

**3R-435**

**Corrective Action Report**

**DATE:  
10.16.07**

PNM Resources  
Alvarado Square  
Albuquerque, NM 87158-2104  
www.pnmresources.com  
505.241.2031  
Fax: 505.241.2376

RECEIVED

2007 OCT 23 AM 10:58

PNM Resources

October 16, 2007

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Mr. Wayne Price, Chief Environmental Bureau  
Oil Conservation Division  
1220 North St. Francis Drive  
Santa Fe, New Mexico 87505

Dear Mr. Price:

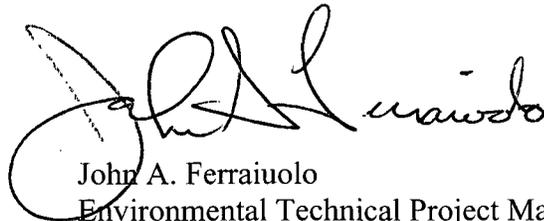
Subject: PNM Bernalillo Compressor Station Facility Corrective Action Report

Public Service Company (PNM) has decommissioned the former Bernalillo Compressor Station located approximately 1-mile north of Bernalillo in Sandoval County New Mexico. A Release Notification, Corrective Action and Closure Plan was previously submitted by letter dated February 19, 2007. The OCD approved the Plan by e-mail dated 5/2/07. Corrective action fieldwork occurred during May 2007. Pursuant to the Oil Conservation Division (OCD) Oil & Gas Regulations 19 NMAC 15 Release Notification and Corrective Action Section 3.116, on behalf of PNM the attached Corrective Action Report is submitted.

This Report is being submitted for review and approval to satisfy the requirement for a facility Clean Closure Determination by the OCD.

Please contact me at (505) 241-4871 if you have any questions.

Thank you for your assistance.



John A. Ferraiuolo  
Environmental Technical Project Manager

Enclosure

cc: Kevin Lawrence, PNM

PUBLIC SERVICE COMPANY OF NEW MEXICO  
BERNALILLO COMPRESSOR STATION  
CORRECTIVE ACTION REPORT

PREPARED BY

PUBLIC SERVICE COMPANY OF NEW MEXICO  
ALBUQUERQUE, NEW MEXICO

October 2007

PUBLIC SERVICE COMPANY OF NEW MEXICO  
BERNALILLO COMPRESSOR STATION  
CORRECTIVE ACTION REPORT

PURPOSE

This Corrective Action Report has been prepared on behalf of Public Service Company of New Mexico (PNM) for the former Bernalillo Compressor Station (the Site) in cooperation with the New Mexico Oil Conservation Division (OCD) pursuant to the 19 NMAC 15 Release Notification and Corrective Action Section 3.116 to satisfy the requirement for a facility Clean Closure Determination by the OCD.

A Release Notification, Corrective Action and Closure Plan dated February 19, 2007 (Closure Plan) was previously submitted on behalf of PNM that discussed Site history and operations, soil and groundwater characterization and remedial action recommendations. PNM received approval of the Closure Plan from the OCD by e-mail dated May 2, 2007.

SITE DESCRIPTION

The Bernalillo Compressor Station is located in Section 29, Township 13N, Range 4E. The facility is approximately 1-mile northeast of the town of Bernalillo, NM in Sandoval County. The location of the facility is illustrated on FIGURES 1. The Site is an industrial facility, historically a natural gas compressor station. Today most of the Site is graded soil. The Albuquerque Mainline, block valve setting and the Bernalillo Border Station No. 1 remain operational at the Site. The Site is secured with a 12-ft. chain link fence with barbed wire and a locked gate.

The compressor building concrete pad (see FIGURE 2) was removed in December of 2006. Following the removal of the pad, discolored soil was observed in a portion of the 30-ft by 70-ft by 3.5-ft. pad excavation, and is the subject of this Corrective Action Report.

SITE CHARACTERIZATION

Groundwater: An on-site domestic well served the facility for sink and lavatory uses. The well was sampled on 6/19/06. The depth to water was measured at 10.50-ft. and the total depth of the well at 163.38-ft. below ground surface at the time of sampling. Analytical results from the groundwater sample were compared against New Mexico Water Quality Control Commission Groundwater Standards and National Primary Drinking Water Regulations Maximum Contaminant Levels (MCL). Analyzed parameters were not detected above regulatory standards or guideline. Well sampling results were reported as part of the Closure Plan.

Soil: Six area soil composite samples were collected on 12/4/06 near the surface of the former compressor building foundation excavation at approximately 3.5-ft. below ground surface. No highly contaminated/saturated soils were observed. Analytical results were compared against the EPA Toxicity Characteristic Leachate Procedure (TCLP) Standards, the New Mexico Environment Department (NMED) Total Petroleum Hydrocarbon (TPH) Screening Guidelines (October 2006) and method detection levels. Analyzed parameters were not detected above regulatory standards. However, two sample results (BCS-3 and BCS-4) exceed TPH Screening Guidelines. The soil contaminant is categorized as weathered compressor engine or turbine lubricating oil. Some degraded asphalt or other high molecular weight hydrocarbon source also appears to comprise the contaminant composition. Site characterization soil sampling results were reported as part of the Closure Plan.

PROPOSED CORRECTIVE ACTION

Groundwater does not appear to have been impacted from the on-site release. PNM proposed to excavate discolored soil in the areas of sample locations BCS-1, BCS-2 and BCS-4 (FIGURE 3). Since groundwater is shallow at the Site (10.50-ft. on 6/19/06) excavation was proposed to terminate at a maximum depth of 8-ft. so as not to impact groundwater. Excavation would proceed guided by field screening (PetroFLAG) to assess remedial progress with laboratory confirmatory analyses. Since the contaminant hydrocarbon fraction is predominantly above C19 range

Bernalillo Compressor Station  
Corrective Action Report

the New Mexico Environment Department (NMED) TPH Screening Guideline for an Industrial Setting of 5,000 mg/kg was proposed as a corrective action remedial goal or excavation to a maximum depth of 8-feet.

Excavated soil together with the material from the BCS-3 sample location pile was to be manifested and transported by a licensed Special Waste hauler to the Waste Management Rio Rancho Landfill for land farming. Clean backfill material would be compacted to the surrounding grade.

CORRECTIVE ACTION

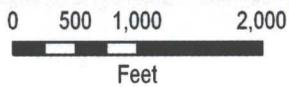
The on-site domestic well was plugged and abandoned on June 20, 2006 by Metric Corporation. A copy of the plugging report that was filed with the Office of the State Engineer dated July 12, 2006. A copy of the domestic well plugging report was provided as part of the Closure Plan.

PNM profiled the contaminated soil with Waste Management, Inc. (Profile # 100054NM, effective 5/17/07) as Non RCRA Hazardous Waste Petroleum Contaminate Soil based on the Site characterization analytical results.

On May 21, 2007 Envirotech, Inc. of Farmington, N.M. under contract to PNM began remedial excavation and loaded visually contaminated soils into trucks for direct off-site transport to the Rio Rancho Landfill. Envirotech is a registered Commercial Solid Waste Hauler (Certification # 0124001) in the State of New Mexico. Approximately 400-cubic yards of soil were manifested to the landfill (PNM will maintain the Special Waste Manifest records and are available upon request). PNM collected and analyzed field screening samples (PetroFLAG) for Total Petroleum Hydrocarbon (TPH) by EPA SW-846 Draft Method 9074 to assess remedial progress and samples of the field identified final excavation (FIGURE 3) for laboratory confirmatory analyses of TPH by EPA Method 413.2 (Oil & Grease). Analyzed parameters were not detected above regulatory standards, guidelines or the proposed remedial standards. The analytical results of the final excavation area are summarized in Table 1 (copy provided as Appendix A).

Envirotech extended the excavation to a total depth of seven (7) feet and the final dimensions of the extended excavation was approximately 37-ft. by 36-ft. Envirotech backfilled the existing and extended excavation with approximately 300 cubic yards of soil obtained from on-site and approximately 160 cubic yards from off-site sources. Backfill was compacted and contoured to the surrounding terrain. Site corrective action was completed on May 23, 2007.

A copy of the Envirotech report titled, Contaminated Soil Excavation at Bernalillo Compressor Station, Bernalillo, New Mexico dated July 20, 2007 is attached as Appendix B.

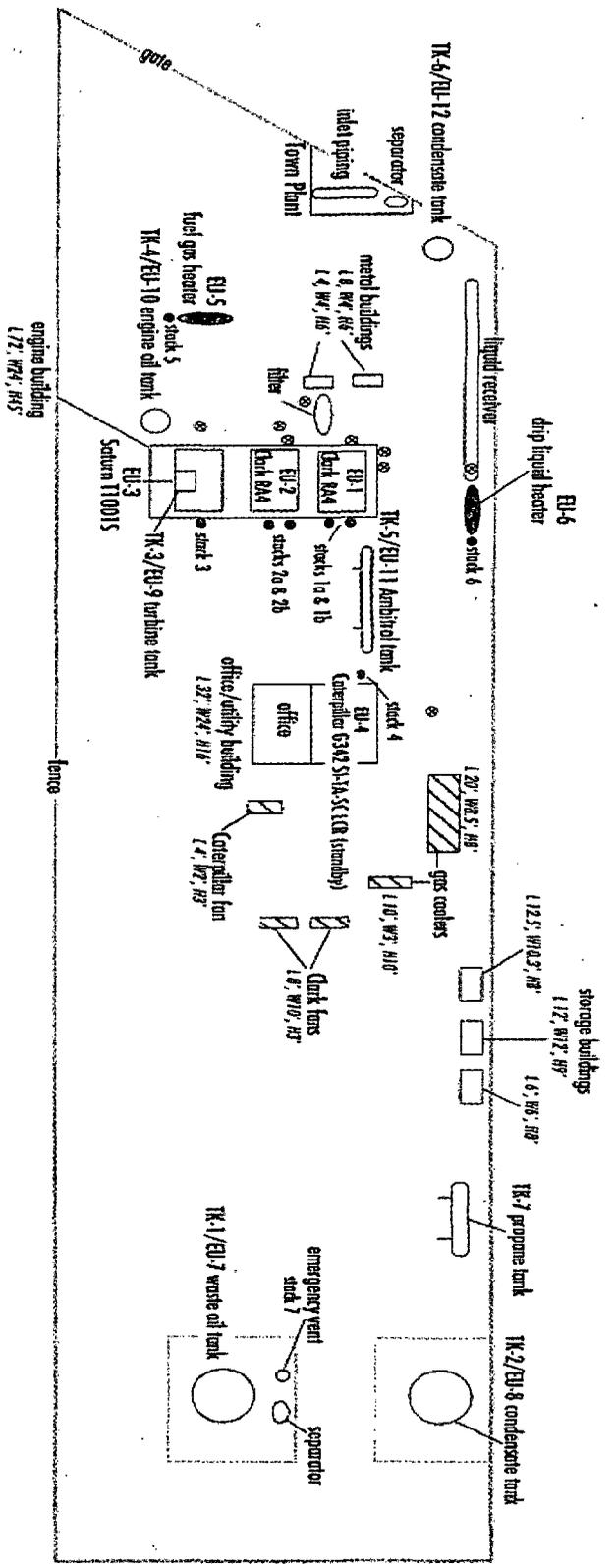


PROJECT LOCATION

FIG FIGURE 2  
 2003 AERIAL PHOTOGRAPHY  
 BERNALILLO COMPRESSOR STATION  
 SITE & SURROUNDINGS

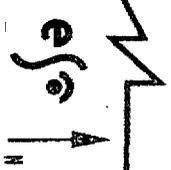
BERNALILLO, SANDOVAL COUNTY  
 NEW MEXICO

Map By: Ronald C.D. Fields, PNM Environmental Services  
 Map Date: 1/4/2007  
 Map Location: C:\Bernalillo Compressor Station



**Key**

- EU - Emission Unit
- TK - Tank
- - Stack
- ⊙ - Emergency Vent
- ☐ - Fan



0 50 100 150 Feet

**Bernalillo Compressor Station  
Site Diagram**

Environmental Services Inc. • 4665 Indian School Road, NE • Suite 106 • Albuquerque, NM 87110 • 505 266 6611

Table 1.  
 Bernalillo Compressor Station Decommissioning  
 May 2007 Corrective Action Excavation  
 Analytical Results

Analytical Method	Parameter	Sample ID					Exceeds Reg. Std.
		N-Wall	W-Wall	S-Wall	Floor	E-Wall	
413.2 Oil&Grease (mg/Kg)	TPH	ND	ND	ND	ND	400	No

Note: ND = analytical result is below method detection level.  
 No = analytical result does not exceed Regulatory Standard.

05/23/07

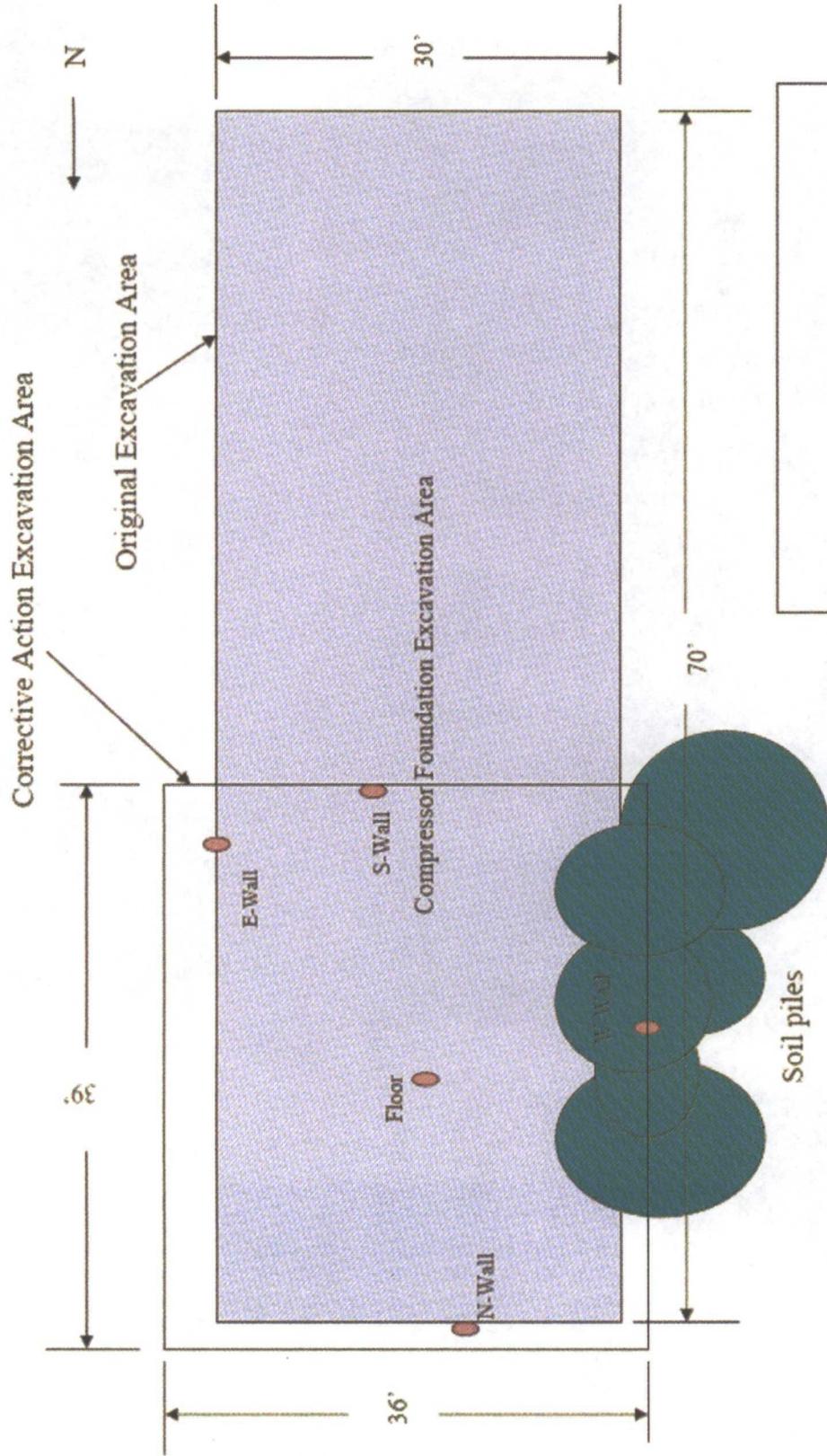


Figure 3  
 Bernalillo Compressor Station  
 Corrective Action Excavation  
 Conducted May 2007  
  
 A perpetual commitment  
 to New Mexico

APPENDIX A

BERNALILLO COMPRESSOR STATION  
CORRECTIVE ACTION FINAL EXCAVATION AREA  
ANALYTICAL RESULTS

MAY 23, 2007

COVER LETTER

Wednesday, May 23, 2007

John Ferraiuolo  
PNM  
Alvarado Square MS 2104  
Albuquerque, NM 87158

TEL: (505) 241-2014

FAX (505) 241-4306

RE: Bern. Comp. St.

Order No.: 0705325

Dear John Ferraiuolo:

Hall Environmental Analysis Laboratory, Inc. received 5 sample(s) on 5/22/2007 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager

NM Lab # NM9425

AZ license # AZ0682

ORELAP Lab # NM100001





QA/QC SUMMARY REPORT

Client: PNM  
 Project: Bern. Comp. St.

Work Order: 0705325

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
---------	--------	-------	-----	------	----------	-----------	------	----------	------

Method: E413.2

Sample ID: MB-13009      MBLK      Batch ID: 13009      Analysis Date: 5/23/2007

Oil & Grease, Total Recoverable      ND      mg/Kg      20      Batch ID: 13009      Analysis Date: 5/23/2007

Sample ID: LCS-13009      LCS      Batch ID: 13009      Analysis Date: 5/23/2007

Oil & Grease, Total Recoverable      104.6      mg/Kg      20      105      84      107      Batch ID: 13009      Analysis Date: 5/23/2007

Sample ID: LCSD-13009      LCSD      Batch ID: 13009      Analysis Date: 5/23/2007

Oil & Grease, Total Recoverable      99.74      mg/Kg      20      99.7      84      115      4.74      20

Qualifiers:

- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name PNM

Date and Time Received:

5/22/2007

Work Order Number 0705325

Received by AT

Checklist completed by

Signature

*[Handwritten Signature]*

Date

5/22/07

Matrix

Carrier name Client drop-off

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present  Not Shipped
- Custody seals intact on sample bottles? Yes  No  N/A
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Water - VOA vials have zero headspace? Yes  No VOA vials submitted  Yes  No
- Water - Preservation labels on bottle and cap match? Yes  No  N/A
- Water - pH acceptable upon receipt? Yes  No  N/A

Container/Temp Blank temperature?

8°

4° C ± 2 Acceptable

If given sufficient time to cool.

COMMENTS:

Client contacted

Date contacted:

Person contacted

Contacted by:

Regarding

Comments:

Corrective Action

# CHAIN-OF-CUSTODY RECORD

Client: Public Service Co. of NM

Address: Alvarado St MS 2104  
Alb., NM 87108

Cell # 220-9253

Phone #: 505-241-4871

Fax #: -2384

Other:  Std.  Level 4

Project Name: Berni Comp. St.

Project #:

Project Manager:

John Ferrarolo

Sampler: same

Sample Temperature: 8

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.
					HgCl <sub>2</sub>	HNO <sub>3</sub>	
5/21/07	1513	Soil	N. Wall	1			0705325
	1425		W. Wall	1			-1
	1608		S. Wall	1			-2
	1620		Floor	1			-3
5/21/07	831		E. Wall	1			-5

Date: 5/22/07 Time: 1007

Relinquished By: (Signature) [Signature]

Relinquished By: (Signature) [Signature]

Received By: (Signature) [Signature]

Received By: (Signature) [Signature]

5/22/07 1007

Call John w/ verbals or call

**HALL ENVIRONMENTAL ANALYSIS LABORATORY**  
 4901 Hawkins NE, Suite D  
 Albuquerque, New Mexico 87109  
 Tel. 505.345.3975 Fax 505.345.4107  
 www.hallenvironmental.com

## ANALYSIS REQUEST

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles or Headspace (Y or N)
											X 90713	
											046	

Remarks:

RUSH

APPENDIX B

BERNALILLO COMPRESSOR STATION  
ENVIROTECH REPORT

CONTAMINATED SOIL EXCAVATION AT BERNALILLO COMPRESSOR  
STATION, BERNALILLO, NEW MEXICO

JULY 20, 2007

# ENVIROTECH INC.

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

July 20, 2007

Project No. 03024-016

Mr. John Ferraiuolo  
PNM Services  
Alvarado Square  
Mailstop 2104  
Albuquerque, New Mexico 87158

Phone: 505-241-4871

**RE: CONTAMINATED SOIL EXCAVATION AT BERNALILLO COMPRESSOR STATION,  
BERNALILLO, NEW MEXICO**

Dear Mr. Ferraiuolo,

Envirotech, Inc., was retained to performed excavation of contaminated soil at the Bernalillo Compressor Station located on Highway 313 near Bernalillo, New Mexico. This report details the activities performed during the excavation.

Envirotech arrived at the site on May 21, 2007. One superintendent, one foreman/operator, and one field technician/operator were on site. At the time of Envirotech's arrival, a 3.5-foot deep excavation had already been started; see attached *Site Photographs*. Envirotech extended the excavation to a total depth of seven (7) feet. The final dimensions of the excavation were approximately 37 feet by 36 feet by seven (7) feet deep. Field screening was conducted by PNM personnel. PNM personnel also collected confirmation samples from each sidewall and the bottom of the excavation for laboratory analysis.

A total of 400 cubic yards of soil was transported to the Rio Rancho landfill for disposal, as per PNM's waste receipts. The excavation was filled using 300 cubic yards of soil obtained on site, 80 cubic yards of virgin backfill from Envirotech's Landfarm #3, and 80 cubic yards from Le Farge; see attached *Bills of Lading*. Backfill was compacted using a wheel roller and a six-inch cap. Backfilling was completed on May 23, 2007.

We appreciate the opportunity to be of service. Should you have any questions or require additional information, please contact our office at 505-632-0615.

Sincerely,  
ENVIROTECH, INC.



Juli Thompson  
Environmental Scientist  
[jthompson@envirotech-inc.com](mailto:jthompson@envirotech-inc.com)

**SITE PHOTOGRAPHY**

PNM – BERNALILLO COMPRESSOR STATION  
SITE PHOTOGRAPHS



Photo 1: Excavation at the time of Envirotech's arrival



Photo 2: Excavation at the time of Envirotech's arrival

Bernalillo Compressor Station  
Corrective Action Report



Bernalillo Compressor Station  
Corrective Action Report

