

Denny E. Faust  
DEPUTY OIL & GAS INSPECTOR

District III  
1000 Rio Brazos Rd. Santa Fe, NM 87505  
JUL 19 1996

State of New Mexico  
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 South Pacheco Street  
Santa Fe, New Mexico 87505

RECEIVED  
JUL 30 1996

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

OIL CON. DIV.  
DIST. 3

PIT REMEDIATION AND CLOSURE REPORT

Operator: PNM Gas Services ( Snyder )		Telephone: 324-3764	
Address: 603 W. Elm Street Farmington, NM 87401			
Facility or Well Name: Arnstein #1E			
Location:	Unit: C	Sec. 18	T. 31 N R. 12 W County San Juan
Pit Type:	Separator <input type="checkbox"/>	Dehydrator <input type="checkbox"/>	Other P&A <input type="checkbox"/>
Land Type:	BLM <input checked="" type="checkbox"/>	State <input type="checkbox"/>	Fee <input type="checkbox"/> Other <input type="checkbox"/>
Pit Location:	Pit dimensions: length 12 ' width 12 ' depth 2.5 '		
(Attach diagram)	Reference: wellhead <input checked="" type="checkbox"/>	other <input type="checkbox"/>	
Footage from reference: 120'			
Direction from reference: 20 Degrees <input type="checkbox"/> East <input checked="" type="checkbox"/> North <input type="checkbox"/> South <input checked="" type="checkbox"/> West			
Depth to Ground Water:		(Vertical distance from contaminants to seasonal high water elevation of ground water)	
		Less than 50 feet	(20 points)
		50 feet to 99 feet	(10 points)
		Greater than 100 feet	( 0 points)
			0
Wellhead Protection Area:		(Less than 200 feet from a private domestic water source, or, less than 1,000 feet from all other water sources)	
		Yes	(20 points)
		No	( 0 points)
			0
Distance to Surface Water:		(Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	
		Less than 200 feet	(20 points)
		200 feet to 1,000 feet	(10 points)
		Greater than 1,000 feet	( 0 points)
			0
RANKING SCORE (TOTAL POINTS) :			0

Date Remediation Started: 2/28/95 Date Completed: 8/28/95

Remediation Method: Excavation X Approx. Cubic Yard 334

(Check all appropriate sections) Landfarmed X Amount Landfarmed (cubic yds) 334

Other \_\_\_\_\_

Remediation Location: Onsite X Offsite \_\_\_\_\_  
(i.e., landfarmed onsite, name and location of offsite facility)

Backfill Material Location: \_\_\_\_\_

General Description of Remedial Action:

Excavated contaminated soil and landfarmed onsite within a bermed area at a depth of 6" to 12". Soil will be aerated by plowing/disking until soil meets regulatory level.

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

Final Pit Closure Sampling:

(if multiple samples, attach sample result and diagram of sample locations and depths)

Sample Location Pit Bottom

Sample depth 30'

Sample date 3/3/95 Sample time 4:00:00 PM

Sample Results

Benzene (ppm) ND

Total BTEX (ppm) 0.2049

Field headspace (ppm) \_\_\_\_\_

TPH 52.00 Method 418.1

Vertical Extent (ft) \_\_\_\_\_ Risk Assessment form attached Yes ☐ No ☒

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 MY BELIEF

DATE 7-26-96 PRINTED NAME \_\_\_\_\_  
SIGNATURE Denver Bearden AND TITLE \_\_\_\_\_

ARNstein 1E

C - NE/NW

San Juan  
County

SEC 18

SNYDER Oil Co.

T - 31 N

SF 078243

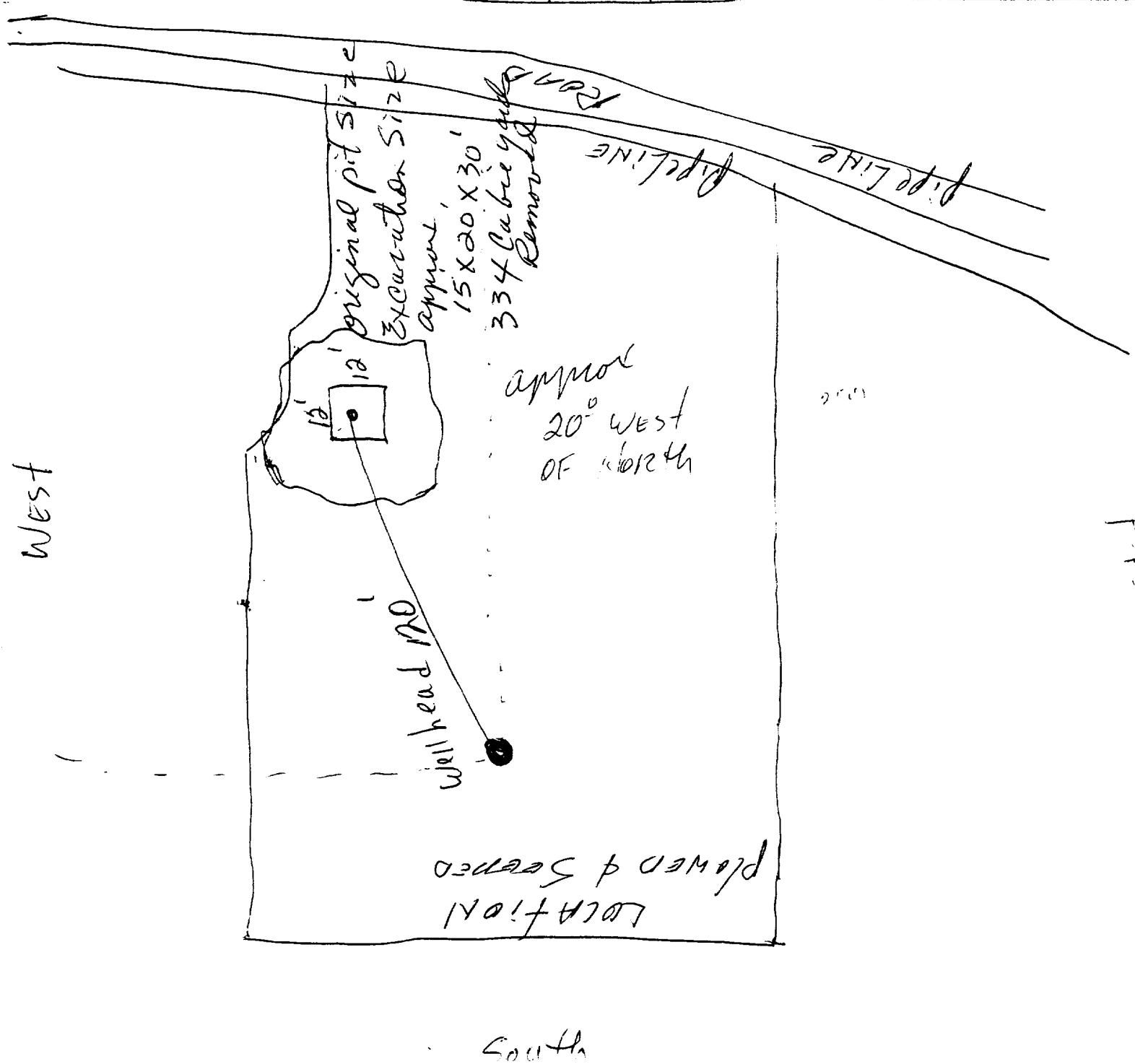
R - 12 W

P & A

Probably Outside Vulnerable Area

Ranking Factor - 0

NORTH



OFF: (505) 325-8786



LAB: (505) 325-5667

**TOTAL PETROLEUM HYDROCARBONS**

Attn: *Denver Bearden*  
Company: *Gas Company of New Mexico*  
Address: *P.O. Box 1899*  
City, State: *Bloomfield, NM 87413*

Date: *3/3/95*  
COC No. *2693*  
Sample No. *5355*  
Job No. *2-1000*

Project Name: *Gas Company of New Mexico*  
Project Location: *Arnstein 1E Pit Bottom 30'*  
Sampled by: *DB* Date: *2/28/95* Time: *16:00*  
Analyzed by: *DC* Date: *3/3/95*  
Type of Sample: *Soil*

**Laboratory Analysis**

<b>Laboratory Identification</b>	<b>Sample Identification</b>	<b>Total Petroleum Hydrocarbons</b>
<i>5355-2693</i>	<i>Gas Company of New Mexico Arnstein 1E Pit Bottom 30'</i>	<i>52 mg/kg</i>

**Method** - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by:

Date:

*Ja 4*  
*3/3/95*

P. O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -



OFF: (505) 325-8786

LAB: (505) 325-5667

### AROMATIC VOLATILE ORGANICS

Attn: **Denver Bearden**  
Company: **Gas Company of New Mexico**  
Address: **P.O. Box 1899**  
City, State: **Bloomfield, NM 87413**

Date: **3/3/95**  
COC No. **2693**  
Sample ID: **5355**  
Job No. **2-1000**

Project Name: **Arnstein 1 E**  
Project Location: **Arnstein 1 E Pit Bottom 30'**  
Sampled by: **DB** Date: **2/28/95**  
Analyzed by: **DLA** Date: **3/2/95**  
Sample Matrix: **Soil**


Time: **16:00**

#### Aromatic Volatile Organics

Component	Measured Concentration ug/kg	Detection Limit Concentration ug/kg
Benzene	ND	0.2
Toluene	52.0	0.2
Ethylbenzene	ND	0.2
m,p-Xylene	120.5	0.2
o-Xylene	32.3	0.2
TOTAL 204.9 ug/kg		

ND - Not Detectable

Method - SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography

Approved by:   
Date: **3/3/95**

P. O. BOX 2606 • FARMINGTON, NM 87499

— TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT —

**VOLATILE AROMATIC HYDROCARBONS**

Gas Company of New Mexico

Project ID: Pits  
Sample ID: Arnstein 1 E LF  
Lab ID: 1002  
Sample Matrix: Soil  
Preservative: Cool  
Condition: Intact

Report Date: 05/18/95  
Date Sampled: 05/15/95  
Date Received: 05/15/95  
Date Extracted: 05/15/95  
Date Analyzed: 05/16/95

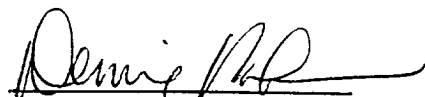
Target Analyte	Concentration (ug/kg)	Detection Limit (ug/kg)
Benzene	ND	7.68
Toluene	ND	7.68
Ethylbenzene	ND	7.68
m,p-Xylenes	ND	15.4
o-Xylene	ND	7.68

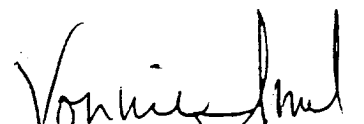
ND - Analyte not detected at the stated detection limit.

<b>Quality Control:</b>	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	98	81 -117%
	Bromofluorobenzene	102	74 -121%

**Reference:** Method 5030, Purge and Trap; Method 8020, Aromatic Volatile Organics;  
Test Methods for Evaluating Solid Wastes, SW-846, United States  
Environmental Protection Agency, Final Update I, July, 1992.

**Comments:**

  
Analyst

  
Review

OFF: (505) 325-5667



LAB: (505) 325-1556

### **TOTAL PETROLEUM HYDROCARBONS**

Attn: **Shawn Adams**  
Company: **Contract Environmental Services, Inc.**  
Address: **P.O. Box 505**  
City, State: **Kirtland, NM 87417**

Date: **15-Jul-96**  
COC No.: **4203**  
Sample No. **11505**  
Job No. **2-1000**

Project Name: **Snyder Oil Corporation - Gov't Arnstein #1E**  
Project Location: **ARN1-E101; Backfill**  
Sampled by: **SA** Date: **12-Jul-96** Time: **17:00**  
Analyzed by: **HR** Date: **15-Jul-96**  
Sample Matrix: **Soil**

#### **Laboratory Analysis**

<b>Parameter</b>	<b>Result</b>	<b>Detection Limit</b>	<b>Unit of Measure</b>	<b>Method</b>
<b>Total Petroleum Hydrocarbons, TPH</b>	<b>&lt; 25</b>	<b>25</b>	<b>mg/kg</b>	<b>EPA Method 418.1</b>


#### **Quality Assurance Report**

##### **Laboratory Fortified Blank/Spike Soil**

<b>Laboratory Identification</b>	<b>Analyzed Value</b>	<b>Acceptable Range</b>	<b>Unit of Measure</b>
<b>Laboratory Fortified Blank Soil - QCBS2</b>	<b>&lt; 25</b>	<b>&lt; 25</b>	<b>mg/kg</b>
<b>Laboratory Fortified Spike Soil - QCSS1</b>	<b>938</b>	<b>828 - 1024</b>	<b>mg/kg</b>

##### **Duplication**

<b>Laboratory Identification</b>	<b>( % RSD )</b>	<b>Limit ( % RSD )</b>
<b>11505-4203</b>	<b>&lt;0.1</b>	<b>15.0</b>

Approved by:   
Date: **7/15/96**

**P.O. BOX 2606 • FARMINGTON, NM 87499**

**- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -**