

3R - 29

APPROVALS

YEAR(S):

12/11/1996



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

December 11, 1996

CERTIFIED MAIL
RETURN RECEIPT NO. P-269-269-226

Mr. B.D. Shaw
Amoco Production Company
200 Amoco Court
Farmington, New Mexico 87401

RE: FINAL SAN JUAN BASIN PIT CLOSURE REPORTS

Dear Mr. Shaw:

The New Mexico Oil Conservation Division (OCD) has completed a review of Amoco Production Company's (Amoco) August 31, 1994 "AMOCO PRODUCTION COMPANY PIT CLOSURE VERIFICATIONS" which were submitted on behalf of Amoco by their consultant Blagg Engineering, Inc. This document contains "PIT REMEDIATION AND CLOSURE REPORTS" for 40 unlined pits in the San Juan Basin of Northwestern New Mexico.

The OCD's review of the above referenced document is addressed below:

A. The pit closure/soil remediation activities conducted at the sites listed below are **approved**.

1. Dryden LS #1 (Tank drain pit)	Unit M, Sec. 28, T28N, R08W.
2. Dryden LS #7 (Separator pit)	Unit N, Sec. 28, T28N, R08W.
3. Florance #42 (Tank drain pit)	Unit M, Sec. 27, T29N, R09W.
4. J.C. Gordon D#2 (Blow pit)	Unit D, Sec. 22, T27N, R10W.
5. J.C. Gordon D#2 (Separator pit)	Unit D, Sec. 22, T27N, R10W.
6. Hamner #2A (Dehy pit I)	Unit C, Sec. 28, T29N, R09W.
7. Hamner #2A (Dehy pit II)	Unit C, Sec. 28, T29N, R09W.
8. Hamner #2A (Separator pit)	Unit C, Sec. 28, T29N, R09W.
9. Hamner #2A (Tank drain pit)	Unit C, Sec. 28, T29N, R09W.
10. Johnson GC B#1 (Blow pit)	Unit H, Sec. 21, T27N, R10W.
11. Johnson GC B#1 (Separator pit)	Unit H, Sec. 21, T27N, R10W.
12. Jones A LS #3 (Separator pit)	Unit G, Sec. 15, T28N, R08W.
13. Jones A LS #3 (Tank drain pit)	Unit G, Sec. 15, T28N, R08W.
14. Martin GC E#1 (Blow pit)	Unit L, Sec. 15, T27N, R10W.
15. Martin GC E#1 (Separator pit)	Unit L, Sec. 15, T27N, R10W.
16. Scherdtfeger A#2X (Tank drain pit)	Unit D, Sec. 31, T28N, R08W.
17. Scherdtfeger A#2X (Separator pit)	Unit D, Sec. 31, T28N, R08W.
18. Scherdtfeger A#2X (Blow pit)	Unit D, Sec. 31, T28N, R08W.

Please be advised that OCD approval does not relieve Amoco of liability if remaining contaminants are found to pose a future threat to surface water, ground water, human health or the environment. In addition, OCD approval does not relieve Amoco of responsibility for compliance with any other federal, state or local laws and/or regulations.

B. The pit remedial activities conducted at the sites listed below are satisfactory. However, according to the reports, onsite landfarming and/or composting actions are still continuing at the sites. Subsequently, the OCD cannot issue final closure approval at this time and approval of closure actions at these sites is **denied**. Please resubmit final closure reports for these sites upon completion of the landfarming and/or composting activities. The final reports will include the results of the soil remediation levels achieved, the laboratory analyses and associated quality assurance/quality control data and the disposition of the remediated soils.

1. Candelario ADA #1 (Blow pit) Unit O, Sec. 36, T28N, R09W.
2. Eskeenalwood #1 (Blow pit) Unit J, Sec. 25, T28N, R09W.
3. Florance C LS #16 (Blow pit) Unit N, Sec. 20, T28N, R08W.
4. J.C. Gordon A#1 (Blow pit) Unit D, Sec. 22, T27N, R10W.
5. J.C. Gordon D#3 (Blow pit) Unit K, Sec. 23, T27N, R10W.
6. J.C. Gordon D#3 (Separator pit) Unit K, Sec. 23, T27N, R10W.
7. Jennapah #1 (Blow pit) Unit H, Sec. 36, T28N, R09W.
8. Jennapah GC A#1E (Blow pit) Unit O, Sec. 36, T28N, R09W.
9. C.M. Morris B#1 (Separator pit) Unit D, Sec. 15, T27N, R10W.
10. C.M. Morris B#1 (Compressor pit) Unit D, Sec. 15, T27N, R10W.
11. Navajo Allotted GC A#1A (Separator) Unit J, Sec. 25, T28N, R09W.
12. Navajo Allotted GC A#1A (Blow pit) Unit J, Sec. 25, T28N, R09W.
13. Schwerdtfeger A#1E (Separator pit) Unit L, Sec. 36, T28N, R09W.
14. Schwerdtfeger A#1E (Blow pit) Unit L, Sec. 36, T28N, R09W.
15. Schwerdtfeger A#1E (Dehy pit) Unit L, Sec. 36, T28N, R09W.
16. Schwerdtfeger A#1E (Tank drain pit) Unit L, Sec. 36, T28N, R09W.
17. Schwerdtfeger A LS #1A (Tank pit) Unit C, Sec. 36, T28N, R09W.
18. Schwerdtfeger A LS #1A (Separator) Unit C, Sec. 36, T28N, R09W.

C. The final pit remedial contaminant levels at the sites listed below are in excess of the OCD's recommended remediation levels. Consequently, the OCD cannot issue final closure approval and approval of closure actions at these sites is **denied**. The OCD requests that Amoco address the extent of the remaining contamination at these sites. The OCD will reconsider issuing closure approval upon resubmission of pit closure forms which address the remaining extent of contamination at the sites. The resubmitted forms should include the completed form and all pertinent information related to the extent of contamination, the results of the soil remediation levels achieved,

Mr. B.D. Shaw
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the results of the soil remediation levels achieved, the laboratory analyses and associated quality assurance/quality control data and the disposition of the remediated soils.

1. Federal F#1 (Separator pit) Unit H, Sec. 16, T27N, R10W.
2. Schwerdtfeger A LS #1A (Dehy pit) Unit C, Sec. 36, T28N, R09W.
3. Schwerdtfeger A LS #1A (Blow pit) Unit C, Sec. 36, T28N, R09W.

D. Ground waters at the sites listed below are contaminated with petroleum related constituents in excess of New Mexico Water Quality Control Commission ground water standards and the extent of ground water contamination at the sites has not been determined. Therefore, approval of these pit closure forms is **denied**. The OCD requests that Amoco investigate the extent of contamination and, if necessary, remediate contaminated ground water pursuant to Amoco's November 21, 1995 ground water investigation/remediation work plan which was approved by the OCD on November 29, 1995.

1. Boyd GC #1A (Separator pit) Unit C, Sec. 08, T31N, R10W.

To simplify the approval process for both Amoco and OCD, the OCD requests that Amoco submit all future pit closure reports only upon completion of all closure activities including onsite landfarming or composting of contaminated soils. The reports should include the completed form and all pertinent information related to the extent of contamination, the results of the soil remediation levels in the pits and landfarms, all laboratory analyses and associated quality assurance/quality control data and the disposition of all remediated soils.

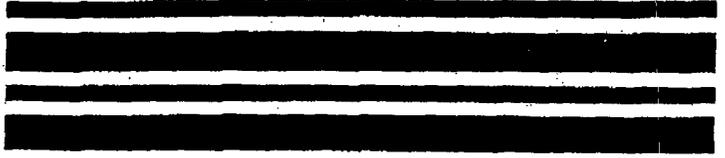
If you have any questions, please call me at (505) 827-7154.

Sincerely,



William C. Olson
Hydrogeologist
Environmental Bureau

xc: OCD Aztec District Office
Bill Liess, BLM Farmington District Office
Nelson Velez, Blagg Engineering, Inc.
Charmaine Tso, Navajo Nation EPA



Patch T

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REPORTS

DATE:

7/29/1994

District I
P.O. Box 1980, Hobbs, NM
District II
P.O. Drawer DD, Artesia, NM 88211
District III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

SUBMIT 1 COPY TO
APPROPRIATE
DISTRICT OFFICE
AND 1 COPY TO
SANTA FE OFFICE

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

PIT REMEDIATION AND CLOSURE REPORT

Operator: Amoco Production Company Telephone: (505) - 326-9200
Address: 200 Amoco Court, Farmington, New Mexico 87401
Facility Or: JC Gordon "D" #2
Well Name _____
Location: Unit or Qtr/Qtr Sec D Sec 22 T 27N R 10W County SAN JUAN
Pit Type: Separator Dehydrator _____ Other _____
Land Type: BLM State _____, Fee _____, Other _____

Pit Location: Pit dimensions: length 35, width 35, depth 25
(Attach diagram) Reference: wellhead , other _____
Footage from reference: 100
Direction from reference: 60 Degrees East North
of
_____ West South _____

Depth To Ground Water: Less than 50 feet (20 points)
(Vertical distance from 50 feet to 99 feet (10 points)
contaminants to seasonal Greater than 100 feet (0 Points) 2
high water elevation of
ground water)

Wellhead Protection Area: Yes (20 points)
(Less than 200 feet from a private No (0 points) C
domestic water source, or; less than
1000 feet from all other water sources)

Distance To Surface Water: Less than 200 feet (20 points)
(Horizontal distance to perennial 200 feet to 1000 feet (10 points) C
lakes, ponds, rivers, streams, creeks, Greater than 1000 feet (0 points)

RANKING SCORE (TOTAL POINTS): 26

Date Remediation Started: _____ Date Completed: 29 July 94

Remediation Method: Excavation Approx. cubic yards 1134
(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: _____
Excavation

Ground Water Encountered: No _____ Yes Depth 25'

Final Pit: Sample location see Attached Documents

Closure Sampling: (if multiple samples, attach sample results and diagram of sample locations and depths)
Sample depth 25' + 20'
Sample date 29 July 1994 Sample time _____

Sample Results
Benzene (ppm) 0.441 @ 20' ND @ 25'
Total BTEX (ppm) 59.441 @ 20' 0.13 @ 25'
Field headspace (ppm) @ 25' (503) @ 20' (606)
TPH ND @ 25'

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 29 July 1994
SIGNATURE B. Shaw PRINTED NAME AND TITLE Buddy D. Shaw Environmental Coordinator

TPH - PASSED
 N. Wall - BTEX FAIL
 Btm - BTEX PASS
 4 Water - BTEX PASS

CLIENT: Amoco ENVIROTECH Inc. PIT NO: A0086
 5796 US HWY. 64, FARMINGTON, NM 87401 (505) 632-0615 C.E.C. NO: 3823

FIELD REPORT: CLOSURE VERIFICATION JOB No: 92140
 PAGE No: 1 of 1

LOCATION: NAME: LC Gordon "D" WELL # 2 PIT: SEP DATE STARTED: _____
 QUAD/UNIT: D SEC: 22 TWP: 27N RNG: 10W BM: NM CNTY: SJ STPA DATE FINISHED: 28 Jul 94
 QTR/FOOTAGE: NW/4 NW/4 CONTRACTOR: EPL ENVIRONMENTAL SPECIALIST: FM

SOIL REMEDIATION: EXCAVATION APPROX. 35 FT. x 35 FT. x 25 FT. DEEP.
 DISPOSAL FACILITY: LAND FARM - ON SITE CUBIC YARDAGE: 1134
 LAND USE: Range - BLM LEASE: SF. 077952

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 100 FEET 60° E/N FROM WELLHEAD
 DEPTH TO GROUNDWATER: P/B @ 150' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'
 NMCCD RANKING SCORE: 20 NMCCD TPH CLOSURE STD: 100 ppm

SOIL AND EXCAVATION DESCRIPTION: 0-25' - Soil is slightly moist, yellow-brown silty sand @ 24 1/2' - Gray clay TD @ 25' - Bedrock. Some water @ 25'
North wall stained brown & gray
 *UNABLE TO EXCAVATE North + Northwest due to congestion

FIELD 419.1 CALCULATIONS

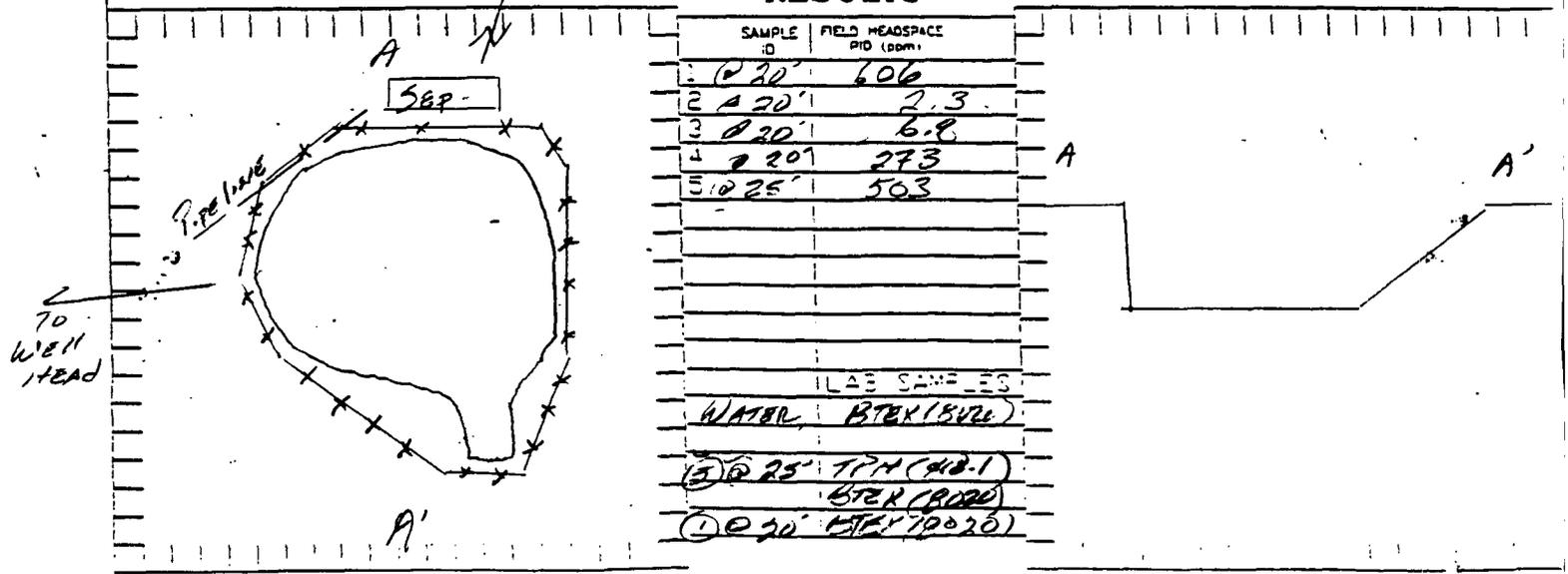
SAMPLE I.D.	LAB No:	WEIGHT (g)	ML. FRESH DILUTION	READING	CALC. ppm

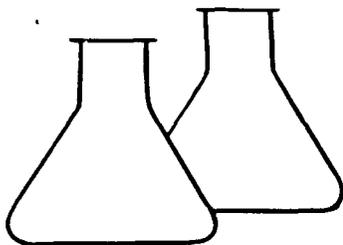


PIT PERIMETER

OVN RESULTS

PIT PROFILE





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:	1020'	Date Reported:	08-10-94
Laboratory Number:	7752	Date Sampled:	07-28-94
Sample Matrix:	Soil	Date Received:	07-28-94
Preservative:	Cool	Date Analyzed:	08-10-94
Condition:	Cool & Intact	Date Extracted:	08-10-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	441	13.1
Toluene	4350	13.1
Ethylbenzene	2250	13.1
p,m-Xylene	10900	13.1
o-Xylene	41500	13.1

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	200 %
	Bromfluorobenzene	167 %

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

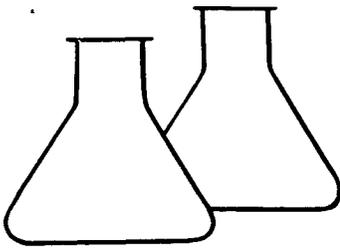
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: JC GORDON "D" #2 SEP PIT
EXCESSIVE SURROGATE RECOVERY DUE TO COELUTION

Ray L. Gaffi
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 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	Amoco	Project #:	92140
Sample ID:	5@25'	Date Sampled:	07-28-94
Laboratory Number:	7753	Date Received:	07-28-94
Sample Matrix:	Soil	Date Analyzed:	08-09-94
Preservative:	Cool	Date Reported:	08-09-94
Condition:	Cool and Intact	Analysis Needed:	TPH

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
----- Total Petroleum Hydrocarbons	----- ND	----- 30.0

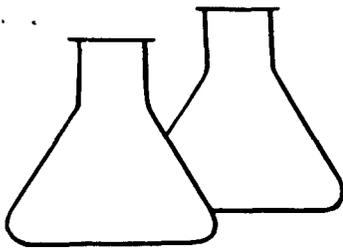
ND = Parameter not detected at the stated detection limit.
N/A = Not applicable

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

Comments: JC GORDON "D" #2 SEP PIT

Reed Griffin
Analyst

Mavis 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:	5025'	Date Reported:	08-10-94
Laboratory Number:	7753	Date Sampled:	07-28-94
Sample Matrix:	Soil	Date Received:	07-28-94
Preservative:	Cool	Date Analyzed:	08-10-94
Condition:	Cool & Intact	Date Extracted:	08-10-94
		Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
Benzene	ND	13.1
Toluene	ND	13.1
Ethylbenzene	14.7	13.1
p,m-Xylene	25.3	13.1
o-Xylene	90	13.1

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	Trifluorotoluene	113 %
	Bromfluorobenzene	93 %

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

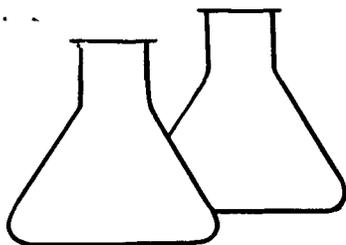
Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1986

ND - Parameter not detected at the stated detection limit.

Comments: JC GORDON "D" #2 SEP PIT

Ray L. Griffin
Analyst

Mavis L. 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:	ground water	Date Reported:	08-10-94
Laboratory Number:	7754	Date Sampled:	07-28-94
Sample Matrix:	Water	Date Received:	07-28-94
Preservative:	HgCl & Cool	Date Analyzed:	08-10-94
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/L)	Det. Limit (ug/L)
-----	-----	-----
Benzene	0.5	0.2
Toluene	19.6	0.4
Ethylbenzene	ND	0.2
p,m-Xylene	ND	0.3
o-Xylene	75.0	0.3

SURROGATE RECOVERIES:	Parameter	Percent Recovery
	-----	-----
	Bromofluorobenzene	159 %

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: JC GORDON "D" # 2

Rex L. Haffin
Analyst

Maris D. Young
Review