

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

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

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

Risk Redvock  
4245  
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OIL CON. DIV.  
3

PIT REMEDIATION AND CLOSURE REPORT

Operator: Amoco Production Company Telephone: (505) - 326-9200  
Address: 200 Amoco Court, Farmington, New Mexico 87401  
Facility Or: GONZALES GC A #1  
Well Name  
Location: Unit or Qtr/Qtr Sec I Sec 20 T 29N R 10W County SAN JUAN  
Pit Type: Separator Dehydrator Other Blow  
Land Type: BLM, State, Fee X, Other

Pit Location: Pit dimensions: length 20', width 25', depth 8'  
(Attach diagram)  
Reference: wellhead X, other  
Footage from reference: 45'  
Direction from reference: 20 Degrees X East North  
of  
West South X

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) 10  
high water elevation of  
ground water)

Wellhead Protection Area: Yes (20 points)  
(Less than 200 feet from a private No (0 points) 0  
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)  
lakes, ponds, rivers, streams, creeks, Greater than 1000 feet (0 points) 20  
irrigation canals and ditches)

RANKING SCORE (TOTAL POINTS): 30

Date Remediation Started: \_\_\_\_\_ Date Completed: 8/30/93

Remediation Method: Excavation ☒ Approx. cubic yards 125  
 (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 BEDROCK BOTTOM - RISK ASSESSED

Ground Water Encountered: No ☒ Yes \_\_\_\_\_ Depth \_\_\_\_\_

Final Pit: Sample location see Attached Documents

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

Sample depth 8' (PIT BOTTOM)

Sample date 8/26/93 Sample time 1145

Sample Results

Benzene(ppm) ND

Total BTEX(ppm) 22.930

Field headspace(ppm) 849

TPH 520 ppm

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 8/30/93

SIGNATURE

B. Shaw

PRINTED NAME  
AND TITLE

Buddy D. Shaw  
Environmental Coordinator



<b>Well Name:</b>	<b>Gonzales GC A #1</b>
<b>Well Site location:</b>	<b>Unit I, Sec. 20, T29N, R10W</b>
<b>Pit Type:</b>	<b>Blow Pit</b>
<b>Producing Formation:</b>	<b>Pictured Cliffs</b>
<b>Pit Category:</b>	<b>Vulnerable</b>
<b>Horizontal Distance to Surface Water:</b>	<b>&lt; 200 ft.</b>
<b>Vicinity Groundwater Depth:</b>	<b>&lt; 100 ft.</b>

## **RISK ASSESSMENT**

Pit remediation activities were terminated when trackhoe encountered sandstone bedrock at 8 feet below grade.

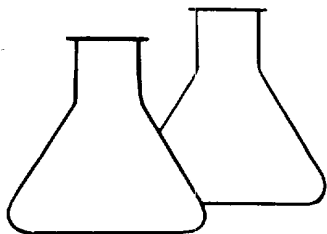
No past or future threat to surface water or groundwater is likely based on the following considerations:

1. Past production fluids were contained locally by a relatively shallow sandstone bedrock located 8 feet below grade. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below sandstone bedrock.
2. Topographic information does not indicate off site lateral fluid migration near the earthen pit.
3. Daily discharge into the earthen pit has been terminated (pit abandoned). Prior discharge into the pit is believed to be under 5 barrels per day.
4. Field headspace readings (OVM/PID) on Pictured Cliffs type locations do not reflect direct correlation to total BTEX per USEPA Method 8020 concentrations. Listed below are several typical AMOCO Pictured Cliffs pit soil analyses comparing headspace to Benzene and total BTEX results.

LOCATION	HEADSPACE (ppm)	BENZENE (ppm)	TOTAL BTEX (ppm)
E.E. Elliott C2	649	ND	26.330
Elliott GC L1	808	ND	14.073
W.D. Heath A13	1069	ND	4.455
Daum LS #4	564	0.034	10.725

The comparisons listed above demonstrates that headspace testing is not an accurate measurement to Benzene or total BTEX concentrations when above standards for Pictured Cliffs type pits.

Based upon the information given, we conclude that the subsurface lateral impact from the earthen pit is very limited and that the sandstone bottom creates enough of a impermeable barrier as to subdue impact to groundwater below it (please refer to AMOCO's report "Post Excavation Pit Closure Investigation Summary, July, 1995", with cover letter dated November 30, 1995). AMOCO therefore request pit closure approval on this location.



# 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:	Pit Bottom @ 8'	Date Sampled:	08-26-93
Laboratory Number:	5954	Date Received:	08-26-93
Sample Matrix:	Soil	Date Analyzed:	08-27-93
Preservative:	Cool	Date Reported:	08-27-93
Condition:	Cool & Intact	Analysis Needed:	TPH

Parameter -----	Concentration (mg/kg) -----	Det. Limit (mg/kg) -----
Total Petroleum Hydrocarbons	520	5.0

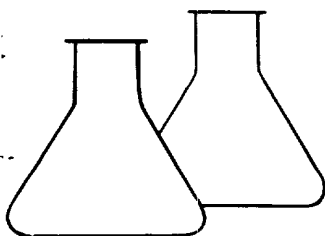
ND = Parameter not detected at the stated detection limit.  
N/A = Not applicable

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

Comments: Gonzales GC "A" 1, Blow Pit, C1245.

Chahar  
Analyst

Maris 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:	Pit Bottom @ 8'	Date Reported:	08-30-93
Laboratory Number:	5954	Date Sampled:	08-26-93
Sample Matrix:	Soil	Date Received:	08-26-93
Preservative:	Cool	Date Extracted:	08-27-93
Condition:	Cool & Intact	Date Analyzed:	08-30-93
		Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
-----	-----	-----
Benzene	ND	13.0
Toluene	230	32.6
Ethylbenzene	ND	13.0
p,m-Xylene	10,200	19.5
o-Xylene	12,500	13.0

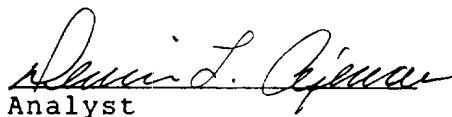
SURROGATE RECOVERIES:	Parameter	Percent Recovery
	-----	-----
	Trifluorotoluene	99 %
	Bromofluorobenzene	95 %

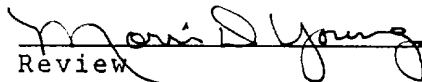
Method: Method 5030, Purge-and-Trap, Test Methods for  
Evaluating Solid Waste, SW-846, USEPA, Sept. 1986.

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: Gonzales GC "A" 1 Blow Pit C4245

  
Analyst

  
Review

[illegible]**ENVIROTECH INC.**

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

CLIENT: <u>AMOCO</u>	<b>BLAGG ENGINEERING, INC.</b> P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>C4245</u>  C.D.C. NO: <u>5636</u>
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## FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: <u>GONZALES GC</u> A WELL #: <u>1</u> PITS: <u>BLOW</u> QUAD/UNIT: <u>(1)</u> SEC: <u>20</u> TWP: <u>29N</u> RNG: <u>10W</u> PM: <u>NM</u> CNTY: <u>SS</u> ST: <u>NM</u> QTR/FOOTAGE: <u>NE 1/4</u> <u>SE 1/4</u> CONTRACTOR: <u>P+S</u>	DATE STARTED: <u>11-26-97</u> DATE FINISHED: _____ ENVIRONMENTAL SPECIALIST: <u>NV/EP</u>
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### SOIL REMEDIATION:

REMEDICATION SYSTEM: <u>LANDFARM</u>	APPROX. CUBIC YARDAGE: <u>148</u>
LAND USE: <u>RANGE</u>	LIFT DEPTH (ft): <u>NA</u>

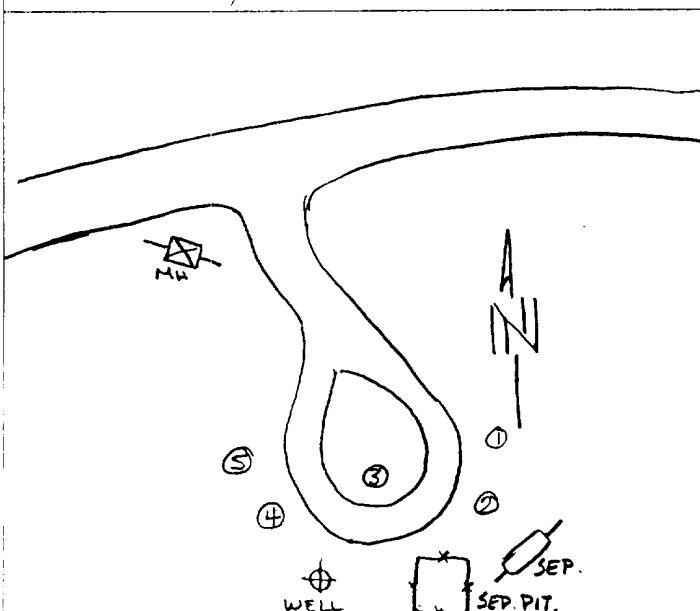
### FIELD NOTES & REMARKS:

DEPTH TO GROUNDWATER: < 100' NEAREST WATER SOURCE: > 1000' NEAREST SURFACE WATER: < 200'  
 NMOCED RANKING SCORE: 30 NMOCED TPH CLOSURE STD: 100 PPM  
 SOIL IS A DRY DARK YELLOW w/ LIGHT BROWN SILTY SAND.  
 NO STAIN OR H.C ODOR.  
 TOOK 5 PT COMP. SAMPLE FOR LAB ANALYSIS.  
 NO ACTUAL LANDFARM OBSERVED ON WELL SITE.

### FIELD 418.1 CALCULATIONS

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

### SKETCH/SAMPLE LOCATIONS



### OVM RESULTS

### LAB SAMPLES

SAMPLE ID	FIELD HEADSPACE PID (ppm)	SAMPLE ID	ANALYSIS	TIME	RESULTS
<u>LF-1</u>	<u>0.0</u>	<u>LF-1</u>	<u>8015</u>	<u>1220</u>	<u>ND</u>

SCALE  
  
 0 FT

TRAVEL NOTES: CALLOUT: <u>N/A</u>	ONSITE: <u>11-26-96</u> <u>1220</u>
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# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

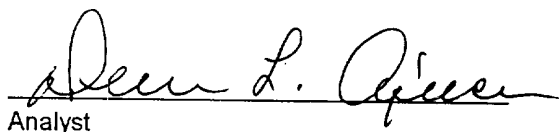
Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	LF - 1	Date Reported:	12-05-97
Laboratory Number:	C624	Date Sampled:	11-26-97
Chain of Custody No:	5636	Date Received:	12-03-97
Sample Matrix:	Soil	Date Extracted:	12-03-97
Preservative:	Cool	Date Analyzed:	12-04-97
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

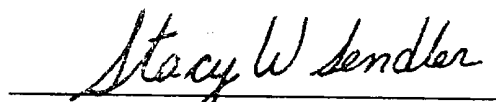
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Gonzales GC A # 1 Landfarm. 5 Pt. Composite.**

  
Analyst

  
Review

**ENVIROTECH INC.**  
5796 U.S. Highway 64-3014  
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