Duke Energy Field Services

CLOSURE PROPOSAL

A-8-13-1 RELEASE SITE

DEFS REF: 130032

UL-C (NE¼ OF THE NW¼) OF SECTION 11 T17S R34E

~4 MILES NORTHWEST OF BUCKEYE

LEA COUNTY, NEW MEXICO

LATITUDE: N 32° 51' 10.26" LONGITUDE: W 103° 31' 58.08"

JANUARY 2006

PREPARED BY:

Environmental Plus, Inc.

2100 Avenue O

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RP# 844

Application pPAC0611654338

LETTER OF TRANSMITTAL

ENVIRONMENTAL PLUS, INC.

Date:	January 18, 2006
To:	**Larry Johnson**
Company Name:	New Mexico Oil Conservation Division – Hobbs
Address:	1625 French Drive
City / State / Zip:	Hobbs, New Mexico 88240
From:	Jason Stegemoller
CC:	Thaddeus Kostrubala – New Mexico State Land Office – Sante Fe Steve Weathers, DEFS – Denver; Lynn Ward, DEFS – Midland; Mark Owens, DEFS – Hobbs
Project #:	130032
Project Name:	Duke Energy Field Services – A-8-13-1 Line
Subject:	**Closure Proposal**

# of originals	# of copies	Description
	1	Copy of the Duke Energy Field Services – A-8-13-1 Closure Proposal

Remarks

Dear Mr. Johnson:

Enclosed is a copy of the Closure Proposal for the above-referenced site. A copy of the proposal was sent to the New Mexico State Land Office and appropriate Duke Energy personnel. Should you have any questions or concerns, please feel free to contact Iain Olness or me at (505) 394-3481.

Sincerely,

Environmental Plus, Inc.

Jason Stegemoller
Environmental Scientist

JAN 2006
Received
Hobbs
OCD

P. O. Box 1558
Eunice, NM 88240
(505) 394-3481
Fax: (505) 394-2601

Distribution List

Duke Energy Field Services- A-8-13-1 Line (Ref. #130032)

Name	Title	Company or Agency	Mailing Address	e-mail
Larry Johnson	Environmental Engineer	New Mexico Oil Conservation Division-Hobbs	1625 French Drive Hobbs, NM 88240	lwjohnson@state.nm.us
Thaddeus Kostrubala	Environmental Engineer	New Mexico State Land Office-Sante Fe	310 Old Sante Fe Trail P.O. Box 1148 Sante Fe, NM 87504-1148	tkostrubala@slo.state.nm.us
Lynn Ward	Environmental Specialist-Western Division	Duke Energy Field Services, LP	10 Desta Drive, Suite 400-W Midland, TX 79705	lcward@duke-energy.com
Mark Owens	Construction Maintenance Supervisor	Duke Energy Field Services, LP	1625 West Marland Blvd. Hobbs, NM 88240	mrowens@duke-energy.com
Steve Weathers	Environmental Manager	Duke Energy Field Services, LP	370 17th Street, Suite 900 Denver, CO 80202	swweathers@duke-energy.com
File	--	Environmental Plus, Inc.	P.O. Box 1558 Eunice, NM 88231	iolness@envplus.net

Standard of Care

Closure Proposal

A-8-13-1-Line (Ref. #130032)

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 the 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 arrived at with currently accepted geologic, hydrogeologic and engineering practices at this time and location. The report was prepared or reviewed by a certified or registered EPI professional with a background in engineering, environmental and/or the natural sciences.

This report was prepared by:

Jason Stegemoller — 18 January 2006

Jason Stegemoller, M.S. — Date

Environmental Scientist

This report was reviewed by:

Iain A. Olness — 18 January 2006

Iain A. Olness, P.G. — Date

Hydrogeologist

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APPENDICES

Project Summary

Site Specific:

- **Company Name**: Duke Energy Field Services
- **Facility Name**: A-8-13-1
- **Project Reference** 130032
- **Company Contacts**: Lynn Ward, Duke Energy Field Services – Midland, Texas
- **Site Location:** WGS84 N32° 51' 10.26"; W103° 31' 58.08"
- **Legal Description**: Unit Letter C (NE¼ of the NW¼), Section 11, T17S, R34E
- **General Description**: approximately 4-miles northwest of Buckeye, New Mexico
- **Elevation**: 4,044-ft amsl **Depth to Ground Water**: 50 – 100-ft (~85 ft)
- **Land Ownership**: State of New Mexico, leased to Eidson Ranches
- **EPI Personnel**: Project Consultant – Iain Olness
  Site Foreman – David Robinson

Release Specific:

- **Product Released**: Natural Gas Liquids (NGL)
- **Volume Released**: ≈4 bbl **Volume Recovered**: none
- **Time of Occurrence**: 12-September-05 **Time of Discovery**: 12-September-05
- **Release Source**: 6-inch low pressure steel pipeline, operating at 0.5 mcf/day
- **Initial Surface Area Affected**: ≈640-ft^2

Remediation Specific:

- **Final Vertical extent of contamination**: 32-ft bgs at maximum; Remaining depth to ground water: ~53-ft
- **Water wells within 1,000-ft**: None
- **Surface water bodies within 1,000-ft**: Release site is within 60-feet of an ephemeral playa lake.
- **NMOCD Site Ranking Index**: 30 points (based on depth to groundwater and proximity to playa lake)
- **Remedial goals for Soil**: TPH – 100 mg/kg; BTEX – 50 mg/kg; Benzene – 10 mg/kg.
- **RCRA Waste Classification**: Exempt
- **Remediation Option Selected**: a) Excavation of contaminated soil above NMOCD remedial goals in sidewalls; b) laboratory analyses to confirm removal of soil impacted above NMOCD remedial thresholds sidewalls; c) barrier installed in floor of excavation to isolate residual impacted soil; d) transport a portion of impacted soil to a state approved landfarm for treatment; e) blend remaining impacted soil with clean soil; f) backfill the excavation with blended and clean soil obtained from the surrounding area.
- **Disposal Facility**: Artesia Aeration, L.L.C. **Volume disposed of**: ~360 yd^3
- **Project Completion Date**: Ongoing
- **Additional Commentary**: None

1.0 Summary

This report addresses the site investigation and remediation of the Duke Energy Field Services (DEFS) A-8-13-1 6-inch natural gas pipeline remediation site. On September 12, 2005, Environmental Plus, Inc. (EPI) was notified by DEFS regarding a natural gas and natural gas liquid (NGL) release along the A-8-13-1 pipeline. This site is located approximately 4 miles southwest of Buckeye, Lea County, New Mexico (reference *Figures 1* and *2*). The initial C-141 Form submitted to the New Mexico Oil Conservation Division (NMOCD) stated a release of 4 barrels (bbl) of NGL, with none recovered. EPI performed GPS surveying, photography and characterization of the site on September 12, 2005. The site consisted of an approximate 640 square feet (ft^2) of visibly affected surface area (reference *Figure 3*).

Remedial activities at the site consisted of excavating visibly NGL saturated soil and transporting approximately 360 cubic yards (yds^3) to Artesia Aeration, L.L.C. for treatment (*reference Figure 3*). On November 7, 2005, soil samples were collected from eastern and southern portions of the excavation and from a test trench excavated beneath the point-of-release to approximately 18-feet below ground surface (bgs). The samples were analyzed in the field for the presence of organic vapors utilizing an UltraRae photoionization detector (PID) equipped with a 9.8 electron-volt (eV) lamp. Field analyses indicated organic vapor concentrations in the excavation floor and sidewalls ranged from 2.0 to 59.5 ppm. Field analytical data for the samples collected from the test trench indicated organic vapor concentrations at 14-feet bgs were 1,653 ppm and at 18-feet bgs were 3,065 ppm.

On November 10, 2005, soil samples were collected from the excavation floor and sidewalls. A portion of each sample was placed in a laboratory provided container and submitted for laboratory confirmation that hydrocarbon impacted soil had been removed. The remaining portion of each soil sample was analyzed in the field for the presence of organic vapors utilizing an UltraRae photoionization detector (PID) equipped with a 9.8 electron-volt (eV) lamp. Laboratory analytical results indicated total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene and total xylenes (BTEX constituents) were below the NMOCD remedial threshold for each analyte. Reported chloride concentrations ranged from 48 to 80 mg/Kg and sulfate concentrations were non-detectable (ND) at or above laboratory MDL. Field analyses indicated organic vapor concentrations ranged from 1.0 to 69.4 mg/Kg (*reference Table 1*).

On November 10, 2005, a soil boring (SB-1) was advanced to a depth of approximately 29-feet bgs to delineate the vertical extent of hydrocarbon impacts. The soil boring was located approximately 10 feet southeast of the point of release and appears to have been situated near the edge of the release area at fifteen feet below ground surface (reference *Figure 4*). Soil samples were collected at 19, 24 and 29-feet bgs and a portion of each sample was submitted to an independent laboratory for quantification of TPH, BTEX constituents, chlorides and sulfates. The remaining portion of the sample was analyzed in the field for the presence of organic vapors and chloride concentrations. Laboratory analytical data indicated TPH and BTEX constituent concentrations were ND at or above laboratory MDL. Reported chloride concentrations ranged from 32 to 64 mg/Kg and sulfate concentrations were ND at or above laboratory MDL (reference *Table 1*).

Field anlyses of soil samples collected from the test trench indicated organic vapor concentrations in excess of 3,000 ppm at 18-feet bgs. Laboratory anlyses of soil samples collect during the advancement of soil boring SB-1 indicated the absence of hydrocarbons at all sampling intervals. Based on this information, a second test trench (TT-1) was excavated on November 30, 2005 (i.e., in the same location as the original test trench), to approximately 32-feet bgs. Soil samples were collected at 20, 25, 30 and 32-feet bgs. A portion of each sample was placed in a laboratory

provided container and submitted to an independent laboratory for quantification of TPH, BTEX constituent, chloride and sulfate concentrations.

Laboratory analytical data indicated BTEX and TPH concentrations were in excess of the NMOCD remedial thresholds for each analyte to approximately 30-feet bgs. The soil sample collected at 32-feet bgs (TT-1 32') indicated benzene concentrations were 0.0327 mg/Kg, BTEX constituent concentrations were 0.149 mg/Kg and TPH concentrations were 13.2 mg/Kg; below each analytes' NMOCD remedial threshold. Reported chloride concentrations ranged from 24.3 to 84.2 mg/Kg and sulfate concentrations ranged from 24.1 to 46.0 mg/Kg (reference *Table 1*).

This release site is located in Unit Letter C (NE¼ of the NW¼), Section 11, T17S, R34E, at a latitude of N32° 51' 10.26" and a longitude of W103° 31' 58.08". The site is approximately 4-miles northwest of Buckeye, New Mexico. The property is owned by the State of New Mexico *(reference Figures 1 through 3)*.

2.0 Site Description

2.1 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 High Plains physiographic subdivision, described by Nicholson & Clebsch as an area that "is a flat, gently sloping plain, treeless, and marred only by slight undulations and covered with short prairie grass."

2.2 Ecological Description

The site is located in the High Plains with vegetation consisting primarily of semi-desert grasslands interspersed with Honey Mesquite (*Prosopis glandulosa*) and annual and perennial forbs. 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 area. A survey of *Listed, Threatened,* or *Endangered* species was not conducted.

2.3 Area Groundwater

The unconfined groundwater aquifer at this site is projected to be approximately 85-ft bgs based on water depth data obtained from the New Mexico State Engineers Office database (reference *Table 2*).

2.4 Area Water Wells

All recorded wells are greater than 1,000 horizontal feet from the site, with the exception of L05806 (E) 2 which is utilized for prospecting or development of natural resources (reference *Figure 2*).

2.5 Area Surface Water Features

The release site is within 60-feet of an ephemeral playa lake (reference *Figure 2*).

3.0 NMOCD Site Ranking

Contaminant delineation and remedial work done at this site indicate the chemical parameters of the soil and the 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)***

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

- *Depth to Groundwater (i.e., distance from the lower most acceptable concentration to the ground water);*
- *Wellhead Protection Area (i.e., distance from fresh water supply wells); and*
- *Distance to Surface Water Bodies (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 30 points with the soil remedial goals highlighted in the Site Ranking table presented below.

1. Groundwater	2. Wellhead Protection Area	3. Distance to Surface Water
Depth to GW <50 feet: *20 points*	**If <1,000' from water source, or; <200' from private domestic water source: *20 points***	**<200 horizontal feet: *20 points***
Depth to GW 50 to 99 feet: *10 points*		**200-1,000 horizontal feet: *10 points***
Depth to GW >100 feet: 0 points	**If >1,000' from water source, or; >200' from private domestic water source: *0 points***	**>1,000 horizontal feet: *0 points***
Site Rank (1+2+3) = 10 + 20 + 20 = 30 points		

Total Site Ranking Score and Acceptable Remedial Goal Concentrations			
Parameter	**20 or >**	10	0
Benzene[1]	**10 ppm**	10 ppm	10 ppm
BTEX[1]	**50 ppm**	50 ppm	50 ppm
TPH	**100 ppm**	1,000 ppm	5,000 ppm

[1] A field soil vapor headspace measurement of 100 ppm may be substituted for a laboratory analysis of the benzene and BTEX concentration limits.

4.0 Subsurface Soil Investigation

Remedial excavation activities consisted of excavating NGL saturated soil (*reference Figure 3*). To confirm removal of NGL contaminated soil, grab-type soil samples were collected from the excavation on the eastern and southern sidewalls and from a test trench excavated to approximately 18-feet bgs. A portion of each sample was analyzed in the field for organic vapor concentrations utilizing an UltraRae PID equipped with a 9.8 eV lamp. Field analyses of the sidewall samples indicated organic vapor concentrations ranged from 2.0 to 59.5 ppm. Organic vapor concentrations

in the sample collected from the test trench at 14-feet bgs were 1,653 ppm and at 18-feet bgs were 3,065 ppm.

On November 10, 2005, soil samples were collected from the excavation floor and sidewalls. A portion of each sample was placed in a jar, set on ice for transport and submitted to an independent laboratory for analyses. The remaining portion of each sample was analyzed in the field utilizing a PID. Field analyses indicated organic vapor concentrations ranged from 1.0 to 6.5 ppm. Laboratory analyses indicated benzene concentrations were non-detectable (ND) at or above laboratory method detection limits (MDL). BTEX constituent concentrations were reported to range from ND to 0.096 mg/Kg, below the NMOCD remedial threshold of 50 mg/Kg. With the exception of the sample collected from the east excavation floor (BH-E), TPH concentrations were ND at or above laboratory MDL. TPH concentrations in BH-E were 209 mg/Kg, above the NMOCD remedial threshold of 100 mg/Kg. Chloride concentrations ranged from 48 to 80 mg/Kg and sulfates were reported as ND at or above laboratory MDL (reference *Table 1*).

On November 10, 2005, a soil boring was advanced to approximately 29-feet bgs. Soil samples were collected at 19, 24 and 29-feet bgs, with a portion of each sample placed in a laboratory provided container and set on ice for transport to an independent laboratory. The remaining portion of each sample was analyzed in the field for the presence of organic vapors. In addition the sample collected at 29-feet bgs was analyzed for chloride concentrations. Field analyses indicated organic vapor concentrations ranged from 1.8 to 22.5 mg/Kg and chloride concentrations at 29-feet bgs were 160 mg/Kg. Laboratory analyses indicated TPH and BTEX constituent concentrations were ND at or above laboratory MDL. Chloride concentrations ranged from 32 to 64 mg/Kg and sulfates were reported as ND at or above laboratory MDL (reference *Table 1*).

Due to conflicting data from samples collected from the test trench and soil boring SB-1, a second test trench TT-1 was excavated on November 30, 2005, to approximately 32-feet bgs. Soil samples were collected at 20, 25, 30 and 32-feet bgs. Upon collection, each sample was placed in a laboratory provided container and set on ice for transport to an independent laboratory for quantification of TPH, BTEX constituents, chloride and sulfate concentrations. Laboratory analytical data indicated hydrocarbon impacts above NMOCD remedial thresholds existed to approximately 30-feet bgs. The sample collected at 32-feet bgs (TT-1 32') indicated benzene concentrations were 0.0327 mg/Kg, below the NMOCD remedial threshold of 10 mg/Kg. Reported BTEX concentrations were 0.149 mg/Kg, below the NMOCD remedial threshold of 50 mg/Kg and TPH concentrations were 13.2 mg/Kg, below the NMOCD remedial threshold of 100 mg/Kg (reference *Table 1*).

5.0 Groundwater Investigation

The projected depth to groundwater at this site is ≈85-ft bgs. Excavation of impacted soil was to a maximum depth of 15-feet bgs. Laboratory analytical results from soil sample collected from the November 30, 2005 test trench (TT-1) indicated hydrocarbon impacted soil in excess of remedial thresholds existed to approximately 30-feet bgs. Analytical results for the soil sample collected from 32-feet bgs indicated TPH and BTEX constituent concentrations were below each analytes' respective NMOCD remedial threshold (reference *Table 1* and *Appendix I*).

Approximately 360 cubic yards of hydrocarbon impacted soil was excavated and transported to Artesia Aeration, L.L.C. for treatment. Based on the removal of hydrocarbon impacted soil above NMOCD remedial threshold and adequate depth to ground water (~50-feet bgs), there is no need for further groundwater investigation at this site. ? BASED ON WHAT ?

6.0 Remediation Process

Remedial activities at the site consisted of the excavation of approximately 360 yd^3 of NGL contaminated soil from the site and transported to the Artesia Aeration, L.L.C. for treatment. Analytical results for the samples collected form the excavation sidewalls indicated TPH and BTEX constituent concentrations were below NMOCD remedial thresholds. Sulfates concentrations were non-detectable at or above laboratory MDL. Chloride concentrations ranged from 32 to 80 mg/Kg. Laboratory analyses of soil samples collected from test trench TT-1 in the excavation floor beneath the point of release indicated hydrocarbon impacts above the NMOCD remedial thresholds exists to approximately 30-feet bgs. Analytical data indicated chloride concentrations ranged from 24.3 to 84.2 mg/Kg and sulfate concentrations ranged from 24.1 to 46.0 mg/Kg (reference *Table 1* and *Appendix 1*). Approximately 800 cubic yards of impacted soil is stockpiled adjacent to the excavation.

7.0 Closure Proposal

This report documents treatment of impacted soil above the NMOCD remedial thresholds in the excavation floor and sidewalls (with exception to the area beneath the point of release). Approximately 360 cubic yards of excavated, NGL impacted soil was transported to Artesia Aeration, L.L.C. for treatment. Another 800 cubic yards of excavated soil is stockpiled adjacent to the excavation. Based on field and analytical results, Environmental Plus, Inc. recommends the placement of a clay, poly-vinyl chloride or equivalent liner on the excavation floor to isolate residual NGL impacted soil below the point of release. The excavation will then be backfilled with excavated soil after blending with clean soil (obtained from Eidson Ranches) to below the NMOCD remedial thresholds. Upon completion of backfilling, the site will be graded to allow natural drainage and seeded with a blend preferred by the New Mexico State Land Office (NMSLO). A *Closure Report* documenting remedial activities will be provided to the NMOCD and the NMSLO upon completion of final closure activities.

FIGURES

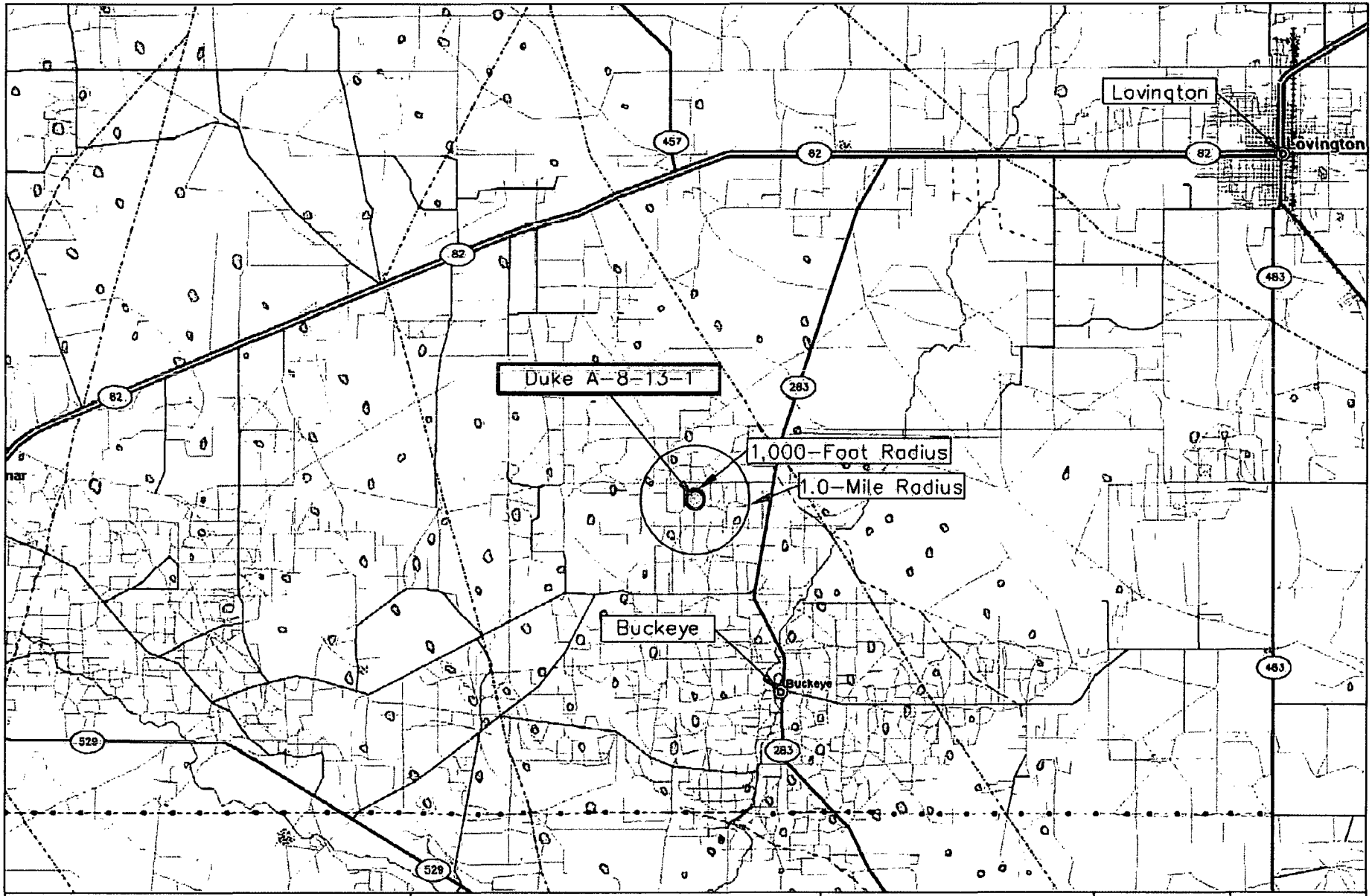

Figure 1 Area Map Duke Energy A-8-13-1	Lea County, New Mexico NE 1/4 of the NW 1/4, Sec. 11, T17S, R34E N 32° 51' 10.26" W 103°31' 58.08" Elevation: 4,044 feet amsl	DWG By: Daniel Dominguez September 2005 0 2.5 5.0 Miles	REVISED: SHEET 1 of 1

N

DEFS A-8-13-1
130032

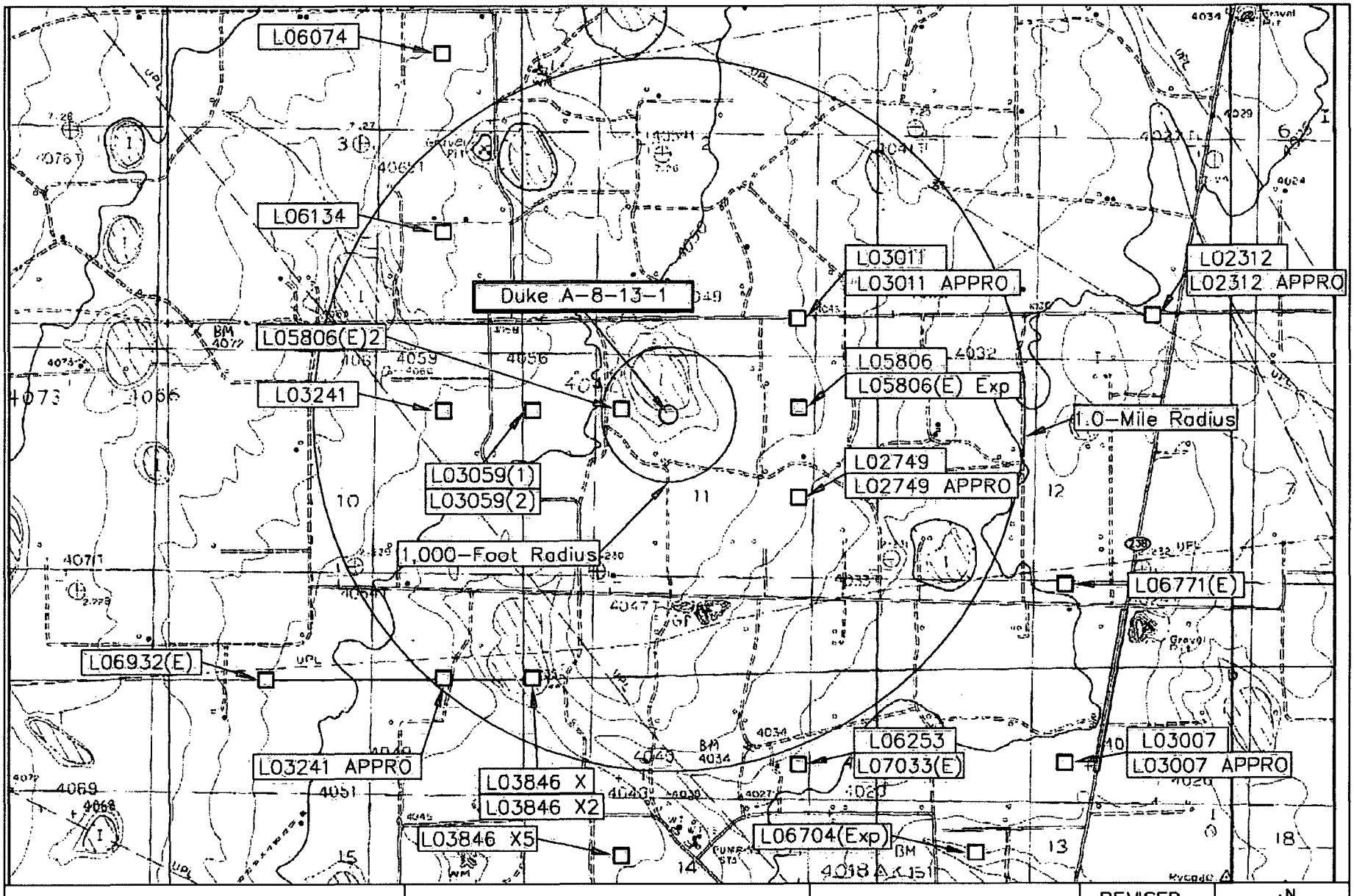

Figure 2 Site Location Map Duke Energy A-8-13-1	Lea County, New Mexico NE 1/4 of the NW 1/4, Sec. 11, T17S, R34E N 32° 51' 10.26" W 103°31' 58.08" Elevation: 4,044 feet amsl	DWG By: Daniel Dominguez September 2005 0 2000 4000 Feet	REVISED: SHEET 1 of 1 N

DEFS A-8-13-1
130032

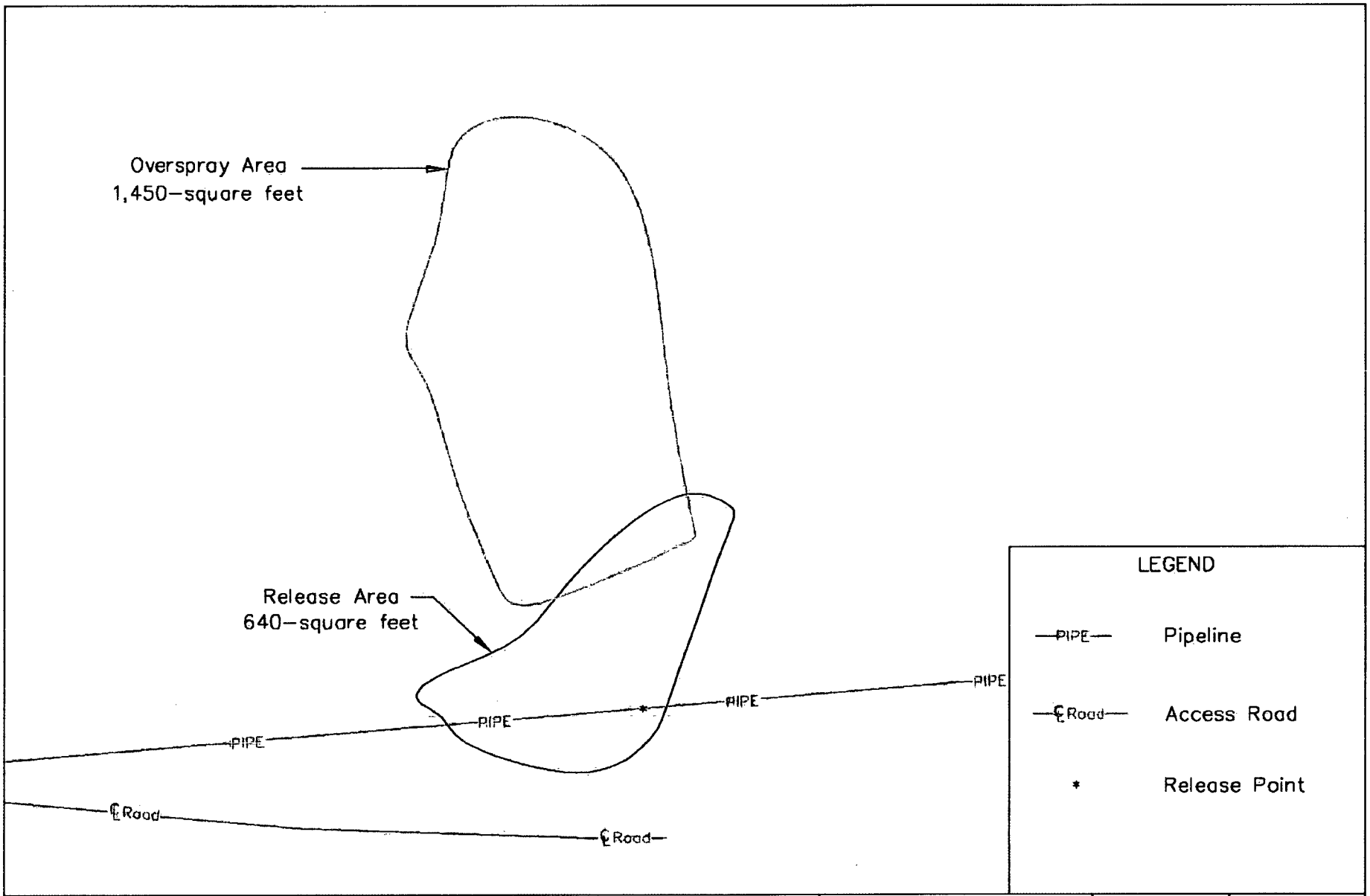

Figure 3 Site Map Duke Energy A-8-13-1	Lea County, New Mexico NE 1/4 of the NW 1/4, Sec. 11, T17S, R34E N 32° 51' 10.26" W 103° 31' 58.08" Elevation: 4,044 feet amsl	DWG By: Daniel Dominguez September 2005	REVISED:	N
		0 15 30 Feet	SHEET 1 of 1	

DEFS A-8-13-1
130032

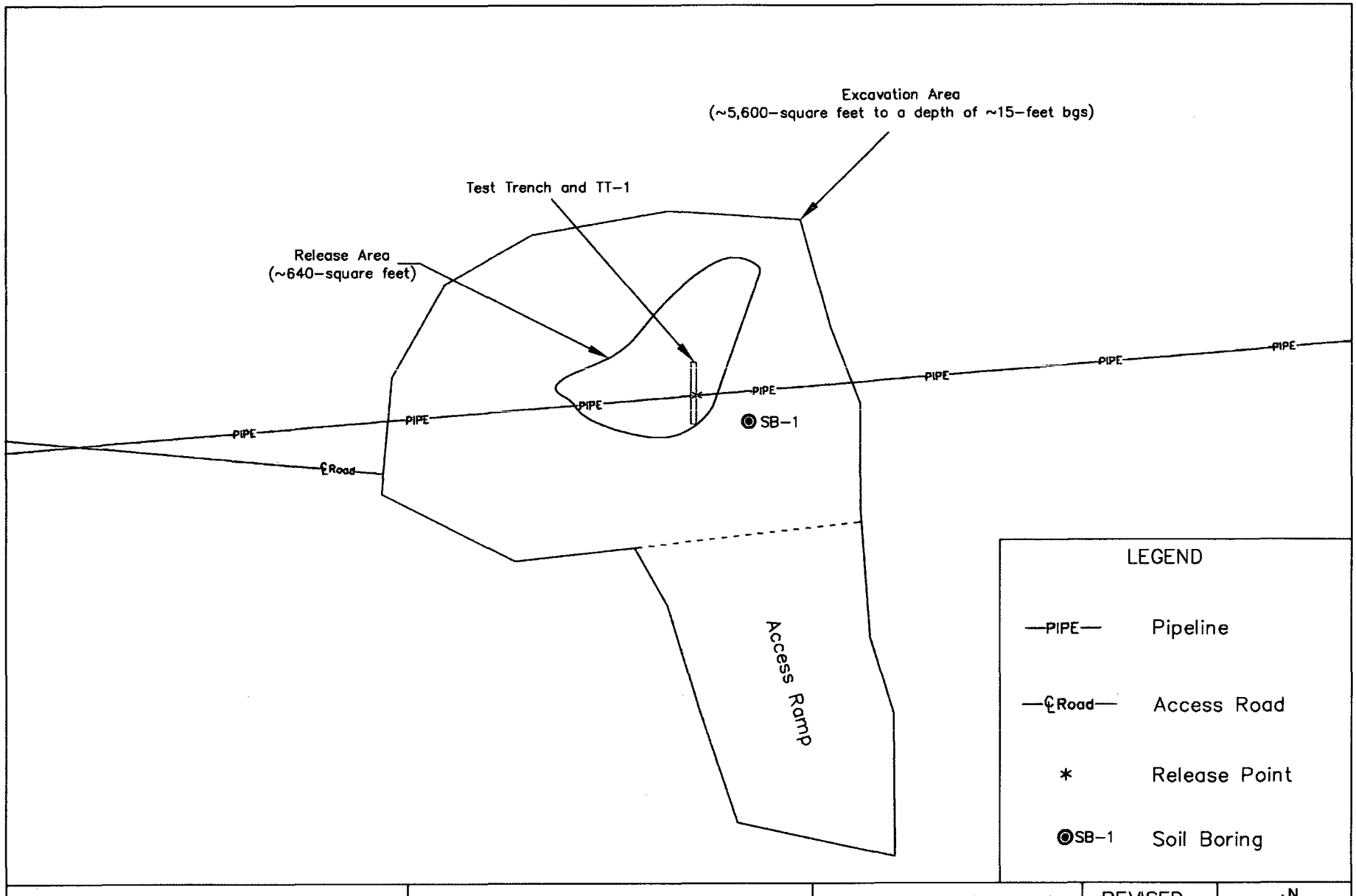

Figure 4 Excavation Map Duke Energy A-8-13-1	Lea County, New Mexico NE 1/4 of the NW 1/4, Sec. 11, T17S, R34E N 32° 51' 10.26" W 103° 31' 58.08" Elevation: 4,044 feet amsl	DWG By: Jason Stegemoller November 2005 0 25 50 Feet	REVISED: SHEET 1 of 1 N

DEFS A-8-13-1
130032

TABLES

TABLE 1

Summary of Soil Sample Field Analyses and Laboratory Analytical Results

DEFS A-8-13-1 (Ref. #130032)

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)
Test Trench	14	07-Nov-05	Excavated	1,653	--	--	--	--	--	--	--	--	--	--	--
	18	07-Nov-05	In Situ	3,065	--	--	--	--	--	--	--	--	--	--	--
BH-W (15')	15	10-Nov-05	Excavated	2.1	--	<0.005	0.024	<0.005	<0.015	0.024	<10.0	<10.0	<20.0	48	<1
ESW (10')	10	10-Nov-05	Excavated	1.0	--	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<20.0	80	<1
WSW-S (5')	5	10-Nov-05	Excavated	2.0	--	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<20.0	64	<1
WSW-N (10')	10	10-Nov-05	Excavated	1.8	--	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<20.0	80	<1
NSW-W (5')	5	10-Nov-05	Excavated	1.3	--	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<20.0	64	<1
NSW-E (5')	5	10-Nov-05	Excavated	6.5	--	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<20.0	48	<1
ESW-N (5')	5	10-Nov-05	Excavated	2.5	--	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<20.0	48	<1
ESW-S (10')	10	10-Nov-05	Excavated	3.6	--	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<20.0	48	<1
BH-E (14')	14	10-Nov-05	Excavated	69.4	--	<0.005	<0.005	0.023	0.073	0.096	<10.0	209	209	48	<1
Soil Boring SB-1	19	10-Nov-05	In Situ	22.5	--	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<20.0	64	<1
	24	10-Nov-05	In Situ	5.2	--	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<20.0	48	<1
	29	10-Nov-05	In Situ	1.8	160	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<20.0	32	<1
TT-1	20	30-Nov-05	In Situ	--	--	**82.8**	413	272	383	**1,150**	6,160	3,970	**10,100**	38.8	32.1
	25	30-Nov-05	In Situ	--	--	**187**	651	288	401	**1,530**	6,470	2,060	**8,530**	84.2	46.0
	30	30-Nov-05	In Situ	--	--	**36.8**	165	84.9	124	**411**	2,690	893	**3,580**	29.5	27.1
	32	30-Nov-05	In Situ	--	--	0.0327	0.0483	0.0291	0.0390	0.149	<10.0	13.2	13.2	24.3	24.1
NMOCD Remedial Thresholds				**100**[3]		**10**				**50**			**100**	**250**[5]	**650**[5]

[1] ***Bolded*** *values are in excess of the NMOCD Remediation Thresholds*

[2] *-- = Not Analyzed*

[3] *In lieu of laboratory analyes of benzene, toluene, ethylbenzene and total xylenes.*

[4] *Detected, but below the reporting limit; therefore the result is an estimated concentration (CLP J-Flag)*

[5] *Chloride and sulfate residuals may not be capable of impacting local groundwaterabove the NMWQCC standards of 250 mg/L and 650 mg/L, respectively.*

TABLE 2

WELL INFORMATION REPORT*

Duke Energy Field Services A-8-13-1 - Ref #130032

Well Number	Diversion[A]	Owner	Use	Source	Twsp	Rng	Sec q q q	Latitude	Longitude	Date Measured	Surface Elevation[B]	Depth to Water (ft bgs)
L 02312	3	WARREN & BRADSHAW, ATTENTION	PRO	Shallow	17S	34E	01 4 4	N 32° 51' 24.81"	W 103° 30' 33.59"	05-Aug-53	4,030	71
L 02312 APPRO				Shallow	17S	34E	01 4 4	N 32° 51' 24.81"	W 103° 30' 33.59"	05-Aug-53	4,030	71
L 02749	3	DON ANGLE & S.P YATES DRILLING	PRO	Shallow	17S	34E	11 2 4	N 32° 50' 58.21"	W 103° 31' 35.39"	14-Jan-55	4,049	85
L 02749 APPRO				Shallow	17S	34E	11 2 4	N 32° 50' 58.21"	W 103° 31' 35.39"	14-Jan-55	4,049	85
L 03007	3	DONNELY DRILLING CO.	PRO	Shallow	17S	34E	13 2 1	N 32° 50' 19.21"	W 103° 30' 49"	26-Oct-55	4,030	70
L 03007 APPRO				Shallow	17S	34E	13 2 1	N 32° 50' 19.21"	W 103° 30' 49"	26-Oct-55	4,030	70
L 03011	3	OSCAR BOURG DRILLING INC.	PRO	Shallow	17S	34E	02 4 4	N 32° 51' 24.38"	W 103° 31' 35.41"	09-Nov-55	4,052	80
L 03011 APPRO				Shallow	17S	34E	02 4 4	N 32° 51' 24.38"	W 103° 31' 35.41"	09-Nov-55	4,052	80
L 03059 (1)	0	S.P. YATES DRILLING CO.	PRO		17S	34E	11 1 1	N 32° 51' 11.01"	W 103° 32' 21.94"		4,060	
L 03059 (2)	0	YATES DRILLING COMPANY	PRO		17S	34E	11 1 1	N 32° 51' 11.01"	W 103° 32' 21.94"		4,060	
L 03241	3	DENVER DRILLING CO.	PRO	Shallow	17S	34E	10 2 2	N 32° 51' 10.93"	W 103° 32' 37.45"	12-Jul-56	4,061	92
L 03241 APPRO				Shallow	17S	34E	10 4 4	N 32° 50' 31.7"	W 103° 32' 37.42"	10-Jul-56	4,055	92
L 03846 X	1200	MOBIL OIL CORPORATION	SRO	Shallow	17S	34E	11 3 3	N 32° 50' 31.78"	W 103° 32' 21.9"		4,047	
L 03846 X 2				Shallow	17S	34E	11 3 3	N 32° 50' 31.78"	W 103° 32' 21.9"		4,047	
L 03846 X 3				Shallow	17S	34E	14 4 4	N 32° 49' 39.7"	W 103° 31' 35.37"		4,029	
L 03846 X 4				Shallow	17S	34E	14 4 1	N 32° 49' 52.71"	W 103° 31' 50.87"		4,039	
L 03846 X 5				Shallow	17S	34E	14 1 4	N 32° 50' 5.7"	W 103° 32' 6.37"		4,049	
L 05806	0	MARCUM DRILLING CO.	PRO	Shallow	17S	34E	11 2 2	N 32° 51' 11.3"	W 103° 31' 35.4"	03-Nov-65	4,054	105
L 05806 (E) EXP	0	GULF OIL CORPORATION	PRO		17S	34E	11 2 2	N 32° 51' 11.3"	W 103° 31' 35.4"		4,054	
L 05806 (E) 2	0	GULF OIL CORPORATION	PRO		17S	34E	11 1 2	N 32° 51' 11.1"	W 103° 32' 6.42"		4,054	
L 06074	0	LIC. LOWE DRILLING CO.	PRO	Shallow	17S	34E	03 2 2	N 32° 52' 3.2"	W 103° 32' 37.66"	19-Nov-66	4,070	95
L 06134	0	MARCUM DRILLING COMPANY	PRO	Shallow	17S	34E	03 4 2	N 32° 51' 37.07"	W 103° 32' 37.53"	01-May-67	4,068	95
L 06240	0	A. W. INC. THOMPSON	PRO	Shallow	17S	34E	13 4 3	N 32° 49' 39.94"	W 103° 30' 49.02"	08-Dec-67	4,023	
L 06253	0	MARCUM DRILLING COMPANY	PRO	Shallow	17S	34E	14 2 2	N 32° 50' 18.96"	W 103° 31' 35.38"	06-Jan-68	4,037	81
L 06254	0	MARCUM DRILLING CO.	PRO	Shallow	17S	34E	14 4 4	N 32° 49' 39.7"	W 103° 31' 35.37"	04-Jan-68	4,030	75
L 06704 EXP	0	NOBLE DRILLING CORP.	PRO		17S	34E	13 1 4	N 32° 50' 6.04"	W 103° 31' 4.44"		4,023	
L 06771 (E)	0	CACTUS DRILLING CORPORATION	PRO	Shallow	17S	34E	12 4 1	N 32° 50' 45.41"	W 103° 30' 49"	28-Feb-71	4,032	86
L 06932 (E)	0	MORAN OIL PROD & DRLG. CORP.	PRO	Shallow	17S	34E	10 3 4	N 32° 50' 31.56"	W 103° 33' 8.46"	10-Apr-72	4,064	101
L 07033 (E)	0	MARCUM DRILLING COMPANY	PRO	Shallow	17S	34E	14 2 2	N 32° 50' 18.96"	W 103° 31' 35.38"	21-Dec-72	4,037	80
L 09987	3	INC. EIDSON RANCH	STK	Shallow	17S	34E	15 4	N 32° 49' 39.34"	W 103° 32' 52.88"	08-Apr-88	4,060	60

* = Data obtained from the New Mexico Office of the State Engineer Website (http://iwaters.ose.state.nm.us:7001/iWATERS/wr_RegisServlet1) and USGS Database.
Shaded well information indicates well location shown on Figure 2
[A] = in acre feet per annum
[B] = Interpolated from USGS Topographical Map
IND = Industrial
STK = Livestock Watering
CLW = Change Location of Well (Ground)
EXP = Expired
PRO = Production
(quarters are 1=NW, 2=NE, 3=SW, 4=SE)
(quarters are biggest to smallest - X Y are in Feet - UTM are in Meters)

APPENDIX I

LABORATORY ANALYTICAL REPORTS
AND
CHAIN-OF-CUSTODY FORMS

CARDINAL LABORATORIES

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: 11/11/05
Reporting Date: 11/17/05
Project Owner: DUKE ENERGY FIELD SERVICES (130032)
Project Name: A-8-13-1
Project Location: UL-C, SEC11, T17S, R34E

Sampling Date: 11/10/05
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: HM
Analyzed By: BC

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE:		11/14/05	11/14/05	11/16/05	11/16/05	11/16/05	11/16/05
H10405-1	BH-W (15')	<10.0	<10.0	<0.005	0.024	0.005	0.032
H10405-2	ESW (10')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H10405-3	WSW-S (5')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H10405-4	WSW-N (10')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H10405-5	NSW-W (5')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H10405-6	NSW-E (10')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H10405-7	ESW-N (5')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H10405-8	ESW-S (10')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H10405-9	BH-E (14')	<10.0	209	<0.005	<0.005	0.023	0.073
H10405-10	SB-1 (19')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H10405-11	SB-1 (24')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H10405-12	SB-1 (29')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
Quality Control		806	742	0.093	0.092	0.096	0.295
True Value QC		800	800	0.100	0.100	0.100	0.300
% Recovery		101	92.8	92.8	91.9	95.7	98.2
Relative Percent Difference		4.1	2.2	4.3	3.4	4.2	4.0

METHODS: TPH GRO & DRO - EPA SW-846 8015 M; BTEX - SW-846 8260.

Burgess J. A. Cooke, Ph. D.

11/17/05
Date

H10405A.XLS

CARDINAL LABORATORIES

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: 11/11/05
Reporting Date: 11/15/05
Project Owner: DUKE ENERGY FIELD SERVICES (130032)
Project Name: A-8-13-1
Project Location: UL-C, SEC11, T17S, R34E

Sampling Date: 11/10/05
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: HM
Analyzed By: AH

LAB NUMBER	SAMPLE ID	SO_4 (mg/Kg)	Cl (mg/Kg)
ANALYSIS DATE:		11/15/05	11/15/05
H10405-1	BH-W (15')	<1	48
H10405-2	ESW (10')	<1	80
H10405-3	WSW-S (5')	<1	64
H10405-4	WSW-N (10')	<1	80
H10405-5	NSW-W (5')	<1	64
H10405-6	NSW-E (10')	<1	48
H10405-7	ESW-N (5')	<1	48
H10405-8	ESW-S (10')	<1	48
H10405-9	BH-E (14')	<1	48
H10405-10	SB-1 (19')	<1	64
H10405-11	SB-1 (24')	<1	48
H10405-12	SB-1 (29')	<1	32
Quality Control		42.53	950
True Value QC		50.00	1000
% Recovery		85.1	95.0
Relative Percent Difference		3.2	5.0

METHODS: EPA 600/4-79-020	375.4	SM 4500 Cl B

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

Amy Hill
Chemist

11/15/05
Date

H10405

Environmental Plus, Inc.

Chain of Custody Form

2100 Avenue O, Eunice, NM 88231 *P.O. Box 1558, Eunice, NM 88231*
(505) 394-3481 FAX: (505) 394-2601

Company Name	Environmental Plus, Inc.
EPI Project Manager	Iain Olness
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Duke Energy Field Services
Facility Name	A-8-13-1
Location	UL-C, Sect. 11, T 17 S, R 34 E
Project Reference	130032
EPI Sampler Name	David Robinson

Bill To

Duke Energy Field Services

Attn: Ronnie Gilchrist
1625 West Marland
Hobbs, NM 88240

ANALYSIS REQUEST

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	MATRIX: WASTEWATER	MATRIX: SOIL	MATRIX: CRUDE OIL	MATRIX: SLUDGE	MATRIX: OTHER:	PRESERV.: ACID/BASE	PRESERV.: ICE/COOL	PRESERV.: OTHER	SAMPLING: DATE	SAMPLING: TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl^-)	SULFATES ($SO_4^=$)	pH	TCLP	OTHER >>>	PAH			
H10405 - 1	BH-W (15')	G	1			1					X		10-Nov-05	8:30	X	X	X	X							
2	ESW (10')	G	1			1					X		10-Nov-05	8:32	X	X	X	X							
3	WSW-S (5')	G	1			1					X		10-Nov-05	8:37	X	X	X	X							
4	WSW-N (10')	G	1			1					X		10-Nov-05	8:40	X	X	X	X							
5	NSW-W (5')	G	1			1					X		10-Nov-05	8:42	X	X	X	X							
6	NSW-E (10')	G	1			1					X		10-Nov-05	8:46	X	X	X	X							
7	ESW-N (5')	G	1			1					X		10-Nov-05	8:50	X	X	X	X							
8	ESW-S (10')	G	1			1					X		10-Nov-05	8:55	X	X	X	X							
9																									
10																									

Sampler Relinquished:	Date / Time	Received By:	E-mail results to: iolness@envplus.net
Relinquished by:	Date 11-11-05 / Time 4:40	Received By: (lab staff) Hope S. Marano	REMARKS:
Delivered by:	Sample Cool & Intact (Yes) No	Checked By:	

Environmental Plus, Inc.

2100 Avenue O, Eunice, NM 88231 P.O. Box 1558, Eunice, NM 88231
(505) 394-3481 FAX: (505) 394-2601

Chain of Custody Form

Company Name	Environmental Plus, Inc.
EPI Project Manager	Iain Olness
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Duke Energy Field Services
Facility Name	A-8-13-1
Location	UL-C, Sect. 11, T 17 S, R 34 E
Project Reference	130032
EPI Sampler Name	David Robinson

Bill To

Duke Energy Field Services

Attn: Ronnie Gilchrist
1625 West Marland
Hobbs, NM 88240

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX 8021B	TPH 8015M	CHLORIDES (Cl^-)	SULFATES ($SO_4^{=}$)	pH	TCLP	OTHER >>>	PAH
H10405 -9	BH-E (14')	G	1			1					X		10-Nov-05	9:00	X	X	X	X				
-10	SB-1 (19')	G	1			1					X		10-Nov-05	9:15	X	X	X	X				
-11	SB-1 (24')	G	1			1					X		10-Nov-05	9:23	X	X	X	X				
-12	SB-1 (29')	G	1			1					X		10-Nov-05	9:40	X	X	X	X				
5																						
6																						
7																						
8																						
9																						
10																						

Sampler Relinquished:	Date / Time	Received By:	E-mail results to: iolness@envplus.net
Relinquished by:	Date 11-11-05 / Time 2:40	Received By: (lab staff) Hope S Moreno	REMARKS:
Delivered by:	Sample Cool & Intact (Yes) No	Checked By:	

ENVIRONMENTAL 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: DEFS/ A-8-13-1

Project Number: 130032

Location: UL-C, Sect. 11, T 17 S, R 34 E

Lab Order Number: 5L01002

Report Date: 12/07/05

Environmental Plus, Incorporated	Project: DEFS/ A-8-13-1	Fax: 505-394-2601
P.O. Box 1558	Project Number: 130032	**Reported:**
Eunice NM, 88231	Project Manager: Iain Olness	12/07/05 16:45

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TT-1 20'	5L01002-01	Soil	11/30/05 09:20	12/01/05 09:45
TT-1 25'	5L01002-02	Soil	11/30/05 10:20	12/01/05 09:45
TT-1 30'	5L01002-03	Soil	11/30/05 10:50	12/01/05 09:45
TT-1 32'	5L01002-04	Soil	11/30/05 11:40	12/01/05 09:45

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TT-1 20' (5L01002-01) Soil									
Benzene	**82.8**	5.00	mg/kg dry	5000	EL50509	12/05/05	12/06/05	EPA 8021B	
Toluene	**413**	5.00	"	"	"	"	"	"	
Ethylbenzene	**272**	5.00	"	"	"	"	"	"	
Xylene (p/m)	**279**	5.00	"	"	"	"	"	"	
Xylene (o)	**104**	5.00	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*112 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*93.5 %*	*80-120*		"	"	"	"	
Gasoline Range Organics C6-C12	**6160**	10.0	mg/kg dry	1	EL50203	12/02/05	12/03/05	EPA 8015M	
Diesel Range Organics >C12-C35	**3970**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**10100**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*220 %*	*70-130*		"	"	"	"	*S-04*
Surrogate: 1-Chlorooctadecane		*181 %*	*70-130*		"	"	"	"	*S-04*
TT-1 25' (5L01002-02) Soil									
Benzene	**187**	5.00	mg/kg dry	5000	EL50509	12/05/05	12/06/05	EPA 8021B	
Toluene	**651**	5.00	"	"	"	"	"	"	
Ethylbenzene	**288**	5.00	"	"	"	"	"	"	
Xylene (p/m)	**299**	5.00	"	"	"	"	"	"	
Xylene (o)	**102**	5.00	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*134 %*	*80-120*		"	"	"	"	*S-04*
Surrogate: 4-Bromofluorobenzene		*100 %*	*80-120*		"	"	"	"	
Gasoline Range Organics C6-C12	**6470**	10.0	mg/kg dry	1	EL50203	12/02/05	12/03/05	EPA 8015M	
Diesel Range Organics >C12-C35	**2060**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**8530**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*189 %*	*70-130*		"	"	"	"	*S-04*
Surrogate: 1-Chlorooctadecane		*153 %*	*70-130*		"	"	"	"	*S-04*
TT-1 30' (5L01002-03) Soil									
Benzene	**36.8**	1.00	mg/kg dry	1000	EL50509	12/05/05	12/06/05	EPA 8021B	
Toluene	**165**	1.00	"	"	"	"	"	"	
Ethylbenzene	**84.9**	1.00	"	"	"	"	"	"	
Xylene (p/m)	**91.7**	1.00	"	"	"	"	"	"	
Xylene (o)	**32.6**	1.00	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*133 %*	*80-120*		"	"	"	"	*S-04*
Surrogate: 4-Bromofluorobenzene		*110 %*	*80-120*		"	"	"	"	
Gasoline Range Organics C6-C12	**2690**	10.0	mg/kg dry	1	EL50203	12/02/05	12/03/05	EPA 8015M	
Diesel Range Organics >C12-C35	**893**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**3580**	10.0	"	"	"	"	"	"	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TT-1 30' (5L01002-03) Soil									
Surrogate: 1-Chlorooctane		*129 %*	*70-130*		*EL50203*	*12/02/05*	*12/03/05*	*EPA 8015M*	
Surrogate: 1-Chlorooctadecane		*129 %*	*70-130*		"	"	"	"	
TT-1 32' (5L01002-04) Soil									
Benzene	**0.0327**	0.0250	mg/kg dry	25	EL50509	12/05/05	12/06/05	EPA 8021B	
Toluene	**0.0483**	0.0250	"	"	"	"	"	"	
Ethylbenzene	**0.0291**	0.0250	"	"	"	"	"	"	
Xylene (p/m)	**0.0390**	0.0250	"	"	"	"	"	"	
Xylene (o)	**ND**	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*88.5 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*80-120*		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	mg/kg dry	1	EL50205	12/02/05	12/05/05	EPA 8015M	
Diesel Range Organics >C12-C35	**13.2**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**13.2**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*88.8 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*99.6 %*	*70-130*		"	"	"	"	

Environmental Plus, Incorporated	Project: DEFS/ A-8-13-1	Fax: 505-394-2601
P.O. Box 1558	Project Number: 130032	**Reported:**
Eunice NM, 88231	Project Manager: Iain Olness	12/07/05 16:45

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TT-1 20' (5L01002-01) Soil									
Chloride	**38.8**	5.00	mg/kg	10	EL50208	12/01/05	12/02/05	EPA 300.0	
% Moisture	**9.4**	0.1	%	1	EL50202	12/01/05	12/02/05	% calculation	
Sulfate	**32.1**	5.00	mg/kg	10	EL50208	12/01/05	12/02/05	EPA 300.0	
TT-1 25' (5L01002-02) Soil									
Chloride	**84.2**	5.00	mg/kg	10	EL50208	12/01/05	12/02/05	EPA 300.0	
% Moisture	**12.7**	0.1	%	1	EL50202	12/01/05	12/02/05	% calculation	
Sulfate	**46.0**	5.00	mg/kg	10	EL50208	12/01/05	12/02/05	EPA 300.0	
TT-1 30' (5L01002-03) Soil									
Chloride	**29.5**	5.00	mg/kg	10	EL50208	12/01/05	12/02/05	EPA 300.0	
% Moisture	**7.2**	0.1	%	1	EL50202	12/01/05	12/02/05	% calculation	
Sulfate	**27.1**	5.00	mg/kg	10	EL50208	12/01/05	12/02/05	EPA 300.0	
TT-1 32' (5L01002-04) Soil									
Chloride	**24.3**	5.00	mg/kg	10	EL50208	12/01/05	12/02/05	EPA 300.0	
% Moisture	**6.2**	0.1	%	1	EL50202	12/01/05	12/02/05	% calculation	
Sulfate	**24.1**	5.00	mg/kg	10	EL50208	12/01/05	12/02/05	EPA 300.0	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

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 EL50203 - Solvent Extraction (GC)										
Blank (EL50203-BLK1)				Prepared: 12/02/05 Analyzed: 12/03/05						
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	*48.4*		*mg/kg*	*50.0*		*96.8*	*70-130*			
Surrogate: 1-Chlorooctadecane	*50.1*		*"*	*50.0*		*100*	*70-130*			
LCS (EL50203-BS1)				Prepared: 12/02/05 Analyzed: 12/03/05						
Gasoline Range Organics C6-C12	416	10.0	mg/kg wet	500		83.2	75-125			
Diesel Range Organics >C12-C35	485	10.0	"	500		97.0	75-125			
Total Hydrocarbon C6-C35	901	10.0	"	1000		90.1	75-125			
Surrogate: 1-Chlorooctane	*57.5*		*mg/kg*	*50.0*		*115*	*70-130*			
Surrogate: 1-Chlorooctadecane	*54.9*		*"*	*50.0*		*110*	*70-130*			
Calibration Check (EL50203-CCV1)				Prepared: 12/02/05 Analyzed: 12/03/05						
Gasoline Range Organics C6-C12	438		mg/kg	500		87.6	80-120			
Diesel Range Organics >C12-C35	531		"	500		106	80-120			
Total Hydrocarbon C6-C35	969		"	1000		96.9	80-120			
Surrogate: 1-Chlorooctane	*56.4*		*"*	*50.0*		*113*	*70-130*			
Surrogate: 1-Chlorooctadecane	*53.4*		*"*	*50.0*		*107*	*70-130*			
Matrix Spike (EL50203-MS1)	**Source: 5K30021-01**			Prepared: 12/02/05 Analyzed: 12/05/05						
Gasoline Range Organics C6-C12	384	10.0	mg/kg dry	510	ND	75.3	75-125			
Diesel Range Organics >C12-C35	480	10.0	"	510	ND	94.1	75-125			
Total Hydrocarbon C6-C35	864	10.0	"	1020	ND	84.7	75-125			
Surrogate: 1-Chlorooctane	*49.9*		*mg/kg*	*50.0*		*99.8*	*70-130*			
Surrogate: 1-Chlorooctadecane	*53.6*		*"*	*50.0*		*107*	*70-130*			
Matrix Spike Dup (EL50203-MSD1)	**Source: 5K30021-01**			Prepared: 12/02/05 Analyzed: 12/05/05						
Gasoline Range Organics C6-C12	383	10.0	mg/kg dry	510	ND	75.1	75-125	0.261	20	
Diesel Range Organics >C12-C35	461	10.0	"	510	ND	90.4	75-125	4.04	20	
Total Hydrocarbon C6-C35	844	10.0	"	1020	ND	82.7	75-125	2.34	20	
Surrogate: 1-Chlorooctane	*48.4*		*mg/kg*	*50.0*		*96.8*	*70-130*			
Surrogate: 1-Chlorooctadecane	*53.8*		*"*	*50.0*		*108*	*70-130*			

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 EL50205 - Solvent Extraction (GC)										
Blank (EL50205-BLK1)				Prepared: 12/02/05 Analyzed: 12/03/05						
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	*48.8*		*mg/kg*	*50.0*		*97.6*	*70-130*			
Surrogate: 1-Chlorooctadecane	*50.7*		*"*	*50.0*		*101*	*70-130*			
LCS (EL50205-BS1)				Prepared: 12/02/05 Analyzed: 12/03/05						
Gasoline Range Organics C6-C12	423	10.0	mg/kg wet	500		84.6	75-125			
Diesel Range Organics >C12-C35	567	10.0	"	500		113	75-125			
Total Hydrocarbon C6-C35	990	10.0	"	1000		99.0	75-125			
Surrogate: 1-Chlorooctane	*58.5*		*mg/kg*	*50.0*		*117*	*70-130*			
Surrogate: 1-Chlorooctadecane	*56.9*		*"*	*50.0*		*114*	*70-130*			
Calibration Check (EL50205-CCV1)				Prepared: 12/02/05 Analyzed: 12/04/05						
Gasoline Range Organics C6-C12	435		mg/kg	500		87.0	80-120			
Diesel Range Organics >C12-C35	526		"	500		105	80-120			
Total Hydrocarbon C6-C35	961		"	1000		96.1	80-120			
Surrogate: 1-Chlorooctane	*56.3*		*"*	*50.0*		*113*	*70-130*			
Surrogate: 1-Chlorooctadecane	*52.4*		*"*	*50.0*		*105*	*70-130*			
Matrix Spike (EL50205-MS1)	**Source: 5L01002-04**			Prepared: 12/02/05 Analyzed: 12/03/05						
Gasoline Range Organics C6-C12	401	10.0	mg/kg dry	533	ND	75.2	75-125			
Diesel Range Organics >C12-C35	457	10.0	"	533	13.2	83.3	75-125			
Total Hydrocarbon C6-C35	858	10.0	"	1070	13.2	79.0	75-125			
Surrogate: 1-Chlorooctane	*47.4*		*mg/kg*	*50.0*		*94.8*	*70-130*			
Surrogate: 1-Chlorooctadecane	*52.6*		*"*	*50.0*		*105*	*70-130*			
Matrix Spike Dup (EL50205-MSD1)	**Source: 5L01002-04**			Prepared: 12/02/05 Analyzed: 12/03/05						
Gasoline Range Organics C6-C12	406	10.0	mg/kg dry	533	ND	76.2	75-125	1.24	20	
Diesel Range Organics >C12-C35	511	10.0	"	533	13.2	93.4	75-125	11.2	20	
Total Hydrocarbon C6-C35	917	10.0	"	1070	13.2	84.5	75-125	6.65	20	
Surrogate: 1-Chlorooctane	*49.0*		*mg/kg*	*50.0*		*98.0*	*70-130*			
Surrogate: 1-Chlorooctadecane	*53.5*		*"*	*50.0*		*107*	*70-130*			

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 EL50509 - EPA 5030C (GC)										
Blank (EL50509-BLK1)				Prepared & Analyzed: 12/05/05						
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	*32.8*		*ug/kg*	*40.0*		*82.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*39.8*		*"*	*40.0*		*99.5*	*80-120*			
LCS (EL50509-BS1)				Prepared & Analyzed: 12/05/05						
Benzene	0.0555	0.00100	mg/kg wet	0.0500		111	80-120			
Toluene	0.0574	0.00100	"	0.0500		115	80-120			
Ethylbenzene	0.0521	0.00100	"	0.0500		104	80-120			
Xylene (p/m)	0.0985	0.00100	"	0.100		98.5	80-120			
Xylene (o)	0.0512	0.00100	"	0.0500		102	80-120			
Surrogate: a,a,a-Trifluorotoluene	*39.4*		*ug/kg*	*40.0*		*98.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*35.8*		*"*	*40.0*		*89.5*	*80-120*			
Calibration Check (EL50509-CCV1)				Prepared & Analyzed: 12/05/05						
Benzene	0.0445		mg/kg wet	0.0500		89.0	80-120			
Toluene	0.0450		"	0.0500		90.0	80-120			
Ethylbenzene	0.0406		"	0.0500		81.2	80-120			
Xylene (p/m)	0.0809		"	0.100		80.9	80-120			
Xylene (o)	0.0415		"	0.0500		83.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	*33.0*		*ug/kg*	*40.0*		*82.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*32.1*		*"*	*40.0*		*80.2*	*80-120*			
Matrix Spike (EL50509-MS1)	**Source: 5K30023-01**			Prepared: 12/05/05 Analyzed: 12/06/05						
Benzene	0.0459	0.00100	mg/kg dry	0.0547	ND	83.9	80-120			
Toluene	0.0497	0.00100	"	0.0547	ND	90.9	80-120			
Ethylbenzene	0.0484	0.00100	"	0.0547	ND	88.5	80-120			
Xylene (p/m)	0.0930	0.00100	"	0.109	ND	85.3	80-120			
Xylene (o)	0.0479	0.00100	"	0.0547	ND	87.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	*35.2*		*ug/kg*	*40.0*		*88.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*44.1*		*"*	*40.0*		*110*	*80-120*			

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 EL50509 - EPA 5030C (GC)										
Matrix Spike Dup (EL50509-MSD1)	**Source: 5K30023-01**			Prepared: 12/05/05 Analyzed: 12/06/05						
Benzene	0.0482	0.00100	mg/kg dry	0.0547	ND	88.1	80-120	4.88	20	
Toluene	0.0528	0.00100	"	0.0547	ND	96.5	80-120	5.98	20	
Ethylbenzene	0.0500	0.00100	"	0.0547	ND	91.4	80-120	3.22	20	
Xylene (p/m)	0.0961	0.00100	"	0.109	ND	88.2	80-120	3.34	20	
Xylene (o)	0.0488	0.00100	"	0.0547	ND	89.2	80-120	1.81	20	
Surrogate: a,a,a-Trifluorotoluene	*35.6*		*ug/kg*	*40.0*		*89.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*40.6*		*"*	*40.0*		*102*	*80-120*			

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 EL50202 - General Preparation (Prep)										
Blank (EL50202-BLK1)				Prepared: 12/01/05 Analyzed: 12/02/05						
% Solids	100		%							
Duplicate (EL50202-DUP1)	**Source: 5K30025-01**			Prepared: 12/01/05 Analyzed: 12/02/05						
% Solids	92.2		%		92.0			0.217	20	
Batch EL50208 - Water Extraction										
Blank (EL50208-BLK1)				Prepared: 12/01/05 Analyzed: 12/02/05						
Chloride	ND	0.500	mg/kg							
Sulfate	ND	0.500	"							
LCS (EL50208-BS1)				Prepared: 12/01/05 Analyzed: 12/02/05						
Chloride	8.00		mg/L	10.0		80.0	80-120			
Sulfate	8.60		"	10.0		86.0	80-120			
Calibration Check (EL50208-CCV1)				Prepared: 12/01/05 Analyzed: 12/02/05						
Chloride	8.00		mg/L	10.0		80.0	80-120			
Sulfate	8.59		"	10.0		85.9	80-120			
Duplicate (EL50208-DUP1)	**Source: 5K30023-01**			Prepared: 12/01/05 Analyzed: 12/02/05						
Sulfate	85.0	5.00	mg/kg		91.0			6.82	20	
Chloride	80.9	5.00	"		93.2			14.1	20	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 12/7/2005

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech.

Environmental Plus, Inc.

Chain of Custody Form

2100 Avenue O, Eunice, NM 88231 P.O. Box 1558, Eunice, NM 88231
(505) 394-3481 FAX: (505) 394-2601

Company Name	Environmental Plus, Inc.
EPI Project Manager	Iain Olness
Mailing Address	P.O. BOX 1558
City, State, Zip	Eunice New Mexico 88231
EPI Phone#/Fax#	505-394-3481 / 505-394-2601
Client Company	Duke Energy Field Services
Facility Name	A-8-13-1
Location	UL-C, Sect. 11, T 17 S, R 34 E
Project Reference	130032
EPI Sampler Name	David Robinson

Bill To

Duke Energy Field Services

Attn: Ronnie Gilchrist
1625 West Marland
Hobbs, NM 88240

LAB I.D. (5LD1002)	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl)	SULFATES (SO_4^{-2})	pH	TCLP	OTHER >>>	PAH			
-01 1	TT-1 (20')	G	1			1					X		30-Nov-05	9:20	X	X	X	X							
-02 2	TT-1 (25')	G	1			1					X		30-Nov-05	10:20	X	X	X	X							
-03 3	TT-1 (30')	G	1			1					X		30-Nov-05	10:50	X	X	X	X							
-04 4	TT-1 (32')	G	1			1					X		30-Nov-05	11:40	X	X	X	X							
5																									
6																									
7																									
8																									
9																									
10																									

ANALYSIS REQUEST

Sampler Relinquished:	Date: 12-1-05	Received By:
David Robinson	Time: 0900	Jaron Boone
Relinquished by:	Date: 12/1/05	Received By: (lab staff)
Jaron Boone	Time: 9:45	Carla Lilly
Delivered by:	Sample Cool & Intact: Yes / No	Checked By:

E-mail results to: iolness@envplus.net

REMARKS:

402 5.0

labels

APPENDIX II

PROJECT PHOTOGRAPHS

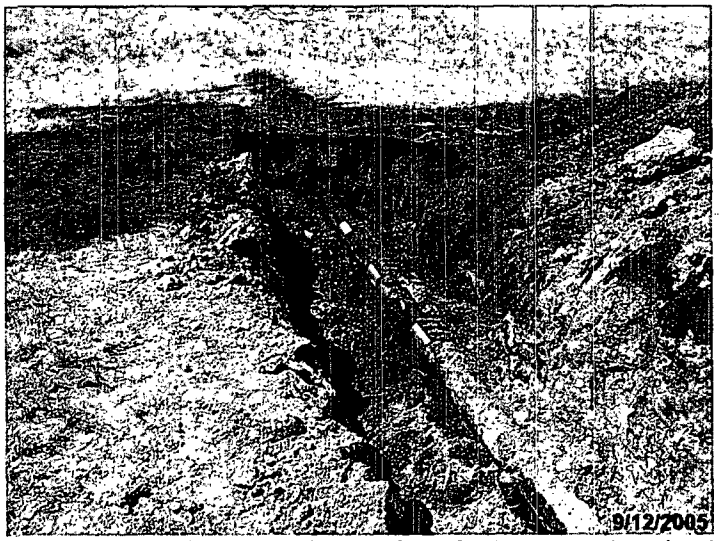

Photo #1:Looking westerly at point-of release. Dark stained soil indicates NGL contamination.

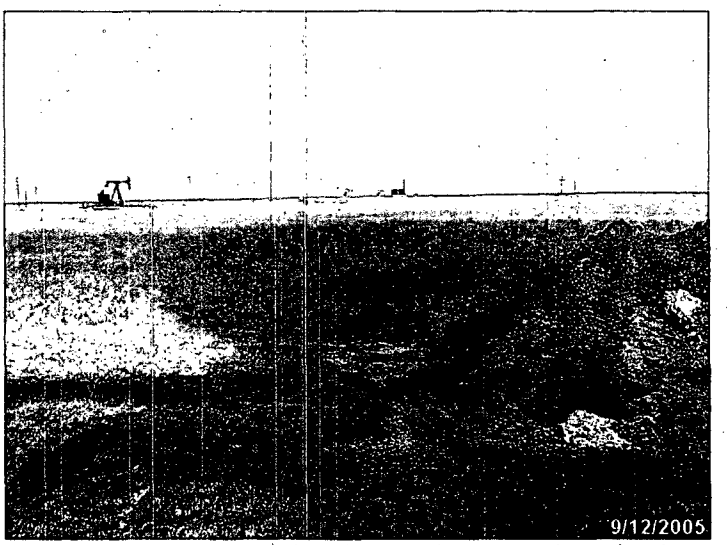

Photo #2: Release area, looking northerly. Dark stained soil indicates contamination

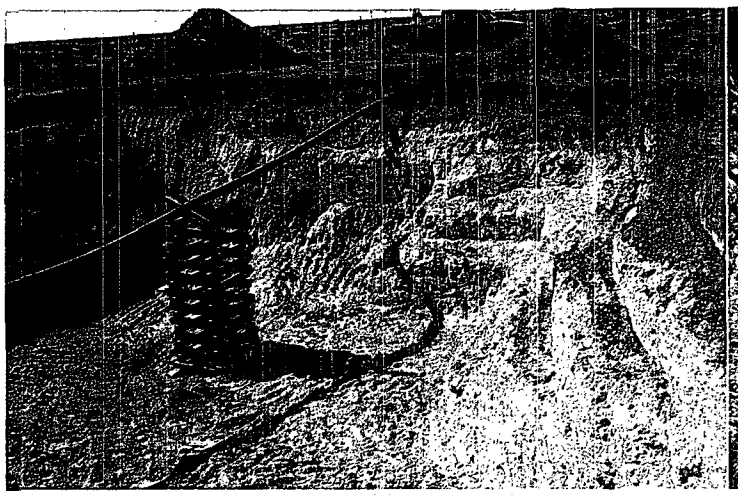

Photo #3: Excavation area, looking westerly.

Photo #4: Excavation area, looking southerly.

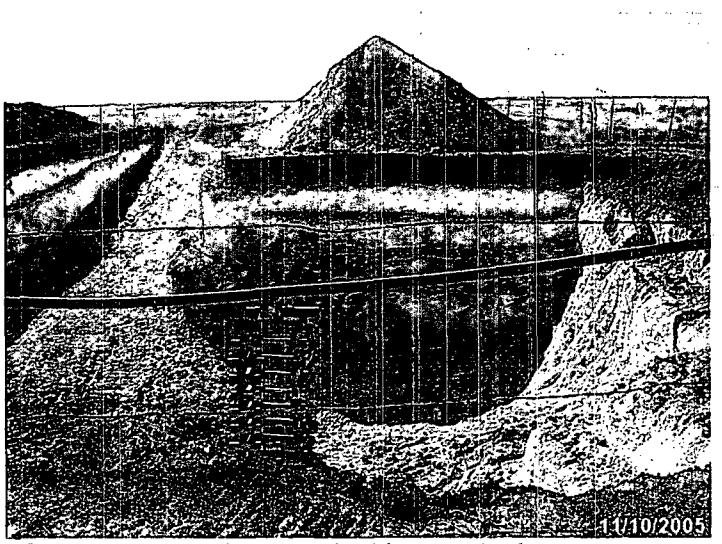

Photo #5: Excavation area, looking southerly. Access ramp is in background of photo.

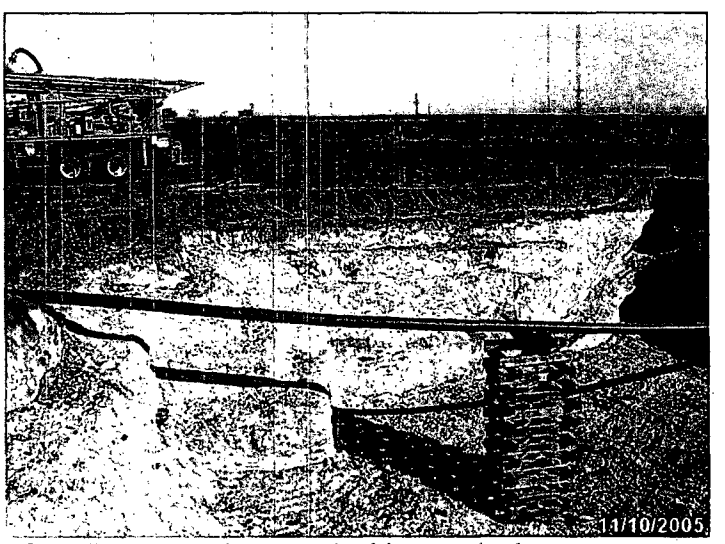

Photo #6: Excavation area, looking northerly.

APPENDIX III

SITE INFORMATION AND METRICS FORM
AND
INFORMATIONAL COPY OF INITIAL
NMOCD C-141 FORM

Duke Energy Field Services

Site Information and Metrics

Incident Date: 12 September 2005	NMOCD Notified: 12 September 2005

Site: A-8-13-1	**Assigned Site Reference #:** 130032
Company: Duke Energy Field Services	
Street Address:	
Mailing Address: 1625 West Marland	
City, State, Zip: Hobbs, New Mexico 88240	
Representative: Lynn Ward	
Representative Telephone: (505) 397-5541	
Telephone:	
Fluid volume released (bbls): 4 bbls	**Recovered (bbls):** No Recovery
>25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas)	
5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas)	
Leak, Spill, or Pit (LSP) Name: A-8-13-1	
Source of contamination: 6" low pressure steel pipeline with a normal daily flow rate of 0.5 mcf/day and 0.113% H2S content.	
Land Owner, i.e., BLM, ST, Fee, Other: State of New Mexico	
LSP Dimensions: 20 feet by 32 feet	
LSP Area: ≈640 ft^2	
Location of Reference Point (RP):	
Location distance and direction from RP:	
Latitude: N 32° 51' 10.26"	
Longitude: W 103° 31' 58.08"	
Elevation above mean sea level: 4,044	
Feet from South Section Line:	
Feet from West Section Line:	
Location- Unit or ¼¼: NE¼ of the NW¼	**Unit Letter:** C
Location- Section: 11	
Location- Township: T17 S	
Location- Range: R 34 E	
Surface water body within 1000 ' radius of site: none	
Domestic water wells within 1000' radius of site: none	
Agricultural water wells within 1000' radius of site: none	
Public water supply wells within 1000' radius of site: none	
Depth from land surface to ground water (DG): ≈ 85	
Depth of contamination (DC): Unknown	
Depth to ground water (DG – DC = DtGW): 50 to 99 feet	

1. Ground Water	2. Wellhead Protection Area	3. Distance to Surface Water Body
If Depth to GW <50 feet: *20 points*	If <1000' from water source, or;<200' from private domestic water source: *20 points*	<200 horizontal feet: *20 points*
If Depth to GW 50 to 99 feet: *10 points*		200-100 horizontal feet: *10 points*
If Depth to GW >100 feet: *0 points*	If >1000' from water source, or; >200' from private domestic water source: *0 points*	>1000 horizontal feet: *0 points*

Site Rank (1+2+3) = 30

Total Site Ranking Score and Acceptable Concentrations

Parameter	>19	10-19	0-9
Benzene[1]	10 ppm	10 ppm	10 ppm
BTEX[1]	50 ppm	50 ppm	50 ppm
TPH	100 ppm	1,000 ppm	5,000 ppm

[1]100 ppm field VOC headspace measurement may be substituted for lab analysis

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 March 17, 1999

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

Informational Only

OPERATOR

☒ Initial Report ☒ Final Report

Name of Company Duke Energy Field Services	**Contact** Mark Owens
Address 1625 West Marland, Hobbs, New Mexico 88240	**Telephone No.** (505) 397-4451
Facility Name A-8-13-1	**Facility Type** Natural Gas Pipeline

Surface Owner State of New Mexico	**Mineral Owner** State of New Mexico	**Lease No.**

LOCATION OF RELEASE

1RP 844

Unit Letter	Section	Township	Range	Feet from the North/South Line	Feet from the East/West Line	County: Lea Lat. N 32° 51' 10.26" Lon. W 103° 31' 58.08"
C	11	T17S	R34E			

NATURE OF RELEASE

Type of Release Condensate	**Volume of Release** 4 barrels	**Volume Recovered** No Recovery
Source of Release 6" low pressure steel line with a normal daily flow rate of 0.5 mcf/day and 0.113% H2S content.	**Date and Hour of Occurrence** September 12, 2005	**Date and Hour of Discovery** September 12, 2005 @ 09:30 hrs
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	**If YES, To Whom?** Larry Johnson, NMOCD Hobbs District	
By Whom? Lynn Ward, DEFS Hobbs	**Not Required**	
Was a Watercourse Reached? ☐ Yes ☒ No	**If YES, Volume Impacting the Watercourse.** NA	

If a Watercourse was Impacted, Describe Fully.*
NA

Describe Cause of Problem and Remedial Action Taken.* Corrosion of a 6" low pressure steel line with a normal daily flow rate of 0.5 mcf/day. Line was shut in and clamped by 12:00 pm.

Describe Area Affected and Cleanup Action Taken.* Site will be delineated and a *Remediation/Closure Proposal* submitted to the NMOCD. Remedial Goals: TPH = 1,000 mg/Kg, benzene = 10 mg/Kg, and BTEX = 50 mg/Kg.

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.

Signature: Lynn Ward	**OIL CONSERVATION DIVISION**
Printed Name: Lynn Ward	**Approved by District Supervisor:** ENVIRO ENGR
E-mail Address: leward@duke-energy.com	
Title: Senior Environment Specialist	**Approval Date:** 5.24.06 **Expiration Date:**
Date: 9/27/05 **Phone:** (432) 620-4207	**Conditions of Approval:** **Attached** ☐

* Attach Additional Sheets If Necessary