

Date Remediation Started: _____ Date Completed: 3/16/94

Remediation Method: Excavation ☒ Approx. cubic yards 6800
(Check all appropriate sections) Landfarmed ☒ Insitu Bioremediation _____
Other _____

Remediation Location: Onsite ☒ Offsite _____
(ie. landfarmed onsite, name and location of offsite facility)

General Description Of Remedial Action: _____

Ground Water Encountered: No _____ Yes ☒ Depth 37'

Final Pit:
Closure Sampling:
(if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location REFER TO "CLOSURE VERIFICATION" SHEET

Sample depth _____

Sample date _____ Sample time _____

Sample Results

Benzene(ppm) _____

Total BTEX(ppm) _____

Field headspace(ppm) _____

TPH _____

Ground Water Sample: Yes ☒ No _____ (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 4/29/94

SIGNATURE B. Shaw

PRINTED NAME
AND TITLE

Buddy D. Shaw
Environmental Coordinator

C4514

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

COCR 3431

FIELD REPORT: CLOSURE VERIFICATION

JOB No: 92140

PAGE No: of

LOCATION: LEASE: LEFROUITZ GC WELL: 81 QD: NE 1/4 NE 1/4 (A)
SEC: 25 TWP: 29N RNG: 10W BM: NM CNTY: SAG JUA DST: NM PIT: BLOW.
CONTRACTOR: P. VELASQUEZ
EQUIPMENT USED: TRACKHOE

DATE STARTED: 3/16/94
DATE FINISHED: 3/16/94

ENVIRONMENTAL SPECIALIST: *NV*

SOIL REMEDIATION: QUANTITY: 80 x 60 x 38'
DISPOSAL FACILITY: LANDFARMED ON-SITE

LAND USE: RANGE

SURFACE CONDITIONS: UNKNOWN (SEE SITE ASSESSMENT FIELD REPORT)

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 80 YARDS S20°E FROM WELLHEAD.
DEPTH TO GROUNDWATER: < 50'
NEAREST WATER SOURCE: > 2000'
NEAREST SURFACE WATER: > 2050'

LAB SAMPLES

⑤ @ 6w BTEX (8020)
③ @ 32' TPH (418.1) BTEX (8020)

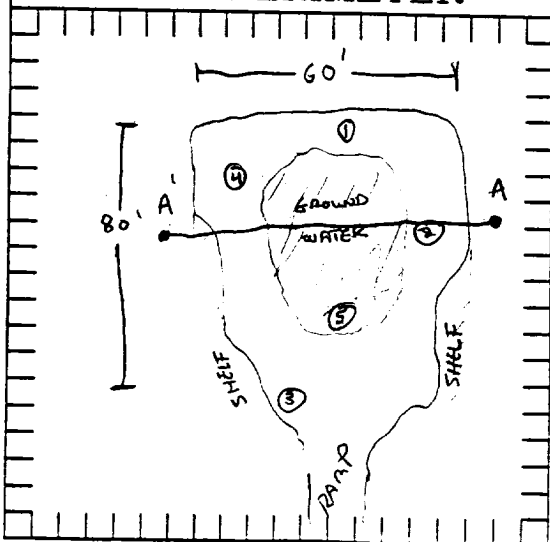
FIELD 418.1 CALCULATIONS

FIELD 418.1 CALCULATIONS						
SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm

SCALE

Q

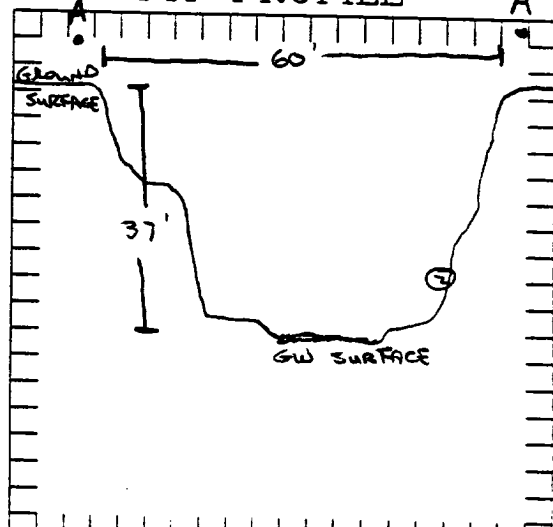
FEET
PIT PERIMETER



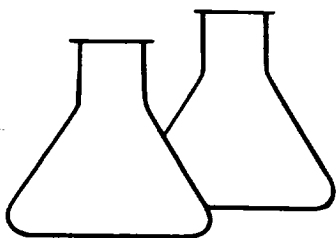
OVM RESULTS

[illegible]

PIT PROFILE



TRAVEL NOTES: CALLOUT: 3/16/94 ONSITE: 3/16/94



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:	3 @ 32'	Date Reported:	03-18-94
Laboratory Number:	7061	Date Sampled:	03-16-94
Sample Matrix:	Soil	Date Received:	03-16-94
Preservative:	Cool	Date Extracted:	03-18-94
Condition:	Cool & Intact	Date Analyzed:	03-18-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	19.8
Toluene	124	49.5
Ethylbenzene	445	19.8
p,m-Xylene	6,300	29.7
o-Xylene	1,620	19.8

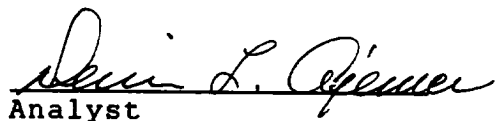
SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	99 %
	Bromofluorobenzene	99 %

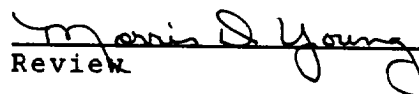
Method: Method 5030, Purge-and-Trap, Test Methods for
Evaluating Solid Waste, SW-846, USEPA, July 1992

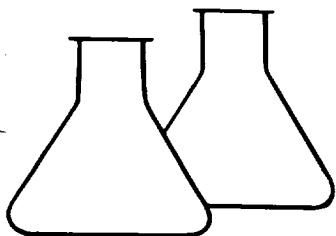
Method 8020, Aromatic Volatile Organics, Test Methods
for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

ND - Parameter not detected at the stated detection limit.

Comments: Lefkovitz GC B1 Blow Pit C4514


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	Project #:	92140
Sample ID:	3 @ 32'	Date Sampled:	03-16-94
Laboratory Number:	7061	Date Received:	03-16-94
Sample Matrix:	Soil	Date Analyzed:	03-27-94
Preservative:	Cool	Date Reported:	03-27-94
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter -----	Concentration (mg/kg) -----	Det. Limit (mg/kg) -----
Total Petroleum Hydrocarbons	1,110	10.0

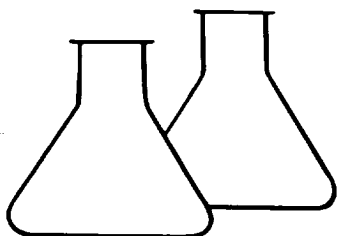
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: Lefkovitz GC Bl Blow Pit C4514

Tony Tistano
Analyst

Morris 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:	5 @ GW (37')	Date Reported:	03-18-94
Laboratory Number:	7062	Date Sampled:	03-16-94
Sample Matrix:	Water	Date Received:	03-16-94
Preservative:	HgCl and Cool	Date Analyzed:	03-18-94
Condition:	Cool and Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	148	1.0
Toluene	570	2.5
Ethylbenzene	83	1.0
p,m-Xylene	1,410	1.5
o-Xylene	245	1.0

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	97 %
	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: Lefkovitz GC B1 Blow Pit C4514

Dennis L. Cramer
Analyst

Morris D. Young
Review

AMOCO GROUNDWATER MONITOR WELL LABORATORY RESULTS

SUBMITTED BY BLAGG ENGINEERING, INC.

LEFKOVITZ GC B # 1 - BLOW PIT
UNIT A, SEC. 25, T29N, R10W

REVISED DATE: JANUARY 13, 1997

FILENAME: (LE-2Q-96.WK3) NJV

SAMPLE DATE	MONITOR WELL No:	D.T.W. (ft)	T.D. (ft)	TDS mg/L	COND. umhos	pH	PRODUCT (in)	BTEX EPA METHOD 8020 (PPB)			
								Benzene	Toluene	Ethyl Benzene	Total Xylene
11-Jun-96	MW #1	30.98	35.39	4440	3400	6.9		ND	ND	ND	1.09
11-Jun-96	MW #2	29.84	35.39	5900	4800	6.9		ND	ND	ND	ND
11-Jun-96	MW #3	28.29	31.81	4420	3600	7.0		ND	2.63	ND	ND

GENERAL WATER QUALITY
AMOCO PRODUCTION COMPANY
LEFKOVITZ GC B # 1
SAMPLE DATE : JUNE 11, 1996

PARAMETERS		MW # 1	MW # 2	MW # 3	Units
GENERAL	LAB pH	7.3	7.4	7.3	s. u.
	LAB CONDUCTIVITY (25 DEG. CELCIUS)	5,920	8,410	6,210	umhos cm
	TOTAL DISSOLVED SOLIDS (180 DEG. CELCIUS)	4,440	5,900	4,420	mg / L
	TOTAL DISSOLVED SOLIDS (CALCULATED)	4,130	5,880	4,190	mg / L
ANIONS	TOTAL ALKALINITY AS CaCO3	215	287	239	mg / L
	BICARBONATE ALKALINITY (AS CaCO3)	215	287	239	mg / L
	CARBONATE ALKALINITY (AS CaCO3)	NA	NA	NA	mg / L
	HYDROXIDE ALKALINITY (AS CaCO3)	NA	NA	NA	mg / L
	CHLORIDE	20.0	42.5	90.0	mg / L
	SULFATE	2,770	3,670	2,720	mg / L
	NITRATE + NITRITE - N	NA	NA	NA	
	NITRATE - N	NA	NA	NA	
	NITRITE - N	NA	NA	NA	
CATIONS	TOTAL HARDNESS AS CaCO3	1,440	1,300	1,410	mg / L
	CALCIUM	550	435	508	mg / L
	MAGNESIUM	16.9	42	35.1	mg / L
	POTASSIUM	6.00	6.00	6.00	mg / L
	SODIUM	640	1,500	680	mg / L
DATA VALIDATION					ACCEPTANCE LEVEL
	CATION/ANION DIFFERENCE	4.71	4.67	4.98	+/- 5 %
	TDS (180):TDS (CALCULATED)	1.1	1.0	1.1	1.0 - 1.2

FIGURE 1



WELL
HEAD



FENCE

PROD
TANK

FENCE

TANK
PIT

SEP

MW #3

MW #2

MW #1

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.

AMOCO PRODUCTION COMPANY

LEFKOVITZ GC B1

NE/4 NE/4 SEC. 25, T29N, 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 INSTALL.

DRAWN BY: NJV

FILENAME: LEFKOV-B1

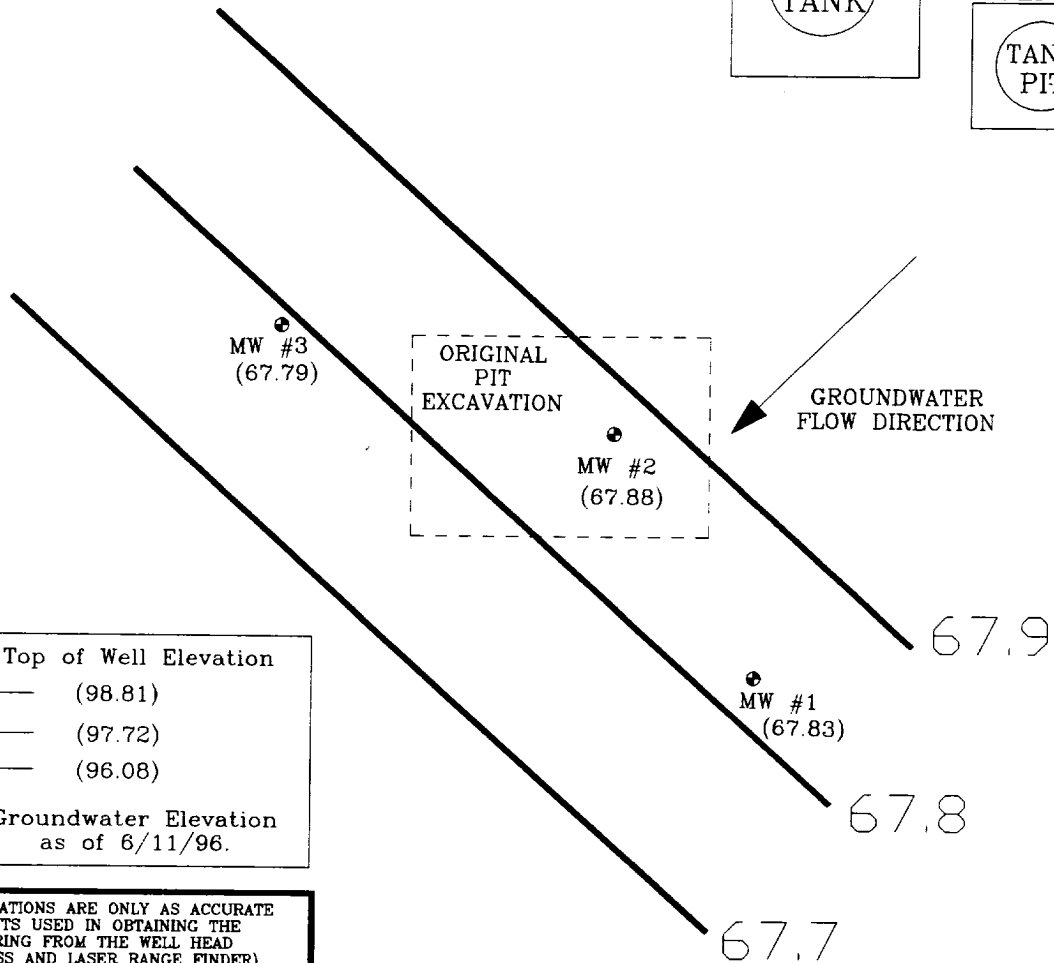
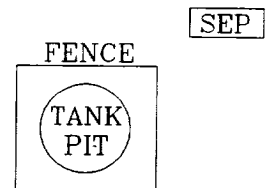
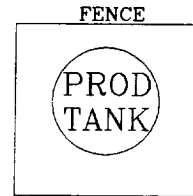
SITE
MAP

6/96



FIGURE 2 (2nd 1/4, 1996)

WELL
HEAD ●



Top of Well Elevation	
MW #1	(98.81)
MW #2	(97.72)
MW #3	(96.08)
● MW #1	Groundwater Elevation (67.83) as of 6/11/96.

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.

AMOCO PRODUCTION COMPANY

LEFKOVITZ GC B1

NE/4 NE/4 SEC. 25, T29N, 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: 1/4ly MONITOR.

DRAWN BY: NJV

FILENAME: LEFKOV-B1

REVISED: 2/10/97 NJV

GROUNDWATER
GRADIENT
MAP
6/96

BLAGG ENGINEERING, Inc.

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

BORE / TEST HOLE REPORT

LOCATION NAME: LEFKOVITZ GC B # 1

CLIENT: AMOCO PRODUCTION COMPANY

CONTRACTOR: BLAGG ENGINEERING, INC.

EQUIPMENT USED: MOBILE DRILL RIG (EARTHPROBE)

BORING LOCATION: S26E, 312 FEET FROM WELL HEAD.

BORING #..... BH - 1

MW #..... 1

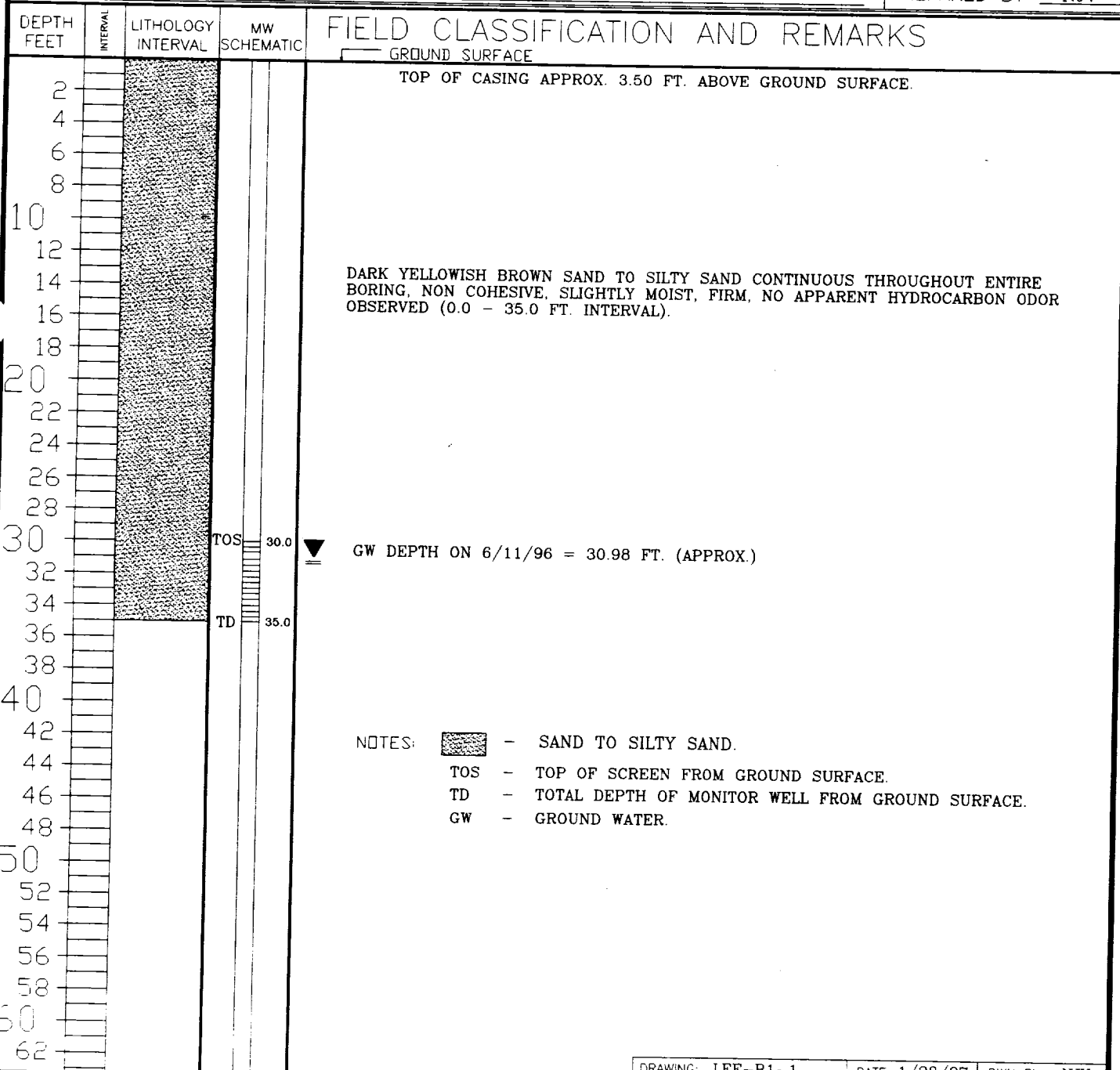
PAGE #..... 1

DATE STARTED 5/31/96

DATE FINISHED 5/31/96

OPERATOR..... JCB

PREPARED BY NJV



DRAWING: LEF-B1-1

DATE: 1/28/97

DWN BY: NJV

BLAGG ENGINEERING, Inc.

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

BORE / TEST HOLE REPORT

LOCATION NAME: LEFKOVITZ GC B # 1

CLIENT: AMOCO PRODUCTION COMPANY

CONTRACTOR: BLAGG ENGINEERING, INC.

EQUIPMENT USED: MOBILE DRILL RIG (EARTHPROBE)

BORING LOCATION: S25E, 237 FEET FROM WELL HEAD.

BORING #..... BH - 2

MW #..... 2

PAGE #..... 2

DATE STARTED 5/31/96

DATE FINISHED 5/31/96

OPERATOR..... JCB

PREPARED BY NJV

DEPTH FEET	INTERVAL	LITHOLOGY INTERVAL	MW SCHEMATIC	FIELD CLASSIFICATION AND REMARKS
				GROUND SURFACE
2				TOP OF CASING FLUSH WITH GROUND SURFACE.
4				
6				
8				
10				DARK YELLOWISH BROWN SAND TO SILTY SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT HYDROCARBON ODOR OBSERVED (0.0 - 25.0 FT. INTERVAL).
12				
14				
16				
18				
20				
22				
24				
26				DARK YELLOWISH BROWN SILTY CLAY TO CLAY, COHESIVE TO PLASTIC, SLIGHTLY MOIST, FIRM TO VERY STIFF, NO APPARENT HYDROCARBON ODOR OBSERVED (25.0 - 26.5 FT. INTERVAL).
28				
30			TOS 30.0	GW DEPTH ON 6/11/96 = 29.84 FT. (APPROX.)
32				DARK YELLOWISH BROWN SAND TO SILTY SAND, NON COHESIVE, SATURATED, FIRM, NO APPARENT HYDROCARBON ODOR OBSERVED (26.5 - 35.0 FT. INTERVAL).
34			TD 35.0	
36				
38				
40				
42				
44				
46				
48				
50				
52				
54				
56				
58				
60				
62				

NOTES:



- SAND TO SILTY SAND.

- SILTY CLAY TO CLAY.

TOS - TOP OF SCREEN FROM GROUND SURFACE.

TD - TOTAL DEPTH OF MONITOR WELL FROM GROUND SURFACE.

GW - GROUND WATER.

DRAWING: LEF-B1-2

DATE: 1/28/97

DWN BY: NJV

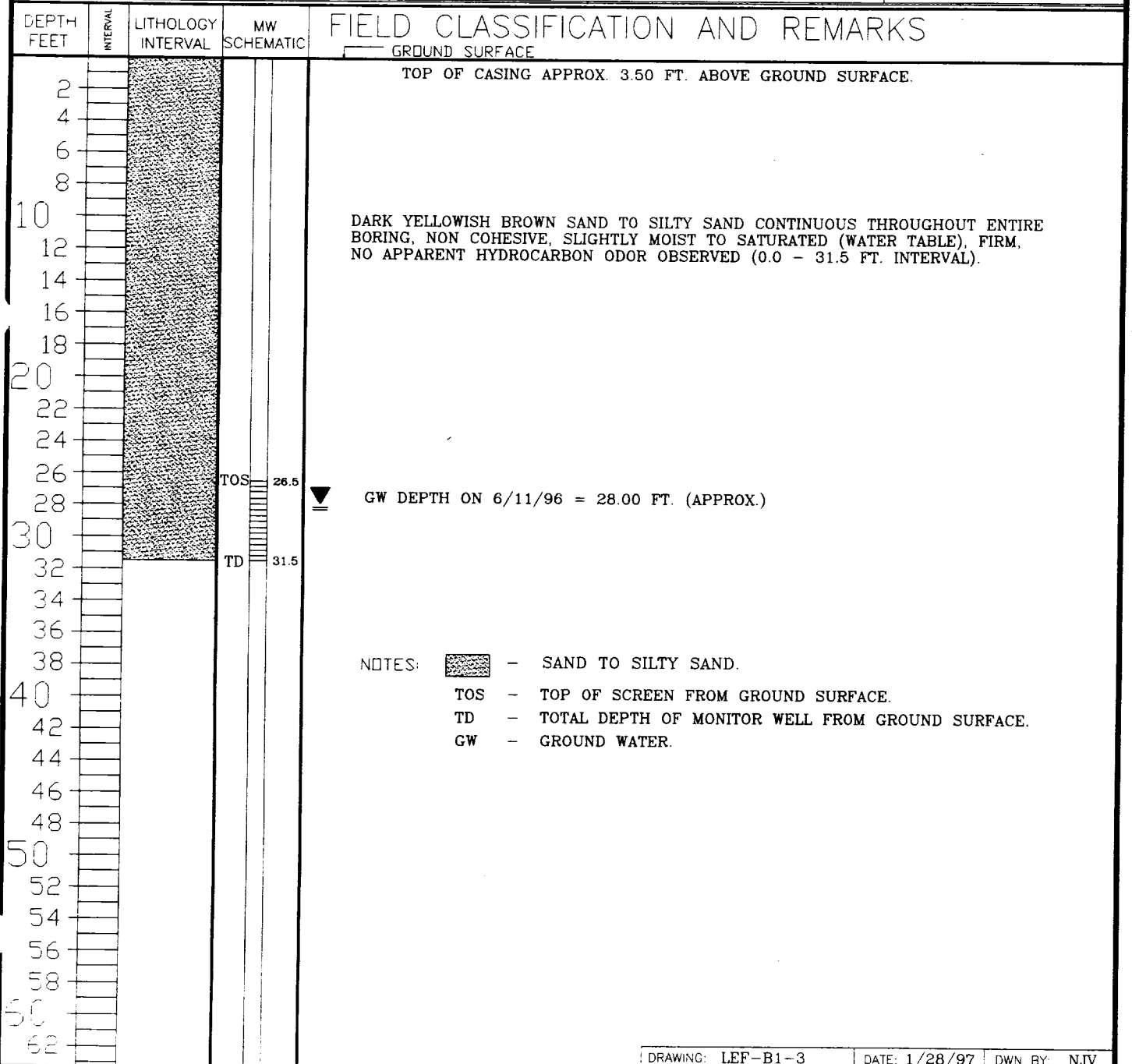
BLAGG ENGINEERING, Inc.

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

BORE / TEST HOLE REPORT

LOCATION NAME: LEFKOVITZ GC B # 1
CLIENT: AMOCO PRODUCTION COMPANY
CONTRACTOR: BLAGG ENGINEERING, INC.
EQUIPMENT USED: MOBILE DRILL RIG (EARTHPROBE)
BORING LOCATION: S4E, 186 FEET FROM WELL HEAD.

BORING #..... BH - 3
MW #..... 3
PAGE #..... 3
DATE STARTED 5/31/96
DATE FINISHED 5/31/96
OPERATOR..... JCB
PREPARED BY NJV



MONITOR WELL #1

2" DIA. SCH. 40 PVC
WELL CASING WITH SLIP CAP
(APPROX. 3.50 ft. ABOVE
GROUND SURFACE)

TOTAL CASING
LENGTH = 30.0 ft.
FROM GROUND SURFACE
TO TOP OF SCREEN

0.02 INCH SLOTTED
SCREEN SCH 40 WITH
POINTED ENC CAP
(5 ft. total length;
top of screen 0.98 ft.
above groundwater)

TOTAL DEPTH = 35.0 ft.
FROM GROUND SURFACE

BACK FILLED WITH
CLEAN NATIVE SOIL
TO SURFACE

8 TO 12 MESH COLORADO
SILICA SAND
(approx. 2 ft. above
top of screen)

WATER TABLE
APPROX. 30.98 ft. FROM
GROUND SURFACE
(measured 6/11/96)

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

AMOCO PRODUCTION COMPANY

LEFKOVITZ GC B # 1

MONITOR WELL CONSTRUCTION & COMPLETION

INSTALLED WITH MOBILE RIG

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-

MONITOR WELL #2

2" DIA. SCH. 40 PVC
WELL CASING WITH SLIP CAP
(flush with ground surface)

TOTAL CASING
LENGTH = 30.0 ft.
FROM GROUND SURFACE
TO TOP OF SCREEN

0.02 INCH SLOTTED
SCREEN SCH 40 WITH
POINTED ENC CAP
(5 ft. total length)

TOTAL DEPTH = 35.0 ft.
FROM GROUND SURFACE

BACK FILLED WITH
CLEAN NATIVE SOIL
TO SURFACE

8 TO 12 MESH COLORADO
SILICA SAND
(approx. 2 ft. above
top of screen)

WATER TABLE
APPROX. 29.84 ft. FROM
GROUND SURFACE
(measured 6/11/96)

SCREEN INTERVAL SET
INTO EXISTING SOIL &
GROUNDWATER CONDITIONS

AMOCO PRODUCTION COMPANY

LEFKOVITZ GC B # 1

MONITOR WELL CONSTRUCTION & COMPLETION

INSTALLED WITH MOBILE RIG

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-

MONITOR WELL #3

2" DIA. SCH. 40 PVC
WELL CASING WITH SLIP CAP
(APPROX. 3.50 ft. ABOVE
GROUND SURFACE)

TOTAL CASING
LENGTH = 26.5 ft.
FROM GROUND SURFACE
TO TOP OF SCREEN

0.02 INCH SLOTTED
SCREEN SCH 40 WITH
POINTED ENC CAP
(5 ft. total length,
top of screen 1.50 ft.
above groundwater)

TOTAL DEPTH = 31.5 ft.
FROM GROUND SURFACE

BACK FILLED WITH
CLEAN NATIVE SOIL
TO SURFACE

8 TO 12 MESH COLORADO
SILICA SAND
(approx. 2 ft. above
top of screen)

WATER TABLE
APPROX. 28.00 ft. FROM
GROUND SURFACE
(measured 6/11/96)

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

AMOCO PRODUCTION COMPANY

LEFKOVITZ GC B # 1

MONITOR WELL CONSTRUCTION & COMPLETION

INSTALLED WITH MOBILE RIG

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 -

BLAGG ENGINEERING, INC.**MONITOR WELL SAMPLING DATA**CLIENT : AMOCO PRODUCTION CO.CHAIN-OF-CUSTODY # : 2488

LEFKOVITZ GC B # 1 - BLOW PIT UNIT A, SEC. 25, T29N, R10W
--

LABORATORY (S) USED : ANAITASDate : June 11, 1996SAMPLER : REOFilename : 06-11-96.WK3PROJECT 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	98.81	67.83	30.98	35.39	1015	6.9	3,400	2.00	-
2	97.72	67.88	29.84	35.39	1040	6.9	4,800	2.00	-
3	96.08	67.79	28.29	31.81	1110	7.0	3,600	1.00	-

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".

PURGEABLE AROMATICS

Blagg Engineering, Inc.

Project ID: Lefkovitz GC B1
Sample ID: MW - 1
Lab ID: 3902
Sample Matrix: Water
Preservative: Cool, HgCl₂
Condition: Intact

Report Date: 06/24/96
Date Sampled: 06/11/96
Date Received: 06/11/96
Date Analyzed: 06/21/96

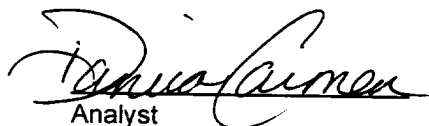
Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	1.09	1.00
o-Xylene	ND	0.50
Total BTEX		1.09

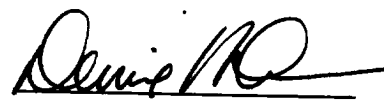
ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	96	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: Lefkovitz GC B1
Sample ID: MW - 2
Lab ID: 3903
Sample Matrix: Water
Preservative: Cool, HgCl₂
Condition: Intact

Report Date: 06/24/96
Date Sampled: 06/11/96
Date Received: 06/11/96
Date Analyzed: 06/21/96

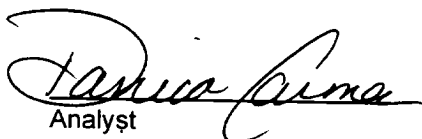
Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	1.00
o-Xylene	ND	0.50
Total BTEX		ND

ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	94	88 - 110%
	Bromofluorobenzene	97	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: Lefkovitz GC B1
Sample ID: MW- 3
Lab ID: 3904
Sample Matrix: Water
Preservative: Cool, HgCl₂
Condition: Intact

Report Date: 06/24/96
Date Sampled: 06/11/96
Date Received: 06/11/96
Date Analyzed: 06/21/96

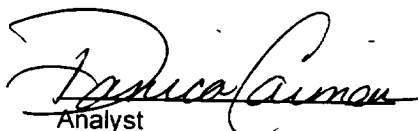
Target Analyte	Concentration (ug/L)	Detection Limit (ug/L)
Benzene	ND	0.50
Toluene	2.63	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	1.00
o-Xylene	ND	0.50
Total BTEX		2.63

ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	91	88 - 110%
	Bromofluorobenzene	95	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: Lefkovitz GC B1
Sample ID: MW - 1
Laboratory ID: 3902
Sample Matrix: Water

Date Reported: 06/24/96
Date Sampled: 06/11/96
Time Sampled: 10:15
Date Received: 06/11/96

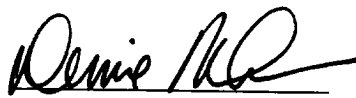
Parameter	Analytical Result	Units
General		
Lab pH.....	7.3	s.u.
Lab Conductivity @ 25° C.....	5,920	µmhos/cm
Total Dissolved Solids @ 180°C.....	4,440	mg/L
Total Dissolved Solids (Calc).....	4,130	mg/L
Anions		
Total Alkalinity as CaCO ₃	215	mg/L
Bicarbonate Alkalinity as CaCO ₃	215	mg/L
Carbonate Alkalinity as CaCO ₃	NA	mg/L
Hydroxide Alkalinity as CaCO ₃	NA	mg/L
Chloride.....	20.0	mg/L
Sulfate.....	2,770	mg/L
Nitrate + Nitrite - N.....	NA	
Nitrate - N.....	NA	
Nitrite - N.....	NA	
Cations		
Total Hardness as CaCO ₃	1,440	mg/L
Calcium.....	550	mg/L
Magnesium.....	16.9	mg/L
Potassium.....	6.00	mg/L
Sodium.....	640	mg/L

Data Validation

		<u>Acceptance Level</u>
Cation/Anion Difference.....	4.71	+/- 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: Lefkovitz GC B1
 Sample ID: MW - 2
 Laboratory ID: 3903
 Sample Matrix: Water

Date Reported: 06/24/96
 Date Sampled: 06/11/96
 Time Sampled: 10:40
 Date Received: 06/11/96

Parameter		Analytical Result	Units
General	Lab pH.....	7.4	s.u.
	Lab Conductivity @ 25° C.....	8,410	µmhos/cm
	Total Dissolved Solids @ 180°C.....	5,900	mg/L
	Total Dissolved Solids (Calc).....	5,880	mg/L
Anions	Total Alkalinity as CaCO ₃	287	mg/L
	Bicarbonate Alkalinity as CaCO ₃	287	mg/L
	Carbonate Alkalinity as CaCO ₃	NA	mg/L
	Hydroxide Alkalinity as CaCO ₃	NA	mg/L
	Chloride.....	42.5	mg/L
	Sulfate.....	3,670	mg/L
	Nitrate + Nitrite - N.....	NA	
	Nitrate - N.....	NA	
Cations	Nitrite - N.....	NA	
	Total Hardness as CaCO ₃	1,300	mg/L
	Calcium.....	453	mg/L
	Magnesium.....	42.3	mg/L
	Potassium.....	6.00	mg/L
	Sodium.....	1,500	mg/L

Data Validation

		Acceptance Level
Cation/Anion Difference.....	4.67	+/- 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: Lefkovitz GC B1
Sample ID: MW - 3
Laboratory ID: 3904
Sample Matrix: Water

Date Reported: 06/24/96
Date Sampled: 06/11/96
Time Sampled: 11:10
Date Received: 06/11/96

Parameter		Analytical Result	Units
General	Lab pH.....	7.3	s.u.
	Lab Conductivity @ 25° C.....	6,210	µmhos/cm
	Total Dissolved Solids @ 180°C.....	4,420	mg/L
	Total Dissolved Solids (Calc).....	4,190	mg/L
Anions	Total Alkalinity as CaCO ₃	239	mg/L
	Bicarbonate Alkalinity as CaCO ₃	239	mg/L
	Carbonate Alkalinity as CaCO ₃	NA	mg/L
	Hydroxide Alkalinity as CaCO ₃	NA	mg/L
	Chloride.....	90.0	mg/L
	Sulfate.....	2,720	mg/L
	Nitrate + Nitrite - N.....	NA	
	Nitrate - N.....	NA	
Cations	Nitrite - N.....	NA	
	Total Hardness as CaCO ₃	1,410	mg/L
	Calcium.....	508	mg/L
	Magnesium.....	35.1	mg/L
	Potassium.....	6.00	mg/L
	Sodium.....	680	mg/L

Data Validation

		Acceptance Level
Cation/Anion Difference.....	4.98	+/- 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



June 24, 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 11, 1996. The samples were from the Lefkovitz GC B1 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".

Denise A. Bohemier
Lab Director

807 S. CARLTON • FARMINGTON, NM 87401 • (505) 328-2395

PROJECT MANAGER:
Anaitas Lab I.D.:

Company:
Address:

Phone: _____
Fax: _____

Bill To:

Company:
Address:

Sample ID	Date	Time	Matrix	Lab ID
MW-1	6-11	1015	WATER	
MW-2	"	1040	"	
MW-3	"	1110	"	
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)				
LEFKOVI 2 GC B1				

CHAIN OF CUSTODY

[illegible]

Please Fill Out Thoroughly.

**Shaded areas
for lab use only.**

White/Yellow: Anaitas
Pink: Client

**LEFKOVITZ GC B # 1 - Blow Pit
Ne/4 Ne/4 Sec. 25, T29N, R10W**

<u>Site Assessment Date:</u>	September 14, 1992 (Documentation Included)
<u>Pit closure Date:</u>	March 16, 1994 (Documentation Included)
<u>Monitor Well Installation Date:</u>	May 31, 1996
<u>Monitor Well Sampling Date:</u>	June 11, 1996

Groundwater Monitor Well Sampling Procedures:

Groundwater samples were collected from site monitor wells following USEPA: SW-846 protocol. The samples were collected using new disposable bailers and placed in new laboratory supplied 40 ml glass vials with teflon septa caps. Samples were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) per USEPA Method 8020. When applicable, additional groundwater was collected and placed in laboratory supplied 250 or 500 ml plastic containers and analyzed for general water quality per USEPA Method 600/4-79-020. The samples were preserved cool (BTEX samples also preserved with mercuric chloride) 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.

Water Quality Information:

The BTEX results for all three (3) monitor wells during the June 11, 1996 sampling event were non detectable or below 25% of the New Mexico Water Quality Control Commission's allowable concentration for groundwater. The general water quality results revealed total dissolved solids within the blow pit area (MW #2) to be above the apparent background level (MW #1). However, the background level itself exceed the allowable concentration for domestic consumption. Groundwater from all monitor wells appear to be statistically equivalent for all general water quality parameters.

Summary and/or Recommendations:

Based on the enclosed documentation, the groundwater within the blow pit area appears to meet all the criteria for permanent closure. All aspects of the Amoco groundwater plan dated October 22, 1996 (approved by NMOCD with letter dated February 7, 1997) has been adhered to. Therefore, Amoco is requesting permanent closure status for this pit. Amoco acknowledges that it is not supplicating closure for the entire site.

94514

1847 / 1842

JOB No: 92140
PAGE No: 1 of 1

Fed. LSE
No. SF-DB1061

DATE STARTED: 9-14-92
DATE FINISHED: 9-15-92
ENVIRO. SPCLT: JW
OPERATOR: BW
ASSISTANT: TC

LOCATION: LSE: Lefkowitz Gas Com. B WELL: No. 1 QD: SW 1/4 NE 1/4 G
SEC: 25 TWP: 29N RNG: 10W PM: NM CNTY: SJ ST: NM PIT: Below

LAND USE: BLM

SURFACE CONDITIONS: EARTHEN PIT approx 3' deep

FIELD NOTES & REMARKS: Pit is located approx. 300' south-east of well head. T-1 Soil ~~is~~ stained ~~blue~~ Black from surface to T.D. of T-1
T-2 Soil is SANDY BROWN from surface to T.D. T-3 is SANDY BROWN from surface to T.D. Soil started smelling at approx. 9' down. No discoloration of soil. North of T-3 ground elev. raises approx 8' to 10'. Elev. diff on East AND south of pit area also.

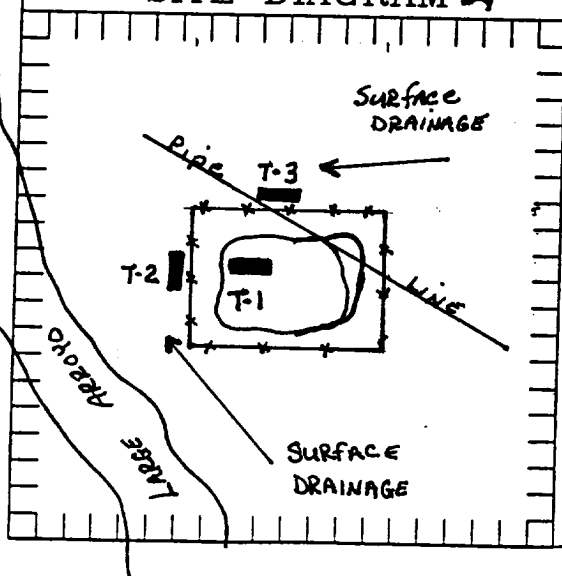
SAMPLE INVENTORY:		
SAMPL ID:	SAMPL TYPE:	LABORATORY ANALYSIS:
T-1 @ 15'	Soil	T.D.H.

[illegible]

SCALE

0 10' 20' FEET

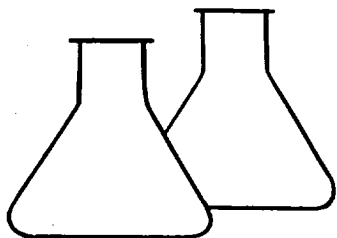
SITE DIAGRAM



TEST HOLE LOGS:

[illegible]

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



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

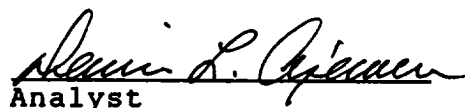
Client:	Amoco	Project #:	92140
Sample ID:	T1 @ 15'	Date Reported:	09-21-92
Laboratory Number:	2583	Date Sampled:	09-14-92
Sample Matrix:	Soil	Date Received:	09-14-92
Preservative:	Cool	Date Analyzed:	09-16-92
Condition:	Cool & Intact	Analysis Needed:	TPH

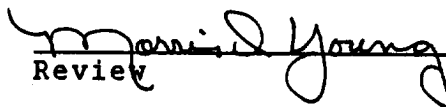
Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----	-----	-----
Total Petroleum Hydrocarbons	387	5.0

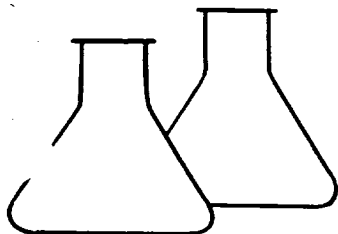
Method: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978

ND - Parameter not detected at the stated detection limit.

Comments: Lefkovitz Gas Com. B1 Blow Pit. 94514


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	Project #:	92140
Sample ID:	T3 @ 15'	Date Reported:	10-01-92
Laboratory Number:	3009	Date Sampled:	09-15-92
Sample Matrix:	Soil	Date Received:	09-15-92
Preservative:	Cool	Date Analyzed:	10-01-92
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	12.2	5.0

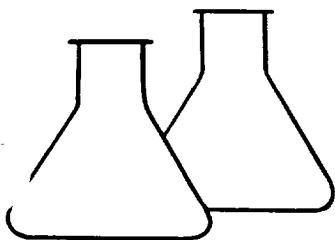
Method: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

ND - Parameter not detected at the stated detection limit.

Comments: Lefkovitz Gas Com. B1 Blow Pit. 94514


Analyst


Review



ENVIROTECH LABS

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

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco	Project #:	92140
Sample ID:	T3 @ 15'	Date Reported:	10-06-92
Laboratory Number:	3009	Date Sampled:	09-15-92
Sample Matrix:	Soil	Date Received:	09-15-92
Preservative:	Cool	Date Extracted:	10-01-92
Condition:	Cool & Intact	Date Analyzed:	10-03-92
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	29.2
Toluene	ND	58
Ethylbenzene	ND	29.2
p,m-Xylene	346	97
o-Xylene	186	48.6

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	105 %
	Bromfluorobenzene	100 %

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: Lefkovitz Gas Com B No.1---Blow Pit---94514

Al Chahar
Analyst

Marion D Young
Review