

# CLOSURE PROPOSAL

## SS-9 PIPELINE

**1RP # 1197**  
**COMPANY No. 36785**  
**EPI REF: 130027**

**UL-B (NW¼ OF THE NE¼) OF SECTION 21 T21S R37E**  
**~2 MILES NORTHWEST OF EUNICE**  
**LEA COUNTY, NEW MEXICO**

**LATITUDE: N 32° 28' 11.19"**      **LONGITUDE: W 103° 10' 04.13"**

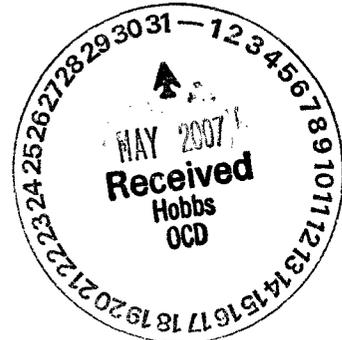
**MAY 2007**

**PREPARED BY:**

**ENVIRONMENTAL PLUS, INC.**  
**2100 AVENUE O**  
**EUNICE, NEW MEXICO 88231**  
**505-394-3481**

**PREPARED FOR:**

*Facility - APAC07163466545*  
*Incident - NPAC0716346633*  
*Application - PACC0716346736*



*RP# 1197*



# STANDARD OF CARE

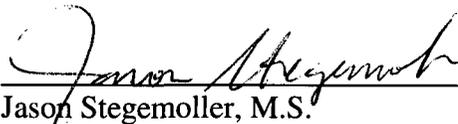
## Closure Proposal

### SS-9 Pipeline

(NMOCD 1RP#1197; EPI Ref. #130027)

The information provided in this report was collected consistent with the New Mexico Oil Conservation Division (NMOCD) *Guidelines for Remediation of Leaks, Spills and Releases* (August 13, 1993), the NMOCD *Unlined Surface Impoundment Closure Guidelines* (February, 1993) and Environmental Plus, Inc. (EPI) *Standard Operating Procedures and Quality Assurance/Quality Control Plan*. The conclusions are based on field observations and laboratory analytical reports as presented in the report. Recommendations follow NMOCD guidance and represent the professional opinions of EPI staff. These opinions were derived using currently accepted geologic, hydrogeologic and engineering practices at this time and location. The report was prepared or reviewed by a certified or registered professional with a background in engineering, environmental and/or natural sciences.

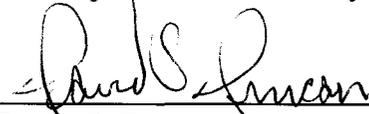
This report was prepared by:

  
\_\_\_\_\_

Jason Stegemoller, M.S.  
Environmental Scientist

May 31, 2007  
Date

This report was reviewed by:

  
\_\_\_\_\_

David P. Duncan  
Civil Engineer

5/31/07  
Date



---

## Table of Contents

1.0	Project Synopsis .....	iv
2.0	Site and Release Information.....	1
3.0	NMOCD Site Ranking .....	2
4.0	Excavation Soil Information.....	3
5.0	Sampling Information.....	4
6.0	Analytical Results.....	5
7.0	Discussion .....	6
8.0	Conclusion and Recommendations .....	7

### FIGURES

- Figure 1: Area Map
- Figure 2: Site Location Map
- Figure 3: Site Map
- Figure 4: Test Trench Location Map
- Figure 5: Excavation Sample Location Map
- Figure 6: Soil Boring Location Map (2-2-07)
- Figure 7: Vertical Liner Location Map (Proposed)

### TABLES

- Table 1: Well Data
- Table 2: Summary of Test Trench and Excavation Laboratory Analytical Results
- Table 3: Summary of Soil Boring Analytical Results

### APPENDICES

- Appendix I: Laboratory Analytical Reports and Chain-of-Custody Forms
- Appendix II: Project Photographs
- Appendix III: Informational Copy of Initial NMOCD C-141 Form



## 1.0 PROJECT SYNOPSIS

### *Site Specific:*

- ◆ **Company Name:** DCP Midstream, LLC (formerly Duke Energy Field Services)
- ◆ **Facility Name:** SS-9 Pipeline
- ◆ **Project Reference:** NMOCD 1RP#1197; EPI Ref. #130027
- ◆ **Company Contacts:** Lynn Ward
- ◆ **Site Location:** WGS84 N32° 28' 11.19"; W103° 10' 04.13"
- ◆ **Legal Description:** Unit Letter-B, (NW¼ of the NE¼), Section 21, T 21 S, R 37 E
- ◆ **General Description:** Approximately 2-miles northwest of Eunice, New Mexico
- ◆ **Elevation:** 3,453-ft amsl
- ◆ **Land Ownership:** Millard Deck Estate
- ◆ **EPI Personnel:** Project Consultant – Iain Olness, Jason Stegemoller  
Field Foreman – John Robinson

### *Release Specific:*

- ◆ **Product Released:** Natural Gas and Natural Gas Liquids (NGL)
- ◆ **Volume Released:** ~3 barrels      **Volume Recovered:** none
- ◆ **Date of Occurrence:** July 11, 2005, a.m.
- ◆ **Date of Discovery:** July 11, 2005, a.m.
- ◆ **Release Source:** 12-inch steel natural gas pipeline
- ◆ **Initial Surface Area Affected:** ~1,900-sq. ft.

### *Remediation Specific:*

- ◆ **Final Vertical extent of contamination:** ~27-feet bgs at maximum depth
- ◆ **Depth to Ground Water:** ~67-ft bgs
- ◆ **Water wells within 1,000-ft:** None
- ◆ **Private domestic water sources within 200-ft:** None
- ◆ **Surface water bodies within 1,000-ft:** None
- ◆ **NMOCD Site Ranking Index:** 10 points to 17-feet bgs; 20 points >17-feet bgs
- ◆ **Remedial goals for Soil:** To 17-feet bgs TPH – 1,000 mg/Kg; >17-feet bgs TPH – 100 mg/Kg; BTEX – 50 mg/Kg; Benzene – 10 mg/Kg; Chloride and sulfate residuals may not be capable of impacting groundwater above NMWQCC groundwater standards of 250 mg/L and 600 mg/L, respectively.
- ◆ **RCRA Waste Classification:** Exempt
- ◆ **Remediation Option Selected:** a) Excavate impacted soil above NMOCD remedial thresholds; b) laboratory analyses to confirm removal of soil impacted above NMOCD remedial thresholds in excavation sidewalls and floor; c) transport a portion of the most impacted soil to the Environmental Plus, Inc. Landfarm for treatment; d) blend remaining portion of impacted soil with clean soil to below NMOCD remedial thresholds; e) advance one soil boring to delineate vertical extent of chloride impacted soil; f) place impermeable barrier between Apache reserve pit and excavation; g) place impermeable barrier over excavation at 5-feet bgs to isolate residual chloride concentrations; h) backfill the excavation with blended soil, grade and contour to promote natural drainage; and i) seed remediation area with a blend approved by the landowner.
- ◆ **Disposal Facility:** Environmental Plus, Inc. Landfarm
- ◆ **Volume disposed:** 420 cubic yards
- ◆ **Project Completion Date:** Ongoing



## 2.0 SITE AND RELEASE INFORMATION

- 2.1 ***Describe the land use and pertinent geographic features within 1,000 feet of the site.***  
In addition to oilfield activities, land surrounding the area is rangeland utilized for livestock grazing.
- 2.2 ***Identify and describe the source or suspected source(s) of the release.***  
Internal and external corrosion of 12-inch diameter steel natural gas pipeline.
- 2.3 ***What is the volume of the release? (if known):*** ~3 barrels of natural gas and natural gas liquids
- 2.4 ***What is the volume recovered? (if any):*** 0 barrels
- 2.5 ***When did the release occur? (if known):*** 11 July 2005 a.m.
- 2.6 ***Geological Description***  
The United States Geological Survey (USGS) Ground-Water Report 6, "*Geology and Ground-water Conditions in Southern Lea County, New Mexico*," A. Nicholson and A. Clebsch, 1961, describes the near surface geology of southern Lea County as "an intergrade of the Quaternary Alluvium (QA) sediments (i.e., fine to medium sand) with the mostly eroded Cenozoic Ogallala (CO) formation. Typically, the QA and CO formations in the area are capped by a thick interbed of caliche and generally overlain by sandy soil."  
  
The release site is located in the Eunice Plains physiographic subdivision, described by Nicholson & Clebsch as an area that is "underlain by a hard caliche surface and is almost entirely covered by reddish-brown dune sand. The sand cover is 2 to 5 feet thick over most of the area, but locally is as much as 20 or 30 feet thick."
- 2.7 ***Ecological Description***  
Typical vegetation consists primarily of an intergrade of High Plains and Northern Chihuahuan Desert grasses. Vegetation includes blue grama, bur-grass, mesquite, shin oak and annual and perennial forbs (eg. broad-leafed milkweed and Russian thistle). Degraded/disturbed areas will consist primarily of annual grasses and forbs and mesquite exhibiting shrubby growth forms. Mammals represented include Orrd's and Merriam's Kangaroo Rats, Deer Mouse, White Throated Wood Rat, Cottontail Rabbit, Black Tailed Jackrabbit, Mule Deer, Bobcat, Red Fox and Coyote. Reptiles, amphibians and birds are numerous and typical of the area. A survey of Listed, Threatened or Endangered species was not conducted.
- 2.8 ***Area Groundwater***  
The unconfined groundwater aquifer at this site is projected to be ~67 feet below ground surface (bgs) based on water depth data obtained from the New Mexico State Engineers Office and the United States Geological Survey data base (reference *Table 1*).
- 2.9 ***Area Water Wells***  
No public water supply wells exist within 1,000-feet of the release site. In addition, no private domestic fresh water wells or springs used by less than five households for domestic or stock watering purposes exist within 200-feet of the release site (reference *Table 1* and *Figure 2*).
- 2.10 ***Area Surface Water Features***  
No surface water features exist within 1,000 feet of the release site (reference *Figure 2*).



### 3.0 NMOCD SITE RANKING

Contaminant delineation and remedial work done at this site indicate chemical parameters of the soil and physical parameters of the groundwater were characterized consistent with the characterization and remediation/abatement goals and objectives set forth in the following New Mexico Oil Conservation Division (NMOCD) publications:

- ◆ *Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993)*
- ◆ *Unlined Surface Impoundment Closure Guidelines (February, 1993)*
- ◆ *Pit and Below-Grade Tank Guidelines (November, 2004)*

Acceptable thresholds for contaminants/constituents of concern (CoC) were determined based on the NMOCD Ranking Criteria as follows:

- ◆ *Depth to Groundwater ( i.e., distance from the lower most acceptable concentration to ground-water);*
- ◆ *Wellhead Protection Area (i.e., distance from fresh water supply wells);*
- ◆ *Distance to Surface Water Body (i.e., horizontal distance to all down gradient surface water bodies).*

Based on the proximity of the site to protectable area water wells, surface water bodies, and depth to groundwater from the lower most contamination, the NMOCD ranking score for the site is ten (10) points to 17-feet bgs and twenty (20) points below 17-feet bgs. Soil remedial goals are highlighted in the Site Ranking table presented below:

1. GROUNDWATER	2. WELLHEAD PROTECTION AREA	3. DISTANCE TO SURFACE WATER	
Depth to GW <50 feet: <b>20 points</b>	If <1,000' from water source, or <200' from private domestic water source: <b>20 points</b>	<200 horizontal feet: <b>20 points</b>	
Depth to GW 50 to 99 feet: <b>10 points</b>		200-1,000 horizontal feet: <b>10 points</b>	
Depth to GW >100 feet: <b>0 points</b>		>1,000 horizontal feet: <b>0 points</b>	
Site Rank (1+2+3) = 10 + 0 + 0 = 10 points (<17-ft bgs); Site Rank (1+2+3) = 20 + 0 + 0 = 20 points (>17-feet bgs)			
<b>Total Site Ranking Score and Acceptable Remedial Goal Concentrations</b>			
Parameter	20 or >	10	0
Benzene <sup>1</sup>	10 ppm	10 ppm	10 ppm
BTEX <sup>1</sup>	50 ppm	50 ppm	50 ppm
TPH	100 ppm	1,000 ppm	5,000 ppm

<sup>1</sup> A field soil vapor headspace measurement of 100 ppm can be substituted in lieu of laboratory analyses for benzene and BTEX.



4.0 **EXCAVATED SOIL INFORMATION**

4.1 *Was soil excavated for off-site treatment or disposal?*     *Yes*     *No*

*Date excavated:* August 5, 2005 through August 29, 2005

*Total volume removed:* 420 cubic yards

4.2 *Indicated soil treatment type:*

<input type="checkbox"/>	<i>Disposal</i>
<input checked="" type="checkbox"/>	<i>Land Treatment</i>
<input type="checkbox"/>	<i>Composting/Biopiling</i>
<input checked="" type="checkbox"/>	<i>Other</i> (aeration and blending)

*Name and location of treatment/disposal facility:*  
Environmental Plus, Inc. Landfarm, Eunice, Lea County, New Mexico

4.3 *Other information not listed above:*  
A portion of the excavated (i.e., approximately 420-cubic yards), NGL-impacted soil was transported to the Environmental Plus, Inc. Landfarm for treatment. The remaining portion of the excavated material was aerated and blended with clean soil obtained from the property owner and stockpiled adjacent to the excavation.



## 5.0 **SAMPLING INFORMATION**

### 5.1 ***Briefly describe the field screening methods used to distinguish contaminated from uncontaminated soil.***

Organic Vapor Concentrations – A portion of each soil sample collected was inserted into a self-sealing polyethylene bag to allow volatilization of organic vapors. After the samples equilibrated to ~70° F, they were analyzed for organic vapors utilizing a MiniRae® Photoionization Detector (PID) equipped with a 10.6 electron volt (eV) lamp and calibrated for benzene response.

Chloride Concentrations – A LaMotte Chloride Test Kit (titration type) was utilized for field analyses of chloride concentration.

### 5.2 ***Briefly describe the soil analytical sampling and handling procedures used.***

Upon collection of each sample, a portion was immediately placed in a laboratory provided container, labeled and set on ice for transport to an independent laboratory for quantification of total petroleum hydrocarbons (TPH); benzene, toluene, ethylbenzene and total xylenes (BTEX constituents), chloride and sulfate concentrations. The remaining portion of each sample was utilized for field analyses of organic vapor and chloride concentrations.

### 5.3 ***Discuss sample locations and provide rationale for their locations.***

Soil samples were collected on July 30, 2005 from three (3) test trenches excavated within the release area (i.e., SP-1, SP-2 and SP-3). Samples were collected from trenches SP-1 and SP-2 initially at 2-foot bgs and two (2)-foot intervals thereafter to 8-foot bgs. Soil samples were collected from trench SP-3 at 2-foot bgs and two (2)-foot intervals thereafter to 16-foot bgs. Test trench and soil sample locations were chosen to provide the best representative example of near-surface and subsurface soils within the release area (reference *Figure 4*).

Soil samples were collected on September 14, 2005 from the excavation sidewalls and floor at twelve (12) discreet sample locations. Soil sample locations were chosen to provide the best representative example of soil within the excavation floor, benches and sidewalls (reference *Figure 5*).

Soil samples were collected on February 2, 2007 from soil boring SB-1 at 6- and 9-foot bgs and five (5) foot intervals thereafter to 34-foot bgs. Soil boring location was chosen to collect samples to delineate total depth of impacted soil between the Apache reserve pit and the excavation (reference *Figure 6*).



## 6.0 ANALYTICAL RESULTS

### 6.1 *Describe the vertical and horizontal extent and magnitude of soil contamination.*

Laboratory analyses of soil samples collected on July 30, 2005 from test trenches SP-1 and SP-2 indicated TPH and BTEX constituent concentrations were below each analytes respective NMOCD remedial threshold at all sample intervals. Chloride concentrations in trench SP-1 ranged from 26.9 to 613 mg/Kg. Chloride concentrations in trench SP-2 ranged from 41.4 to 943 mg/Kg. Chloride concentrations were limited to the upper 5-feet bgs in SP-1 and the upper 3-feet bgs in SP-2 (reference *Table 2* and *Figure 4*).

Laboratory analyses of soil samples collected on July 30, 2005 from test trench SP-3 indicated TPH and BTEX concentrations were above each analytes' respective NMOCD remedial threshold to approximately 7-feet bgs. Chloride concentrations were above the remedial goal of 250 mg/Kg in all sample intervals to a depth of at least 16-feet bgs (reference *Table 2* and *Figure 4*).

Laboratory analyses of soil samples collected on September 14, 2005 from the excavation floor, sidewalls and benches indicated BTEX constituent concentrations were non-detectable (ND) at or above laboratory analytical method detection limits (MDL). TPH concentrations ranged from ND to 222 mg/Kg. Chloride concentrations ranged from 96.0 to 5,310 mg/Kg (reference *Table 2* and *Figure 5*).

Laboratory analyses of soil samples collected on February 2, 2007 from soil boring SB-1 indicated chloride residuals ranged from 16.0 mg/Kg to 336 mg/Kg with greatest concentrations exhibited at 19 to 24-feet bgs. Chloride concentrations subsequently decreased to 16.0 mg/Kg at 34-feet bgs (reference *Table 3* and *Figure 6*).

### 6.2 *Is surface soil contamination present at the site (i.e., soil in the uppermost two feet that is visibly stained, contaminated at greater than 10 ppm (PID) or hydrocarbon saturated)?*

*yes*       *no*

*If yes, attach a site map identifying extent(s) of surface soil contamination.*



---

7.0 **DISCUSSION**

7.1 ***Discuss the risks associated with the remaining soil contamination:***

Laboratory analyses of excavation soil samples indicate hydrocarbon impacted soil above NMOCD remedial thresholds has been excavated. Within the excavation, chloride residuals above the 250 mg/Kg remedial goal may be capable of impacting local groundwater. With a horizontal impermeable barrier placed over the excavation (i.e., isolating chloride residuals from vertical migration) groundwater should not be impacted by this release. With a vertical impermeable barrier placed between the Apache reserve pit and the excavation (i.e., isolating inflow from the reserve pit) remediated soil should not be impacted/re-impacted from external sources (reference *Figure 7*).

7.2 ***Discuss the risks associated with the impacted groundwater:*** Not Applicable

7.3 ***Discuss other concerns not mentioned above:*** Not Applicable



## 8.0 CONCLUSIONS AND RECOMMENDATIONS

- 8.1 **Recommendation for the site:**
- Site Closure*
  - Additional Groundwater Monitoring*
  - Corrective Action*

- 8.2 ***Base the recommendation above on Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993). Describe below how you applied the policy to support your recommendation. If closure is recommended, please summarize significant site investigative events and describe how site specific risk issues have been adequately addressed or minimized to acceptable low risk levels.***

EPI was retained by DCP Midstream, LLC (formerly Duke Energy Field Services) to investigate/remediate NGL impacted soil below NMOCD remedial thresholds. EPI personnel excavated approximately 1,400-cubic yards of impacted soil from a 5,800-square foot area to a maximum depth of 20-feet bgs.

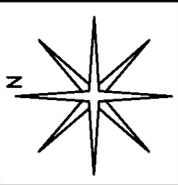
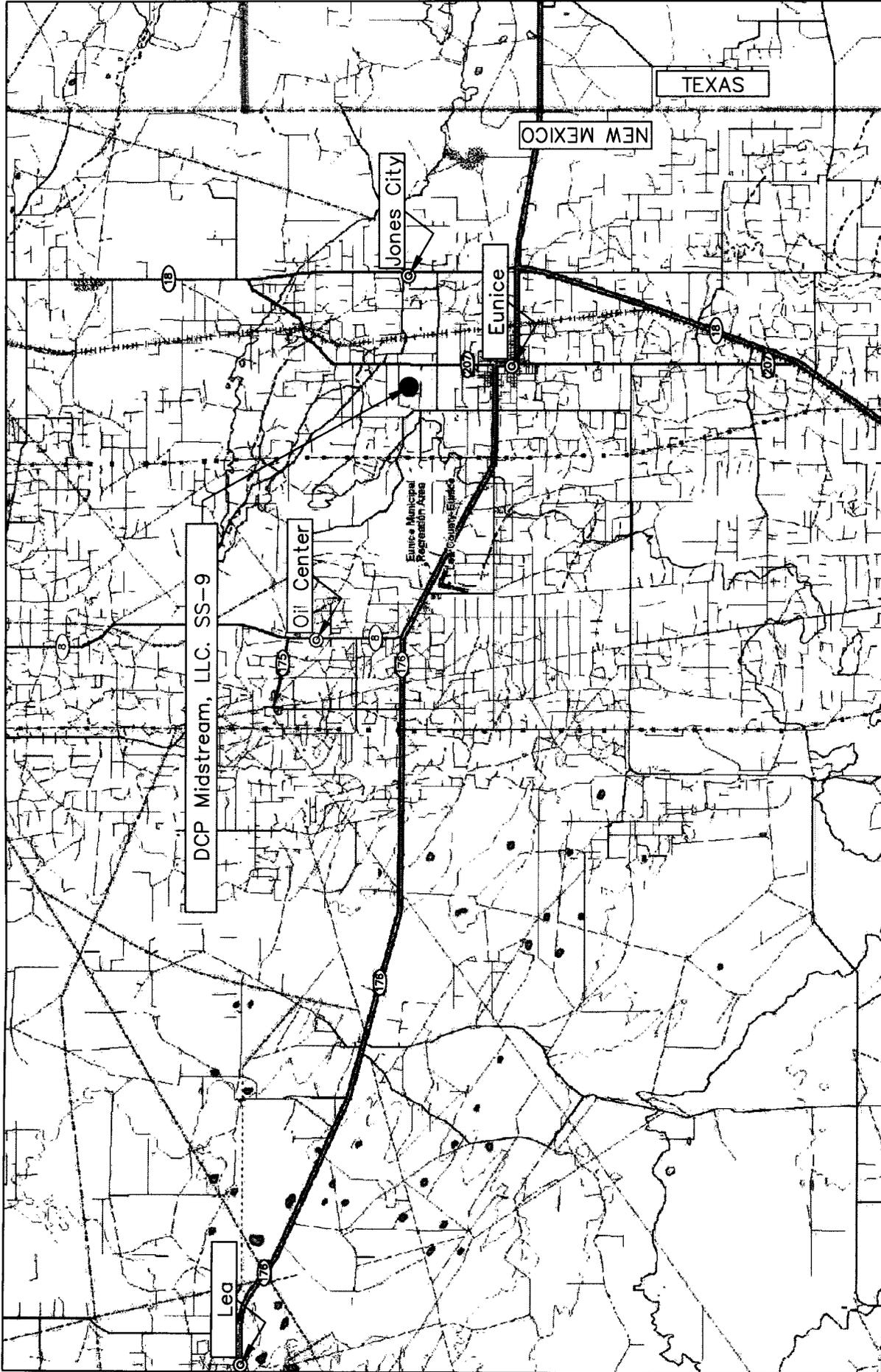
A portion of the excavated, NGL impacted soil (i.e., 420-cubic yards) was transported to the Environmental Plus, Inc. Landfarm, Eunice, NM for treatment. The remaining portion was aerated and blended with clean soil obtained from the property owner.

Laboratory analyses of soil samples collected on September 2005 from the excavation sidewalls, benches and floor indicate in situ soil is below NMOCD remedial thresholds for TPH and BTEX constituent concentrations. Chloride concentrations were in excess of the remedial goal of 250 mg/Kg in ten (10) of the twelve (12) soil samples. Sulfate concentrations were in excess of the remedial goal of 600 mg/Kg in four (4) of the twelve (12) collected soil samples (reference *Table 2* and *Figure 5*).

- 8.3 ***If additional groundwater monitoring is recommended, indicate the proposed monitoring schedule and frequency. Conduct quarterly monitoring until the NMOCD responds to this report.*** Not Applicable
- 8.4 ***If corrective action is recommended, provide a conceptual approach.*** Environmental Plus, Inc. recommends the following actions be taken:
- a) Collect soil samples from approximately every 200-cubic yards of aerated/blended soil and submit to an independent laboratory for quantification of TPH, BTEX constituent, chloride and sulfate concentrations; and
  - b) Excavate a 120-foot long trench to approximately 24-feet bgs between the Apache reserve pit and SS-9 excavation. Upon completion of excavation, place a vertical impermeable barrier comprised of 40-mil polyethylene to isolate the DCP Midstream site from inflow of reserve pit contaminants; and
  - c) Backfill the excavation with the aerated/blended soil to approximately 5-feet bgs. Place an impermeable, horizontal barrier comprised of 20-mil polyethylene between two (2) one (1)-foot thick layers of clean (i.e., debris free/seperated) soil or sand; and
  - d) Complete backfilling of excavation with aerated/blended material; and
  - e) Contour/grade the backfilled excavation to allow for natural drainage; and
  - f) Seed the remediation area with a blend suitable to the property owner.

Upon completion of remediation activities, EPI will submit a *Closure Report* to the NMOCD, property owner and appropriate DCP Midstream, LLC personnel.

**FIGURES**

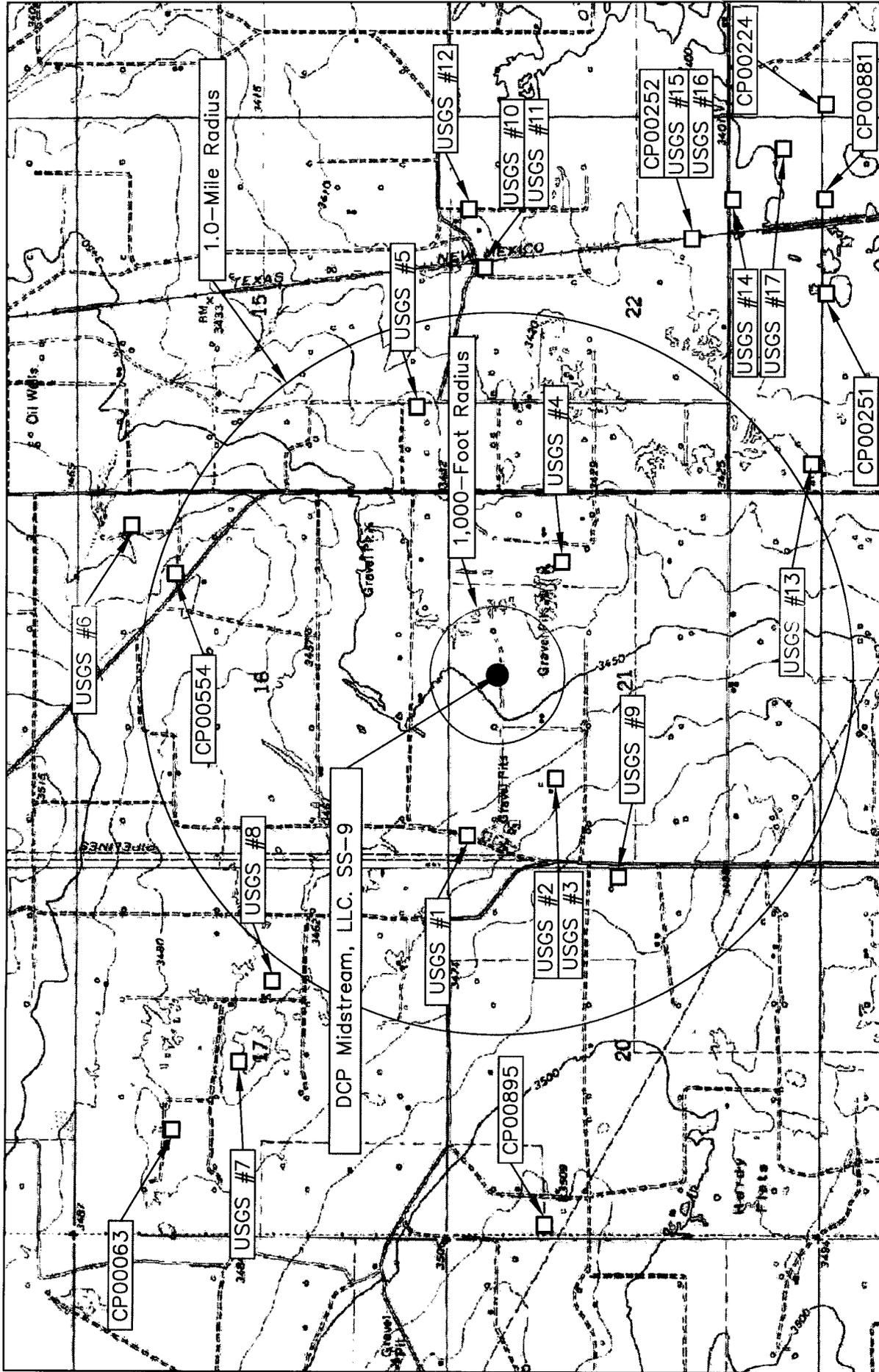


REVISIONS:  
 0 3 6  
 SHEET  
 1 of 1  
 Miles

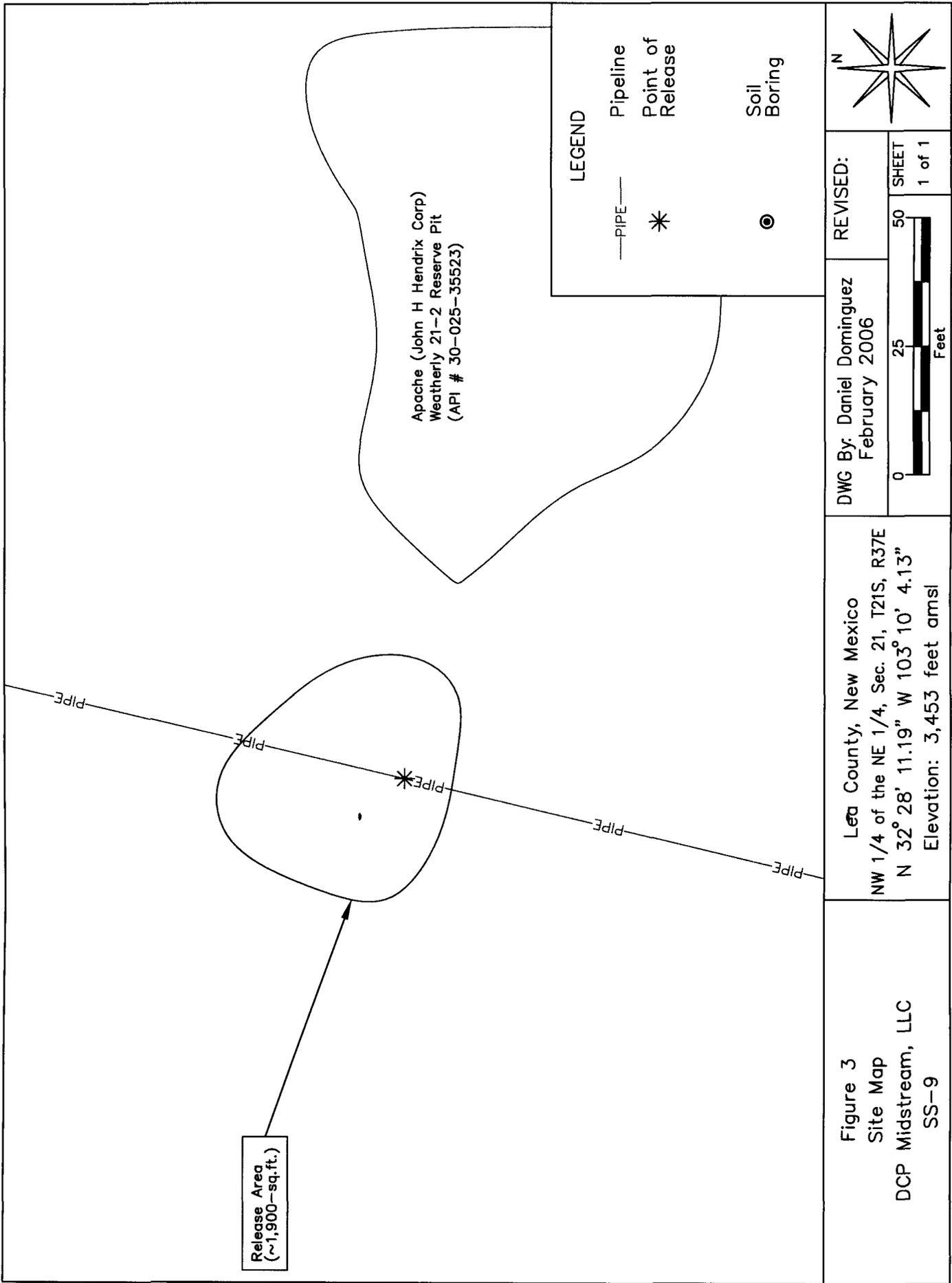
DWG By: Daniel Dominguez  
 February 2006

Lea County, New Mexico  
 NW 1/4 of the NE 1/4, Sec. 21, T21S, R37E  
 N 32° 28' 11.19" W 103° 10' 4.13"  
 Elevation: 3,453 feet amsl

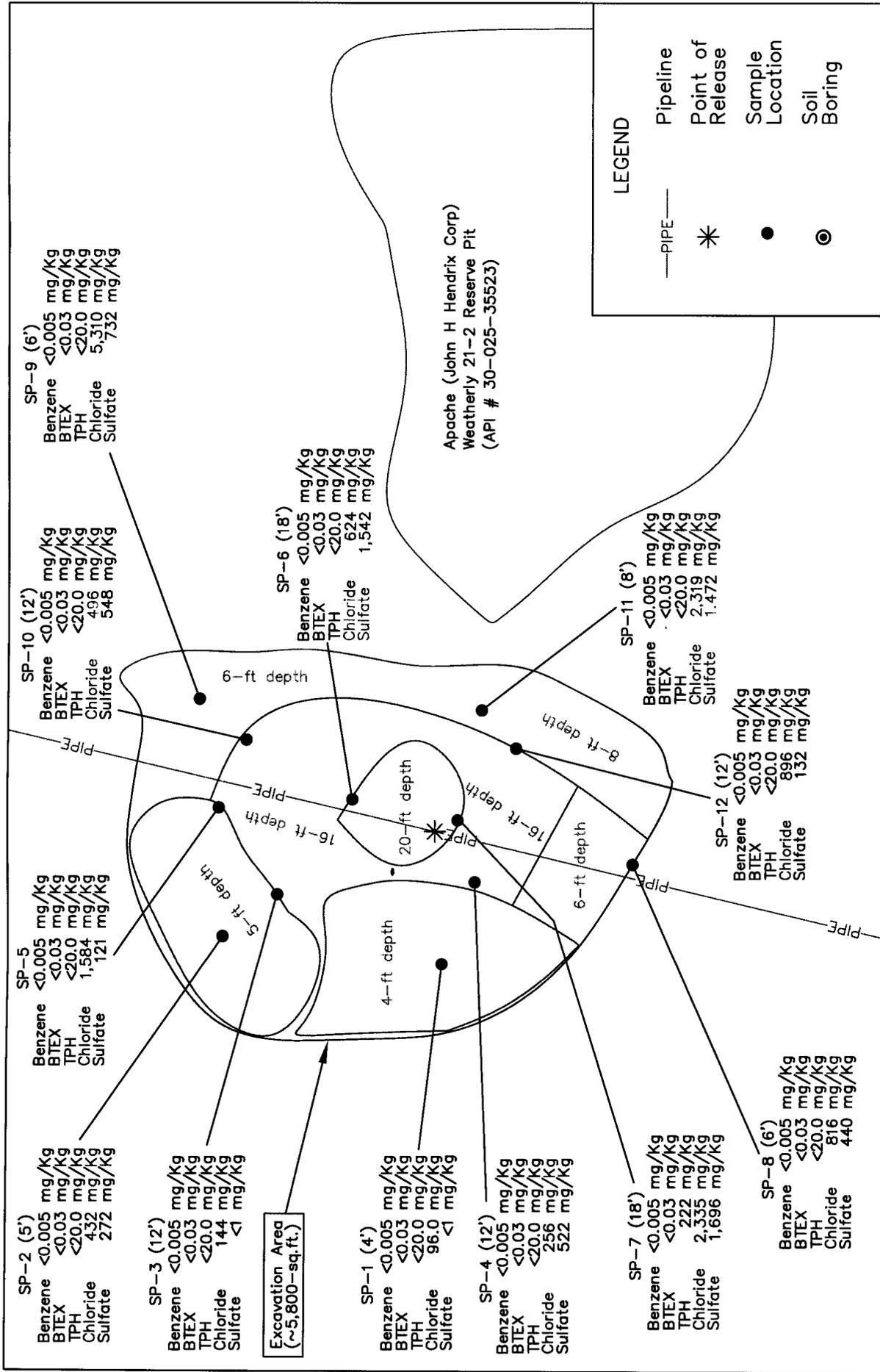
Figure 1  
 Area Map  
 DCP Midstream, LLC.  
 SS-9



<p>Figure 2 Site Location Map DCP Midstream, LLC. SS-9</p>	<p>Lēa County, New Mexico NW 1/4 of the NE 1/4, Sec. 21, T21S, R37E N 32° 28' 11.19" W 103° 10' 4.13" Elevation: 3,453 feet amsl</p>	<p>DWG By: Daniel Dominguez February 2006</p>	<p>REVISED:</p>
	<p>0 2000 4000 Feet</p> <p>SHEET 1 of 1</p>		







**Figure 5**  
Excavation Sample Location Map  
DCP Midstream, LLC  
SS-9

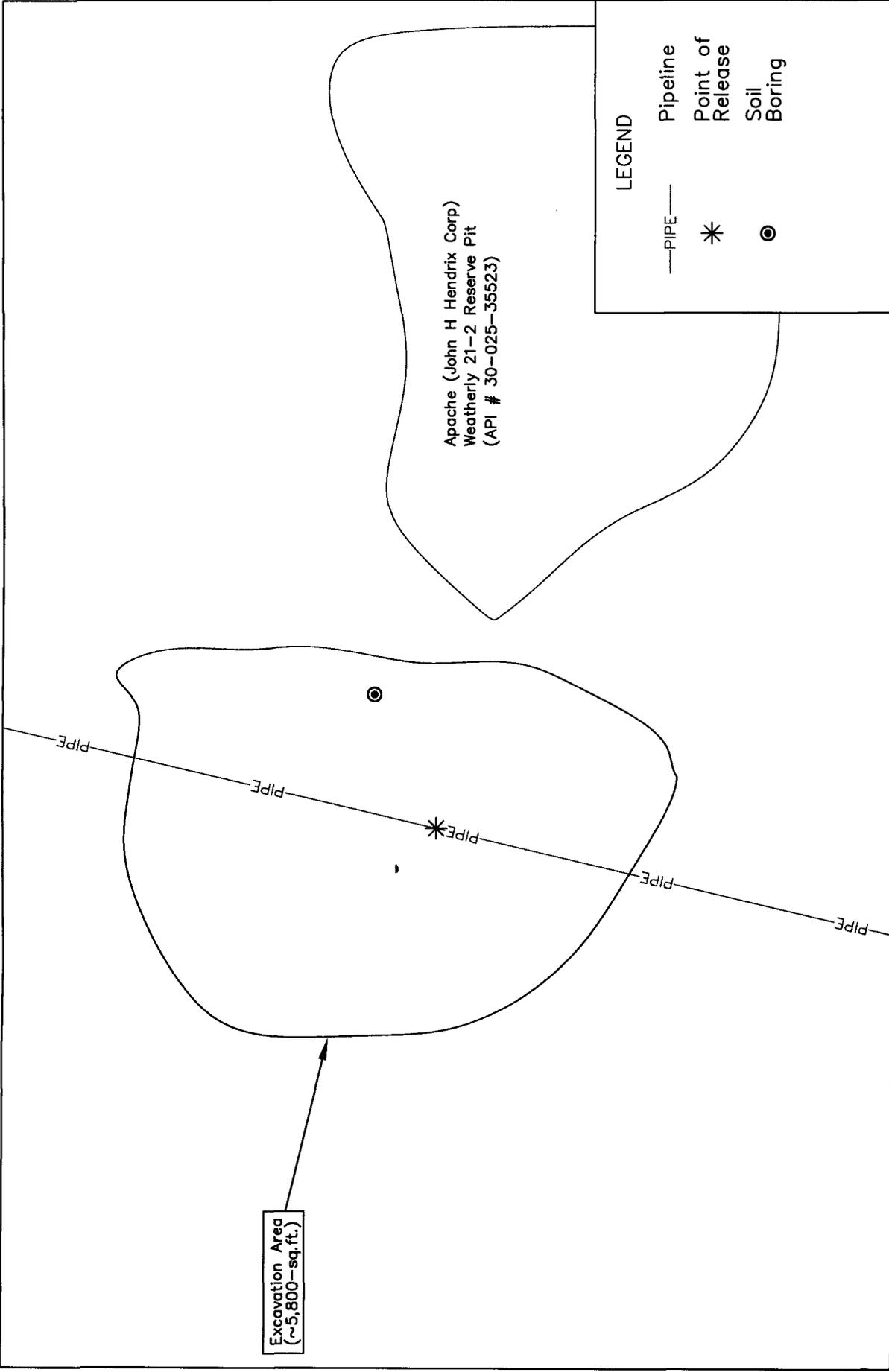
**Lea County, New Mexico**  
NW 1/4 of the NE 1/4, Sec. 21, T21S, R37E  
N 32° 28' 11.19" W 103° 10' 4.13"  
Elevation: 3,453 feet amsl

**DWG By: Dausiel Starginkalter**  
February 2006

**REvised:**  
Dec. 2006

**SHEET**  
1 of 1

0 25 50 Feet

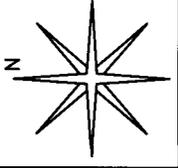


Excavation Area  
 (~5,800-sq.ft.)

Apache (John H Hendrix Corp)  
 Weatherly 21-2 Reserve Pit  
 (API # 30-025-35523)

**LEGEND**

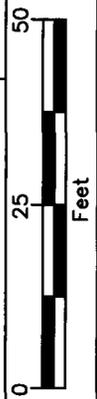
- PIPE—
- \* Point of Release
- ⊙ Soil Boring



REVISED:

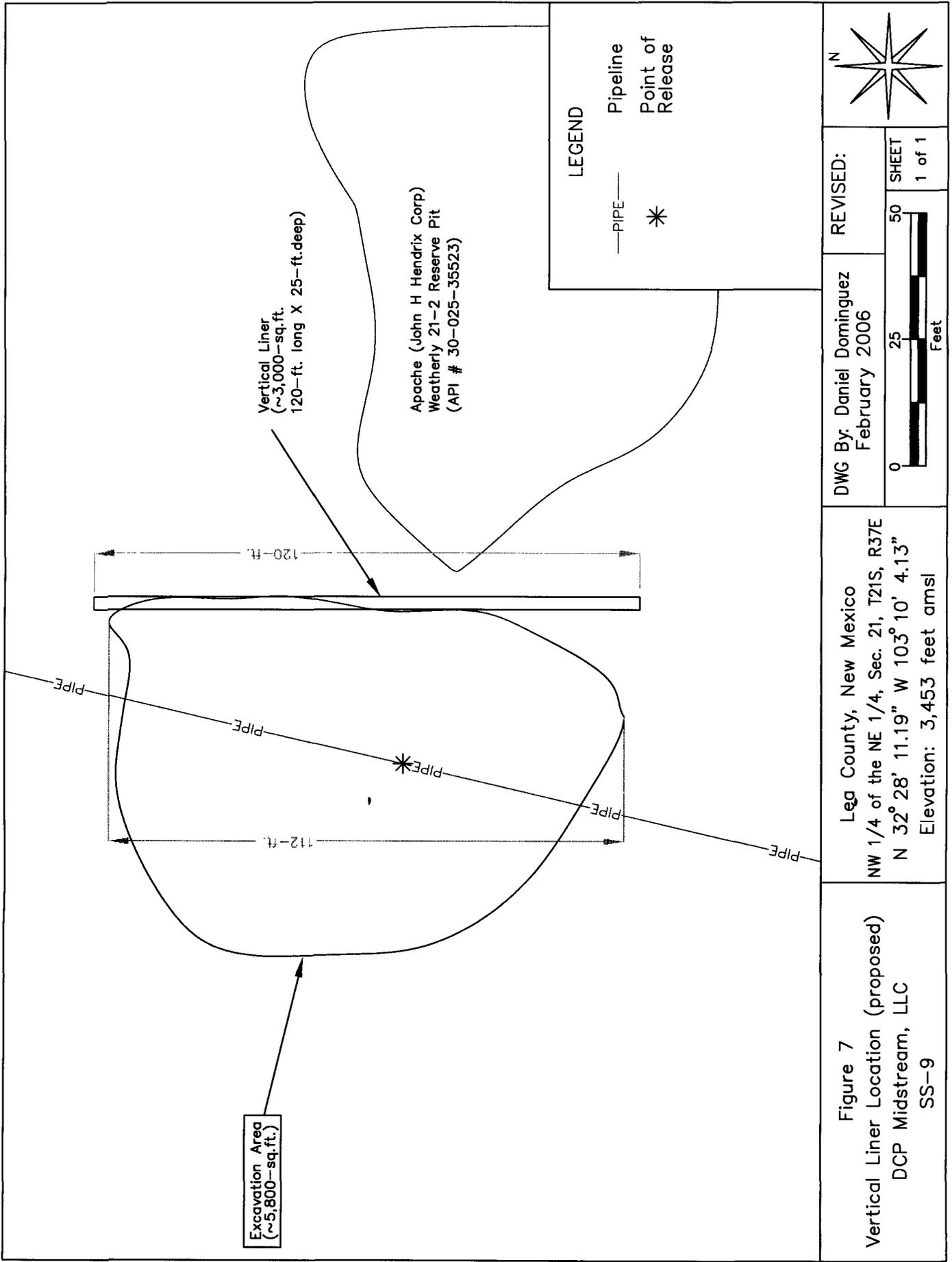
DWG By: Daniel Dominguez  
 February 2006

SHEET  
 1 of 1



Lea County, New Mexico  
 NW 1/4 of the NE 1/4, Sec. 21, T21S, R37E  
 N 32° 28' 11.19" W 103° 10' 4.13"  
 Elevation: 3,453 feet amsl

Figure 6  
 Soil Boring Location (2-2-2007)  
 DCP Midstream, LLC  
 SS-9



REVISIED:

DWG By: Daniel Dominguez  
February 2006

SHEET  
1 of 1

Leg County, New Mexico  
NW 1/4 of the NE 1/4, Sec. 21, T21S, R37E  
N 32° 28' 11.19" W 103° 10' 4.13"  
Elevation: 3,453 feet amsl

Figure 7  
Vertical Liner Location (proposed)  
DCP Midstream, LLC  
SS-9

**TABLES**

TABLE 1

Well Data

Duke Energy Field Services SS-9 (Ref. #130027)

Well Number	Diversion <sup>A</sup>	Owner	Use	Twsp	Rng	Sec q q q	Latitude	Longitude	Date Measured	Well Depth (ft bgs)	Depth to Water (ft bgs)
USGS #1				21 S	37 E	21 1 1 1			10-Jan-54		73.07
USGS #2				21 S	37 E	21 1 3 2			10-Dec-70		80.12
USGS #3				21 S	37 E	21 1 3 2			02-Dec-65		77.77
USGS #4				21 S	37 E	21 2 4 2			25-Apr-91		56.11
USGS #5				21 S	37 E	15 3 3 4			19-Apr-91		49.06
CP 00254	3	Millard Deck	STK	21 S	37 E	16 2 2	N 32° 28' 56.57"	W 103° 09' 47.62"	05-Jun-76	80	70
USGS #6				21 S	37 E	16 2 2 2			24-Apr-91		63.45
CP 00063 EXP	0	Right Reverend Sandy Meizger		21 S	37 E	17 1 2 3	N 32° 28' 56.7"	W 103° 11' 20"			
USGS #7				21 S	37 E	17 1 4 4			08-Feb-96		71.95
USGS #8				21 S	37 E	17 4 1 2			10-Dec-70		70.25
CP 00895		Joe R. Sims	DOM	21 S	37 E	20 1 1	N 32° 28' 4.45"	W 103° 11' 35.34"	17-Mar-00	163	
USGS #9				21 S	37 E	20 2 4 4			06-Mar-96		98.69
CP 00251	48	Versado Gas Processors, LLC	IND	21 S	37 E	22 4 3 2	N 32° 27' 25.15"	W 103° 09' 1.37"	31-Dec-48	103	
CP 00252	40	Versado Gas Processors, LLC	IND	21 S	37 E	22 4 2 4	N 32° 27' 38.22"	W 103° 08' 46"	31-Mar-49	106	
CP 00881	3	Richard Don Jones	DOM	21 S	37 E	22 4 4 3	N 32° 27' 25.16"	W 103° 08' 45.99"	07-Sep-99	95	53
USGS #10				21 S	37 E	22 2 1 1			08-Feb-01		39.64
USGS #11				21 S	37 E	22 2 1 1			23-Feb-96		42.81
USGS #12				21 S	37 E	22 2 1 2			17-Dec-70		56.62
USGS #13				21 S	37 E	22 3 3 3			17-Apr-91		46.1
USGS #14				21 S	37 E	22 4 1 4			27-Jan-76		68.83
USGS #15				21 S	37 E	22 4 3 2			19-Apr-77		66.62
USGS #16				21 S	37 E	22 4 3 2			27-Jan-76		66.73
USGS #17				21 S	37 E	22 4 4 2			17-Apr-91		58.61

TABLE 1

Well Data

Duke Energy Field Services SS-9 (Ref. #130027)

Well Number	Diversion <sup>A</sup>	Owner	Use	Twp	Rng	Sec q q q	Latitude	Longitude	Date Measured	Well Depth (ft bgs)	Depth to Water (ft bgs)
[Shaded area containing well data]											

\* = Data obtained from the New Mexico Office of the State Engineer Website ([http://twaters.ose.state.nm.us:7001/tWATERS/wr\\_RegisServlet](http://twaters.ose.state.nm.us:7001/tWATERS/wr_RegisServlet))

Shaded area indicates well locations not shown on Figure 2

<sup>A</sup> = in acre feet per annum

<sup>B</sup> = Elevation interpolated from USGS topographical map based on referenced location.

IND = Industrial

STK = Livestock watering

DOM = Domestic

SRO = Secondary recovery of oil

SAN = 72-12-1 Sanitary in conjunction with commercial use

quarters are 1=NW, 2=NE, 3=SW, 4=SE; quarters are biggest to smallest

TABLE 2

Summary of Test Trench and Excavation Laboratory Analytical Results

DCP Midstream, LLC. SS-9 (EPI Ref. #130027)

Soil Sample ID	Depth (feet)	Sample Date	Soil Status	PID Reading (ppm)	Field Chloride (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH (as gasoline) (mg/kg)	TPH (as diesel) (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)	Sulfate (mg/kg)			
SP-1 (2')	2	30-Jul-05	Excavated	233.0	680	0.0163 <sup>B</sup>	0.139	0.285	1.54	0.655	141	549	690	613	--			
SP-1 (4')	4	30-Jul-05	Excavated	52.0	400	<0.0250	<0.0250	0.0245 <sup>A</sup>	0.0748	0.0748	31.6	231	263	284	--			
SP-1 (6')	6	30-Jul-05	Excavated	39.5	160	<0.0250	<0.0250	<0.0250	<0.0250	<0.100	<10.0	<10.0	<10.0	26.9	--			
SP-1 (8')	8	30-Jul-05	Excavated	7.7	160	<0.0250	<0.0250	<0.0250	<0.0250	<0.100	<10.0	<10.0	<10.0	31.4	--			
SP-2 (2')	2	30-Jul-05	Excavated	13.1	700	<0.0250	<0.0250	<0.0250	<0.0250	<0.100	<10.0	<10.0	93.2	943	--			
SP-2 (4')	4	30-Jul-05	Excavated	9.4	320	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	159	--			
SP-2 (6')	6	30-Jul-05	Excavated	8.2	250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	41.4	--			
SP-2 (8')	8	30-Jul-05	Excavated	6.7	250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	48.2	--			
SP-3 (2')	2	30-Jul-05	Excavated	20.2	4,480	--	--	--	--	--	--	--	--	--	--			
SP-3 (4')	4	30-Jul-05	Excavated	7.7	480	--	--	--	--	--	--	--	--	--	--			
SP-3 (6')	6	30-Jul-05	Excavated	1,645	3,760	1.99	17.4	13.8	19.9	53.1	1,350	2,450	3,800	5,570	--			
SP-3 (8')	8	30-Jul-05	Excavated	47.6	400	<0.0250	0.0409	0.0814	0.221	0.343	<10.0	<10.0	<10.0	427	--			
SP-3 (10')	10	30-Jul-05	Excavated	25.1	400	--	--	--	--	--	--	--	--	--	--			
SP-3 (12')	12	30-Jul-05	Excavated	13.9	480	--	--	--	--	--	--	--	--	--	--			
SP-3 (14')	14	30-Jul-05	Excavated	7.8	480	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	466	--			
SP-3 (16')	16	30-Jul-05	Excavated	34.2	560	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<10.0	578	--			
SP-1	4	14-Sep-05	In Situ	14.0	--	<0.005	<0.005	<0.005	<0.015	<0.03	<10.0	<10.0	<20.0	96.0	<1			
SP-2	5	14-Sep-05	In Situ	11.7	--	<0.005	<0.005	<0.005	<0.015	<0.03	<10.0	<10.0	<20.0	432	272			
SP-3	12	14-Sep-05	In Situ	13.5	--	<0.005	<0.005	<0.005	<0.015	<0.03	<10.0	<10.0	<20.0	144	<1			
SP-4	12	14-Sep-05	In Situ	13.5	--	<0.005	<0.005	<0.005	<0.015	<0.03	<10.0	<10.0	<20.0	256	522			
SP-5	12	14-Sep-05	In Situ	13.8	--	<0.005	<0.005	<0.005	<0.015	<0.03	<10.0	<10.0	<20.0	1,584	121			
SP-6	6	14-Sep-05	In Situ	13.0	--	<0.005	<0.005	<0.005	<0.015	<0.03	<10.0	<10.0	<20.0	624	1,542			
SP-7	18	14-Sep-05	In Situ	9.8	--	<0.005	<0.005	<0.005	<0.015	<0.03	<10.0	222	222	2,335	1,696			
SP-8	6	14-Sep-05	In Situ	7.5	--	<0.005	<0.005	<0.005	<0.015	<0.03	<10.0	<10.0	<20.0	816	440			
SP-9	6	14-Sep-05	In Situ	11.9	--	<0.005	<0.005	<0.005	<0.015	<0.03	<10.0	<10.0	<20.0	5,310	732			
SP-10	12	14-Sep-05	In Situ	7.4	--	<0.005	<0.005	<0.005	0.016	0.016	<10.0	<10.0	<20.0	496	548			
SP-11	8	14-Sep-05	In Situ	10.1	--	<0.005	<0.005	<0.005	<0.015	<0.03	<10.0	<10.0	<20.0	2,319	1,472			
SP-12	12	14-Sep-05	In Situ	5.7	--	<0.005	<0.005	<0.005	<0.015	<0.03	<10.0	<10.0	<20.0	896	132			
<b>NMOC Remedial Thresholds</b>														<b>10</b>	<b>50</b>	<b>1,000</b>	<b>250<sup>C</sup></b>	<b>600<sup>C</sup></b>

**Bolded values are in excess of the NMOC Remediation Thresholds**

-- = Not Analyzed

<sup>A</sup> In lieu of laboratory analyses of benzene, toluene, ethylbenzene and total xylenes.

<sup>B</sup> Estimated concentration; detected, but below laboratory reporting limits

<sup>C</sup> Chloride and sulfate residuals may not be capable of impacting local groundwater above the NMWQCC standards of 250 mg/L and 600 mg/L, respectively.

**TABLE 3**  
**Summary of Soil Boring Analytical Results**

DCP Midstream, LLC. SS-9 (EPI Ref. #130027)

Soil Sample I.D.	Depth (feet)	Sample Date	PID Reading (ppm)	Field Chloride (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH (as gasoline) (mg/kg)	TPH (as diesel) (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)	Sulfate (mg/kg)
SB-1 (6')	6	02-Feb-07	10.1	320	<0.002	<0.002	<0.002	<0.006	<0.012	<10.0	<10.0	<20.0	304	<1 *
SB-1 (9')	9	02-Feb-07	1.2	240	<0.002	<0.002	<0.002	<0.006	<0.012	<10.0	<10.0	<20.0	96.0	160
SB-1 (14')	14	02-Feb-07	0.7	240	<0.002	<0.002	<0.002	<0.006	<0.012	<10.0	<10.0	<20.0	96.0	284
SB-1 (19')	19	02-Feb-07	0.8	480	<0.002	<0.002	<0.002	<0.006	<0.012	<10.0	<10.0	<20.0	336	210
SB-1 (24')	24	02-Feb-07	0.9	320	<0.002	<0.002	<0.002	<0.006	<0.012	<10.0	<10.0	<20.0	336	251
SB-1 (29')	29	02-Feb-07	0.8	240	<0.002	<0.002	<0.002	<0.006	<0.012	<10.0	<10.0	<20.0	176	201
SB-1 (34')	34	02-Feb-07	0.8	160	<0.002	<0.002	<0.002	<0.006	<0.012	<10.0	<10.0	<20.0	16.0	52
<b>NMOCD Remedial Thresholds</b>			<b>100<sup>A</sup></b>		<b>10</b>				<b>50</b>			<b>1,000/100<sup>D</sup></b>		<b>250<sup>C</sup></b>

*Bolded values are in excess of the NMOCD Remediation Thresholds*

<sup>A</sup> In lieu of laboratory analyses of benzene, toluene, ethylbenzene and total xylenes.

<sup>B</sup> Detected, but below the reporting limit; therefore the result is an estimated concentration (CLP J-Flag)

<sup>C</sup> Chloride and sulfate residuals may not be capable of impacting local groundwater above the NMWQCC standards of 250 and 600 mg/L

<sup>D</sup> Remedial goals for TPH are 1,000 mg/kg or less to 17-foot bgs and 100 mg/kg or less past 17-foot bgs.

\* Color Matrix Interference. Result should therefore be considered an approximation

**APPENDICES**

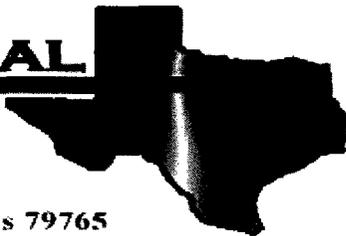
**APPENDIX I**

**LABORATORY ANALYTICAL REPORTS**

**AND**

**CHAIN-OF-CUSTODY FORM**

# **E** NVIRONMENTAL LAB OF



12600 West I-20 East - Odessa, Texas 79765

## Analytical Report

**Prepared for:**

Iain Olness

Environmental Plus, Incorporated

P.O. Box 1558

Eunice, NM 88231

Project: Duke Energy- SS-9 (Ref #130027)

Project Number: None Given

Location: UL-B, Sec. 21, T21S, R37E

Lab Order Number: 5H04004

Report Date: 08/11/05

Environmental Plus, Incorporated  
P.O. Box 1558  
Eunice NM, 88231

Project: Duke Energy- SS-9 (Ref #130027)  
Project Number: None Given  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
08/11/05 10:49

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SP-1 (2') (5H04004-01) Soil</b>									
Benzene	J [0.0163]	0.0250	mg/kg dry	25	EH50410	08/04/05	08/05/05	EPA 8021B	J
Toluene	0.139	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.285	0.0250	"	"	"	"	"	"	
Xylene (p/m)	1.40	0.0250	"	"	"	"	"	"	
Xylene (o)	0.143	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		113 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		83.1 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	141	10.0	mg/kg dry	1	EH50508	08/05/05	08/05/05	EPA 8015M	
Diesel Range Organics >C12-C35	549	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	690	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		93.0 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		127 %	70-130		"	"	"	"	
<b>SP-1 (4') (5H04004-02) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EH50410	08/04/05	08/05/05	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	J [0.0245]	0.0250	"	"	"	"	"	"	J
Xylene (p/m)	0.0748	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		88.6 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.8 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	31.6	10.0	mg/kg dry	1	EH50508	08/05/05	08/05/05	EPA 8015M	
Diesel Range Organics >C12-C35	231	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	263	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		95.8 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		126 %	70-130		"	"	"	"	
<b>SP-1 (6') (5H04004-03) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EH50410	08/04/05	08/05/05	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		90.3 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.6 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EH50508	08/05/05	08/05/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	

Environmental Lab of Texas

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SP-2 (4') (5H04004-06) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EH50410	08/04/05	08/05/05	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		88.5 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		87.8 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EH50508	08/05/05	08/05/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		97.4 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		129 %	70-130		"	"	"	"	
<b>SP-2 (6') (5H04004-07) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EH50410	08/04/05	08/05/05	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		84.7 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		82.7 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EH50508	08/05/05	08/05/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		85.8 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		119 %	70-130		"	"	"	"	
<b>SP-2 (8') (5H04004-08) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EH50410	08/04/05	08/05/05	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		82.8 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		85.9 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EH50508	08/05/05	08/05/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	

Environmental Lab of Texas

*The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.*

Environmental Plus, Incorporated  
P.O. Box 1558  
Eunice NM, 88231

Project: Duke Energy- SS-9 (Ref #130027)  
Project Number: None Given  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
08/11/05 10:49

**Organics by GC**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SP-3 (14') (5H04004-11) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EH50410	08/04/05	08/05/05	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		84.6 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		85.9 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EH50508	08/05/05	08/05/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		88.8 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		125 %	70-130		"	"	"	"	

**SP-3 (16') (5H04004-12) Soil**

Benzene	ND	0.0250	mg/kg dry	25	EH50410	08/04/05	08/05/05	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		80.5 %	80-120		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		81.6 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EH50508	08/05/05	08/05/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		91.2 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		120 %	70-130		"	"	"	"	

Environmental Plus, Incorporated  
P.O. Box 1558  
Eunice NM, 88231

Project: Duke Energy- SS-9 (Ref #130027)  
Project Number: None Given  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
08/11/05 10:49

**General Chemistry Parameters by EPA / Standard Methods**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SP-3 (6') (5H04004-09) Soil</b>									
Chloride	5570	50.0	mg/kg	100	EH51009	08/09/05	08/09/05	EPA 300.0	
% Moisture	17.1	0.1	%	1	EH50501	08/04/05	08/05/05	% calculation	
<b>SP-3 (8') (5H04004-10) Soil</b>									
Chloride	427	5.00	mg/kg	10	EH51009	08/09/05	08/09/05	EPA 300.0	
% Moisture	14.4	0.1	%	1	EH50501	08/04/05	08/05/05	% calculation	
<b>SP-3 (14') (5H04004-11) Soil</b>									
Chloride	466	10.0	mg/kg	20	EH51009	08/09/05	08/09/05	EPA 300.0	
% Moisture	10.2	0.1	%	1	EH50501	08/04/05	08/05/05	% calculation	
<b>SP-3 (16') (5H04004-12) Soil</b>									
Chloride	578	10.0	mg/kg	20	EH51009	08/09/05	08/09/05	EPA 300.0	
% Moisture	10.4	0.1	%	1	EH50501	08/04/05	08/05/05	% calculation	

Environmental Plus, Incorporated  
P.O. Box 1558  
Eunice NM, 88231

Project: Duke Energy- SS-9 (Ref #130027)  
Project Number: None Given  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
08/11/05 10:49

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch EH50410 - EPA 5030C (GC)**

<b>Matrix Spike Dup (EH50410-MSD1)</b>		<b>Source: 5H04005-08</b>		<b>Prepared: 08/04/05 Analyzed: 08/05/05</b>						
Benzene	97.5		ug/kg	100	ND	97.5	80-120	2.53	20	
Toluene	98.4		"	100	ND	98.4	80-120	4.57	20	
Ethylbenzene	95.4		"	100	ND	95.4	80-120	4.01	20	
Xylene (p/m)	192		"	200	ND	96.0	80-120	3.08	20	
Xylene (o)	84.4		"	100	ND	84.4	80-120	2.92	20	
Surrogate: a,a,a-Trifluorotoluene	87.5		"	100		87.5	80-120			
Surrogate: 4-Bromofluorobenzene	96.9		"	100		96.9	80-120			

**Batch EH50508 - Solvent Extraction (GC)**

<b>Blank (EH50508-BLK1)</b>				<b>Prepared &amp; Analyzed: 08/05/05</b>	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet		
Diesel Range Organics >C12-C35	ND	10.0	"		
Total Hydrocarbon C6-C35	ND	10.0	"		
Surrogate: 1-Chlorooctane	41.6		mg/kg	50.0	83.2 70-130
Surrogate: 1-Chlorooctadecane	56.5		"	50.0	113 70-130

<b>LCS (EH50508-BS1)</b>				<b>Prepared &amp; Analyzed: 08/05/05</b>	
Gasoline Range Organics C6-C12	414	10.0	mg/kg wet	500	82.8 75-125
Diesel Range Organics >C12-C35	532	10.0	"	500	106 75-125
Total Hydrocarbon C6-C35	946	10.0	"	1000	94.6 75-125
Surrogate: 1-Chlorooctane	50.3		mg/kg	50.0	101 70-130
Surrogate: 1-Chlorooctadecane	58.9		"	50.0	118 70-130

<b>Calibration Check (EH50508-CCV1)</b>				<b>Prepared: 08/05/05 Analyzed: 08/06/05</b>	
Gasoline Range Organics C6-C12	459		mg/kg	500	91.8 80-120
Diesel Range Organics >C12-C35	574		"	500	115 80-120
Total Hydrocarbon C6-C35	1030		"	1000	103 80-120
Surrogate: 1-Chlorooctane	50.9		"	50.0	102 0-200
Surrogate: 1-Chlorooctadecane	62.6		"	50.0	125 0-200

Environmental Plus, Incorporated  
P.O. Box 1558  
Eunice NM, 88231

Project: Duke Energy- SS-9 (Ref #130027)  
Project Number: None Given  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
08/11/05 10:49

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch EH50501 - General Preparation (Prep)**

**Blank (EH50501-BLK1)** Prepared: 08/04/05 Analyzed: 08/05/05

% Moisture ND 0.1 %

**Duplicate (EH50501-DUP1)** Source: 5H03008-01 Prepared: 08/04/05 Analyzed: 08/05/05

% Moisture 4.7 0.1 % 5.1 8.16 20

**Batch EH51009 - Water Extraction**

**Blank (EH51009-BLK1)** Prepared & Analyzed: 08/09/05

Chloride ND 0.500 mg/kg

**LCS (EH51009-BS1)** Prepared & Analyzed: 08/09/05

Chloride 10.3 mg/L 10.0 103 80-120

**Calibration Check (EH51009-CCV1)** Prepared & Analyzed: 08/09/05

Chloride 10.6 mg/L 10.0 106 80-120

**Duplicate (EH51009-DUP1)** Source: 5H04004-01 Prepared & Analyzed: 08/09/05

Chloride 606 5.00 mg/kg 613 1.15 20



**Environmental Lab of Texas  
Variance / Corrective Action Report – Sample Log-In**

Client: EPL

Date/Time: 8/4/05 12:52

Order #: 5H04004

Initials: CK

**Sample Receipt Checklist**

	Yes	No	
Temperature of container/cooler?			0.5 C
Shipping container/cooler in good condition?	<input checked="" type="checkbox"/>	No	
Custody Seals intact on shipping container/cooler?	<input checked="" type="checkbox"/>	No	Not present
Custody Seals intact on sample bottles?	<input checked="" type="checkbox"/>	No	Not present
Chain of custody present?	<input checked="" type="checkbox"/>	No	
Sample Instructions complete on Chain of Custody?	<input checked="" type="checkbox"/>	No	
Chain of Custody signed when relinquished and received?	<input checked="" type="checkbox"/>	No	
Chain of custody agrees with sample label(s)	<input checked="" type="checkbox"/>	No	
Container labels legible and intact?	<input checked="" type="checkbox"/>	No	
Sample Matrix and properties same as on chain of custody?	<input checked="" type="checkbox"/>	No	
Samples in proper container/bottle?	<input checked="" type="checkbox"/>	No	
Samples properly preserved?	<input checked="" type="checkbox"/>	No	
Sample bottles intact?	<input checked="" type="checkbox"/>	No	
Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/>	No	
Containers documented on Chain of Custody?	<input checked="" type="checkbox"/>	No	
Sufficient sample amount for indicated test?	<input checked="" type="checkbox"/>	No	
All samples received within sufficient hold time?	<input checked="" type="checkbox"/>	No	
VOC samples have zero headspace?	<input checked="" type="checkbox"/>	No	Not Applicable

Other observations:

---



---

**Variance Documentation:**

Contact Person: - \_\_\_\_\_ Date/Time: \_\_\_\_\_ Contacted by: \_\_\_\_\_  
Regarding: \_\_\_\_\_

---



---

Corrective Action Taken:

---



---



---



---



---



---



PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR  
 ENVIRONMENTAL PLUS, INC.  
 ATTN: IAIN OLNESS  
 P.O. BOX 1558  
 EUNICE, NM 88231  
 FAX TO: (505) 394-2601

Receiving Date: 09/14/05  
 Reporting Date: 09/16/05  
 Project Owner: DUKE ENERGY FIELD SERVICES  
 Project Name: SS-9 (REF. #130027)  
 Project Location: UL-B, SEC21, T21S, R37E

Sampling Date: 09/14/05  
 Sample Type: SOIL  
 Sample Condition: COOL & INTACT  
 Sample Received By: HM  
 Analyzed By: HM

LAB NUMBER	SAMPLE ID	SO <sub>4</sub> ( mg/Kg )	Cl ( mg/Kg )
ANALYSIS DATE:		09/15/05	09/15/05
H10191-1	SP-1	<1	96
H10191-2	SP-2	272	432
H10191-3	SP-3	<1	144
H10191-4	SP-4	522	256
H10191-5	SP-5	121	1584
H10191-6	SP-6	1542	624
H10191-7	SP-7	1696	2335
H10191-8	SP-8	440	816
H10191-9	SP-9	732	5310
H10191-10	SP-10	548	496
H10191-11	SP-11	1472	2319
H10191-12	SP-12	132	896
Quality Control		48.52	1000
True Value QC		50.00	1000
% Recovery		97.0	100
Relative Percent Difference		4.8	0

METHODS: EPA 600/4-79-020	375.4	325.3
---------------------------	-------	-------

Note: Analyses performed on 1:4 w:v aqueous extracts.

Amy Hill  
 Chemist

9/16/05  
 Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.







**APPENDIX II**

**PROJECT PHOTOGRAPHS**



*Photo #1:* Release area looking northwesterly across pipeline right-of-way.



*Photo #2:* Looking northeasterly along pipeline right-of way.



*Photo #3:* Looking northwesterly across excavation area as of November 21, 2006.



*Photo #4:* Looking northerly across excavation as of November 21, 2006.

**APPENDIX III**  
**INFORMATIONAL COPY OF INITIAL**  
**NMOCD C-141 FORM**

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

**Informational - Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

<b>Name of Company:</b> Duke Energy Field Services	<b>Contact:</b> Lynn Ward
<b>Address:</b> 10 Desta Drive, Suite 400-W	<b>Telephone No.:</b> (432) 620-4207
<b>Facility Name:</b> SS-9	<b>Facility Type:</b>

<b>Surface Owner:</b> Millard Deck Estate	<b>Mineral Owner:</b>	<b>Lease No.:</b>
---	-----------------------	-------------------

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	21	21S	37E					Lea

**Latitude:** N 32° 28' 11.19" **Longitude:** W 103° 10' 4.13"

**NATURE OF RELEASE**

<b>Type of Release:</b> Natural Gas	<b>Volume of Release:</b> ~3 bbls	<b>Volume Recovered:</b> none
<b>Source of Release:</b> Pipeline	<b>Date and Hour of Occurrence:</b> 11 July 2005, @ A.M.	<b>Date and Hour of Discovery:</b> 11 July 2005, @ A.M.
<b>Was Immediate Notice Given?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	<b>If YES, To Whom?</b> NA	
<b>By Whom?</b>	<b>Date and Hour:</b>	
<b>Was a Watercourse Reached?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>If YES, Volume Impacting the Watercourse:</b> Not Applicable	

**If a Watercourse was Impacted, Describe Fully.\*** Not Applicable

**Describe Cause of Problem and Remedial Action Taken.\*** Approximately 3 barrels of natural gas were released as the result of the structural integrity of the natural gas line failing, with no amount recovered from the site. The line was shut in and is scheduled to be replaced.

**Describe Area Affected and Cleanup Action Taken.\*** Approximately 1,900 square-feet of surface area was impacted by the release. To date, approximately 1,500 cubic yards of material have been excavated from the release area. Approximately 420 cubic yards have been transported to an approved disposal facility and the remaining 1,080 cubic yards are stockpiled on site. Laboratory analytical results for samples collected from the excavation indicate all organic contaminants (i.e. TPH and BTEX) are below NMOCD remedial goals. However, reported chloride and sulfate levels remain slightly elevated (reference Figure 4).

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

<b>Signature:</b>	<b>OIL CONSERVATION DIVISION</b>	
<b>Printed Name:</b> Lynn Ward	Approved by District Supervisor: <i>[Signature]</i>	
<b>Title:</b> Environmental Specialist-Western Division	<b>Approval Date:</b> 5.31.07	<b>Expiration Date:</b> 7.31.07
<b>E-mail Address:</b> lward@duke-energy.com	<b>Conditions of Approval:</b>	
<b>Date:</b> <b>Phone:</b> (432) 620-4207	SUBMITAL OF FINAL BY <i>[Signature]</i> Attached <input type="checkbox"/>	

\* Attach Additional Sheets If Necessary