District I
P O Box 1980. **DEPUTY OIL & GAS INSPECTOR Energy, Minerals and Natural Resources Department

E DIL CONSERVATION DIVISION

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

District II P O. Drawer DD. Artese: NM 8800T 11 9 1996

1000 Rio Brazos Rd. Aztec, NM 87410

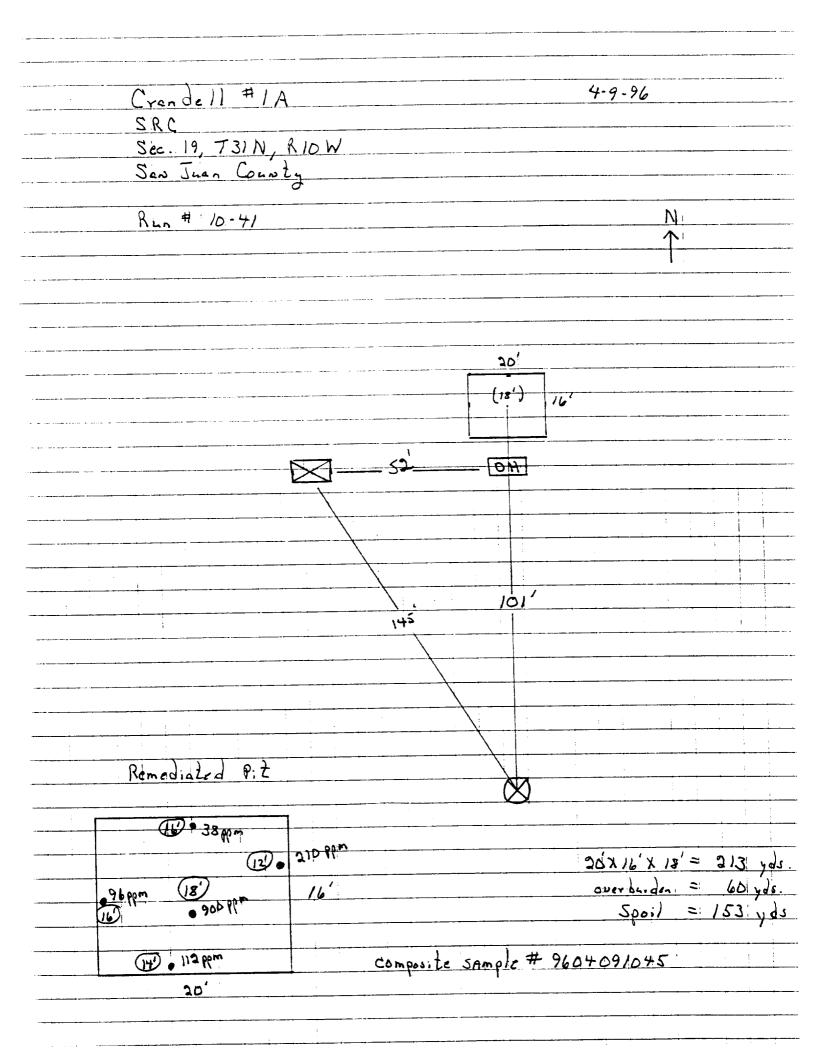
District III

2040 South Pacheco Street Santa Fe, New Mexico 87505 OIL COM. DIV.

PIT REMEDIATION AND CLOSURE REPORT

Operato r ;	PNM Gas Services (SRC) Telephone: <u>324-3764</u>
Address: 603	W. Elm Street Farmington, NM 87401	
Facility or Well Na	ame: Crandell #1A	
Location:	nit: Sec19	T. 31 N R. 10 W County San Juan
Pit Type: S	eparator Dehydrator	✓ Other No
Land Type: Bl	LM Y State	Fee Other No
Pit Loca ti on:	Pit dimensions: length 20	width 20 depth 3
(Attach diagram)	Reference: wellhead 🗸	other
	Footage from reference: 101	
А	Direction from reference: due	Degrees East North 🗸
		of West South
Depth to Ground (Vertical distance from contami seasonal high water elevation of water	nants to	Less than 50 feet (20 points) 50 feet to 99 feet (10 points) Greater than 100 feet (0 points)
Wellheard Protecti (Less than 200 feet from a prival domestic water source, or; less feet from all other water source		Yes (20 points) No (0 points) 0
Distance to Surface (Horizontal distance to perenni ponds, rivers, streams, creeks, i	ai lakes,	Less than 200 feet (20 points) 200 feet to 1,000 feet (10 points) Greater than 1,000 feet (0 points)
canals and ditches		RANKING SCORE (TOTAL POINTS): 0

Date Remediation Started:	4/9/96		Date Completed:	4/9/96
Remediation Method:	Excavation	x	Approx. Cubic Yard	213
heck all opropriate	Landfarmed	X	Amount Landfarmed (cu	bic yds) 153
ctions)	Other			
Remediation Location: i.e., landfarmed onsite, name and ocation of offsite facility)	Onsite	<u>x</u>	Offsite	
Backfill Material Location:				
General Description of Rer	nedial Action:			
Excavated contaminated soil to	pit size of 20'x16'x	18' and landfarmed soil onsit	e within a bermed area at a dep	oth of 6" to 12". Soil will be
aerated by plowing/disking until	soil meets regulate	ory levels.		
Ground Water Encounter	ed: No	y Yes	De	epth
Final Pit Closure Sampling:	Sample Locati	on 5 pt. composite-4 s	ide walls and center of pit botto	om
(if multiple samples, attach sample result and diagram of	Sample depth	18'		
sample locations and depths.)	Sample date	4/9/96	_ Sample time	10: 4 5:00 AM
	Sample Resul	ts		
	Benze	ene (ppm)	0.0079	
	Total	BTEX (ppm)	4.6561	
	Field 1	neadspace (ppm)		
	ТРН	135.00	Method 418.1	
Vertical Extent (ft) 25	5	Risk Assess	sment form attached Ye	s <u>v</u> No
Ground Water Sample:	Yes	_ No <u>v</u>	(If yes, at	tach sample results)
I HEREBY CERTIFY TH	AT THE INFOR	MATION ABOVE IS TR	UE AND COMPLETE TO	THE BEST OF MY
KNOWLEDGE AND MY	BELIEF			
DATE 7-26- SIGNATURE DE	96	PRIN	TED NAME	
SIGNATURE De	mus B	earden AND	TITLE	





OFF: (505) 325-8786

LAB: (505) 325-5667

TOTAL PETROLEUM HYDROCARBONS

Attn:

Denver Bearden

Date:

14-Apr-96

Company: PNM Gas Services

COC No.:

4601

Address:

Sample No.

10606

603 W. Elm

City, State: Farmington, NM 87401

Job No.

2-1000

Project Name:

PNM Gas Services - Crandell #1A

Project Location:

9604091045; 5pt. Composite, 4 Walls & Bottom, 18'

Sampled by:

GC

Date:

9-Apr-96 Time:

10:45

Analyzed by:

DC

Date:

14-Apr-96

Type of Sample:

Soil

Laboratory Analysis

Laboratory Identification	Sample Identification	Total Petroleum Hydrocarbons
	PNM Gas Services - Crandell #1A	
10606-4601	9604091045; 5pt. Composite, 4 Walls & Bottom, 18*	135 mg/kg

Quality Assurance Report

Laboratory Identification	Analyzed Value	Acceptable Range	Units of Measure
Laboratory Fortified Blank Soil - QCBS2	< 25	< 25	mg/kg
Laboratory Fortified Spike Soil - QCSS1	913	828 - 1024	mg/kg

Method - EPA Method 418.1 Total Petroleum Hydrocarbons

Approved by:



LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:

Denver Bearden

Date:

11-Apr-96

Company: PNM Gas Services

COC No.:

4601

Address:

603 W. Elm

Sample No.

10606

City, State: Farmington, NM 87401

Job No.

2-1000

Project Name:

PNM Gas Services - Crandell #1A

Project Location:

9604091045; 5pt. Composite, 4 Walls & Bottom, 18' Date:

9-Apr-96 Time:

10:45

Sampled by:

GC DC

Date:

11-Apr-96

Analyzed by: Type of Sample:

Soil

Aromatic Volatile Organics

Component		Result	Units of Measure	Detection Limit	Units of Measure
Benzene		7.9	ug/ kg	. 0.2	ug/ kg
Toluene		168.5	ug/ kg	0.2	ug/ kg
Ethylbenzene		83.1	ug/ kg	0.2	ug/ kg
m,p-Xylene		3393.0	ug/ kg	0.2	ug/ kg
o-Xylene		1003.5	ug/ kg	0.2	ug/ kg
	TOTAL	4656.1	ug/ kg		

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

LAB: (505) 325-5667

Mr. Derwer Bearden Public Service Company Of New Mexico Farmington, NM 87401 June 6, 1996

RE: Results of Vertical Assessments

Pierce 1, (H) Sec 30, T31N, R10W, NMPM, San Juan Co., NM Crandell 1A, (p) Sec 19, T31N, R10W, NMPM, San Juan Co., NM

On Site Project: 4-1272

The enclosed site diagrams and boring logs summarize the assessment of vertical extent of contamination for the two referenced dehydrator pit locations. Also attached are the laboratory results of soil samples taken at the total depth of the borings.

Based on the results, the Crandell 1A pit can be closed by risk assessment with vertical extent at approximately 25 feet. The extent of contamination on the Pierce 1 location is greater than 31 feet, and On Site has reschedule to drill during the week of June 10, 1996.

Per your inquiry, On Site has also schedule to drill the pits on Pierce #2A and Lester #1 on the week of June 10, 1996, when Mark Sikelianos and Maureen Gannon of PNM are available.

Please contact Cindy Gray or me at (505) 325-5667 if you need additional information. Thanks for considering On Site.

Respectfully submitted, On Sile Technologies, Ltd.

Michael K. Lane, P.E.

Senior Engineer

NMED-Certified Environmental Scientist

enclosiures

MKL/mki File: wert.ltr

ON SITE TECHNOLOGIES, LTD. P.O. BOX 2606, FARMINGTON, NM 87499 (505) 325-5667

DATE: 06-06-96 CLIENT: PNM

SITE LOCATION:

CRANDELL # 1A Unit P, Sec. 19. T3 1N, R 10W. NMPM

San Juan County, NM

ONSITE CONTRACTOR:

EQUIPMENT:

GEOPROBE (2" AUGER w/ Split Spoon)

ASSESSMENT SUMMARY

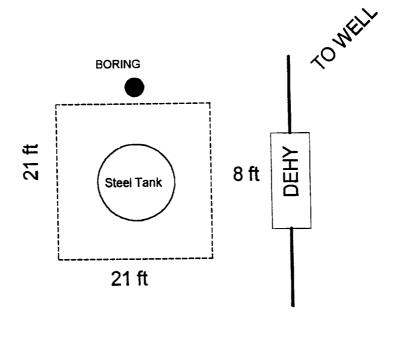
CO.#: PNM 1001

LOGGER: MKL PAGE #: JOB #: 4-1272

FINISH: 5/6/96 START: 5/6/96

NOTES:

Follow-up pit assessment for vertical extent and risk assessment. Dehy. Refer to boring log.





Not to Scale



PROJECT: Follow-up Pit Assessment

CLIENT: PNM

Crandell #1A, Dehy Pit SITE LOCATION:

P-S 19-T3 1N-R 10W , NMPM

San Juan County, NM

CONTRACTOR: ON SITE

EQUIPMENT: GEOPROBE w/2" Flight Auger

TEST HOLE LOG

TEST HOLE: #1 LOGGER: MKL

JOB #: 4-1272

PAGE #: 1

START: 5/06/96

FINISH: 05/06/96

CONTR	RACTOR:	ONZITE		EQUIPMENT:	SEOF NODE W/ Z	
DEPTH (ft)	SOIL	ПТНОГОСУ	FIELD SCREEN PID: (units)	LAB ANALYSES (ppm)	FIELD CLASSIFICAT	TION & REMARKS
SURFACE	SM/SC				LT. BROWN SILTY FINE SAND, SL SOFT TO SL. FIRM. NO ODOR OR	PLASTIC, MOIST, DISCOLORATION.
10'	SM/SC		1.2			
20'			2.3			
			163		SAME AS ABOVE (SAA), SLIGHT I	
30'	SS			BTEX: 0.023 BENZ: 0.0028 TPH: <5.0	DRILLING REFUSAL. PROBABLY TOTAL DEPTH: 25'(bgs)	SANDSTONE.
40'						
50'						
_					Soil sample taken from cuttings on a	uper flights.
					Soil sample taken from cuttings on at	
						BY: MKL DATE:06/05/96

BY: MKL DATE: 06/05/96 FILE: 41272AB1.CAD



OFF: (505) 325-8786

LAB: (505) 325-5667

TPH - Gasoline / Diesel Range Organics

Attn:

Michael K. Lane

Date:

8-May-96

Company: On Site Technologies, Ltd. c/o PNM

COC No.: Sample No. 4075

Address:

612 E. Murray Drive City, State: Farmington, NM 87401

Job No.

10817 4-1000

Project Name:

PNM Gas Services - Crandell #1A

Project Location:

B1 @ 25' ML

Date:

6-May-96 Time:

12:55

Sampled by: Analyzed by:

DC

Date:

8-May-96

Sample Matrix:

Soil

Laboratory Analysis

Analyte		Result	Unit of Measure	Detection Limit	Unit of Measure
Gasoline Range Organics (C5 - C9)		< 5.0	mg/kg	5.0	mg/kg
Diesel Range Organics (C10 - C28)		< 5.0	mg/kg	5.0	mg/ kg
	TOTAL	< 5.0	mg/kg]	

Quality Assurance Report

GRO QC No.:

0447-STD

DRO QC No.:

0446-STD

Calibration Check

Analyte	Method Biank	Unit of Measure	True Value	Analyzed Value	% Diff	Limit
Gasoline Range (C5 - C9)	< 50	p pb	900	873	3.0	15%
Diesel Range (C10 - C28)	< 5.0	ppm	2,000	2,120	6.0	15%

Matrix Snika

Mauix Spik	,				
Analyte	1- Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Gasoline Range (C5-C9)	79	78	(70-130)	2	20%
Diesel Range (C10-C28)	96	98	(70-130)	2	20%

Method - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography



OFF: (505) 325-8786

LAB: (505) 325-5667

AROMATIC VOLATILE ORGANICS

Attn:

Michael K. Lane

Date:

7-May-96

Company: On Site Technologies, Ltd. c/o PNM

COC No.:

4075

Address:

Sample No.

10817

City, State: Farmington, NM 87401

612 E. Murray Drive

Job No.

4-1000

Project Name:

PNM Gas Services - Crandell #1A

Project Location:

B1 @ 25'

Sampled by:

ML

Date: Date: 6-May-96 Time:

12:55

Analyzed by: Sample Matrix: DC Soil 7-May-96

Aromatic Volatile Organics

			Units of	Detection	Units of
Component		Result	Measure	Limit	Measure
Benzene		2.8	ug/ kg	0.2	ug/ kg
Toluene		8.6	ug/ kg	0.2	ug/ kg
Ethylbenzene		1.6	ug/ kg	0.2	ug/ kg
m,p-Xylene		7.7	ug/ kg	0.2	ug/ kg
o-Xylene		2.3	ug/ kg	0.2	ug/ kg
	TOTAL	23.0	_ug/ kg		

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

Approved by:

Land Farmed ON-Location: 153 Cabic Yids Compasite Sample # 960507 1055 Soil Vapar Head Squee Reading = 88 ppm 3.0 3.0 11.2 19.8 4.7 .70 Sample digth between 2" + 12"	Crance //) / Mevidian B:1 Sec. 19, T31 Run # 10-4/	N, RID W		5-7-96
5011 Vapor Mead Space Reading = 88 pm	Land	Farmed ON-	Location:	153 Chbic Yads
3.0 3.0 91.2 /9.8 4.7 .76	Compo	site sample	# 960507/	0:55
7.7 .76	Soil V	lapar Head Sp	ace Reading =	88 pm
7.7 .76				
7.7 .76				
7.7 .76		3.0	1.	
4.7 .76		1		
7.7				
4.7		2).2	19.8	
			. • 1	
	:			
		4.7	-76	
			i .	
			· · · · · · · · · · · · · · · · · · ·	
Sample depth between 2"+12"				
		Sample d	with believe 2	" + 12"
		1		



LAB: (505) 325-5667

Diesel Range Organics

Attn:

Denver Bearden

Date:

9-May-96

Company: PNM Gas Services

COC No .:

4640

Address:

603 W. Elm

OFF: (505) 325-8786

Sample No.

10849

City, State: Farmington, NM 87401

Job No.

2-1000

Project Name:

PNM Ges Services - Crandell 1A Land Farm

Project Location:

96050B1055; 6pt. Composite, 2"-12" deep

8-May-96 Time: Date:

Sampled by:

GC

Date:

10:55

Analyzed by: Sample Matrix: DC Soil

9-May-96

Laboratory Analysis

Parameter	Result	Unit of Measure	Detection Limit	Unit of Measure
Diesel Range Organics (C10 - C28)	28.4	mg/kg	5.0	mg/kg

Quality Assurance Report

DRO QC No.:

0475-QC

Calibration Check

Parameter	Me th od Bl en k	Unit of Measure	True Value	Analyzed Value	% Diff	Limit
Diesel Range (C10 - C28)	< 5 .0	ppm	2,000	1,820	9.0	15%_

Matrix Snika

Maura Spike							
1- Percent	2 - Percent						
Receivered	Recovered	Limit	%RSD	Limit			
77		i		ļ			
9 6	98	(70-130)	2	20%			
	1- Percent Receivered	1- Percent 2 - Percent Recevered Recovered	1- Percent 2 - Percent Recevered Recovered Limit	1- Percent 2 - Percent Receivered Limit %RSD			

Method - SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography

Approved by: