

GW - 139

WORK PLANS



AUSTIN | DALLAS | HOUSTON | MIDLAND

BNC Environmental Services, Inc.
BNC Engineering, LLC

April 11, 2003

Mr. Steve Weathers
DUKE ENERGY FIELD SERVICES, LP
370 17th Street, Ste. 900
Denver, Colorado 80202

Subject: Closure Workplan
Duke Energy Field Services, LP
CP-1 Compressor Station (GW-139)
Eddy County, New Mexico

Dear Mr. Weathers:

BNC Environmental Services, Inc. (BNC) has prepared the following workplan for site closure at the Duke Energy Field Services, LP (DEFS), CP-1 Compressor Station located in Eddy County, New Mexico (See attached FIGURE 1-Site Location Map). BNC understands the New Mexico Oil Conservation Division (NMOCD) requested a closure workplan in a January 13, 2003 letter in response to a DEFS letter dated January 7, 2003 where DEFS informed the NMOCD of their intent not to renew the discharge permit (GW-139) for the CP-1 Compressor Station. Additionally, this workplan is required to be submitted to the NMOCD for approval as stipulated in Item 14 of Attachment of Conditions of the discharge permit approved by the NMOCD on March 2, 1998. Closure workplan activities are based on the NMOCD document "Guidelines for Remediation of Leaks, Spills and Releases" dated August 13, 1993.

This workplan includes sections concerning background information, regulatory framework and site classification, and summarizes soil closure requirements.

BACKGROUND INFORMATION

The site is located south of Highway 31, approximately 1.25 miles northeast of Loving in Eddy County, New Mexico. The site is known as the CP-1 Compressor Station. The legal description of the referenced property is NE ¼ of SE ¼ of Section 15, Township 23 South, Range 28 East. Site coordinates are Latitude 32° 18.254' N, Longitude 104° 4.099' W.

BNC performed a site visit on April 3, 2002 and understands that currently all that remains at the site is the built up compressor pad and associated piping. The dimensions of the caliche and gravel compressor pad are approximately 25 feet by 50 feet by 1 foot (above grade). All DEFS electrical equipment starting at the local electric company's electric meter has been removed for salvage. DEFS has also removed the engine oil AST and the associated secondary containment equipment.

REGULATORY FRAMEWORK AND SITE CLASSIFICATION

The NMOCD has regulatory jurisdiction over oil and gas production operations, including discharge permits and associated closure activities in the State of New Mexico. This project is being conducted under the regulatory guidance of the NMOCD, which requires that hydrocarbon-affected soils be remediated in such a manner that the potential for future affects to groundwater or the environment are minimized. The NMOCD clean up levels are determined on a site-by-site basis, and are based on ranking criteria, which is outlined in the NMOCD "Guidelines for Remediation of Spills, Leaks, and Releases", dated August 13, 1993. These ranking criteria guidelines are based on site characteristics consisting of: depth to groundwater, wellhead protection (useable water sources), and distance to surface water.

There are currently no monitor wells or water wells on the site to determine an exact depth to groundwater. BNC reviewed the New Mexico Office of the State Engineer and the Interstate Stream Commission document "New Mexico Water Resource Atlas" dated December 2002. Plate 12.2 of this document shows the site is situated between the groundwater elevation contours 2,900 and 3,000 feet above sea level. For site ranking purposes, the groundwater elevation at the site is assumed to be 2,950 feet above sea level. The surface elevation of the site is approximately 3,005 feet above sea level. The estimated depth to groundwater based on the above information is 55 feet below ground surface.

The compressor site is located within the confines of the Bird Creek Resources CP-1 crude oil well lease. The land surface within the area of the lease is relatively flat and covered by bermed AST tank pads and hardened caliche roads/parking areas. In general, adjacent properties are relatively flat with a low relief, hilly, sandy and dry topography. The Pecos River is the closest surface water to the site. The Pecos River is located approximately 4,000 feet northeast of the compressor site. Oil wells are present in the overall adjacent area. Wellhead protection areas appear to be greater than 1,000 feet from the release site.

The table below illustrates the ranking criteria, used by the NMOCD and includes site specific characteristics at the CP-1 Compressor Station site.

Criteria	Site Characteristics	Ranking Score
Depth to Ground Water	50-99 feet	10
Wellhead Protection Area	>1000 feet	0
Distance to Surface Water	>1000 feet	0
	Total Ranking Score	10

Based on the CP-1 Compressor Station site characteristics and the "Guidelines for Remediation of Spills, Leaks and Releases" the site has a ranking score of 10. Consequently the ranking criteria clean-up levels of 10 mg/Kg Benzene, 50 mg/Kg total BTEX, and 1,000 mg/Kg TPH are established for remediation activities at the site.

CLOSURE WORKPLAN

This closure workplan has been developed to assess, remove, and if necessary dispose hydrocarbon-affected soils (exhibiting soil concentrations of TPH and BTEX above NMOCD site remediation levels).

Task I – Mobilization and Site Preparation

Upon acceptance of the workplan by the NMOCD, utility location services will be contacted and a site and work specific health and safety plan will be prepared. Appropriate NMOCD personnel will be notified 48-hours in advance of site activities. All necessary heavy equipment and a crew will be mobilized to the site to perform the closure activities.

Task II – Compressor Pad Deconstruction

The above grade compressor pad at the site is composed of approximately 46 cubic yards of caliche and fine gravel. Heavy equipment will be utilized to remove all unnecessary piping and excavate and stockpile the compressor pad material in a centralized location. All removed piping will be sold for scrap or stored at a DEFS facility for future use. Additionally, the pad materials for the motor oil AST's secondary containment will be placed in the same stockpile as the compressor pad materials. If strong soil staining is visible underneath the pad, excavation equipment will be utilized to remove to the maximum extent practicable all soils determined in the field to exceed NMOCD cleanup levels. The soils, if obviously impacted, will be stockpiled in a separate stockpile and composite samples collected for waste characterization purposes.

Task III – Excavation and Soil Stockpile Confirmation Sampling

Two discrete floor samples will be collected from under the compressor pad if the excavation is less than two feet in depth. If the excavation is greater than two feet in depth, then two discrete floor samples and one discrete side wall sample per wall will be collected. The soil samples will be analyzed for TPH analysis by modified EPA Method 8015B and BTEX analysis by EPA Method 8021B.

The stockpiled compressor pad material and the excavated soils (if necessary) will each be composite sampled and analyzed for TPH analysis by modified EPA Method 8015B and BTEX analysis by EPA Method 8021B. The stockpile samples will be placed on hold at the analytical laboratory for possible waste characterization analysis.

Task IV – Waste Characterization

Soil stockpile samples that exceed NMOCD cleanup levels will be properly classified. Upon classification, arrangements will be made for offsite disposal at an appropriate DEFS approved and NMOCD permitted waste facility.

Task V - Backfilling

If the confirmation sample determines the compressor pad material stockpile is below NMOCD cleanup levels, the stockpile materials will be spread on site.

If site closure activities result in an excavation and confirmation sample results exhibit concentrations within the remedial excavation below NMOCD cleanup levels, the excavation will be backfilled with clean imported soil. The excavation will be backfilled with the compressor pad or excavated material if the laboratory analytical data for either determines that the material is below the NMOCD cleanup levels. The excavation will be backfilled in a manner to minimize aesthetic degradation to the surrounding properties.

Task VI - Reporting

A closure report will be prepared to chronicle closure activities. After DEFS review, this closure report will be transmitted to the NMOCD in Santa Fe and Artesia, New Mexico. The report will present a summary of the closure activities. Site drawings, certified laboratory results, transportation manifests (if required) and photograph documentation will be included within the report.

If you have any questions, please contact either of us at (915) 686-0086. We appreciate the opportunity to provide you with this workplan for the CP-1 Compressor Station.

Sincerely,

BNC Environmental Services, Inc.



Aaron M. Hale
Project Geologist



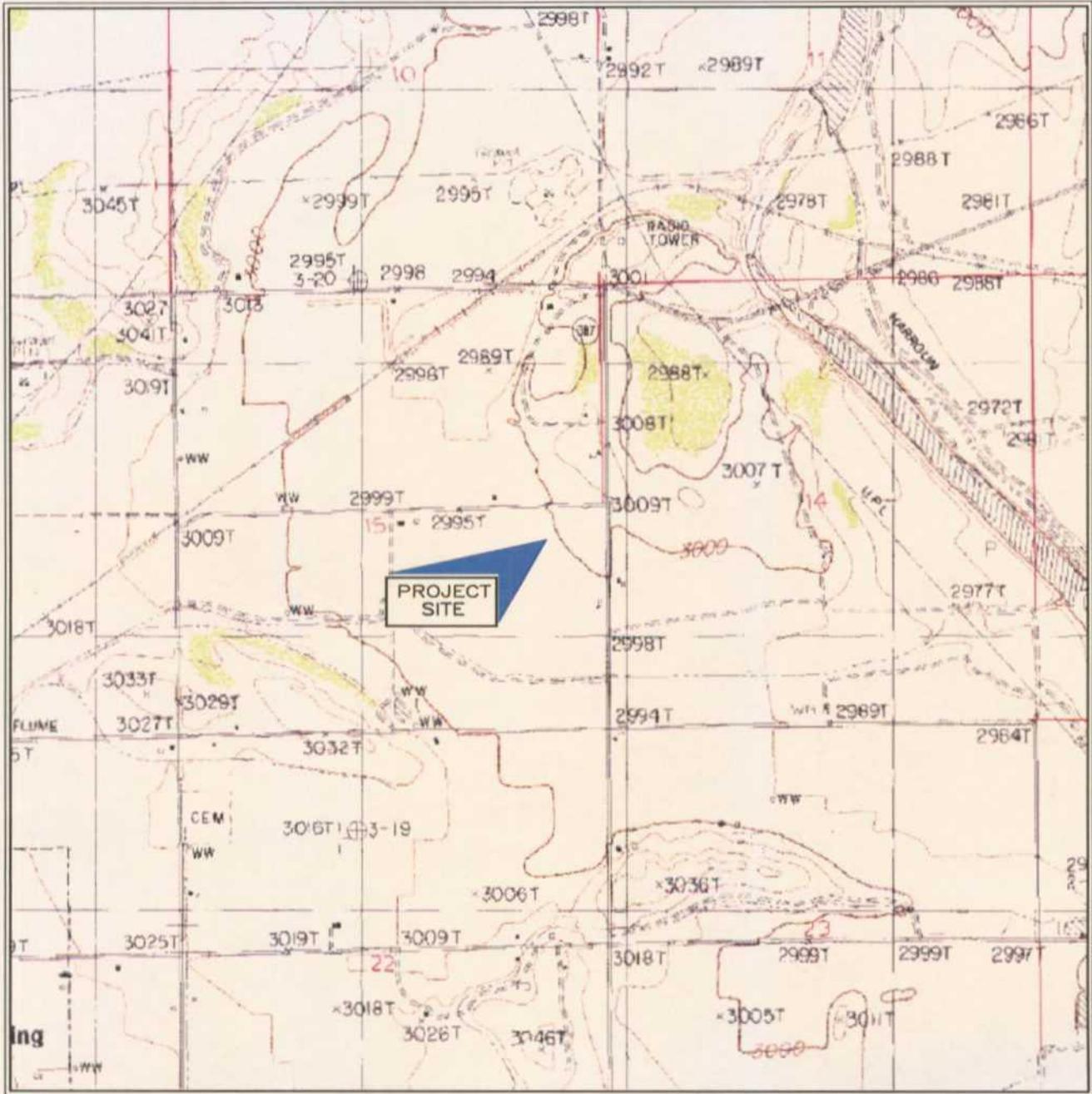
Thomas C. Larson
Senior Project Geologist

Attachments: Figure 1 - Site Location Map

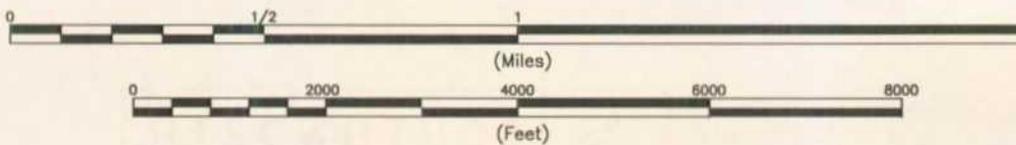
LOVING QUADRANGLE
NEW MEXICO

LAT=32°18.254N
LONG=104°4.099W

PROVISIONAL EDITION 1985



SCALE 1:24,000



NORTH

1019 SR 4/11/03



SITE LOCATION MAP

CP-1 COMPRESSOR STATION
DUKE ENERGY FIELD SERVICES EDDY COUNTY, NEW MEXICO

JOB No. 1019

FIGURE 1