4143

Kevin L. Givner
Analyst

Maris D. Young
Review

CHAIN OF CUSTODY RECORD

Client/Project Name		Project Location		ANALYSIS/PARAMETERS										Remarks	
Amoco 92140		Sep Pit		C4143											
Sampler: (Signature)		McCoy GC "A" 1A		Chain of Custody Tape No.											
Robert M Young															
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers										
TRENCH 1	8-30-93	1100	5973	WATER	2	✓									
TRENCH 2-NORTH	8-30-93	1110	5974	WATER	2	✓									
TRENCH 2-SOUTH	8-30-93	1120	5975	WATER	2	✓									
TRENCH 3	8-30-93	1130	5976	WATER	2	✓									
TRENCH 4	8-30-93	1140	5977	WATER	2	✓									
TRENCH 5	8-30-93	1150	5978	WATER	2	✓									
TRENCH 6	8-30-93	1200	5979	WATER	2	✓									
TRENCH 7	8-30-93	1210	5980	WATER	2	✓									
Relinquished by: (Signature)		Date		Time		Received by: (Signature)		Date		Time					
Robert M Young		8-30-93		1345		C. Chalarney		8-30-93		1350					
Relinquished by: (Signature)						Received by: (Signature)									
Relinquished by: (Signature)						Received by: (Signature)									

ENVIROTECH INC.
 5796 U.S. Highway 64-3014
 Farmington, New Mexico 87401
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