

# CLOSURE REPORT

## A-8-13-1 EXT. RELEASE SITE

**1RP # 880**

**COMPANY NO. 36785**

**DEFS REF: 130033**

**UL-J (NW¼ OF THE SE¼) OF SECTION 10 T17S R34E**

**~3.8 MILES NORTH-NORTHEAST OF BUCKEYE**

**LEA COUNTY, NEW MEXICO**

**LATITUDE: N 32° 50' 46.02"**

**LONGITUDE: W 103° 32' 40.32"**

**NOVEMBER 2006**

**PREPARED BY:**

**ENVIRONMENTAL PLUS, INC.  
2100 AVENUE O  
EUNICE, NEW MEXICO 88231**

**PREPARED FOR:**



**Duke Energy  
Field Services**

*pPAC0613751829*

*RP#880*

# LETTER OF TRANSMITTAL

ENVIRONMENTAL  
PLUS, INC.



Date: November 16, 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  
Myra Meyers – New Mexico State Land Office – Hobbs  
Steve Weathers, DEFS – Denver; Lynn Ward, DEFS – Midland;  
Mark Owens, DEFS – Hobbs  
Project #: 1RP# 880; EPI Ref: 130033  
Project Name: Duke Energy Field Services – A-8-13-1 Ext. Line  
Subject: **Closure Report**

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

## Remarks

Dear Mr. Johnson:

Enclosed is a copy of the Closure Report for the above-referenced site. A copy of the report 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 Cody Miller or me at (505) 394-3481.

Sincerely,

Environmental Plus, Inc.

Jason Stegemoller  
Environmental Scientist



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



**Distribution List**

**Duke Energy Field Services – A-8-13-1 Ext. Release Site  
IRP #880; DEFS Ref: 130033**

<b>Name</b>	<b>Title</b>	<b>Company or Agency</b>	<b>Mailing Address</b>	<b>e-mail</b>
Larry Johnson	Environmental Engineer	NMOCD – Hobbs	1625 French Drive Hobbs, NM 88240	larry.johnson@state.nm.us
Thaddeus Kostrubala	Environmental Engineer	NMSLO – Sante Fe	310 Old Sante Fe Trail P.O. Box 1148 Sante Fe, NM 87504-1148	tkostrubala@slo.state.nm.us
Myra Meyers	District Resource Manager	NMSLO – Hobbs	2702 N. Grimes, Suite D Hobbs, NM 88240	mmeyers@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
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Steve Weathers	Senior Environmental Specialist	Duke Energy Field Services, LP	370 17 <sup>th</sup> Street, Suite 2500 Denver, CO 80202	swweathers@duke-energy.com
File	- -	Environmental Plus, Inc.	P.O. Box 1558 Eunice, NM 88231	jstegemoller@envplus.net



## STANDARD OF CARE

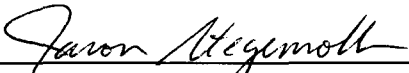
### Closure Report

A-8-13-1 Ext.

(NMOCD 1RP#880; EPI Ref. #130033)

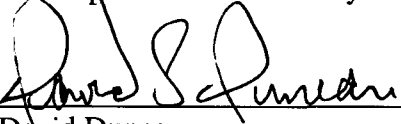
The information provided in this report was collected consistent with the New Mexico Oil Conservation Division (NMOCD) *Guidelines for Remediation of Leaks, Spills and Releases* (August 13, 1993), the NMOCD *Unlined Surface Impoundment Closure Guidelines* (February, 1993) and Environmental Plus, Inc. (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

November 16, 2006  
Date

This report was reviewed by:

  
David Duncan  
Civil Engineer

11-16-06  
Date



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## 1.0 PROJECT SYNOPSIS

### *Site Specific:*

- ◆ **Company Name:** Duke Energy Field Services
- ◆ **Facility Name:** A-8-13-1 Ext.
- ◆ **Project Reference:** NMOCD 1RP#880; EPI Ref. #130033
- ◆ **Company Contacts:** Lynn Ward
- ◆ **Site Location:** WGS84 N32° 50' 46.02"; W103° 32' 40.32"
- ◆ **Legal Description:** Unit Letter-J, (NW¼ of the SE¼), Section 10, T 17 S, R 34 E
- ◆ **General Description:** Approximately 3.8-miles north-northeast of Buckeye, New Mexico
- ◆ **Elevation:** 4,409-ft amsl
- ◆ **Land Ownership:** State of New Mexico
- ◆ **EPI Personnel:** Project Consultant – Iain Olness  
Project Foreman – David Robinson

### *Release Specific:*

- ◆ **Product Released:** Natural Gas and Natural Gas Liquids (NGL)
- ◆ **Volume Released:** 8 barrels      **Volume Recovered:** none
- ◆ **Time of Occurrence:** September 27, 2005      **Time of Discovery:** September 27, 2005 @ 14:30 hrs
- ◆ **Release Source:** 4-inch steel natural gas pipeline
- ◆ **Initial Surface Area Affected:** ~ 1,400 square feet

### *Remediation Specific:*

- ◆ **Final Vertical extent of contamination:** 22-feet bgs at maximum depth
- ◆ **Depth to Ground Water:** ~88-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
- ◆ **Remedial goals for Soil:** TPH – 1,000 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 contaminated soil above NMOCD remedial goals in sidewalls; 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 a state approved landfarm for treatment; d) blend remaining excavated soil with clean soil; e) backfill the excavation with blended soil to within 2-ft below ground surface; and f) backfill remaining 2-ft of excavation with clean topsoil.
- ◆ **Disposal Facility:** Artesia Aeration, LLC
- ◆ **Volume disposed:** ~1,180-yd<sup>3</sup>
- ◆ **Project Completion Date:** July 14, 2006



## 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 and utilized for livestock grazing.

**2.2** *Identify and describe the source or suspected source(s) of the release.*  
Corrosion of 4-inch steel natural gas pipeline.

**2.3** *What is the volume of the release? (if known):* 8 *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):* September 27, 2005

**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 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."

**2.7** ***Ecological Description***

The site is located in the Southern High Plains (Llano Estacado or Staked Plains) physiographic subdivision. Typical vegetation consists primarily of perennial grasses (eg. blue grama, buffalograss) and annual and perennial forbs (eg. broad-leaved 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 ~88 feet (ft) 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 are located 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 groundwater);*
- ♦ *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 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: 0 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 + 0 + 0 = 10 points			
Total Site Ranking Score and Acceptable Remedial Goal Concentrations			
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:** October 19, 2005 through June 21, 2006

**Total volume removed:** Approximately 2,040 cubic yards of impacted soil were excavated. Approximately 1,180 cubic yards of the most impacted soil was transported to Artesia Aeration, LLC for treatment. The remaining soil, approximately 860 cubic yards, was stockpiled on site and allowed to aerate. After excavation activities were completed, the stockpiled soil was blended with clean soil obtained from the State of New Mexico.

4.2 **Indicated soil treatment type:**

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

**Name and location of treatment/~~disposal~~ facility:**  
Artesia Aeration, LLC – Located near Maljamar, New Mexico



## 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 was utilized for field analyses of chloride concentration.

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

Soil samples from the excavation were collected utilizing hand and/or mechanical excavation equipment to gather the sample from at least 6-inches below/within the surface of the excavation.

Soil samples were collected during the advancement of soil boring SB-1 utilizing a hollow core drill. Soil samples were collected at five foot (5-ft) intervals from 10-ft below ground surface (bgs) to a total depth of 40-feet bgs.

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); chloride and sulfate concentrations.

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

On November 15, 2005, a series of seven soil samples were collected at depths ranging from 3 to 10-ft bgs from a southwest to northeast test trench excavated near the point of release to delineate the horizontal extent of contamination (reference *Figure 4*).

On November 21, 2005, a soil boring (SB-1) was advanced near the point of release to approximately 40-ft bgs to delineate the vertical extent of hydrocarbon impacted soil. Soil samples were collected at 10-ft bgs (i.e., the excavation floor) and then at 5-ft intervals thereafter. The soil boring location (i.e., near the point of release) was chosen to provide the best representative example of soil within the excavation floor and sidewalls (reference *Figure 4*).

On December 7, 2005, soil samples were collected in three locations from the excavation floor and in eight locations from the excavation sidewalls. Soil sample locations were chosen to provide the best representative example of soil within the excavation floor and sidewalls (reference *Figure 5*).

On June 6, 2006, a soil sample was collected from 1.5 feet below the existing excavation floor. The soil sample location was chosen to provide the best representative example of soil from beneath the current excavation floor (reference *Figure 5*).

On June 21, 2006, soil samples were collected in four locations from the excavation floor. Soil sample locations were chosen to provide the best representative example of soil within the excavation floor (reference *Figure 5*).

On July 10, 2006, three soil samples were collected from the stockpiled soil after blending with clean soil. Soil sample locations were chosen to provide the best representative example of soil within the blended/stockpiled soil.



## 6.0 ANALYTICAL RESULTS

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

Laboratory analyses of the soil sample collected on November 15, 2005 from the test trench indicated non-detectable (ND) to low BTEX constituent concentrations. Benzene concentrations were ND at or above laboratory method detection limits (MDL). TPH concentrations ranged from ND to 93.2 mg/Kg, below the NMOCD remedial threshold of 1000 mg/Kg. Chloride concentrations ranged from 10.3 to 2,580 mg/Kg. Sulfate concentrations ranged from 25.1 to 245 mg/Kg (reference *Table 2* and *Figure 4*).

Laboratory analyses of soil samples collected from soil boring SB-1 indicated TPH and BTEX constituent concentrations above each analytes' respective NMOCD remedial thresholds were restricted to 15-ft bgs. Chloride concentrations ranged from 32 to 128 mg/Kg. Sulfate concentrations ranged from 25.1 to 245 mg/Kg (reference *Table 2* and *Figure 4*).

Laboratory analyses of soil samples collected on December 7, 2005 from the excavation sidewalls indicated TPH and BTEX constituent concentrations were below each analytes' respective NMOCD remedial threshold. Laboratory analyses of samples collected from the excavation floor at 20-ft bgs indicated benzene, BTEX and TPH concentrations in sample BH-1 (20') exceeded each analytes' respective NMOCD remedial threshold. All remaining excavation floor samples were below each analytes' respective NMOCD remedial threshold (reference *Table 2* and *Figure 5*).

Laboratory analyses of the soil sample collected at approximately 21.5-ft (i.e., 1.5-ft below the existing excavation floor) on June 6, 2006 indicated BTEX constituent concentrations were ND at or above laboratory MDL. TPH concentrations were reported at 56.4 mg/Kg, below the NMOCD remedial threshold of 1,000 mg/Kg. Chloride concentrations were 38.2 mg/Kg and sulfate concentrations were 31.5 mg/Kg (reference *Table 2*).

After excavating an additional 2-feet from the existing excavation floor, soil samples were collected on June 21, 2006 at approximately 22-ft bgs. Laboratory analyses of soil samples indicated TPH and BTEX constituent concentrations were ND at or above laboratory MDL. Chloride concentrations ranged from 29.5 mg/Kg to 49.2 mg/Kg. Sulfate concentrations ranged from 106 mg/Kg to 180 mg/Kg (reference *Table 2* and *Figure 5*).

Laboratory analyses of soil samples collected on July 10, 2006 from the blended stockpiled soil indicated BTEX constituent concentrations were ND at or above laboratory MDL. TPH concentrations were reported to range from 101 to 149 mg/Kg, below the NMOCD remedial threshold of 1,000 mg/Kg. Reported chloride concentrations ranged from 63.8 to 106 mg/Kg. Sulfate concentrations were reported to range from 52.5 to 81.5 mg/Kg (reference *Table 2*).

### 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.*



Visibly stained soil has been excavated. Approximately 1,180 cubic yards of the most impacted soil were transported to Artesia Aeration for treatment. The remaining portion, approximately 860 cubic yards, was blended with clean soil and utilized to backfill the excavation.



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## 7.0 **DISCUSSION**

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

Soil impacted above NMOCD remedial thresholds has been excavated from the sidewalls and floor. Laboratory analyses of soil samples collected from the excavation sidewalls and floor indicated TPH and BTEX constituent concentrations were below each analytes' respective NMOCD remedial threshold. Additionally, laboratory analyses indicated chloride and sulfate concentrations were below each analytes' respective remedial threshold/goal.

### 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.*

Approximately 2,040 cubic yards of hydrocarbon impacted soil were excavated from a surface area of approximately 3,460 square feet to a maximum depth of 22-ft bgs. Approximately 1,180 cubic yards of the most heavily impacted soil were transported to Artesia Aeration, LLC for treatment. The remaining portion of excavated soil, approximately 860 cubic yards, was blended with clean soil obtained from a State of New Mexico pit and utilized to backfill the excavation to approximately 2-ft bgs. The remaining 2-ft of the excavation was backfilled with clean topsoil obtained from Eidson Ranch.

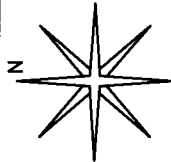
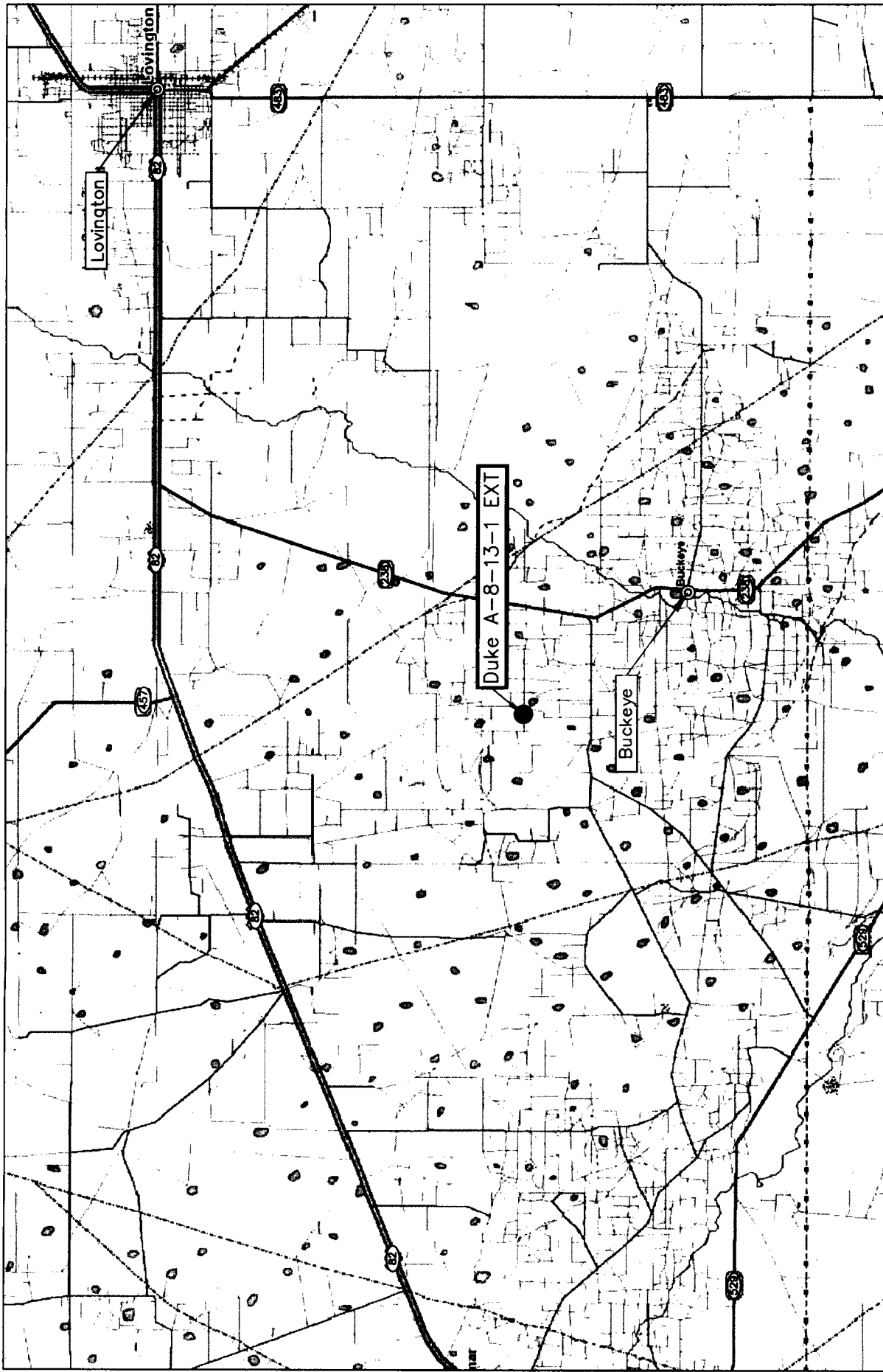
Laboratory analytical results of soil samples collected by EPI personnel from the excavation sidewalls and floor indicate TPH, BTEX constituents, chloride and sulfate concentrations were below each analytes' respective NMOCD remedial threshold. Laboratory analytical results of soil samples collected from the blended soil indicate TPH and BTEX constituent concentrations were below each analytes' respective NMOCD remedial thresholds.

Environmental Plus, Inc., on behalf of DEFS, request the NMOCD require no further action and issue DEFS a *Site Closure Letter*.

### 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.* Not Applicable

## FIGURES



REVISED:  
JCS, Oct. 2005

DWG By: Daniel Dominguez  
September 2005

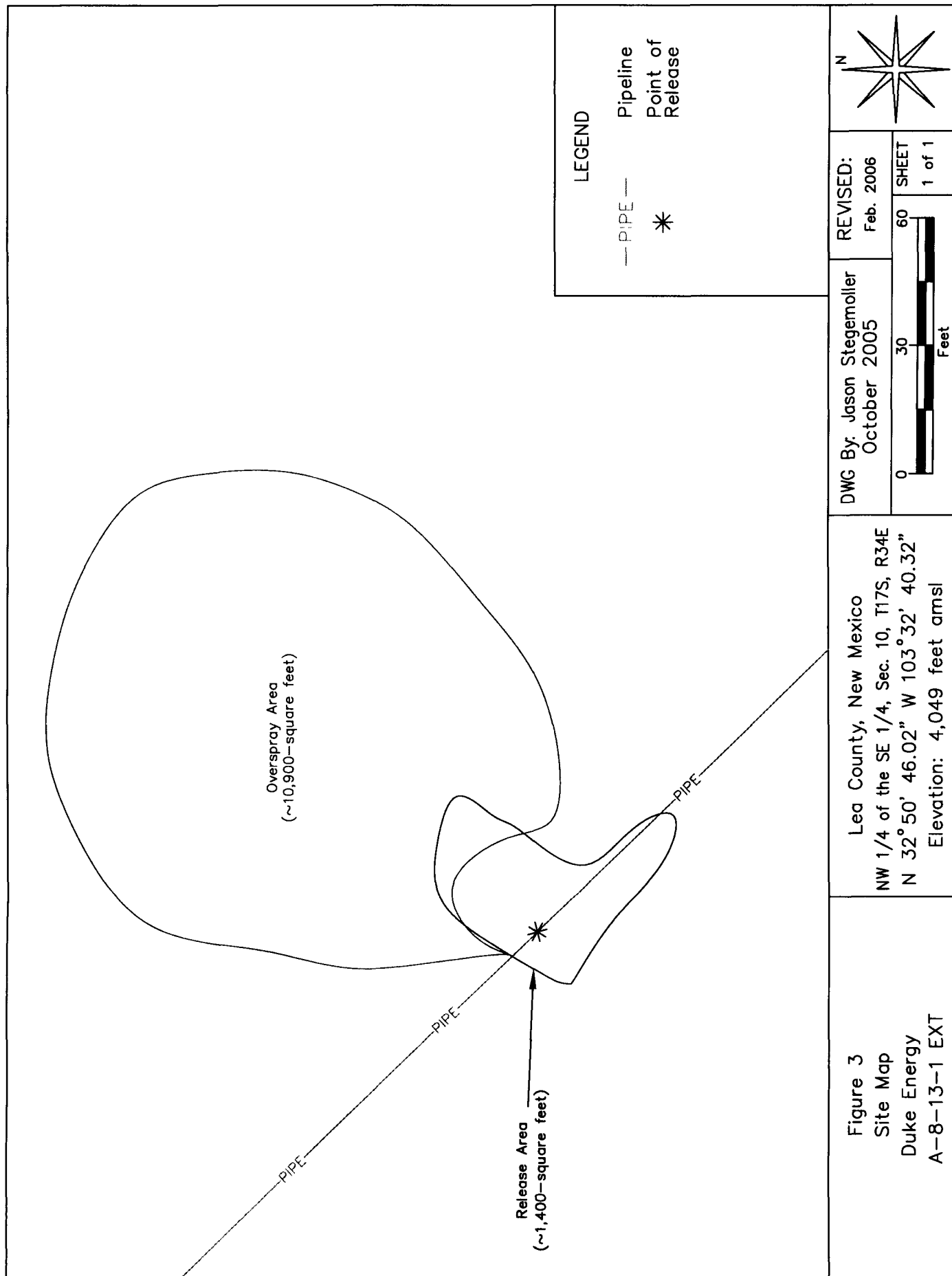
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SHEET  
1 of 1

Lea County, New Mexico  
NW 1/4 of the SE 1/4, Sec. 10, T17S, R34E  
N 32° 50' 46.02" W 103° 32' 40.32"  
Elevation: 4,049 feet amsl

Figure 1  
Area Map  
Duke Energy  
A-8-13-1 EXT







# LEGEND

— PIPE —  
\*  
Point of Release

REVISIED:  
Feb. 2006

DWG By: Jason Stegemoller  
October 2005

Lea County, New Mexico  
NW 1/4 of the SE 1/4, Sec. 10, T17S, R34E  
N 32° 50' 46.02" W 103° 32' 40.32"  
Elevation: 4,049 feet amsl

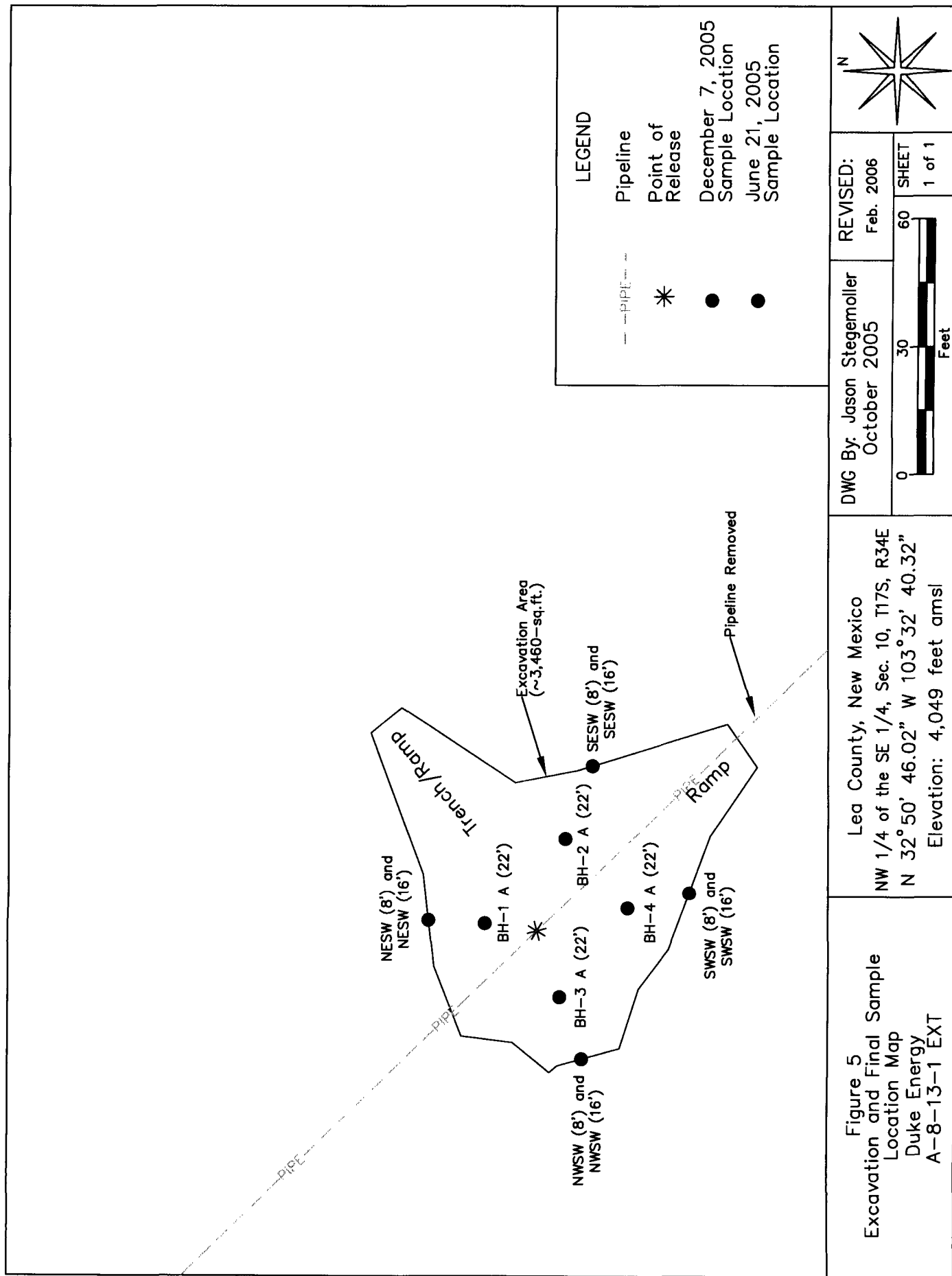
Figure 3  
Site Map  
Duke Energy  
A-8-13-1 EXT



SHEET  
1 of 1







## TABLES

TABLE 1

## WELL INFORMATION REPORT\*

Duke Energy Field Services A-8-13-1-EXT - Ref #130033

Well Number	Diversion <sup>A</sup>	Owner	Use	Source	Twp	Rng	Sec q q q	Latitude	Longitude	Date Measured	Surface Elevation <sup>B</sup>	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	DONNELLY 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 2 2	N 32° 51' 10.93"	W 103° 32' 37.45"	12-Jul-56	4,061	92
L 03846 X	1,200	MOBIL OIL CORPORATION	SRO	Shallow	17S	34E	11 3 3	N 32° 50' 31.78"	W 103° 32' 21.9"	10-Jul-56	4,055	
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' 43.41"	W 103° 30' 49"	28-Feb-71	4,032	86
L 06932 (E)	0	MORAN OIL PROD. & DRUG. 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
USGS #1					17S	34E	10 2 2 3			18-Dec-90		99.62
USGS #2					17S	34E	11 2 4 4			19-Feb-76		88.7
USGS #3					17S	34E	14 1 1 1			18-Dec-90		106.95
USGS #4					17S	34E	14 1 4 4			23-Jan-81		111.18
USGS #5					17S	34E	02 1 3 1			14-Feb-96		93.15
USGS #6					17S	34E	02 3 4 3			18-Dec-90		92.45
USGS #7					17S	34E	04 4 3 2			27-Mar-86		104.06
USGS #8					17S	34E	15 4 2 1			02-Apr-86		113.69

\* = Data obtained from the New Mexico Office of the State Engineer Website ([http://waters.ose.state.nm.us:7001/iWATERS/wr\\_RegisServLet1](http://waters.ose.state.nm.us:7001/iWATERS/wr_RegisServLet1)) and USGS Database.

Shaded well information indicates well location shown on Figure 2

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

TABLE 2

## Summary of Excavation and Soil Boring Analytical Results

DEFS A-8-13-1 Ext (Ref. #130033)

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)	
NWT (3')	3	15-Nov-05	Excavated	25.9	--	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<20.0	15.9	29.3	
SET (5')	5	15-Nov-05	Excavated	68.5	--	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	9.13 <sup>1</sup>	73.0	73.0	2,580	245	
SWT-B (4')	4	15-Nov-05	Excavated	16.8	--	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<20.0	139	38.0	
NWT-A2 (7')	7	15-Nov-05	Excavated	230	--	<0.0250	<0.0250	0.0656	0.172	0.238	<10.0	<10.0	<20.0	24.6	75.8	
NET-B (5')	5	15-Nov-05	Excavated	151	--	<0.0250	0.0223 <sup>1</sup>	0.0373	0.0530	0.0900	22.2	71.0	93.2	12.1	25.1	
NET-B2 (10')	10	15-Nov-05	Excavated	52.3	--	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<20.0	10.3	27.1	
SWT-C (5')	5	15-Nov-05	Excavated	53.9	--	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<10.0	<10.0	<20.0	1,450	99.6	
Soil Boring SB-1	10	21-Nov-05	Excavated	1,281	160	0.142	5.57	7.64	18.9	32.3	596	1,400	2,000	64	160	
	15	21-Nov-05	Excavated	888	160	4.71	28.9	22.9	46.8	103	198	873	1,071	48	152	
	20	21-Nov-05	Excavated	100	160	0.003	<0.002	0.006	0.020	0.029	<10.0	36.8	36.8	48	61	
	25	21-Nov-05	In Situ	48.5	160	0.003	<0.002	0.008	0.020	0.031	<10.0	<10.0	<20.0	128	88	
	30	21-Nov-05	In Situ	44.5	160	<0.002	<0.002	<0.002	<0.006	<0.012	<10.0	<10.0	<20.0	32	42	
	35	21-Nov-05	In Situ	41.5	160	<0.002	<0.002	<0.002	<0.006	<0.012	<10.0	<10.0	<20.0	32	100	
	40	21-Nov-05	In Situ	5.7	160	<0.002	<0.002	<0.002	<0.006	<0.012	<10.0	<10.0	<20.0	48	64	
NWSW (8')	8	07-Dec-05	In Situ	40.4	--	<0.002	0.004	0.011	0.036	0.051	<10.0	71.5	71.5	16	384	
NWSW (16')	16	07-Dec-05	In Situ	18.1	--	<0.002	<0.002	<0.002	<0.006	<0.012	<10.0	29.2	29.2	16	61	
SWSW (8')	8	07-Dec-05	In Situ	14.0	--	<0.002	<0.002	<0.002	<0.006	<0.012	<10.0	<10.0	<20.0	192	397	
SWSW (16')	16	07-Dec-05	In Situ	265	--	<0.002	<0.002	<0.002	<0.006	<0.012	<10.0	24.3	24.3	48	147	
SESW (8')	8	07-Dec-05	In Situ	830	--	1.03	1.41	3.04	10.7	16.2	<10.0	372	372	304	247	
SESW (16')	16	07-Dec-05	In Situ	4.5	--	<0.002	<0.002	<0.002	<0.006	<0.012	<10.0	<10.0	<20.0	64	157	
NESW (8')	8	07-Dec-05	In Situ	5.4	--	<0.002	<0.002	<0.002	<0.006	<0.012	<10.0	<10.0	<20.0	48	<1	
NESW (16')	16	07-Dec-05	In Situ	9.4	--	<0.002	<0.002	<0.002	<0.006	<0.012	<10.0	<10.0	<20.0	16	40	
BH-1 (20')	20	07-Dec-05	Excavated	2,731	--	23.8	304	1,132	315	1,780	1,450	1,750	3,200	16	95	
BH-1A (21.5')	21.5	06-Jun-06	Excavated	--	--	<0.0250	<0.0250	<0.0250	<0.0500	<0.0125	<10.0	56.4	56.4	38.2	31.5	
BH-1A (22')	22	21-Jun-06	In Situ	62	--	<0.0250	<0.0250	<0.0250	<0.0500	<0.0125	<10.0	<10.0	<10.0	32.8	112.0	
BH-2 (20')	20	07-Dec-05	Excavated	111	--	<0.002	<0.002	<0.002	<0.006	<0.012	<10.0	42.1	42.1	48	166	
BH-2A (22')	22	21-Jun-06	In Situ	57	--	<0.0250	<0.0250	<0.0250	<0.0500	<0.0125	<10.0	<10.0	<10.0	29.5	106	
BH-3 (20')	20	07-Dec-05	Excavated	69.3	--	<0.002	<0.002	<0.002	<0.006	<0.012	<10.0	<10.0	<20.0	48	166	
BH-3A (22')	22	21-Jun-06	In Situ	68.7	--	<0.0250	<0.0250	<0.0250	<0.0500	<0.0125	<10.0	<10.0	<10.0	36.2	118	
BH-4A (22')	22	21-Jun-06	In Situ	48.9	--	<0.0250	<0.0250	<0.0250	<0.0500	<0.0125	<10.0	<10.0	<10.0	49.2	180	
SP-1	--	10-Jul-06	Stockpile	24.9	200	<0.0250	<0.0250	<0.0250	<0.0500	<0.0125	7.46 <sup>A</sup>	118	118	106	63.0	
SP-2	--	10-Jul-06	Stockpile	37.2	200	<0.0250	<0.0250	<0.0250	<0.0500	<0.0125	9.00 <sup>A</sup>	149	149	74.4	81.5	
SP-3	--	10-Jul-06	Stockpile	40.7	200	<0.0250	<0.0250	<0.0250	<0.0500	<0.0125	8.80 <sup>A</sup>	101	101	63.8	52.5	
NMOC Remedial Thresholds											100	10	50	1,000	250 <sup>B</sup>	600 <sup>B</sup>

## APPENDICES



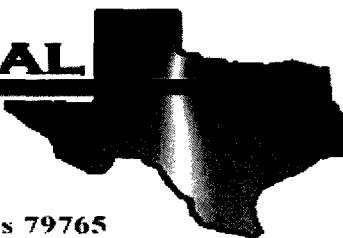
**APPENDIX I**

**LABORATORY ANALYTICAL REPORTS**

**AND**

**CHAIN-OF-CUSTODY FORM**

# 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 Ext.

Project Number: 130033

Location: UL-J, Sect. 10, T 17 S, R 34 E

Lab Order Number: 5K17010

Report Date: 11/22/05

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

Project: DEFS / A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
11/22/05 12:43

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
NWT (3')	5K17010-01	Soil	11/15/05 08:12	11/17/05 13:50
SET (5')	5K17010-02	Soil	11/15/05 08:15	11/17/05 13:50
SWT-B (4')	5K17010-03	Soil	11/15/05 09:43	11/17/05 13:50
NWT-A2 (7')	5K17010-04	Soil	11/15/05 12:20	11/17/05 13:50
NET-B (5')	5K17010-05	Soil	11/15/05 09:32	11/17/05 13:50
NET-B2 (10')	5K17010-06	Soil	11/15/05 09:34	11/17/05 13:50
SWT-C (5')	5K17010-07	Soil	11/15/05 12:50	11/17/05 13:50

Environmental Plus, Incorporated  
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Reported:  
11/22/05 12:43

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>NWT (3') (5K17010-01) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EK51813	11/18/05	11/18/05	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		101 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.4 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	"	1	EK51817	11/18/05	11/19/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		95.2 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		115 %	70-130		"	"	"	"	
<b>SET (5') (5K17010-02) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EK51813	11/18/05	11/18/05	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		102 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	J [9.13]	10.0	"	1	EK51817	11/18/05	11/19/05	EPA 8015M	J
Diesel Range Organics >C12-C35	73.0	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	73.0	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		82.2 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		101 %	70-130		"	"	"	"	
<b>SWT-B (4') (5K17010-03) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EK51813	11/18/05	11/18/05	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		105 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.1 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	"	1	EK51817	11/18/05	11/19/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	

Environmental Lab of Texas

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Page 2 of 10

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

Project: DEFS / A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
11/22/05 12:43

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SWT-B (4') (5K17010-03) Soil</b>									
Surrogate: 1-Chlorooctane		95.2 %	70-130		EK51817	11/18/05	11/19/05	EPA 8015M	
Surrogate: 1-Chlorooctadecane		113 %	70-130		"	"	"	"	
<b>NWT-A2 (7') (5K17010-04) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EK51813	11/18/05	11/18/05	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.0656	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.112	0.0250	"	"	"	"	"	"	
Xylene (o)	0.0599	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		97.6 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.2 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	18.6	10.0	"	1	EK51817	11/18/05	11/19/05	EPA 8015M	
Diesel Range Organics >C12-C35	71.9	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	90.5	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		87.4 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		110 %	70-130		"	"	"	"	
<b>NET-B (5') (5K17010-05) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EK51813	11/18/05	11/18/05	EPA 8021B	
Toluene	J [0.0223]	0.0250	"	"	"	"	"	"	J
Ethylbenzene	0.0373	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.0530	0.0250	"	"	"	"	"	"	
Xylene (o)	J [0.0227]	0.0250	"	"	"	"	"	"	J
Surrogate: a,a,a-Trifluorotoluene		101 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.1 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	22.2	10.0	"	1	EK51817	11/18/05	11/19/05	EPA 8015M	
Diesel Range Organics >C12-C35	71.0	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	93.2	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		89.2 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		103 %	70-130		"	"	"	"	

Environmental Lab of Texas

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Page 3 of 10

Environmental Plus, Incorporated  
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Eunice NM, 88231

Project: DEFS / A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
11/22/05 12:43

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>NET-B2 (10') (5K17010-06) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EK51813	11/18/05	11/18/05	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		103 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.6 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	"	1	EK51817	11/18/05	11/19/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		79.0 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		88.0 %	70-130		"	"	"	"	
<b>SWT-C (5') (5K17010-07) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EK51813	11/18/05	11/18/05	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		105 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	80-120		"	"	"	"	
Gasoline Range Organics C6-C12	ND	10.0	"	1	EK51817	11/18/05	11/19/05	EPA 8015M	
Diesel Range Organics >C12-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		86.0 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		95.4 %	70-130		"	"	"	"	

Environmental Lab of Texas

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Page 4 of 10

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

Project: DEFS / A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
11/22/05 12:43

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>NWT (3') (5K17010-01) Soil</b>									
Chloride	15.9	5.00	mg/kg	10	EK52111	11/18/05	11/21/05	EPA 300.0	
% Moisture	9.2	0.1	%	1	EK51804	11/17/05	11/18/05	% calculation	
Sulfate	29.3	5.00	mg/kg	10	EK52111	11/18/05	11/21/05	EPA 300.0	
<b>SET (5') (5K17010-02) Soil</b>									
Chloride	2580	50.0	mg/kg	100	EK52111	11/18/05	11/21/05	EPA 300.0	
% Moisture	25.4	0.1	%	1	EK51804	11/17/05	11/18/05	% calculation	
Sulfate	245	50.0	mg/kg	100	EK52111	11/18/05	11/21/05	EPA 300.0	
<b>SWT-B (4') (5K17010-03) Soil</b>									
Chloride	139	5.00	mg/kg	10	EK52111	11/18/05	11/21/05	EPA 300.0	
% Moisture	7.5	0.1	%	1	EK51804	11/17/05	11/18/05	% calculation	
Sulfate	38.0	5.00	mg/kg	10	EK52111	11/18/05	11/21/05	EPA 300.0	
<b>NWT-A2 (7') (5K17010-04) Soil</b>									
Chloride	24.6	5.00	mg/kg	10	EK52111	11/18/05	11/21/05	EPA 300.0	
% Moisture	11.4	0.1	%	1	EK51804	11/17/05	11/18/05	% calculation	
Sulfate	75.8	5.00	mg/kg	10	EK52111	11/18/05	11/21/05	EPA 300.0	
<b>NET-B (5') (5K17010-05) Soil</b>									
Chloride	12.1	5.00	mg/kg	10	EK52111	11/18/05	11/21/05	EPA 300.0	
% Moisture	7.4	0.1	%	1	EK51804	11/17/05	11/18/05	% calculation	
Sulfate	25.1	5.00	mg/kg	10	EK52111	11/18/05	11/21/05	EPA 300.0	
<b>NET-B2 (10') (5K17010-06) Soil</b>									
Chloride	10.3	5.00	mg/kg	10	EK52111	11/18/05	11/21/05	EPA 300.0	
% Moisture	6.4	0.1	%	1	EK51804	11/17/05	11/18/05	% calculation	
Sulfate	27.1	5.00	mg/kg	10	EK52111	11/18/05	11/21/05	EPA 300.0	
<b>SWT-C (5') (5K17010-07) Soil</b>									
Chloride	1450	20.0	mg/kg	40	EK52111	11/18/05	11/21/05	EPA 300.0	
% Moisture	11.3	0.1	%	1	EK51804	11/17/05	11/18/05	% calculation	
Sulfate	99.6	20.0	mg/kg	40	EK52111	11/18/05	11/21/05	EPA 300.0	

Environmental Lab of Texas

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

Project: DEFS / A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601  
Reported:  
11/22/05 12:43

**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
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**Batch EK51813 - EPA 5030C (GC)**

**Blank (EK51813-BLK1)**

Prepared & Analyzed: 11/18/05

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	0.0414		"	0.0400		104	80-120			
Surrogate: 4-Bromofluorobenzene	0.0431		"	0.0400		108	80-120			

**LCS (EK51813-BS1)**

Prepared & Analyzed: 11/18/05

Benzene	0.0553	0.00100	mg/kg wet	0.0500		111	80-120			
Toluene	0.0600	0.00100	"	0.0500		120	80-120			
Ethylbenzene	0.0578	0.00100	"	0.0500		116	80-120			
Xylene (p/m)	0.105	0.00100	"	0.100		105	80-120			
Xylene (o)	0.0568	0.00100	"	0.0500		114	80-120			
Surrogate: a,a,a-Trifluorotoluene	0.0441		"	0.0400		110	80-120			
Surrogate: 4-Bromofluorobenzene	0.0357		"	0.0400		89.2	80-120			

**Calibration Check (EK51813-CCV1)**

Prepared & Analyzed: 11/18/05

Benzene	52.6		ug/kg	50.0		105	80-120			
Toluene	55.6		"	50.0		111	80-120			
Ethylbenzene	52.2		"	50.0		104	80-120			
Xylene (p/m)	95.0		"	100		95.0	80-120			
Xylene (o)	51.3		"	50.0		103	80-120			
Surrogate: a,a,a-Trifluorotoluene	0.0468		mg/kg wet	0.0400		117	80-120			
Surrogate: 4-Bromofluorobenzene	0.0347		"	0.0400		86.8	80-120			

**Matrix Spike (EK51813-MS1)**

Source: 5K17010-06

Prepared & Analyzed: 11/18/05

Benzene	1.39	0.0250	mg/kg dry	1.34	ND	104	80-120			
Toluene	1.42	0.0250	"	1.34	ND	106	80-120			
Ethylbenzene	1.34	0.0250	"	1.34	ND	100	80-120			
Xylene (p/m)	2.50	0.0250	"	2.67	ND	93.6	80-120			
Xylene (o)	1.34	0.0250	"	1.34	ND	100	80-120			
Surrogate: a,a,a-Trifluorotoluene	0.0492		"	0.0427		115	80-120			
Surrogate: 4-Bromofluorobenzene	0.0344		"	0.0427		80.6	80-120			

Environmental Lab of Texas

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

Project: DEFS / A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
11/22/05 12:43

**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
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**Batch EK51813 - EPA 5030C (GC)**

**Matrix Spike Dup (EK51813-MSD1)**

Source: 5K17010-06

Prepared & Analyzed: 11/18/05

Benzene	1.43	0.0250	mg/kg dry	1.34	ND	107	80-120	2.84	20	
Toluene	1.54	0.0250	"	1.34	ND	115	80-120	8.14	20	
Ethylbenzene	1.57	0.0250	"	1.34	ND	117	80-120	15.7	20	
Xylene (p/m)	2.87	0.0250	"	2.67	ND	107	80-120	13.4	20	
Xylene (o)	1.55	0.0250	"	1.34	ND	116	80-120	14.8	20	
Surrogate: a,a,a-Trifluorotoluene	0.0500		"	0.0427		117	80-120			
Surrogate: 4-Bromofluorobenzene	0.0496		"	0.0427		116	80-120			

**Batch EK51817 - Solvent Extraction (GC)**

**Blank (EK51817-BLK1)**

Prepared: 11/18/05 Analyzed: 11/19/05

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	41.5		mg/kg	50.0		83.0	70-130			
Surrogate: 1-Chlorooctadecane	49.6		"	50.0		99.2	70-130			

**LCS (EK51817-BS1)**

Prepared: 11/18/05 Analyzed: 11/19/05

Gasoline Range Organics C6-C12	407	10.0	mg/kg wet	500		81.4	75-125			
Diesel Range Organics >C12-C35	539	10.0	"	500		108	75-125			
Total Hydrocarbon C6-C35	946	10.0	"	1000		94.6	75-125			
Surrogate: 1-Chlorooctane	44.7		mg/kg	50.0		89.4	70-130			
Surrogate: 1-Chlorooctadecane	36.7		"	50.0		73.4	70-130			

**Calibration Check (EK51817-CCV1)**

Prepared: 11/18/05 Analyzed: 11/19/05

Gasoline Range Organics C6-C12	534		mg/kg	500		107	80-120			
Diesel Range Organics >C12-C35	597		"	500		119	80-120			
Total Hydrocarbon C6-C35	1130		"	1000		113	80-120			
Surrogate: 1-Chlorooctane	56.9		"	50.0		114	70-130			
Surrogate: 1-Chlorooctadecane	43.4		"	50.0		86.8	70-130			

Environmental Lab of Texas

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

Project: DEFS / A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601  
**Reported:**  
11/22/05 12:43

**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
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**Batch EK51817 - Solvent Extraction (GC)**

**Matrix Spike (EK51817-MS1)**

**Source: 5K17010-01**

**Prepared: 11/18/05 Analyzed: 11/19/05**

Gasoline Range Organics C6-C12	416	10.0	mg/kg dry	551	ND	75.5	75-125			
Diesel Range Organics >C12-C35	660	10.0	"	551	ND	120	75-125			
Total Hydrocarbon C6-C35	1080	10.0	"	1100	ND	98.2	75-125			
Surrogate: 1-Chlorooctane	49.6		mg/kg	50.0		99.2	70-130			
Surrogate: 1-Chlorooctadecane	56.4		"	50.0		113	70-130			

**Matrix Spike Dup (EK51817-MSD1)**

**Source: 5K17010-01**

**Prepared: 11/18/05 Analyzed: 11/19/05**

Gasoline Range Organics C6-C12	437	10.0	mg/kg dry	551	ND	79.3	75-125	4.92	20	
Diesel Range Organics >C12-C35	608	10.0	"	551	ND	110	75-125	8.20	20	
Total Hydrocarbon C6-C35	1050	10.0	"	1100	ND	95.5	75-125	2.82	20	
Surrogate: 1-Chlorooctane	47.5		mg/kg	50.0		95.0	70-130			
Surrogate: 1-Chlorooctadecane	56.3		"	50.0		113	70-130			

Environmental Lab of Texas

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

Project: DEFS / A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
11/22/05 12:43

**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
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**Batch EK51804 - General Preparation (Prep)**

**Blank (EK51804-BLK1)**

Prepared: 11/17/05 Analyzed: 11/18/05

% Solids 100 %

**Duplicate (EK51804-DUP1)**

Source: 5K17002-01

Prepared: 11/17/05 Analyzed: 11/18/05

% Solids 90.2 % 90.2 0.00 20

**Batch EK52111 - Water Extraction**

**Blank (EK52111-BLK1)**

Prepared: 11/18/05 Analyzed: 11/21/05

Chloride ND 0.500 mg/kg

Sulfate ND 0.500 "

**LCS (EK52111-BS1)**

Prepared: 11/18/05 Analyzed: 11/21/05

Chloride 8.42 mg/L 10.0 84.2 80-120

Sulfate 8.69 " 10.0 86.9 80-120

**Calibration Check (EK52111-CCV1)**

Prepared: 11/18/05 Analyzed: 11/21/05

Chloride 8.73 mg/L 10.0 87.3 80-120

Sulfate 9.03 " 10.0 90.3 80-120

**Duplicate (EK52111-DUP1)**

Source: 5K17004-01

Prepared: 11/18/05 Analyzed: 11/21/05

Sulfate 1750 20.0 mg/kg 1740 0.573 20

Chloride 311 20.0 " 311 0.00 20

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

Project: DEFS / A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
11/22/05 12:43

### Notes and Definitions

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).  
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:



Date:

11/22/2005

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.

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Environmental Lab of Texas

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E-mail results to: [iolness@envplus.net](mailto:iolness@envplus.net)  
REMARKS: *lobes w/seals*

# Environmental Lab of Texas

## Variance / Corrective Action Report – Sample Log-In

Client: EPI

Date/Time: 11-17-05 @ 1350

Order #: 5K17010

Initials: JMM

### Sample Receipt Checklist

Temperature of container/cooler?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	-3.0 C
Shipping container/cooler in good condition?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	N/A
Custody Seals intact on shipping container/cooler?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not present N/A
Custody Seals intact on sample bottles?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not present
Chain of custody present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Sample Instructions complete on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Chain of Custody signed when relinquished and received?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Chain of custody agrees with sample label(s)	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Container labels legible and intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Sample Matrix and properties same as on chain of custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Samples in proper container/bottle?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Samples properly preserved?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Sample bottles intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Preservations documented on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Containers documented on Chain of Custody?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Sufficient sample amount for indicated test?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
All samples received within sufficient hold time?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
VOC samples have zero headspace?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Not Applicable

Other observations:

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### Variance Documentation:

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

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Corrective Action Taken:

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# ARDINAL 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: 11/22/05

Reporting Date: 11/30/05

Project Owner: DUKE ENERGY FIELD SERVICES (130033)

Project Name: A-8-13-1 Eyt

Project Location: UL-J, SEC10, T17S, R34E

Sampling Date: 11/21/05

Sample Type: SOIL

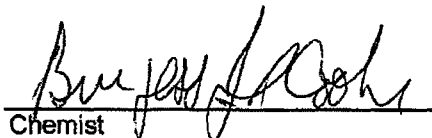
Sample Condition: COOL & INTACT

Sample Received By: BC

Analyzed By: BC

LAB NUMBER	SAMPLE ID	GRO (C <sub>6</sub> -C <sub>10</sub> ) (mg/Kg)	DRO (C <sub>10</sub> -C <sub>28</sub> ) (mg/Kg)
		11/23/05	11/23/05
H10441-1	SB-1 (10')	596	1400
H10441-2	SB-1 (15')	198	873
H10441-3	SB-1 (20')	<10.0	36.8
H10441-4	SB-1 (25')	<10.0	<10.0
H10441-5	SB-1 (30')	<10.0	<10.0
H10441-6	SB-1 (35')	<10.0	<10.0
H10441-7	SB-1 (40')	<10.0	<10.0
Quality Control		800	790
True Value QC		800	800
% Recovery		100	98.7
Relative Percent Difference		1.9	2.7

METHOD: SW-846 8015 M

  
Chemist

11/30/05  
Date

H10441A.XLS

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# ARDINAL LABORATORIES

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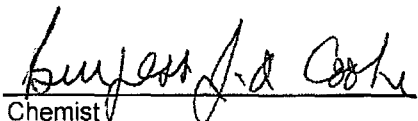
ANALYTICAL RESULTS FOR  
ENVIRONMENTAL PLUS, INC  
ATTN: IAIN OLNESS  
PO BOX 1558  
EUNICE, NM 88231  
FAX TO: 505-394-2601

Receiving Date: 11/22/05  
Reporting Date: 11/30/05  
Project Number: 130033  
Project Name: A-8-13-1  
Project Location: UL-J, SECT 10, T 17 S, R 34 E

Sampling Date: 11/21/05  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: BC  
Analyzed By: JD

LAB NUMBER	SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYLBENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE:		11/28/05	11/28/05	11/28/05	11/28/05
H10441-1	SB-1 (10')	0.142	5.57	7.64	18.9
H10441-2	SB-1 (15')	4.71	28.9	22.9	46.8
H10441-3	SB-1 (20')	0.003	<0.002	0.006	0.020
H10441-4	SB-1 (25')	0.003	<0.002	0.008	0.020
H10441-5	SB-1 (30')	<0.002	<0.002	<0.002	<0.006
H10441-6	SB-1 (35')	<0.002	<0.002	<0.002	<0.006
H10441-7	SB-1 (40')	<0.002	<0.002	<0.002	<0.006
Quality Control		0.100	0.100	0.102	0.305
True Value QC		0.100	0.100	0.100	0.300
% Recovery		100	100	102	102
Relative Percent Difference		4.9	3.5	3.4	4.2

METHODS: EPA - SW 846-8021B, 5030B; Gas Chromatography

  
Chemist

11/30/05  
Date

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**ANALYTICAL RESULTS FOR  
ENVIRONMENTAL PLUS, INC.**

ATTN: IAIN OLNESS

P.O. BOX 1558

EUNICE, NM 88231

FAX TO: (505) 394-2601

Receiving Date: 11/22/05

Reporting Date: 11/29/05

Project Owner: DUKE ENERGY FIELD SERVICES (130033)

Project Name: A-8-13-1

Project Location: UL-J, SEC10, T17S, R34E

Sampling Date: 11/21/05

Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: BC

Analyzed By: AH

LAB NUMBER	SAMPLE ID	SO <sub>4</sub> (mg/Kg)	Cl (mg/Kg)
ANALYSIS DATE:		11/29/05	11/29/05
H10441-1	SB-1 (10')	160	64
H10441-2	SB-1 (15')	152	48
H10441-3	SB-1 (20')	61	48
H10441-4	SB-1 (25')	88	128
H10441-5	SB-1 (30')	42	32
H10441-6	SB-1 (35')	100	32
H10441-7	SB-1 (40')	64	48
Quality Control		28.57	910
True Value QC		30.00	1000
% Recovery		95.0	91.0
Relative Percent Difference		4.9	1.4

METHODS: EPA 600/4-79-020	375.4	SM 4500 ClB
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Note: Analyses performed on 1:4 w:v aqueous extracts.

Amy Hill  
Chemist

11/29/05  
Date

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**Environmental Plus, Inc.**

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

P.O. Box 1558, Eunice, NM 88231

**Chain of Custody Form**

<b>Company Name</b> Environmental Plus, Inc.		<b>Bill To</b>		<b>ANALYSIS REQUEST</b>									
<b>EPI Project Manager</b> Iain Olness		<b>Duke Energy Field Services</b>											
<b>Mailing Address</b> P.O. BOX 1558													
<b>City, State, Zip</b> Eunice New Mexico 88231													
<b>EPI Phone# / Fax#</b> 505-394-3481 / 505-394-2601													
<b>Client Company</b> Duke Energy Field Services													
<b>Facility Name</b> A-8-13-1													
<b>Location</b> UL-J, Sect. 10, T 17 S, R 34 E													
<b>Project Reference</b> 130033													
<b>EPI Sampler Name</b> George Blackburn													

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.			SAMPLING		TIME	BTX 8021B	TPH 8015M	CHLORIDES (Cl)	SULFATES (SO <sub>4</sub> )	pH	TCLP	OTHER >>>	PAH	
				GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE	ICE/COOL	OTHER	DATE										
110444-1	1 SB-1 (10')		1												X	X	X	X					
2	2 SB-1 (15')		1												X	X	X	X					
3	3 SB-1 (20')		1												X	X	X	X					
4	4 SB-1 (25')		1												X	X	X	X					
5	5 SB-1 (30')		1												X	X	X	X					
6	6 SB-1 (35')		1												X	X	X	X					
7	7 SB-1 (40')		1												X	X	X	X					
8																							
9																							
10																							

<b>Sample Relinquished:</b> Iain Olness	<b>Relinquished by:</b> Roger Boone	<b>Received By:</b> Roger Boone	<b>Date:</b> 11-22-05	<b>Time:</b> 11:12	<b>Sample Cool &amp; Intact</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<b>REMARKS:</b> E-mail results to: iolness@envplus.net
	<b>Delivered by:</b> Roger Boone	<b>Checked By:</b> Roger Boone				



# ARDINAL 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: 12/16/05

Reporting Date: 12/21/05

Project Owner: DUKE ENERGY FIELD SERVICES

Project Name: A-8-13-1 EXT.

Project Location: UL-J, SEC10, T17S, R34E

Sampling Date: 12/07/05

Sample Type: SOIL

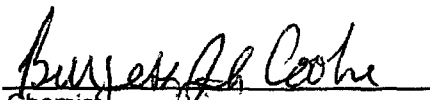
Sample Condition: COOL & INTACT

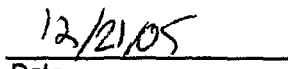
Sample Received By: HM

Analyzed By: BC

LAB NUMBER	SAMPLE ID	GRO	DRO
		(C <sub>6</sub> -C <sub>10</sub> ) (mg/Kg)	(>C <sub>10</sub> -C <sub>28</sub> ) (mg/Kg)
ANALYSIS DATE:		12/20/05	12/20/05
H10516-1	NWSW (8')	<10.0	71.5
H10516-2	NWSW (16')	<10.0	29.2
H10516-3	SWSW (8')	<10.0	<10.0
H10516-4	SWSW (16')	<10.0	24.3
H10516-5	SESW (8')	49.9	372
H10516-6	SESW (16')	<10.0	<10.0
H10516-7	NESW (8')	<10.0	<10.0
H10516-8	NESW (16')	<10.0	<10.0
H10516-9	BH-1 (20')	1450	1750
H10516-10	BH-2 (20')	<10.0	42.1
H10516-11	BH-3 (20')	<10.0	<10.0
Quality Control		751	783
True Value QC		800	800
% Recovery		93.8	97.9
Relative Percent Difference		2.0	6.3

METHOD: SW-846 8015 M

  
Chemist

  
Date

H10516A.XLS

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# ARDINAL LABORATORIES

PHONE (915) 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: 12/16/05

Reporting Date: 12/23/05

Project Number: 130033

Project Name: A-8-13-1 EXT

Project Location: UL-J, SECT. 10, T 17 S, R 34 E

Sampling Date: 12/07/05

Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: Hope Moreno

Analyzed By: JD

LAB NUMBER	SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYLBENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE:		12/21/05	12/21/05	12/21/05	12/21/05
H10516-1	NWSW 8'	<0.002	0.004	0.011	0.036
H10516-2	NWSW 16'	<0.002	<0.002	<0.002	<0.006
H10516-3	SWSW 8'	<0.002	<0.002	<0.002	<0.006
H10516-4	SWSW 16'	<0.002	<0.002	<0.002	<0.006
H10516-5	SESW 8'	1.03	1.41	3.04	10.70
H10516-6	SESW 16'	<0.002	<0.002	<0.002	<0.006
H10516-7	NESW 8'	<0.002	<0.002	<0.002	<0.006
H10516-8	NESW 16'	<0.002	<0.002	<0.002	<0.006
H10516-9	BH-1 20'	23.8	304	1132	315.4
H10516-10	BH-2 20'	<0.002	<0.002	<0.002	<0.006
H10516-11	BH-3 20'	<0.002	<0.002	<0.002	<0.006
Quality Control		0.094	0.093	0.095	0.276
True Value QC		0.100	0.100	0.100	0.300
% Recovery		94%	93%	95%	92%
Relative Percent Difference		6.10%	5.20%	4.10%	2.20%

METHODS: EPA - SW 846-8021B, 5030B; Gas Chromatography

  
Laboratory Manager

12/23/05  
Date

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# ARDINAL 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: 12/16/05

Reporting Date: 12/21/05

Project Owner: DUKE ENERGY FIELD SERVICES

Project Name: A-8-13-1 EXT.

Project Location: UL-J, SEC10, T17S, R34E

Sampling Date: 12/07/05

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:		12/20/05	12/20/05
H10516-1	NWSW (8')	384	16
H10516-2	NWSW (16')	61	16
H10516-3	SWSW (8')	397	192
H10516-4	SWSW (16')	147	48
H10516-5	SESW (8')	247	304
H10516-6	SESW (16')	157	64
H10516-7	NESW (8')	<1	48
H10516-8	NESW (16')	40	16
H10516-9	BH-1 (20')	95	16
H10516-10	BH-2 (20')	166	48
H10516-11	BH-3 (20')	166	48
Quality Control		57.87	980
True Value QC		50.00	1000
% Recovery		116	98.0
Relative Percent Difference		6.0	2.0

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

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

*John S. Moore*  
Chemist

12-21-05  
Date

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

## 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 Ext.																							
Location UL-J, Sect. 10, T 17 S, R 34 E																							
Project Reference 130033																							
EPI Sampler Name David Robinson																							
LAB I.D.  H10516 - 1		SAMPLE I.D.		# CONTAINERS	MATRIX			PRESERV.	SAMPLING														
				(G)RAB OR (C)OMP.	GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE	ICE/COOL	OTHER	DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl)	SULFATES (SO <sub>4</sub> )	pH	TCLP	OTHER >>	PAH
NWSW (8')				G 1	X		X					X		07-Dec-05	13:10	X	X	X	X				
2 NWSW (16')				G 1			X					X		07-Dec-05	13:57	X	X	X	X				
3 SWSW (8')				G 1			X					X		07-Dec-05	13:12	X	X	X	X				
4 SWSW (16')				G 1			X					X		07-Dec-05	13:37	X	X	X	X				
5 SESW (8')				G 1			X					X		07-Dec-05	13:16	X	X	X	X				
6 SESW (16')				G 1			X					X		07-Dec-05	13:41	X	X	X	X				
7 NESW (8')				G 1			X					X		07-Dec-05	13:14	X	X	X	X				
8 NESW (16')				G 1			X					X		07-Dec-05	13:39	X	X	X	X				
9 BH-1 (20')				G 1			X					X		07-Dec-05	13:45	X	X	X	X				
10 BH-2 (20')				G 1			X					X		07-Dec-05	13:47	X	X	X	X				

Sample Requested By: <i>Iain Olness</i>	Date Received By: 10/10/05 Time 13:30	Received By: (lab staff) 12/16/05 Time 15:45 <i>Hope J. Adams</i>
Relinquished by: <i>Iain Olness</i>		
Delivered by:		
	Sample Cool & Intact Yes No	Checked By:

E-mail results to: iolness@envplus.net

REMARKS:

**Environmental Plus, Inc.**

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

P.O. Box 1558, Eunice, NM 88231

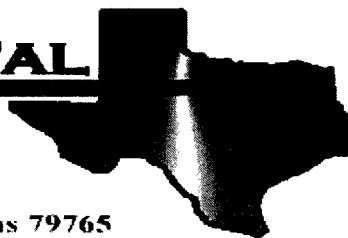
**Chain of Custody Form**

<b>Company Name</b> Environmental Plus, Inc.		<b>Bill To</b>		<b>ANALYSIS REQUEST</b>																			
<b>EPI Project Manager</b> Iain Olness		<b>Duke Energy Field Services</b>																					
<b>Mailing Address</b> P.O. BOX 1558																							
<b>City, State, Zip</b> Eunice New Mexico 88231																							
<b>EPI Phone#/Fax#</b> 505-394-3481 / 505-394-2601																							
<b>Client Company</b> Duke Energy Field Services																							
<b>Facility Name</b> A-8-13-1 Ext.																							
<b>Location</b> UL-J, Sect. 10, T 17 S, R 34 E																							
<b>Project Reference</b> 130033																							
<b>EPI Sampler Name</b> David Robinson																							
<b>LAB I.D.</b>	<b>SAMPLE I.D.</b>	<b>(G)RAB OR (C)OMP.</b>	<b># CONTAINERS</b>	<b>GROUND WATER</b>	<b>WASTEWATER</b>	<b>SOIL</b>	<b>CRUDE OIL</b>	<b>SLUDGE</b>	<b>OTHER:</b>	<b>ACID/BASE</b>	<b>ICE/COOL</b>	<b>OTHER</b>	<b>DATE</b>	<b>TIME</b>	<b>BTEX 8021B</b>	<b>TPH 8015M</b>	<b>CHLORIDES (Cl)</b>	<b>SULFATES (SO<sub>4</sub>)</b>	<b>PH</b>	<b>TCLP</b>	<b>OTHER &gt;&gt;&gt;</b>	<b>PAH</b>	
H10516-11	BH-3 (20')	G	1			X					X		07-Dec-05	13:49	X	X	X						
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							

<b>Sampler Relinquished:</b> Iain Olness	<b>Received By:</b> Iain Olness Date: 12/16/05 Time: 1545	<b>Remarks:</b> E-mail results to: iolness@envplus.net
<b>Relinquished by:</b> Iain Olness	<b>Received By: (lab staff)</b>	
<b>Delivered by:</b>	<b>Sample Cool &amp; Intact</b> Yes No	<b>Checked By:</b>

# 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 Ext.

Project Number: 130033

Location: UL-J, Sect. 10, T 17 S, R 34 E

Lab Order Number: 6F06023

Report Date: 06/12/06



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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
06/12/06 14:54

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH-1A 21.5'	6F06023-01	Soil	06/06/06 10:35	06/06/06 16:00

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
06/12/06 14:54

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>BH-1A 21.5' (6F06023-01) Soil</b>									
Chloride	38.2	5.00	mg/kg	10	EF60708	06/07/06	06/07/06	EPA 300.0	
% Moisture	7.8	0.1	%	1	EF60709	06/06/06	06/07/06	% calculation	
Sulfate	31.5	5.00	mg/kg	10	EF60708	06/07/06	06/07/06	EPA 300.0	

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.*

Page 3 of 9



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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
06/12/06 14:54

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>BH-1A 21.5' (6F06023-01) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EF60926	06/09/06	06/09/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: <i>a,a,a</i> -Trifluorotoluene		101 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.5 %	80-120		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF60719	06/07/06	06/09/06	EPA 8015M	
Carbon Ranges C12-C28	56.4	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	J [6.71]	10.0	"	"	"	"	"	"	J
Total Hydrocarbon nC6-nC35	56.4	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		103 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		114 %	70-130		"	"	"	"	

Environmental Lab of Texas

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Page 2 of 9

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
06/12/06 14:54

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>BH-1A 21.5' (6F06023-01) Soil</b>									
Chloride	38.2	5.00	mg/kg	10	EF60708	06/07/06	06/07/06	EPA 300.0	
% Moisture	7.8	0.1	%	1	EF60709	06/06/06	06/07/06	% calculation	
Sulfate	31.5	5.00	mg/kg	10	EF60708	06/07/06	06/07/06	EPA 300.0	

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
06/12/06 14:54

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

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

**Batch EF60719 - Solvent Extraction (GC)**

**Blank (EF60719-BLK1)**

Prepared: 06/07/06 Analyzed: 06/08/06

Carbon Ranges C6-C12	ND	10.0	mg/kg wet						
Carbon Ranges C12-C28	ND	10.0	"						
Carbon Ranges C28-C35	ND	10.0	"						
Total Hydrocarbon nC6-nC35	ND	10.0	"						
Surrogate: 1-Chlorooctane	59.8		mg/kg	50.0		120	70-130		
Surrogate: 1-Chlorooctadecane	61.3		"	50.0		123	70-130		

**LCS (EF60719-BS1)**

Prepared: 06/07/06 Analyzed: 06/08/06

Carbon Ranges C6-C12	578	10.0	mg/kg wet	500		116	75-125		
Carbon Ranges C12-C28	529	10.0	"	500		106	75-125		
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125		
Total Hydrocarbon nC6-nC35	1110	10.0	"	1000		111	75-125		
Surrogate: 1-Chlorooctane	74.9		mg/kg	100		74.9	70-130		
Surrogate: 1-Chlorooctadecane	78.9		"	100		78.9	70-130		

**Calibration Check (EF60719-CCV1)**

Prepared: 06/07/06 Analyzed: 06/09/06

Carbon Ranges C6-C12	257		mg/kg	250		103	80-120		
Carbon Ranges C12-C28	289		"	250		116	80-120		
Total Hydrocarbon nC6-nC35	547		"	500		109	80-120		
Surrogate: 1-Chlorooctane	72.5		"	100		72.5	70-130		
Surrogate: 1-Chlorooctadecane	88.3		"	100		88.3	70-130		

**Matrix Spike (EF60719-MS1)**

Source: 6F06023-01

Prepared: 06/07/06 Analyzed: 06/08/06

Carbon Ranges C6-C12	544	10.0	mg/kg dry	542	ND	100	75-125		
Carbon Ranges C12-C28	601	10.0	"	542	56.4	100	75-125		
Carbon Ranges C28-C35	ND	10.0	"	0.00	6.71		75-125		
Total Hydrocarbon nC6-nC35	1150	10.0	"	1080	56.4	101	75-125		
Surrogate: 1-Chlorooctane	55.0		mg/kg	50.0		110	70-130		
Surrogate: 1-Chlorooctadecane	56.3		"	50.0		113	70-130		

Environmental Lab of Texas

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Page 4 of 9

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
06/12/06 14:54

**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 EF60719 - Solvent Extraction (GC)**

**Matrix Spike Dup (EF60719-MSD1)**

Source: 6F06023-01

Prepared: 06/07/06 Analyzed: 06/08/06

Carbon Ranges C6-C12	555	10.0	mg/kg dry	542	ND	102	75-125	2.00	20	
Carbon Ranges C12-C28	607	10.0	"	542	56.4	102	75-125	0.993	20	
Carbon Ranges C28-C35	ND	10.0	"	0.00	6.71		75-125		20	
Total Hydrocarbon nC6-nC35	1160	10.0	"	1080	56.4	102	75-125	0.866	20	
Surrogate: 1-Chlorooctane	55.4		mg/kg	50.0		111	70-130			
Surrogate: 1-Chlorooctadecane	56.2		"	50.0		112	70-130			

**Batch EF60926 - EPA 5030C (GC)**

**Blank (EF60926-BLK1)**

Prepared & Analyzed: 06/09/06

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	37.9		ug/kg	40.0		94.8	80-120			
Surrogate: 4-Bromofluorobenzene	32.2		"	40.0		80.5	80-120			

**LCS (EF60926-BS1)**

Prepared & Analyzed: 06/09/06

Benzene	1.17	0.0250	mg/kg wet	1.25		93.6	80-120			
Toluene	1.22	0.0250	"	1.25		97.6	80-120			
Ethylbenzene	1.13	0.0250	"	1.25		90.4	80-120			
Xylene (p/m)	2.47	0.0250	"	2.50		98.8	80-120			
Xylene (o)	1.30	0.0250	"	1.25		104	80-120			
Surrogate: a,a,a-Trifluorotoluene	35.3		ug/kg	40.0		88.2	80-120			
Surrogate: 4-Bromofluorobenzene	38.2		"	40.0		95.5	80-120			

Environmental Lab of Texas

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Page 5 of 9

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
06/12/06 14:54

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

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

**Batch EF60926 - EPA 5030C (GC)**

**Calibration Check (EF60926-CCV1)**

Prepared: 06/09/06 Analyzed: 06/10/06

Benzene	48.3		ug/kg	50.0		96.6	80-120		
Toluene	50.4		"	50.0		101	80-120		
Ethylbenzene	55.3		"	50.0		111	80-120		
Xylene (p/m)	99.5		"	100		99.5	80-120		
Xylene (o)	53.1		"	50.0		106	80-120		
Surrogate: a,a,a-Trifluorotoluene	36.3		"	40.0		90.8	80-120		
Surrogate: 4-Bromofluorobenzene	38.1		"	40.0		95.2	80-120		

**Matrix Spike (EF60926-MS1)**

Source: 6F06023-01

Prepared: 06/09/06 Analyzed: 06/10/06

Benzene	1.34	0.0250	mg/kg dry	1.36	ND	98.5	80-120		
Toluene	1.29	0.0250	"	1.36	ND	94.9	80-120		
Ethylbenzene	1.20	0.0250	"	1.36	ND	88.2	80-120		
Xylene (p/m)	2.65	0.0250	"	2.71	ND	97.8	80-120		
Xylene (o)	1.40	0.0250	"	1.36	ND	103	80-120		
Surrogate: a,a,a-Trifluorotoluene	38.4		ug/kg	40.0		96.0	80-120		
Surrogate: 4-Bromofluorobenzene	40.8		"	40.0		102	80-120		

**Matrix Spike Dup (EF60926-MSD1)**

Source: 6F06023-01

Prepared: 06/09/06 Analyzed: 06/10/06

Benzene	1.30	0.0250	mg/kg dry	1.36	ND	95.6	80-120	2.99	20
Toluene	1.26	0.0250	"	1.36	ND	92.6	80-120	2.45	20
Ethylbenzene	1.16	0.0250	"	1.36	ND	85.3	80-120	3.34	20
Xylene (p/m)	2.61	0.0250	"	2.71	ND	96.3	80-120	1.55	20
Xylene (o)	1.37	0.0250	"	1.36	ND	101	80-120	1.96	20
Surrogate: a,a,a-Trifluorotoluene	34.8		ug/kg	40.0		87.0	80-120		
Surrogate: 4-Bromofluorobenzene	40.0		"	40.0		100	80-120		

Environmental Lab of Texas

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
06/12/06 14:54

**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
<b>Batch EF60708 - Water Extraction</b>										
<b>Blank (EF60708-BLK1)</b>				Prepared & Analyzed: 06/07/06						
Sulfate	ND	0.500	mg/kg							
Chloride	ND	0.500	"							
<b>LCS (EF60708-BS1)</b>				Prepared & Analyzed: 06/07/06						
Chloride	9.87	0.500	mg/kg	10.0		98.7	80-120			
Sulfate	8.09	0.500	"	10.0		80.9	80-120			
<b>Calibration Check (EF60708-CCV1)</b>				Prepared & Analyzed: 06/07/06						
Chloride	10.1		mg/L	10.0		101	80-120			
Sulfate	8.12		"	10.0		81.2	80-120			
<b>Duplicate (EF60708-DUP1)</b>				Source: 6F06008-02		Prepared & Analyzed: 06/07/06				
Chloride	415	10.0	mg/kg		462			10.7	20	
<b>Duplicate (EF60708-DUP2)</b>				Source: 6F06023-01		Prepared & Analyzed: 06/07/06				
Chloride	43.0	5.00	mg/kg		38.2			11.8	20	
Sulfate	38.2	5.00	"		31.5			19.2	20	
<b>Matrix Spike (EF60708-MS1)</b>				Source: 6F06008-02		Prepared & Analyzed: 06/07/06				
Chloride	677	10.0	mg/kg	200	462	108	80-120			
<b>Matrix Spike (EF60708-MS2)</b>				Source: 6F06023-01		Prepared & Analyzed: 06/07/06				
Chloride	143	5.00	mg/kg	100	38.2	105	80-120			
Sulfate	111	5.00	"	100	31.5	79.5	80-120			S-07
<b>Batch EF60709 - General Preparation (Prep)</b>										
<b>Blank (EF60709-BLK1)</b>				Prepared: 06/06/06 Analyzed: 06/07/06						
% Solids	100		%							

Environmental Lab of Texas

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P.O. Box 1558  
Eunice NM, 88231

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
06/12/06 14:54

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

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

**Batch EF60709 - General Preparation (Prep)**

<b>Duplicate (EF60709-DUP1)</b>	<b>Source: 6F05012-01</b>		<b>Prepared: 06/06/06 Analyzed: 06/07/06</b>						
% Solids	98.9		%		98.8		0.101	20	
<b>Duplicate (EF60709-DUP2)</b>	<b>Source: 6F06004-02</b>		<b>Prepared: 06/06/06 Analyzed: 06/07/06</b>						
% Solids	97.9		%		98.9		1.02	20	
<b>Duplicate (EF60709-DUP3)</b>	<b>Source: 6F06007-01</b>		<b>Prepared: 06/06/06 Analyzed: 06/07/06</b>						
% Solids	94.8		%		95.4		0.631	20	
<b>Duplicate (EF60709-DUP4)</b>	<b>Source: 6F06015-07</b>		<b>Prepared: 06/06/06 Analyzed: 06/07/06</b>						
% Solids	83.6		%		86.2		3.06	20	

Environmental Lab of Texas

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

Reported:  
06/12/06 14:54

### Notes and Definitions

S-07 Recovery outside Laboratory historical or method prescribed limits.  
J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).  
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:

6/12/2006

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.

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If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

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**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 Ext.																				
Location		UL-J, Sect. 10, T 17 S, R 34 E																				
Project Reference		130033																				
EPI Sampler Name		David Robinson																				
LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE	ICE/COOL	OTHER	DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl)	SULFATES (SO <sub>4</sub> )	PH	TCLP	OTHER >>>	PAH
640033	1BH-1A (21.5')	G	1			X					X		06-Jun-06	10:35	X	X	X	X				
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

**Bill To**

**Duke Energy Field Services**

Attn: Ronnie Gilchrist  
1625 West Marland  
Hobbs, NM 88240

**ANALYSIS REQUEST**

E-mail results to: iolness@envplus.net

REMARKS: 4oz glass 9.0°C

**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 Ext.

**Location** UL-J, Sect. 10, T 17 S, R 34 E

**Project Reference** 130033

**EPI Sampler Name** David Robinson

**LAB I.D.** 640033

**SAMPLE I.D.** 1BH-1A (21.5')

**(G)RAB OR (C)OMP.** G

**# CONTAINERS** 1

**GROUND WATER**

**WASTEWATER**

**SOIL** X

**CRUDE OIL**

**SLUDGE**

**OTHER:**

**ACID/BASE**

**ICE/COOL** X

**OTHER**

**DATE** 06-Jun-06

**TIME** 10:35

**BTEX 8021B** X

**TPH 8015M** X

**CHLORIDES (Cl)** X

**SULFATES (SO<sub>4</sub>)** X

**PH**

**TCLP**

**OTHER >>>**

**PAH**

**Received By:** [Signature] Date: 6-6-06 Time: 1:30

**Received By: (lab staff)** [Signature] Date: 6-6-06 Time: 11:00

**Sample Cool & Intact** [Initials] No

**Checked By:** [Signature]

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

Client: EPI / Duke  
 Date/Time: 6/6/06 16:00  
 Order #: 6F06023  
 Initials: CK

**Sample Receipt Checklist**

Temperature of container/cooler?	Yes	No	9.5 C
Shipping container/cooler in good condition?	<input checked="" type="checkbox"/>	No	
Custody Seals intact on shipping container/cooler?	Yes	No	<del>NOT present</del>
Custody Seals intact on sample bottles?	Yes	No	<del>NOT present</del>
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"/>	<input checked="" type="checkbox"/>	* J m
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: Jacob M. Date/Time: 6/6/06 16:00 Contacted by: Carrie K.  
 Regarding: \_\_\_\_\_

Temp.

\_\_\_\_\_

\_\_\_\_\_

Corrective Action Taken:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Discussed - proceed w/ analysis.

\_\_\_\_\_

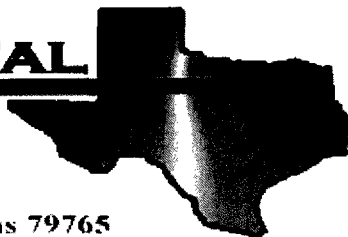
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# **ENVIRONMENTAL LAB OF**



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 Ext.

Project Number: 130033

Location: UL-J, Sect. 10, T 17 S, R 34 E

Lab Order Number: 6F23007

Report Date: 06/29/06

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH-1A 22'	6F23007-01	Soil	06/21/06 14:01	06/23/06 11:35
BH-2A 22'	6F23007-02	Soil	06/21/06 14:02	06/23/06 11:35
BH-3A 22'	6F23007-03	Soil	06/21/06 14:03	06/23/06 11:35
BH-4A 22'	6F23007-04	Soil	06/21/06 14:04	06/23/06 11:35

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>BH-1A 22' (6F23007-01) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EF62725	06/27/06	06/28/06	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		100 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	80-120		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF62326	06/23/06	06/26/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		113 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		112 %	70-130		"	"	"	"	
<b>BH-2A 22' (6F23007-02) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EF62725	06/27/06	06/28/06	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		103 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	80-120		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF62326	06/23/06	06/24/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		105 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		107 %	70-130		"	"	"	"	
<b>BH-3A 22' (6F23007-03) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EF62725	06/27/06	06/28/06	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		106 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.8 %	80-120		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF62326	06/23/06	06/24/06	EPA 8015M	

Environmental Lab of Texas

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>BH-3A 22' (6F23007-03) Soil</b>									
Carbon Ranges C12-C28	ND	10.0	mg/kg dry	1	EF62326	06/23/06	06/24/06	EPA 8015M	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		78.2 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		76.4 %	70-130		"	"	"	"	
<b>BH-4A 22' (6F23007-04) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EF62725	06/27/06	06/28/06	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		106 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.0 %	80-120		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EF62326	06/23/06	06/24/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbon nC6-nC35	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		106 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		107 %	70-130		"	"	"	"	

Environmental Lab of Texas

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Page 3 of 10

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Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>BH-1A 22' (6F23007-01) Soil</b>									
Chloride	32.8	5.00	mg/kg	10	EF62714	06/27/06	06/27/06	EPA 300.0	
% Moisture	6.9	0.1	%	1	EF62604	06/23/06	06/26/06	% calculation	
Sulfate	112	5.00	mg/kg	10	EF62714	06/27/06	06/27/06	EPA 300.0	
<b>BH-2A 22' (6F23007-02) Soil</b>									
Chloride	29.5	5.00	mg/kg	10	EF62714	06/27/06	06/27/06	EPA 300.0	
% Moisture	6.8	0.1	%	1	EF62604	06/23/06	06/26/06	% calculation	
Sulfate	106	5.00	mg/kg	10	EF62714	06/27/06	06/27/06	EPA 300.0	
<b>BH-3A 22' (6F23007-03) Soil</b>									
Chloride	36.2	5.00	mg/kg	10	EF62714	06/27/06	06/27/06	EPA 300.0	
% Moisture	6.3	0.1	%	1	EF62604	06/23/06	06/26/06	% calculation	
Sulfate	118	5.00	mg/kg	10	EF62714	06/27/06	06/27/06	EPA 300.0	
<b>BH-4A 22' (6F23007-04) Soil</b>									
Chloride	49.2	5.00	mg/kg	10	EF62714	06/27/06	06/27/06	EPA 300.0	
% Moisture	5.5	0.1	%	1	EF62604	06/23/06	06/26/06	% calculation	
Sulfate	180	5.00	mg/kg	10	EF62714	06/27/06	06/27/06	EPA 300.0	

Environmental Lab of Texas

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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**Batch EF62326 - Solvent Extraction (GC)**

**Blank (EF62326-BLK1)**

Prepared: 06/23/06 Analyzed: 06/24/06

Carbon Ranges C6-C12	ND	10.0	mg/kg wet						
Carbon Ranges C12-C28	ND	10.0	"						
Carbon Ranges C28-C35	ND	10.0	"						
Total Hydrocarbon nC6-nC35	ND	10.0	"						
Surrogate: 1-Chlorooctane	41.3		mg/kg	50.0		82.6	70-130		
Surrogate: 1-Chlorooctadecane	41.9		"	50.0		83.8	70-130		

**LCS (EF62326-BS1)**

Prepared: 06/23/06 Analyzed: 06/24/06

Carbon Ranges C6-C12	506	10.0	mg/kg wet	500		101	75-125		
Carbon Ranges C12-C28	481	10.0	"	500		96.2	75-125		
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125		
Total Hydrocarbon nC6-nC35	988	10.0	"	1000		98.8	75-125		
Surrogate: 1-Chlorooctane	41.9		mg/kg	50.0		83.8	70-130		
Surrogate: 1-Chlorooctadecane	36.4		"	50.0		72.8	70-130		

**Calibration Check (EF62326-CCV1)**

Prepared: 06/23/06 Analyzed: 06/24/06

Carbon Ranges C6-C12	228		mg/kg	250		91.2	80-120		
Carbon Ranges C12-C28	275		"	250		110	80-120		
Total Hydrocarbon nC6-nC35	503		"	500		101	80-120		
Surrogate: 1-Chlorooctane	85.6		"	100		85.6	70-130		
Surrogate: 1-Chlorooctadecane	85.5		"	100		85.5	70-130		

**Matrix Spike (EF62326-MS1)**

Source: 6F23007-01

Prepared: 06/23/06 Analyzed: 06/24/06

Carbon Ranges C6-C12	534	10.0	mg/kg dry	537	ND	99.4	75-125		
Carbon Ranges C12-C28	513	10.0	"	537	ND	95.5	75-125		
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125		
Total Hydrocarbon nC6-nC35	1050	10.0	"	1070	ND	98.1	75-125		
Surrogate: 1-Chlorooctane	61.7		mg/kg	50.0		123	70-130		
Surrogate: 1-Chlorooctadecane	57.6		"	50.0		115	70-130		

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD Limit	Notes
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**Batch EF62326 - Solvent Extraction (GC)**

**Matrix Spike Dup (EF62326-MSD1)**

Source: 6F23007-01

Prepared: 06/23/06 Analyzed: 06/24/06

Carbon Ranges C6-C12	536	10.0	mg/kg dry	537	ND	99.8	75-125	0.374	20
Carbon Ranges C12-C28	517	10.0	"	537	ND	96.3	75-125	0.777	20
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125		20
Total Hydrocarbon nC6-nC35	1050	10.0	"	1070	ND	98.1	75-125	0.00	20
Surrogate: 1-Chlorooctane	59.9		mg/kg	50.0		120	70-130		
Surrogate: 1-Chlorooctadecane	56.8		"	50.0		114	70-130		

**Batch EF62725 - EPA 5030C (GC)**

**Blank (EF62725-BLK1)**

Prepared & Analyzed: 06/27/06

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	40.2		ug/kg	40.0		100	80-120		
Surrogate: 4-Bromofluorobenzene	34.1		"	40.0		85.2	80-120		

**LCS (EF62725-BS1)**

Prepared & Analyzed: 06/27/06

Benzene	1.30	0.0250	mg/kg wet	1.25		104	80-120		
Toluene	1.37	0.0250	"	1.25		110	80-120		
Ethylbenzene	1.18	0.0250	"	1.25		94.4	80-120		
Xylene (p/m)	2.71	0.0250	"	2.50		108	80-120		
Xylene (o)	1.36	0.0250	"	1.25		109	80-120		
Surrogate: a,a,a-Trifluorotoluene	36.9		ug/kg	40.0		92.2	80-120		
Surrogate: 4-Bromofluorobenzene	37.9		"	40.0		94.8	80-120		

Environmental Lab of Texas

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

**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
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**Batch EF62725 - EPA 5030C (GC)**

**Calibration Check (EF62725-CCV1)**

Prepared: 06/27/06 Analyzed: 06/28/06

Benzene	51.5		ug/kg	50.0		103	80-120			
Toluene	56.8		"	50.0		114	80-120			
Ethylbenzene	57.8		"	50.0		116	80-120			
Xylene (p/m)	116		"	100		116	80-120			
Xylene (o)	57.1		"	50.0		114	80-120			
Surrogate: a,a,a-Trifluorotoluene	38.5		"	40.0		96.2	80-120			
Surrogate: 4-Bromofluorobenzene	41.5		"	40.0		104	80-120			

**Matrix Spike (EF62725-MS1)**

Source: 6F23006-16

Prepared: 06/27/06 Analyzed: 06/28/06

Benzene	1.33	0.0250	mg/kg dry	1.29	ND	103	80-120			
Toluene	1.45	0.0250	"	1.29	ND	112	80-120			
Ethylbenzene	1.38	0.0250	"	1.29	ND	107	80-120			
Xylene (p/m)	3.05	0.0250	"	2.58	ND	118	80-120			
Xylene (o)	1.48	0.0250	"	1.29	ND	115	80-120			
Surrogate: a,a,a-Trifluorotoluene	38.1		ug/kg	40.0		95.2	80-120			
Surrogate: 4-Bromofluorobenzene	43.7		"	40.0		109	80-120			

**Matrix Spike Dup (EF62725-MSD1)**

Source: 6F23006-16

Prepared: 06/27/06 Analyzed: 06/28/06

Benzene	1.38	0.0250	mg/kg dry	1.29	ND	107	80-120	3.81	20	
Toluene	1.51	0.0250	"	1.29	ND	117	80-120	4.37	20	
Ethylbenzene	1.47	0.0250	"	1.29	ND	114	80-120	6.33	20	
Xylene (p/m)	3.04	0.0250	"	2.58	ND	118	80-120	0.00	20	
Xylene (o)	1.54	0.0250	"	1.29	ND	119	80-120	3.42	20	
Surrogate: a,a,a-Trifluorotoluene	39.7		ug/kg	40.0		99.2	80-120			
Surrogate: 4-Bromofluorobenzene	45.0		"	40.0		112	80-120			

Environmental Lab of Texas

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
<b>Batch EF62604 - General Preparation (Prep)</b>									
<b>Duplicate (EF62604-DUP1)</b>		<b>Source: 6F22020-01</b>			Prepared: 06/23/06 Analyzed: 06/26/06				
% Solids	100		%		100		0.00	20	
<b>Duplicate (EF62604-DUP2)</b>		<b>Source: 6F23006-08</b>			Prepared: 06/23/06 Analyzed: 06/26/06				
% Solids	91.3		%		91.4		0.109	20	
<b>Batch EF62714 - General Preparation (WetChem)</b>									
<b>Blank (EF62714-BLK1)</b>					Prepared & Analyzed: 06/27/06				
Sulfate	ND	0.500	mg/kg						
Chloride	ND	0.500	"						
<b>LCS (EF62714-BS1)</b>					Prepared & Analyzed: 06/27/06				
Chloride	10.1		mg/L	10.0	101	80-120			
Sulfate	10.6		"	10.0	106	80-120			
<b>Calibration Check (EF62714-CCV1)</b>					Prepared & Analyzed: 06/27/06				
Chloride	10.1		mg/L	10.0	101	80-120			
Sulfate	10.6		"	10.0	106	80-120			
<b>Duplicate (EF62714-DUP1)</b>		<b>Source: 6F26007-04</b>			Prepared & Analyzed: 06/27/06				
Chloride	51.4	5.00	mg/kg		50.2		2.36	20	
Sulfate	79.6	5.00	"		79.5		0.126	20	
<b>Duplicate (EF62714-DUP2)</b>		<b>Source: 6F23007-01</b>			Prepared & Analyzed: 06/27/06				
Chloride	33.1	5.00	mg/kg		32.8		0.910	20	
Sulfate	112	5.00	"		112		0.00	20	

Environmental Lab of Texas

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Page 8 of 10

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

**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
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**Batch EF62714 - General Preparation (WetChem)**

**Matrix Spike (EF62714-MS1)**

**Source: 6F26007-04**

**Prepared & Analyzed: 06/27/06**

Chloride	151	5.00	mg/kg	100	50.2	101	80-120			
Sulfate	156	5.00	"	100	79.5	76.5	80-120			S-07

**Matrix Spike (EF62714-MS2)**

**Source: 6F23007-01**

**Prepared & Analyzed: 06/27/06**

Chloride	128	5.00	mg/kg	100	32.8	95.2	80-120			
Sulfate	195	5.00	"	100	112	83.0	80-120			

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

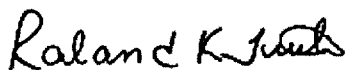
Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

### Notes and Definitions

S-07 Recovery outside Laboratory historical or method prescribed limits.  
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:



Date:

6/29/2006

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.

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If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

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# Environmental Plus, Inc.

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

P.O. Box 1558, Eunice, NM 88231

## Chain of Custody Form

Company Name Environmental Plus, Inc.		Bill To		ANALYSIS REQUEST	
EPI Project Manager Iain Olness		Duke Energy Field Services			
Mailing Address P.O. BOX 1558		Attn: Ronnie Gilchrist			
City, State, Zip Eunice New Mexico 88231		1625 West Marland			
EPI Phone#/Fax# 505-394-3481 / 505-394-2601		Hobbs, NM 88240			
Client Company Duke Energy Field Services					
Facility Name A-8-13-1 Ext.					
Location UL-J, Sect. 10, T 17 S, R 34 E					
Project Reference 130033					
EPI Sampler Name David Robinson					

LAB I.D.	SAMPLE I.D.	MATRIX			PRESERV.			SAMPLING		ANALYSIS REQUEST											
		GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE	ICE/COOL	OTHER	DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl)	SULFATES (SO <sub>4</sub> )	PH	TCLP	OTHER >>>	PAH	
1	BH-1A (22')			X							21-Jun-06	14:01	X	X	X	X					
2	BH-2A (22')			X							21-Jun-06	14:02	X	X	X	X					
3	BH-3A (22')			X							21-Jun-06	14:03	X	X	X	X					
4	BH-4A (22')			X							21-Jun-06	14:04	X	X	X	X					
5																					
6																					
7																					
8																					
9																					
10																					

Sampler Relinquished: David Robinson	Received By: Daron Boone	Time: 6:00 AM	Date: 6/23/06
Relinquished by:	Received By: (lab staff)	Time:	Date:
Delivered by:	Sample Cool & Intact	No	Yes
	4.0		

REMARKS:  
for glass  
w/ labels & jar seals

E-mail results to: jstegemoller@envplus.net

# Environmental Lab of Texas

## Variance / Corrective Action Report – Sample Log-In

Client: EPI

Date/Time: 6/28/06 11:25

Order #: 6F23007

Initials: CK

### Sample Receipt Checklist

Temperature of container/cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	4.0 C
Shipping container/cooler in good condition?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Custody Seals intact on shipping container/cooler?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<del>Not present</del>
Custody Seals intact on sample bottles?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not present
Chain of custody present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Sample Instructions complete on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Chain of Custody signed when relinquished and received?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Chain of custody agrees with sample label(s)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Container labels legible and intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Sample Matrix and properties same as on chain of custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Samples in proper container/bottle?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Samples properly preserved?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Sample bottles intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Containers documented on Chain of Custody?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Sufficient sample amount for indicated test?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
All samples received within sufficient hold time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
VOC samples have zero headspace?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Not Applicable

Other observations:

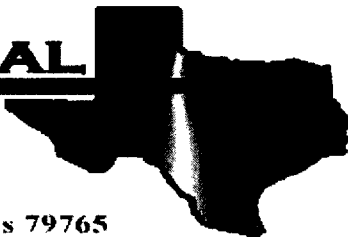
### Variance Documentation:

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

Regarding: \_\_\_\_\_

Corrective Action Taken:

# 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 Ext.

Project Number: 130033

Location: UL-J, Sect. 10, T 17 S, R 34 E

Lab Order Number: 6G11004

Report Date: 07/12/06

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP-1	6G11004-01	Soil	07/10/06 07:45	07/11/06 11:00
SP-2	6G11004-02	Soil	07/10/06 07:46	07/11/06 11:00
SP-3	6G11004-03	Soil	07/10/06 07:47	07/11/06 11:00

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SP-1 (6G11004-01) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EG61108	07/11/06	07/11/06	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		98.2 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	80-120		"	"	"	"	
<b>Carbon Ranges C6-C12</b>	<b>J [7.46]</b>	10.0	mg/kg dry	1	EF62304	07/11/06	07/11/06	EPA 8015M	J
<b>Carbon Ranges C12-C28</b>	<b>118</b>	10.0	"	"	"	"	"	"	
<b>Carbon Ranges C28-C35</b>	<b>ND</b>	10.0	"	"	"	"	"	"	
<b>Total Hydrocarbon nC6-nC35</b>	<b>118</b>	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		85.2 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		87.6 %	70-130		"	"	"	"	
<b>SP-2 (6G11004-02) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EG61108	07/11/06	07/11/06	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		96.8 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.5 %	80-120		"	"	"	"	
<b>Carbon Ranges C6-C12</b>	<b>J [9.00]</b>	10.0	mg/kg dry	1	EF62304	07/11/06	07/11/06	EPA 8015M	J
<b>Carbon Ranges C12-C28</b>	<b>149</b>	10.0	"	"	"	"	"	"	
<b>Carbon Ranges C28-C35</b>	<b>ND</b>	10.0	"	"	"	"	"	"	
<b>Total Hydrocarbon nC6-nC35</b>	<b>149</b>	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		93.4 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		94.2 %	70-130		"	"	"	"	
<b>SP-3 (6G11004-03) Soil</b>									
Benzene	ND	0.0250	mg/kg dry	25	EG61108	07/11/06	07/11/06	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		98.8 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	80-120		"	"	"	"	
<b>Carbon Ranges C6-C12</b>	<b>J [8.80]</b>	10.0	mg/kg dry	1	EF62304	07/11/06	07/11/06	EPA 8015M	J

Environmental Lab of Texas

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Page 2 of 10

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SP-3 (6G11004-03) Soil</b>									
<b>Carbon Ranges C12-C28</b>	<b>101</b>	10.0	mg/kg dry	1	EF62304	07/11/06	07/11/06	EPA 8015M	
<b>Carbon Ranges C28-C35</b>	<b>ND</b>	10.0	"	"	"	"	"	"	
<b>Total Hydrocarbon nC6-nC35</b>	<b>101</b>	10.0	"	"	"	"	"	"	
<i>Surrogate: 1-Chlorooctane</i>		89.8 %	70-130		"	"	"	"	
<i>Surrogate: 1-Chlorooctadecane</i>		91.2 %	70-130		"	"	"	"	

Environmental Lab of Texas

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Page 3 of 10

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>SP-1 (6G11004-01) Soil</b>									
Chloride	106	20.0	mg/kg Wet	2	EG61107	07/11/06	07/11/06	SW 846 9253	
% Moisture	1.9	0.1	%	1	EG61212	07/11/06	07/12/06	% calculation	
Sulfate	63.0	25.0	mg/kg	5	EG61211	07/11/06	07/12/06	EPA 9038	
<b>SP-2 (6G11004-02) Soil</b>									
Chloride	74.4	20.0	mg/kg Wet	2	EG61107	07/11/06	07/11/06	SW 846 9253	
% Moisture	1.3	0.1	%	1	EG61212	07/11/06	07/12/06	% calculation	
Sulfate	81.5	25.0	mg/kg	5	EG61211	07/11/06	07/12/06	EPA 9038	
<b>SP-3 (6G11004-03) Soil</b>									
Chloride	63.8	20.0	mg/kg Wet	2	EG61107	07/11/06	07/11/06	SW 846 9253	
% Moisture	1.6	0.1	%	1	EG61212	07/11/06	07/12/06	% calculation	
Sulfate	52.5	25.0	mg/kg	5	EG61211	07/11/06	07/12/06	EPA 9038	

Environmental Lab of Texas

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD Limit	Notes
<b>Batch EF62304 - Solvent Extraction (GC)</b>								
<b>Blank (EF62304-BLK1)</b>			Prepared & Analyzed: 07/11/06					
Carbon Ranges C6-C12	ND	10.0	mg/kg wet					
Carbon Ranges C12-C28	ND	10.0	"					
Carbon Ranges C28-C35	ND	10.0	"					
Total Hydrocarbon nC6-nC35	ND	10.0	"					
Surrogate: 1-Chlorooctane	46.8		mg/kg	50.0		93.6	70-130	
Surrogate: 1-Chlorooctadecane	47.8		"	50.0		95.6	70-130	
<b>LCS (EF62304-BS1)</b>			Prepared & Analyzed: 07/11/06					
Carbon Ranges C6-C12	430	10.0	mg/kg wet	500		86.0	75-125	
Carbon Ranges C12-C28	444	10.0	"	500		88.8	75-125	
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125	
Total Hydrocarbon nC6-nC35	874	10.0	"	1000		87.4	75-125	
Surrogate: 1-Chlorooctane	51.6		mg/kg	50.0		103	70-130	
Surrogate: 1-Chlorooctadecane	43.7		"	50.0		87.4	70-130	
<b>Calibration Check (EF62304-CCV1)</b>			Prepared & Analyzed: 07/11/06					
Carbon Ranges C6-C12	223		mg/kg	250		89.2	80-120	
Carbon Ranges C12-C28	259		"	250		104	80-120	
Total Hydrocarbon nC6-nC35	482		"	500		96.4	80-120	
Surrogate: 1-Chlorooctane	39.8		"	50.0		79.6	70-130	
Surrogate: 1-Chlorooctadecane	37.9		"	50.0		75.8	70-130	
<b>Matrix Spike (EF62304-MS1)</b>			Source: 6G11002-24	Prepared & Analyzed: 07/11/06				
Carbon Ranges C6-C12	429	10.0	mg/kg dry	503	ND	85.3	75-125	
Carbon Ranges C12-C28	452	10.0	"	503	ND	89.9	75-125	
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125	
Total Hydrocarbon nC6-nC35	880	10.0	"	1010	ND	87.1	75-125	
Surrogate: 1-Chlorooctane	52.2		mg/kg	50.0		104	70-130	
Surrogate: 1-Chlorooctadecane	45.9		"	50.0		91.8	70-130	

Environmental Lab of Texas

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

**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 EF62304 - Solvent Extraction (GC)**

**Matrix Spike Dup (EF62304-MSD1)**

Source: 6G11002-24

Prepared & Analyzed: 07/11/06

Carbon Ranges C6-C12	430	10.0	mg/kg dry	503	ND	85.5	75-125	0.233	20	
Carbon Ranges C12-C28	467	10.0	"	503	ND	92.8	75-125	3.26	20	
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125		20	
Total Hydrocarbon nC6-nC35	897	10.0	"	1010	ND	88.8	75-125	1.91	20	
Surrogate: 1-Chlorooctane	53.8		mg/kg	50.0		108	70-130			
Surrogate: 1-Chlorooctadecane	46.4		"	50.0		92.8	70-130			

**Batch EG61108 - EPA 5030C (GC)**

**Blank (EG61108-BLK1)**

Prepared & Analyzed: 07/11/06

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	34.7		ug/kg	40.0		86.8	80-120			
Surrogate: 4-Bromofluorobenzene	38.1		"	40.0		95.2	80-120			

**LCS (EG61108-BS1)**

Prepared & Analyzed: 07/11/06

Benzene	1.17	0.0250	mg/kg wet	1.25		93.6	80-120			
Toluene	1.34	0.0250	"	1.25		107	80-120			
Ethylbenzene	1.31	0.0250	"	1.25		105	80-120			
Xylene (p/m)	2.89	0.0250	"	2.50		116	80-120			
Xylene (o)	1.42	0.0250	"	1.25		114	80-120			
Surrogate: a,a,a-Trifluorotoluene	37.8		ug/kg	40.0		94.5	80-120			
Surrogate: 4-Bromofluorobenzene	43.8		"	40.0		110	80-120			

Environmental Lab of Texas

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Page 6 of 10

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

**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 EG61108 - EPA 5030C (GC)**

**Calibration Check (EG61108-CCV1)**

Prepared: 07/11/06 Analyzed: 07/12/06

Benzene	59.7		ug/kg	50.0		119	80-120			
Toluene	57.9		"	50.0		116	80-120			
Ethylbenzene	56.3		"	50.0		113	80-120			
Xylene (p/m)	119		"	100		119	80-120			
Xylene (o)	58.2		"	50.0		116	80-120			
Surrogate: a,a,a-Trifluorotoluene	44.1		"	40.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	36.2		"	40.0		90.5	80-120			

**Matrix Spike (EG61108-MS1)**

Source: 6G11004-01

Prepared & Analyzed: 07/11/06

Benzene	1.41	0.0250	mg/kg dry	1.27	ND	111	80-120			
Toluene	1.42	0.0250	"	1.27	ND	112	80-120			
Ethylbenzene	1.26	0.0250	"	1.27	ND	99.2	80-120			
Xylene (p/m)	2.98	0.0250	"	2.55	ND	117	80-120			
Xylene (o)	1.44	0.0250	"	1.27	ND	113	80-120			
Surrogate: a,a,a-Trifluorotoluene	38.8		ug/kg	40.0		97.0	80-120			
Surrogate: 4-Bromofluorobenzene	40.5		"	40.0		101	80-120			

**Matrix Spike Dup (EG61108-MSD1)**

Source: 6G11004-01

Prepared & Analyzed: 07/11/06

Benzene	1.41	0.0250	mg/kg dry	1.27	ND	111	80-120	0.00	20	
Toluene	1.42	0.0250	"	1.27	ND	112	80-120	0.00	20	
Ethylbenzene	1.34	0.0250	"	1.27	ND	106	80-120	6.63	20	
Xylene (p/m)	2.97	0.0250	"	2.55	ND	116	80-120	0.858	20	
Xylene (o)	1.42	0.0250	"	1.27	ND	112	80-120	0.889	20	
Surrogate: a,a,a-Trifluorotoluene	44.1		ug/kg	40.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	41.1		"	40.0		103	80-120			

Environmental Lab of Texas

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Page 7 of 10

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

**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 EG61107 - Water Extraction**

**Blank (EG61107-BLK1)**

Prepared & Analyzed: 07/11/06

Chloride ND 20.0 mg/kg Wet

**LCS (EG61107-BS1)**

Prepared & Analyzed: 07/11/06

Chloride 83.0 mg/kg 100 83.0 80-120

**Matrix Spike (EG61107-MS1)**

Source: 6G11002-05

Prepared & Analyzed: 07/11/06

Chloride 489 20.0 mg/kg Wet 500 0.00 97.8 80-120

**Matrix Spike Dup (EG61107-MSD1)**

Source: 6G11002-05

Prepared & Analyzed: 07/11/06

Chloride 489 20.0 mg/kg Wet 500 0.00 97.8 80-120 0.00 20

**Reference (EG61107-SRM1)**

Prepared & Analyzed: 07/11/06

Chloride 50.0 mg/kg 50.0 100 80-120

**Batch EG61211 - Water Extraction**

**Blank (EG61211-BLK1)**

Prepared: 07/11/06 Analyzed: 07/12/06

Sulfate ND 25.0 mg/kg

**LCS (EG61211-BS1)**

Prepared: 07/11/06 Analyzed: 07/12/06

Sulfate 24.1 5.00 mg/kg 25.0 96.4 80-120

**Calibration Check (EG61211-CCV1)**

Prepared: 07/11/06 Analyzed: 07/12/06

Sulfate 50.8 mg/kg 50.0 102 80-120

**Duplicate (EG61211-DUP1)**

Source: 6G11004-01

Prepared: 07/11/06 Analyzed: 07/12/06

Sulfate 63.0 25.0 mg/kg 63.0 0.00 20

Environmental Lab of Texas

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Page 8 of 10

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

Project: DEFS/ A-8-13-1 Ext.  
Project Number: 130033  
Project Manager: Iain Olness

Fax: 505-394-2601

**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 EG61212 - General Preparation (Prep)**

**Blank (EG61212-BLK1)**

Prepared: 07/11/06 Analyzed: 07/12/06

% Solids 100 %

**Duplicate (EG61212-DUP1)**

Source: 6G11002-01

Prepared: 07/11/06 Analyzed: 07/12/06

% Solids 99.6 % 99.6 0.00 20

**Duplicate (EG61212-DUP2)**

Source: 6G11002-21

Prepared: 07/11/06 Analyzed: 07/12/06

% Solids 99.5 % 99.2 0.302 20

Environmental Plus, Incorporated  
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### Notes and Definitions

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).  
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:

7/12/2006

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.

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If you have received this material in error, please notify us immediately at 432-563-1800.

# Environmental Plus, Inc.

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

P.O. Box 1558, Eunice, NM 88231

## Chain of Custody Form

Company Name Environmental Plus, Inc.		Bill To		ANALYSIS REQUEST											
EPI Project Manager Iain Olness		Duke Energy Field Services													
Mailing Address P.O. BOX 1558		Attn: Ronnie Gilchrist													
City, State, Zip Eunice New Mexico 88231		1625 West Marland													
EPI Phone#/Fax# 505-394-3481 / 505-394-2601		Hobbs, NM 88240													
Client Company Duke Energy Field Services															
Facility Name A-8-13-1 Ext.															
Location UL-J, Sect. 10, T 17 S, R 34 E															
Project Reference 130033															
EPI Sampler Name David Robinson															

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.			SAMPLING		TIME	TPH 8015M	CHLORIDES (Cl)	SULFATES (SO <sub>4</sub> )	PH	TCLP	OTHER >>>	PAH
				GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE	ICE/COOL	OTHER	DATE									
1 SP-1		G 1																				
2 SP-2		G 1																				
3 SP-3		G 1																				
4																						
5																						
6																						
7																						
8																						
9																						
10																						

Samples Relinquished:		Received By:	
Date: 7/19/06		Date: 7/19/06	
Time: 06:47		Time: 06:47	
Relinquished by: [Signature]		Received By: (lab staff)	
Date: 7/19/06		Date: 7/19/06	
Time: 11:06		Time: 11:06	
Relinquished by: [Signature]		Received By: [Signature]	
Delivered by: [Signature]		Checked By: [Signature]	
Sample Cool & Intact		No	

E-mail results to: iolness@envplus.net	
REMARKS: RUSH	
4oz glass	
5.0 w/ labels	

# Environmental Lab of Texas

## Variance / Corrective Action Report – Sample Log-In

Client: EPI

Date/Time: 7/11/09 11:00

Order #: 6611009

Initials: UK

### Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	50	C
Shipping container/cooler in good condition?	<input checked="" type="checkbox"/>	No		
Custody Seals intact on shipping container/cooler?	Yes	No	Not present	
Custody Seals intact on sample bottles?	Yes	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:

---



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### Variance Documentation:

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

Regarding:

---



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Corrective Action Taken:

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**APPENDIX II**

**PROJECT PHOTOGRAPHS**





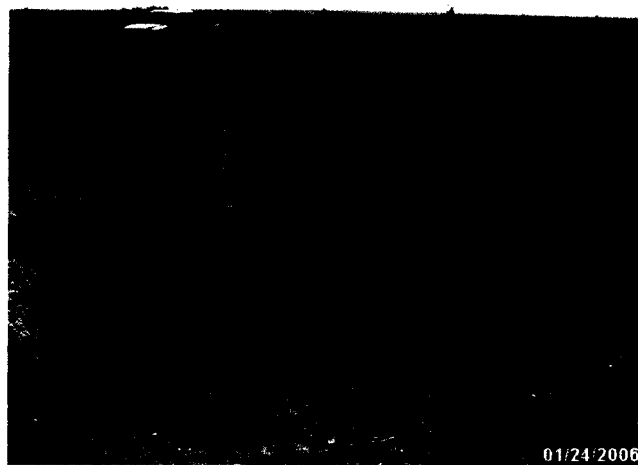
**Photo #1:** Looking northerly at point-of release. Dark stained soil indicates NGL contamination.



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



**Photo #3:** Excavation area, looking northeasterly.



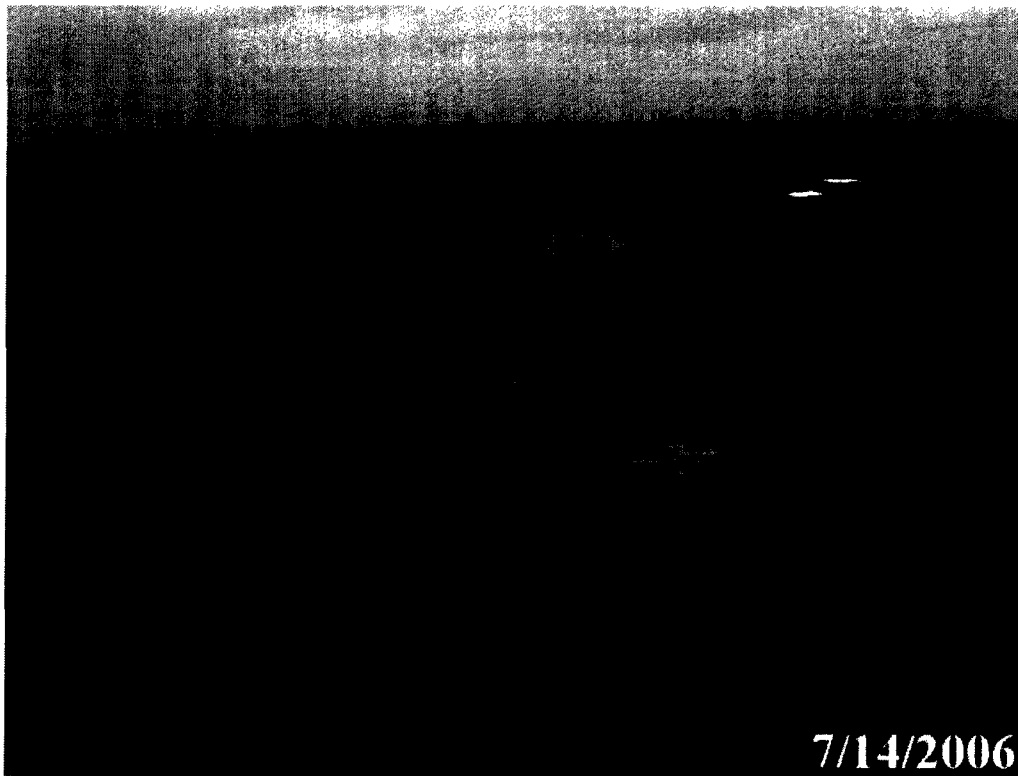
**Photo #4:** Excavation area, looking southerly.



**Photo #5:** Excavation area, looking north-northwesterly.



**Photo #6:** Excavation area, looking east-northeasterly.



*Photo #7:*Current status, looking easterly.



*Photo #8:*Current status, looking northerly

**APPENDIX III**  
**SOIL BORING LOG**

## Log Of Test Borings

(NOTE - Page 1 of 2)



ENVIRONMENTAL PLUS, INC.  
STATE APPROVED LAND FARM AND  
ENVIRONMENTAL SERVICES  
EUNICE  
505-394-3481

Project Number: 130033

Project Name: DEFS A-8-13-1 EXT

Location: UL-J, Section 10, Township 17 South, Range 34 East

Boring Number: SB-1

Surface Elevation: --

Time	Sample Type	Recovery (Inches)	Moisture	PID Readings (ppm)	Chloride Analysis (mg/Kg)	U.S.C.S. Symbol	Depth (feet)	Start Date: 11-21-05 Time: 9:30	Completion Date: 11-21-05 Time: 11:00	Description
										1' Sandy Loam Topsoil
							5			CALICHE, White to Tan, Hard to Firm
940	SS	12	Dry	1,281	160		10			
945	SS	12	Dry	888	160		15			
955	SS	12	Dry	100	160		20			
1000	SS	12	Dry	48.5	160		25			
1010	SS	12	Dry	44.5	160		30			
1020	SS	12	Dry	41.5	160		35			

## Log Of Test Borings

(NOTE - Page 2 of 2)



ENVIRONMENTAL PLUS, INC.  
STATE APPROVED LAND FARM AND  
ENVIRONMENTAL SERVICES  
EUNICE  
505-394-3481

Project Number: 130033

Project Name: DEFS A-8-13-1 EXT

Location: UL-J, Section 10, Township 17 South, Range 34 East

Boring Number: SB-1

Surface Elevation: --

Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	Chloride Analysis (mg/Kg)	U.S.C.S. Symbol	Depth (feet)	Description
1030	SS	12	Dry	5.7	160		40	CALICHE, White to Tan, Hard to Firm
								End of Soil Boring at 41' bgs
							40	
							45	
							50	
							55	
							60	

Water Level Measurements (feet)						Drilling Method: HSA 3.5' ID
Date	Time	Sample Depth	Casing Depth	Cave-In Depth	Water Level	Backfill Method: Bentonite
-	-	-	-	-	-	Field Representative: GB
-	-	-	-	-	-	

**APPENDIX IV**

**FINAL**

**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 March 17, 1999

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Duke Energy Field Services	Contact Lynn Ward
Address 10 Desta Drive, Suite 400-W, Midland, Texas 79705	Telephone No. 432-620-4162
Facility Name A-18-13-1 Ext.	Facility Type 4" Steel Low Pressure Line

Surface Owner State of New Mexico, leased by Eidson Ranches	Mineral Owner	Lease No.
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LOCATION OF RELEASE

Unit Letter J	Section 10	Township T17S	Range R34E	Feet from the North/South Line	Feet from the East/West Line	County: Lea Lat. N 32° 50' 46.02" Lon. W 103° 32' 40.32"
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IRP# 880

NATURE OF RELEASE

Type of Release Natural Gas and Natural Gas Liquids	Volume of Release 8 barrels	Volume Recovered No Recovery
Source of Release Internal corrosion of 4" steel low pressure line	Date and Hour of Occurrence September 27, 2005	Date and Hour of Discovery September 27, 2005 @ 14:30 hrs
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Larry Johnson, NMOCD-Hobbs @ 15:42 hrs	
By Whom? Lynn Ward	Not Required	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse. NA	

If a Watercourse was Impacted, Describe Fully.\*

NA

Describe Cause of Problem and Remedial Action Taken.\* The release occurred due to internal corrosion of a 4" steel line. The line was shut in, and later removed.

Describe Area Affected and Cleanup Action Taken.\* Approximately 1,400-ft<sup>2</sup> of surface area impacted due to the release. Approximately 2,040 yd<sup>3</sup> of soil impacted above NMOCD remedial thresholds was excavated from an area of approximately 3,460-ft<sup>2</sup> to a maximum depth of 22-ft bgs. Approximately 1,180 yd<sup>3</sup> of the most impacted soil was transported to Artesia Aeration, LLC for treatment. The remaining 860 yd<sup>3</sup> were blended with clean soil obtained from the State of New Mexico and utilized to backfill the excavation up to 2-ft bgs. The remaining 2-ft of excavation was backfilled with clean topsoil obtained from Eidson Ranches.

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: <i>Lynn Ward</i>	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Lynn Ward	Approved by District Supervisor: <i>ENVIRO ENGR</i>	
E-mail Address: leward@duke-energy.com		
Title: Senior Environmental Specialist	Approval Date: 11.20.06	Expiration Date: —
Date: 11-15-2006 Phone: (432) 620-4207	Conditions of Approval:	Attached <input type="checkbox"/>

\* Attach Additional Sheets If Necessary

RP# 880