

**SITE INVESTIGATION,
REMEDATION AND FINAL C-141
CLOSURE DOCUMENTATION**

**L-EXTENSION-2 RELEASE SITE
DEFS REF: L-EXTENSION-2 121103**

**UL-G (SW¼ OF THE NE¼) OF SECTION 21 T22S R36E
~7.5 MILES WEST-SOUTHWEST (236.5°) OF EUNICE
LEA COUNTY, NEW MEXICO**

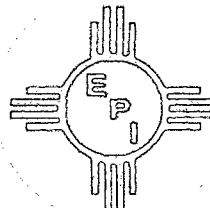
LATITUDE: N32° 22' 38.41" LONGITUDE: W103° 15' 58.71"

JANUARY 16, 2004

PREPARED BY: JCG

Environmental Plus, Inc.

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



Duke = 229153

*facility = FPAC0602037808
incident = NPAC0602037951*

application = pPAC0602038126



ENVIRONMENTAL PLUS, INC. *Micro-Blaze* *Micro-Blaze Out™*
STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES

January 16, 2004

Mr. Larry Johnson
Energy, Minerals, and Natural Resources Department
New Mexico Oil Conservation Division
1625 North French Dr.
Hobbs, New Mexico 88240

Subject: Duke Energy Field Services – L-Extension-2 121103
Final C-141 and Closure Documentation

Dear Mr. Johnson:

Environmental Plus, Inc. (EPI), on behalf of Duke Energy Field Services submits for your consideration and approval the Final C-141 and Closure Documentation for the “L-Extension-2 121103” remediation site. This report documents the vertical and horizontal extents of hydrocarbon contamination at the site, removal of contaminated soils above acceptable CoC levels, and the disposal of said contaminated soils at EPI’s approved land farm consistent with the Initial C-141 and Remediation Plan submitted to NMOCD on December 19, 2003. EPI, on behalf of Duke Energy Field Services, therefore requests that the NMOCD consider the information provided within this documentation and require “no further action” at this site.

If there are any questions please call Mr. Ben Miller or myself at EPI’s offices, or at 505-390-0288 or 505-390-9804, respectively. Mr. Paul Mulkey of Duke Energy Field Services can be contacted at 505-391-5716.

All official correspondence should be addressed to:

Mr. Paul Mulkey
Duke Energy Field Services
11525 West Carlsbad Highway
Hobbs, New Mexico 88240

Sincerely,

John Good, Environmental Consultant

cc: Paul Mulkey, Duke Energy Field Services, Linam Ranch, w/enclosure
Lynn Ward, Duke Energy Field Services, Midland, w/enclosure
Steve Weathers, Duke Energy Field Services, Denver, w/enclosure
Sherry Miller, EPI President
Ben Miller, EPI Vice President and General Manager
Pat McCasland, EPI Technical Manager
File

ENVIRONMENTAL PLUS, INC.

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Project Summary

Site Specific:

- ◆ **Company Name:** Duke Energy Field Services
- ◆ **Facility Name:** L-Extension-2 Natural Gas Gathering Pipeline
- ◆ **Project Reference** L-Extension-2 121103
- ◆ **Company Contact:** Paul Mulkey
- ◆ **Site Location:** WGS84: N32° 22' 38.41"; W103° 15' 58.71"
- ◆ **Legal Description:** Unit Letter G, (SW¼ of the NE¼), Section 21, T22S, R36E
- ◆ **General Description:** approximately 7.5-miles west-southwest (236.5°) of Eunice, NM
- ◆ **Elevation:** 3519-ft amsl **Depth to Ground Water:** ~165-ft
- ◆ **Land Ownership:** Millard Deck Estate
- ◆ **EPI Personnel:** Technical Manager – Pat McCasland
 Project Consultant – John Good
 Site Foreman – Eddie Joe Harper

Release Specific:

- ◆ **Product Released:** Natural Gas & NGL
- ◆ **Volume Released:** 5 bbl **Volume Recovered:** 3.5 bbl
- ◆ **Time of Occurrence:** Unknown **Time of Discovery:** 11-Dec-03
- ◆ **Release Source:** 20" steel NG pipeline; integrity lost due to internal corrosion; repaired by clamping with ultimate replacement of section.
- ◆ **Initial Surface Area Affected:** 2,000-ft²

Remediation Specific:

- ◆ **Final Vertical extent of contamination:** 7-ft bgs; Remaining depth to ground water: 158-ft
- ◆ **Water wells within 1000-ft:** 0 **Surface water bodies within 1000-ft:** 0
- ◆ **NMOCD Site Ranking Index:** 0 points (>100-ft to top of water table)
- ◆ **Remedial goals for Soil < 65-ft bgs:** TPH – 5000 ppm; BTEX – 50 ppm; Benzene – 10 ppm; Chlorides – 250 ppm
- ◆ **RCRA Waste Classification:** Exempt
- ◆ **Remediation Option Selected:** a) Excavation and disposal of contaminated soil above NMOCD remedial goals; b) analytical confirmation of bottom-hole and sidewall contaminant levels; c) backfill with clean caliche and topsoil.
- ◆ **Disposal Facility:** Environmental Plus, Inc. **Volume disposed of:** 861-yd³
- ◆ **Project Completion Date:** December 31, 2003
- ◆ **Additional Commentary:** None

1.0 Introduction & Background

This report addresses the site investigation and remediation of the Duke Energy Field Services (DEFS) "L-Extension-2 121103" 20-inch natural gas gathering line remediation site. On December 15, 2003, Environmental Plus, Inc. (EPI) was notified by DEFS regarding a newly discovered natural gas and associated natural gas liquid (NGL) release at this site. The initial C-141 Form submitted to the New Mexico Oil Conservation Division (NMOCD) on December 19, 2003 reports the release volume (NGL) as 5-bbl with 3.5-bbl recovered. EPI responded the day of the DEFS' notification and commenced GPS surveying, photography and characterization of the site. The site consisted of an approximate 2,000 -ft² surface area with pooled NGL associated with the Point of Release (POR) (*Plate 3, Attachments*). Remediation of this release site consisted of excavation and disposal of 861-yd³ of contaminated soil at EPI's approved surface waste facility, soil sampling and laboratory analyses, backfilling and contouring of the excavation. Remediation of the site was completed on December 31, 2003.

The site is associated with the DEFS L-Extension-2 natural gas gathering pipeline. This release site is located in Unit Letter G, (SW¼ of the NE¼), Section 21, T22S, R36E, N32°22'38.41" and W103°15'58.71". It is approximately 7.5-miles west-southwest (236.5°) of Eunice, NM. The property is owned by the Millard Deck Estate. A site location map, site topographical map and detailed GPS site renderings are included in the Attachments as *Plates 1, 2, 3 and 4*.

The natural gas and associated NGL release at this site was discovered on December 11, 2003 and reported to NMOCD on December 12, 2003. The Initial NMOCD C-141 Form was submitted on December 19, 2003. The leak was the result of internal pipe corrosion. The pipeline was temporarily clamped and eventually replaced by DEFS personnel.

2.0 Site Description

2.1 Geological Description

The United States Geological Survey (USGS) Ground-Water Report 6, "Geology and Ground-Water Conditions in Southern Lea County, New Mexico," A. Nicholson and A. Clebsch, 1961, describes the near surface geology of southern Lea County as "an intergrade of the Quaternary Alluvium (QA) sediments, i.e., fine to medium sand, with the mostly eroded Cenozoic Ogallala (CO) formation. Typically, the QA and CO formations in the area are capped by a thick interbed of caliche and generally overlain by sandy soil."

The release site is located in the Eunice Plain physiographic subdivision, described by Nicholson & Clebsch as an area "underlain by a hard caliche surface and is almost entirely covered by reddish-brown dune sand". The thickness of the sand cover ranges from 2-5 feet in most areas to as much as 20-30 feet in drift areas.

2.2 Ecological Description

The area is typical of the Upper Chihuahuan Desert Biome consisting primarily of hummocky sand hills covered with Harvard Shin Oak (*Quercus harvardi*) interspersed with Honey Mesquite (*Prosopis glandulosa*) along with typical desert grasses, flowering annuals and flowering perennials. Mammals represented, include Orrd's and Merriam's Kangaroo Rat, Deer Mouse, White Throated Wood Rat, Cottontail Rabbit, Black Tailed Jackrabbit, Mule Deer, Bobcat, Red Fox and Coyote. Reptiles, Amphibians, and Birds are numerous

and typical of area. A survey of Listed, Threatened, or Endangered species was not conducted.

2.3 Area Ground Water

The unconfined ground water aquifer at this site is projected to be ~165-ft bgs based on water depth data obtained from the NM State Engineers Office data base. Ground water gradient in this area is generally to the east-southeast.

Water Column Report - NM State Engineer Database, 12-19-03

Well Number	Tws	Rng	Sec	Q	Q	Q	Well Depth	Water Depth	Water Culum
763	22S	36E	1	3	2	2	265	137	128
727	22S	36E	5	2	3	1	267	212	55
469	22S	36E	6	3	2	1	220	195	25
70	22S	36E	16	1	2	2	220	170	50
575	22S	36E	27	4	3		198	160	38

(Quarters are: 1=NW, 2=NE, 3=SW, 4=SE - biggest to smallest)

2.4 Area Water Wells

All recorded wells are greater than 1000 horizontal feet from the site.

2.5 Area Surface Water Features

No surface water bodies exist within 1000 horizontal feet of the site.

3.0 NMOCD Site Ranking

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

- ◆ Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993)
- ◆ Unlined Surface Impoundment Closure Guidelines (February 1993)

Acceptable thresholds for contaminants/constituents of concern (CoCs), i.e., TPH^{8015m}, Benzene, and the mass sum of Benzene, Toluene, Ethyl Benzene, and total Xylenes (BTEX), was determined based on the NMOCD Ranking Criteria as follows:

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

Based on the proximity of the site to protectable area water wells, surface water bodies, and depth to ground water from the lower most contamination, the NMOCD ranking score for the site is 0 points with the soil remedial goals highlighted in the Site Ranking table presented below.

1. Ground Water	2. Wellhead Protection Area	3. Distance to Surface Water	
Depth to GW <50 feet: 20 points	If <1000' from water source, or; <200' from private domestic water source: 20 points	<200 horizontal feet: 20 points	
Depth to GW 50 to 99 feet: 10 points		200-1000 horizontal feet: 10 points	
Depth to GW >100 feet: 0 points	If >1000' from water source, or; >200' from private domestic water source: 0 points	>1000 horizontal feet: 0 points	
Ground Water Score = 0	Wellhead Protection Score= 0	Surface Water Score= 0	
Site Rank (1+2+3) = 0 + 0 + 0 = 0 points (for soil 0-65'bgs)			
Total Site Ranking Score and Acceptable Remedial Goal Concentrations			
Parameter	20 or >	10	0
Benzene ¹	10 ppm	10 ppm	10 ppm
BTEX ¹	50 ppm	50 ppm	50 ppm
TPH	100 ppm	1000 ppm	5000 ppm

4.0 Subsurface Soil Investigation

The vertical extent of hydrocarbon contamination at the site was determined by a test excavation of the release area associated with the POR to a depth of 8-ft bgs. It was determined that the NGL had penetrated the soil to a depth less than 8-ft beneath the POR (*Plate 5, Attachments*). The lateral extent of contamination was determined with PID measurements of VOC concentrations as the excavation progressed outwardly from the POR. Final bottom-hole and sidewall contaminant concentrations were determined with 5-point composite sampling on 12-23-03 (*Plate 5, Attachments*). All laboratory analyses for this project were performed by Cardinal Laboratories, Hobbs, NM. The 7-ft composite bottom-hole sample (12-23-03) was analyzed for chloride and sulfate contamination and was found to be well below the respective remedial goals of 250-ppm and 600-ppm.

5.0 Ground Water Investigation

The projected depth to ground water at this site is 165-ft bgs. Excavation of the site was to a maximum depth of 7-ft. Final CoC levels of the bottom-hole of the excavation were confirmed to be below remedial goals for Benzene, TPH and BTEX (*Plate 5, Attachments*).

The excavation was backfilled with clean caliche and topsoil purchased from the property owner. Based on the removal the Constituents of Concern (CoC) to below remedial goal concentrations and adequate depth to ground water, there will be no need for further ground water investigation at this site.

6.0 Remediation Process

Remediation of the site commenced on December 15, 2003 and continued through December 31, 2003. Remedial activities at the site consisted of excavation and disposal of 861-yd³ of NGL contaminated soil from the site. All contaminated soil removed from the site was disposed of in the NMOCD approved EPI land farm located south of Eunice, NM. The excavation was backfilled with clean caliche and topsoil purchased from the property owner.

The excavation was composite sampled (bottom-hole and sidewalls) on December 23, 2003. Results of the analyses (*Plates 5, Attachments*) indicate that remedial goals have been achieved in all areas of the excavation.

The surface damaged area encompasses 21,834-ft² (*Plate 4 – Attachments*). This area will be evaluated periodically for the necessity of re-seeding or erosion control.

7.0 Closure Justification

This report documents successful implementation of the Remediation Plan approved by NMOCD for this release site. Soil contaminated above acceptable CoC remedial concentrations was excavated and removed from the location. Disposal of RCRA exempt contaminated soils was at the Environmental Plus, Inc. approved land farm. The excavation was backfilled with clean caliche and topsoil and properly contoured to provide adequate drainage. Based on the data presented in this report, Environmental Plus, Inc., on behalf of Duke Energy Field Services, requests that the NMOCD require “no further action” at this site.

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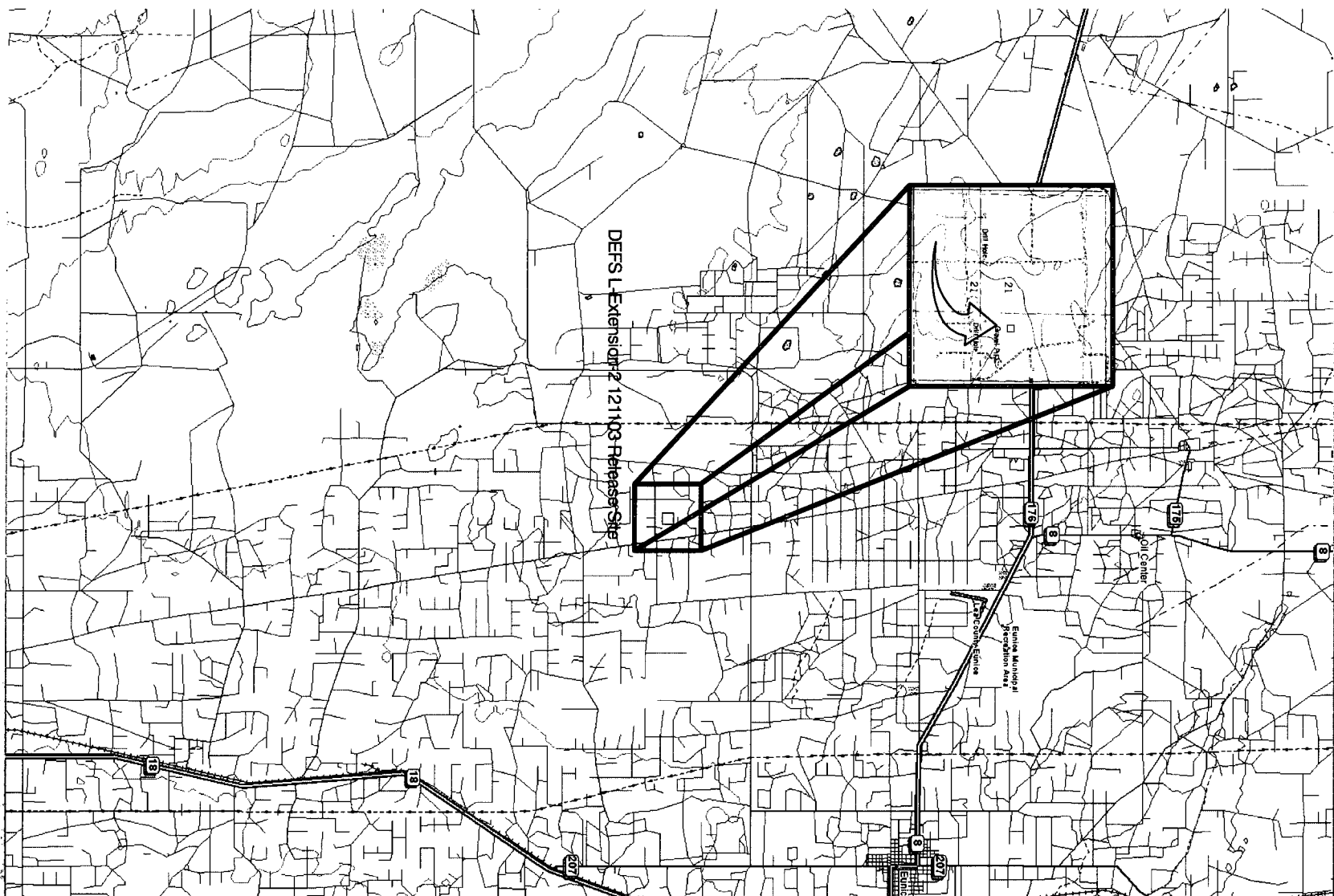


Plate 1 - Release Site Location
Duke Energy Field Services
L-Extension-2 121103

Lea County, New Mexico
UL-G Section 21 T22S R36E
N32° 22' 38.41" W103° 15' 58.71"
Elevation: 3,519-ft amsl

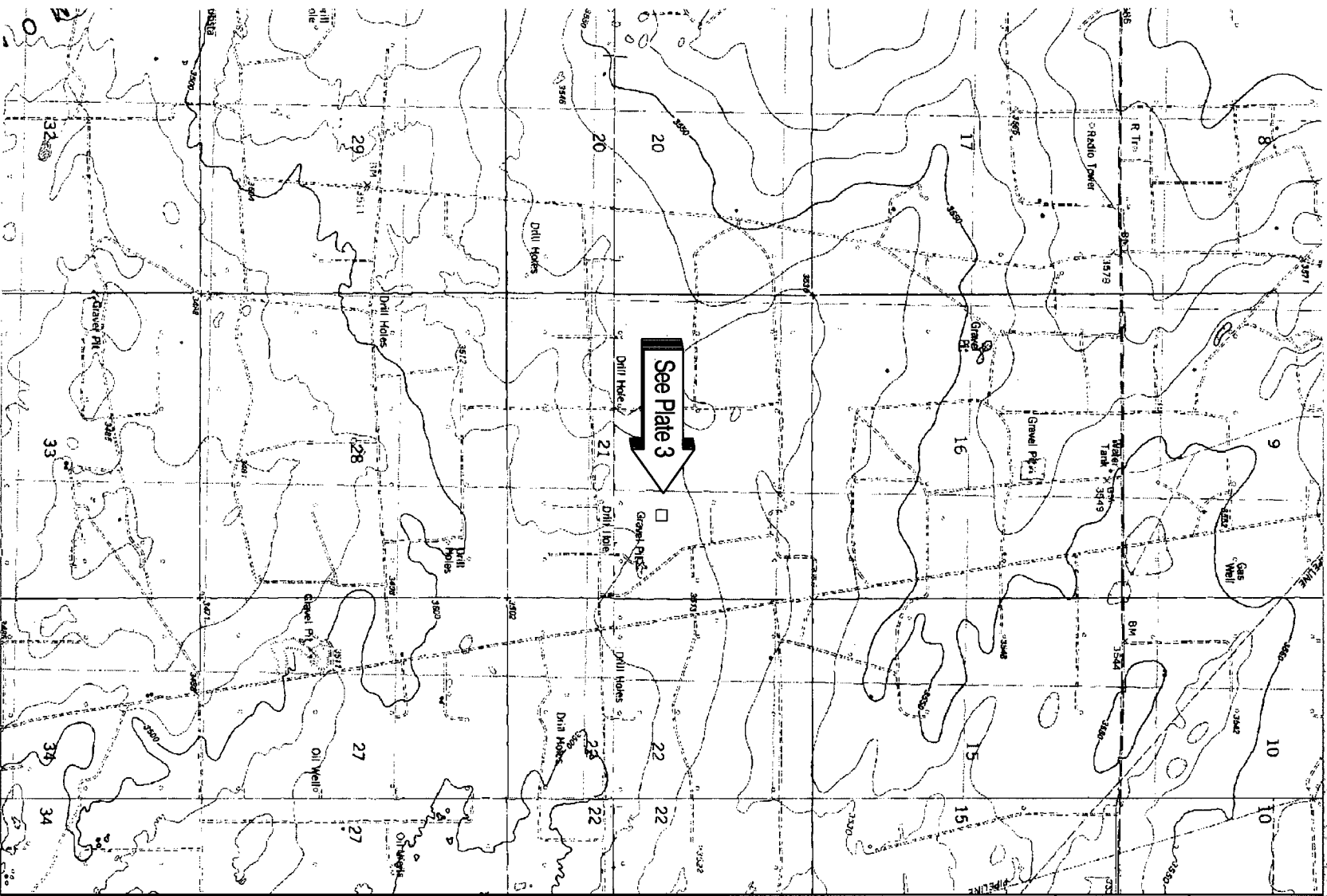
DWG BY: John Good
December - 2003

REVISED:

SCALE:
0 5
Miles

SHEET
1 of 1





<p>Plate 1 - Release Site Topography Duke Energy Field Services L-Extension-2 121103</p>	<p>Lea County, New Mexico UL-G Section 21 T22S R36E N32° 22' 38.41" W103° 15' 58.71" Elevation: 3,519-ft amsl</p>	<p>DWG BY: John Good December - 2003</p>	<p>REVISED:</p>	
		<p>SCALE: 0 Mile 1</p>		

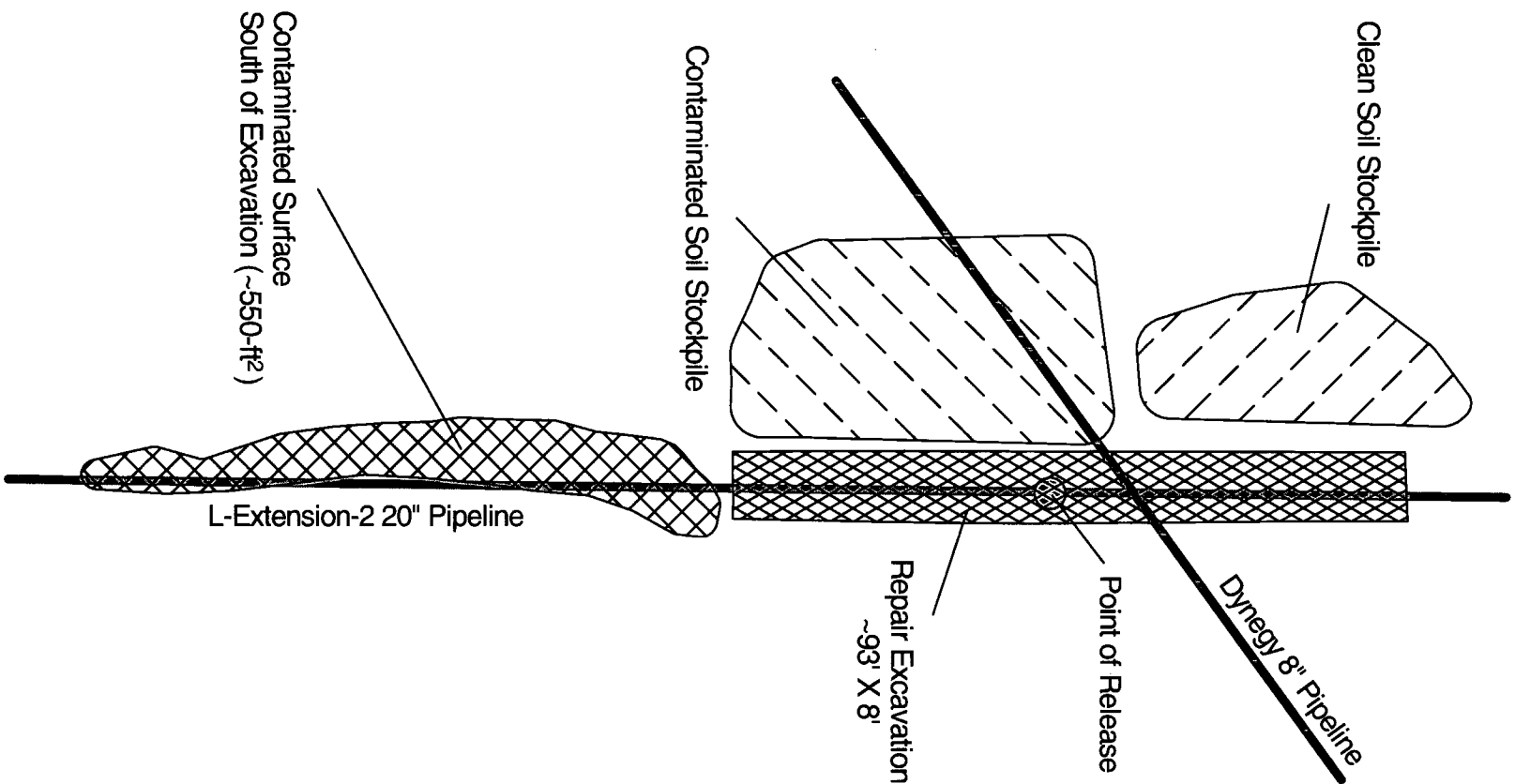
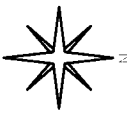



Plate 3 - Initial Site GPS Demarcations Duke Energy Field Services L-Extension-2 121103	Lea County, New Mexico UL-G Section 21 T22S R36E N32° 22' 38.41" W103° 15' 58.71" Elevation: 3,519-ft amsl	DWG BY: John Good December - 2003	REVISED:	
		SCALE: 		

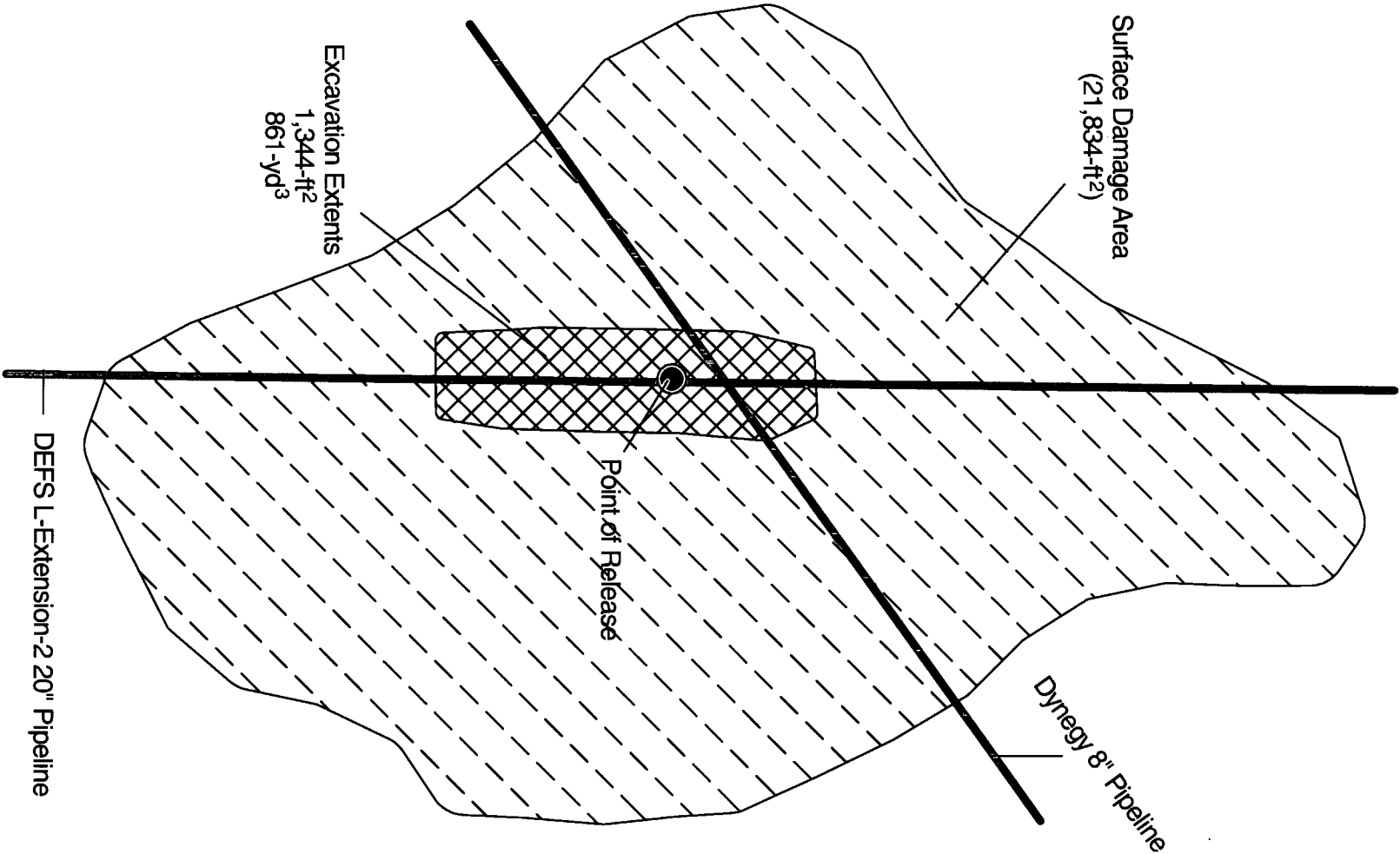


Plate 4 - Final Site GPS Demarcations
Duke Energy Field Services
L-Extension-2 121103

Lea County, New Mexico
UL-G Section 21 T22S R36E
N32° 22' 38.41" W103° 15' 58.71"
Elevation: 3,519-ft amsl

DWG BY: John Good
January - 2004

REVISED:

SCALE:
0 75
Feet



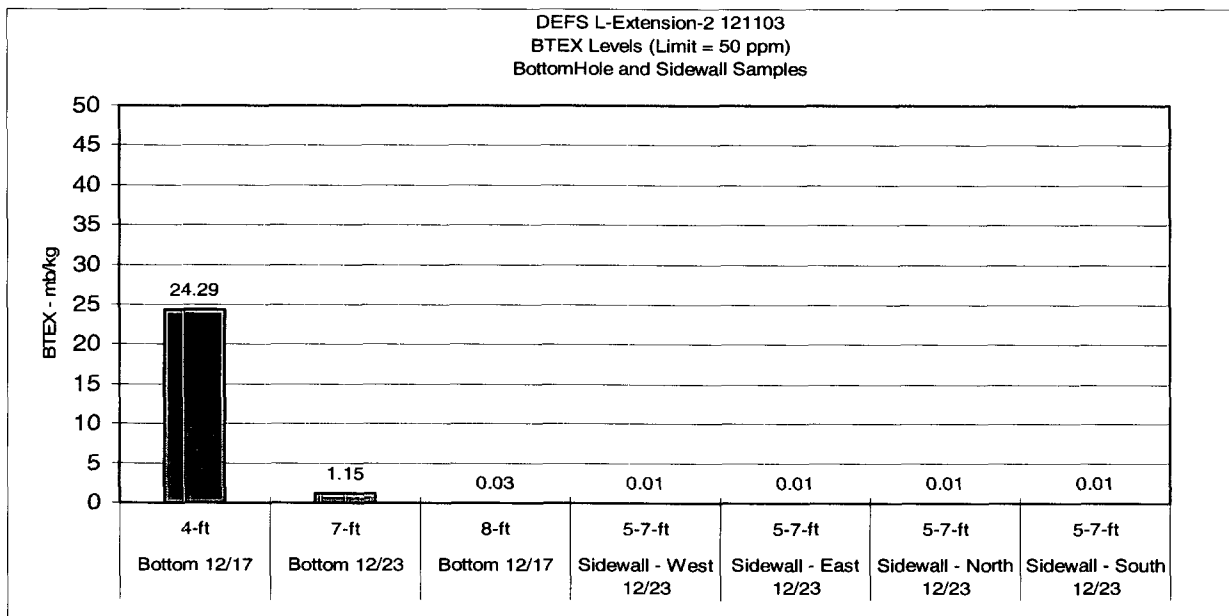
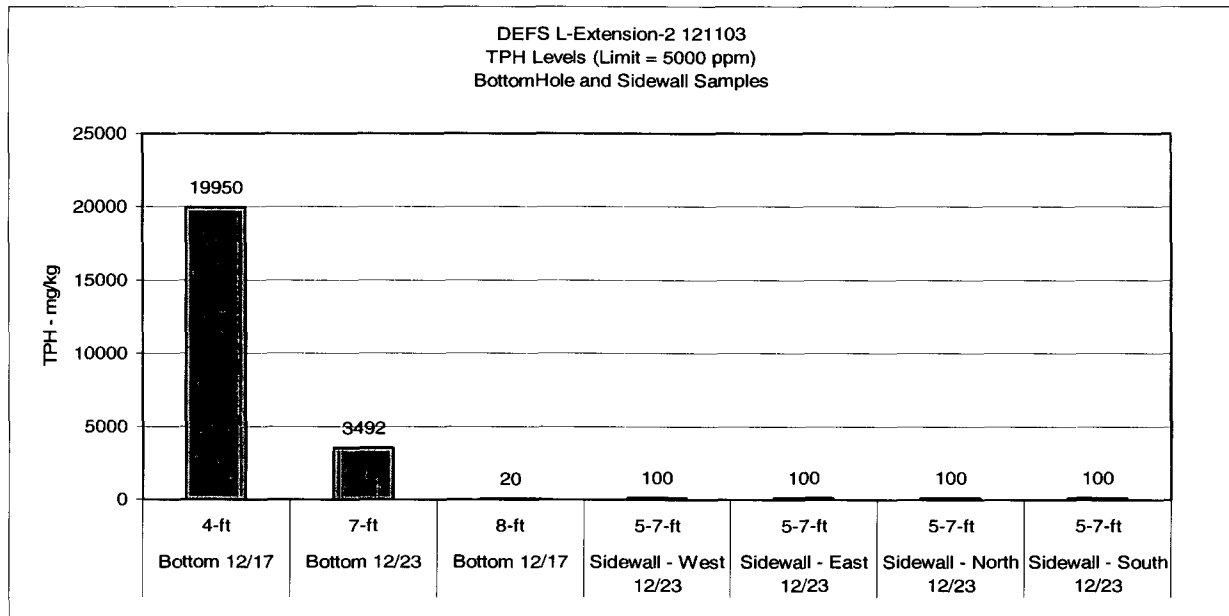
Plate 5: Soil Analytical Data

Duke Energy Field Services - L-Extension-2 121103 - Excavation Sampling Results														
Bold	highlighted cells indicate values in excess of the NMOCD remedial action guideline thresholds: TPH: 5000 mg/Kg; BTEX: 50 mg/Kg; Benzene: 10 mg/Kg; Cl: 250 ppm; SO ₄ : 600 ppm													
Sample Date	Excavation Sampling Area	Depth (ft - bgs ¹)	SAMPLE ID#	VOC ppm	GRO ² mg/Kg	DRO ³ mg/Kg	TPH ⁴ mg/Kg	BTEX ⁵ mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ethyl Benzene mg/Kg	Total Xylenes mg/Kg	Cl mg/Kg	SO ₄ mg/Kg
12/17/03	Bottomhole-POR	4-ft	SDLE2121703BHC-4		3050	18900	19950	24.294	0.844	6.380	4.570	12.500	80	
12/17/03	Bottomhole-POR	8-ft	SDLE2121703BHC-8		10	10	20	0.030	0.005	0.005	0.005	0.015		
12/23/03	Sidewall - West	5-7-ft	SDLE2122303WSWC		50	50	100	0.012	0.002	0.002	0.002	0.006		
12/23/03	Sidewall - East	5-7-ft	SDLE2122303ESWC		50	50	100	0.012	0.002	0.002	0.002	0.006		
12/23/03	Sidewall - North	5-7-ft	SDLE2122303NSWC		50	50	100	0.012	0.002	0.002	0.002	0.006		
12/23/03	Sidewall - South	5-7-ft	SDLE2122303SSWC		50	50	100	0.012	0.002	0.002	0.002	0.006		
12/23/03	Bottomhole	7-ft	SDLE2122303BHC		582	2910	3492	1.148	0.054	0.240	0.216	0.638	32	258

¹ bgs = below ground surface ² GRO - Gasoline Range Organics (Detection Limit = 10/50 mg/Kg) ³ DRO - Diesel Range Organics (Detection Limit = 10/50 mg/Kg)

⁴ TPH - Total Petroleum Hydrocarbon (GRO+DRO) ⁵ BTEX = Sum of Benzene, Toluene, Ethyl Benzene (Detection Limits = 0.005/0.002 mg/Kg) and Total Xylenes (Detection Limit = 0.015/0.006 mg/Kg)

Note: Reported detection limits are considered "de minimus" values and are included in the TPH and BTEX summations.



LABORATORY ANALYTICAL DATA

Cardinal Laboratories Inc.

101 East Marland, Hobbs, NM 88240
505-393-2326 Fax 505-393-2476

2111 Beechwood, Abilene, TX 79603
915-673-7001 Fax 915-673-7020

Company Name Environmental Plus, Inc.		Bill To		ANALYSIS REQUEST																			
EPI Project Manager John Good																							
Billing 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 L-Extension-2 Pipeline																							
Project Reference L-Extension-2 121503																							
EPI Sampler Name John Good																							
LAB I.D.	SAMPLE I.D.	(GRAB OR C)JMP.	# CONTAINERS	MATRIX								PRESERV.		SAMPLING		BTEX 8021B	TPH 8015M	CHLORIDES (Cl)	SULFATES (SO ₄)	PH	TCLP	OTHER >>>	
				GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACID/BASE	ICE/COOL	OTHER	DATE	TIME									
H8260-1	1 SDLE2121703BHC-4	C	1			X					X		17-Dec	11:00	X	X							
-2	2 SDLE2121703BHC-8	C	1			X					X		17-Dec	11:15	X	X	X						
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							

Sampler Relinquished:		Date: Time:	Received By:		Fax Results To John Good 505-394-2801 REMARKS:
Relinquished by:		Date: 12/17/2003 Time: 2:40P	Received By: (lab staff)		
Delivered by:		Sample Cool & Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Checked By:	



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: JOHN GOOD

P.O. BOX 1558

EUNICE, NM 88231

FAX TO: (505) 394-2601

Receiving Date: 12/17/03

Reporting Date: 12/19/03

Project Owner: DUKE ENERGY FIELD SERVICES

Project Name: L-EXTENSION-2 PIPELINE

Project Location: NOT GIVEN

Sampling Date: 12/17/03

Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: GP

Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/Kg)	DRO (>C ₁₀ -C ₂₈) (mg/Kg)	Cl* (mg/Kg)
		12/18/03	12/18/03	12/18/03
H8260-1	SDLE2121703BHC-4	3050	16900	80
H8260-2	SDLE2121703BHC-8	<10.0	<10.0	-
Quality Control		744	810	940
True Value QC		800	800	1000
% Recovery		93.0	101	94.0
Relative Percent Difference		6.7	1.2	7.4

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl*: Std. Methods 4500-ClB

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

Buyer of Goods
Chemist

12/19/03
Date

H8260A.XLS
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



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: JOHN GOOD
P.O. BOX 1558
EUNICE, NM 88231
FAX TO: (505) 394-2601

Receiving Date: 12/17/03
Reporting Date: 12/19/03
Project Owner: DUKE ENERGY FIELD SERVICES
Project Name: L-EXTENSION-2 PIPELINE
Project Location: NOT GIVEN

Sampling Date: 12/17/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: BC

LAB NUMBER	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE		12/18/03	12/18/03	12/18/03	12/18/03
H8260-1	SDLE2121703BHC-4	0.844	6.38	4.57	12.5
H8260-2	SDLE2121703BHC-8	<0.005	<0.005	<0.005	<0.015
Quality Control		0.099	0.100	0.099	0.302
True Value QC		0.100	0.100	0.100	0.300
% Recovery		99.1	100	98.7	101
Relative Percent Difference		3.2	3.6	3.1	2.5

METHOD: EPA SW-846 8260

Buyer Joe Coole
Chemist

12/19/03
Date

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

H8260B.XLS

Cardinal Laboratories Inc.

101 East Marland, Hobbs, NM 88240
505-393-2326 Fax 505-393-2476

2111 Beechwood, Abilene, TX 79603
915-673-7001 Fax 915-673-7020

Company Name Environmental Plus, Inc.		Bill To		ANALYSIS REQUEST																	
EPI Project Manager John Good																					
Billing Address P.O. BOX 1558																					
City, State, Zip Eunice New Mexico 88231																					
EPI Phone# / Fax# 505-394-3481 / 505-394-2801																					
Client Company DUKE ENERGY FIELD SERVICES																					
Facility Name L-Extension-2																					
Project Reference L-Extension-2 121103																					
EPI Sampler Name Eddie Joe Harper																					
LAB I.D.	SAMPLE I.D.	(GRAB OR (COMP. # CONTAINERS	MATRIX							PRESERV.		SAMPLING		BTEX 8021B	TPH 8016M	CHLORIDES (CT)	SULFATES (SO ₄)	PH	TCLP	OTHER >>>	
			GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	ACIDBASE	ICE/COOL	OTHER	DATE	TIME								
H8890-1	8DLE2122303WSWC	C 1			X					X		23-Dec	8:00	X	X						
-2	8DLE2122303ESWC	C 1			X					X		23-Dec	8:10	X	X						
-3	8DLE2122303NSWC	C 1			X					X		23-Dec	8:15	X	X						
-4	8DLE2122303SSWC	C 1			X					X		23-Dec	8:20	X	X						
-5	8DLE2122303BHC-7	C 1			X					X		23-Dec	8:25	X	X	X	X				
6																					
7																					
8																					
9																					
10																					

Sampler Relinquished: Relinquished By: John Good		Date: 12/23 Time: 1:55 Received By: Date: 12/23/03 Time: 4:30 Received By: (lab staff) Amy Hill	Fax Results To John Good 505-394-2801 REMARKS:
Delivered by:		Sample Cool & Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Checked By:



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: JOHN GOOD
 P.O. BOX 1558
 EUNICE, NM 88231
 FAX TO: 505-394-2601

Receiving Date: 12/23/03
 Project Owner: DUKE ENERGY FIELD SERVICES
 Project Number: L-EXTENSION-2 121103
 Project Name: L-EXTENSION-T
 Project Location: NOT GIVEN

Sampling Dates: 12/23/03
 Sample Type: SOIL
 Sample Condition: 4°C & INTACT
 Sample Received By: JA
 Analyzed By: JA

LAB ID	SAMPLE ID	TPH GRO (mg/Kg)	TPH DRO (mg/Kg)	TPH TOTAL (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
H8290-1	SDLE2122303WSWC	<50.0	<50.0	<50.0	<0.002	<0.002	<0.002	<0.006
H8290-2	SDLE2122303ESWC	<50.0	<50.0	<50.0	<0.002	<0.002	<0.002	<0.006
H8290-3	SDLE2122303NSWC	<50.0	<50.0	<50.0	<0.002	<0.002	<0.002	<0.006
H8290-4	SDLE2122303SSWC	<50.0	<50.0	<50.0	<0.002	<0.002	<0.002	<0.006
H8290-5	SDLE2122303BHC -7	582	2910	3490	0.054	0.240	0.216	0.638

Extraction Date	12/24/03	12/24/03	12/24/03	12/24/03	12/24/03	12/24/03	12/24/03
Analysis Date	12/24/03	12/24/03	12/24/03	12/24/03	12/24/03	12/24/03	12/24/03
Method Blank (mg/Kg)	<50.0	<50.0	<50.0	<0.002	<0.002	<0.002	<0.002
True Value LCS (mg/Kg)			200	0.100	0.100	0.100	0.300
LCS % Recovery			94.4%	96.0%	96.0%	101.0%	93.7%
Matrix Spike RPD			2.1%	8.3%	12.2%	8.5%	6.9%

DATA FLAGS:

Methods: TPH SW-846 8015M; BTEX SW-846 8021b, 5030b


 Jim Armstrong

 12-29-03
 Date

H8290BTEX8015MENVPLUS.xls

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



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: JOHN GOOD

P.O. BOX 1558

EUNICE, NM 88231

FAX TO: (505) 394-2601

Receiving Date: 12/23/03

Reporting Date: 12/24/03

Project Owner: DUKE ENERGY FIELD SERVICES

Project Name: L-EXTENSION-2

Project Location: L-EXTENSION-2 121103

Sampling Date: 12/23/03

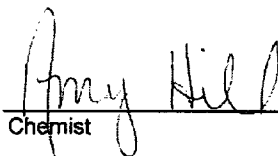
Sample Type: SOIL

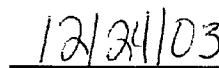
Sample Condition: COOL & INTACT

Sample Received By: AH

Analyzed By: HM

LAB NUMBER	SAMPLE ID	SO ₄ (mg/Kg)	Cl (mg/Kg)
ANALYSIS DATE:		12/24/03	12/24/03
H8290-5	SDLE2122303BHC -7	258	32
Quality Control			
True Value QC		53.65	980
% Recovery		50.00	1000
Relative Percent Difference		107	98.0
		1.5	3.1
METHODS: EPA 600/4-79-020		375.4	SM 4500-Cl B


Chemist


Date

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

H8290

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 June 10, 2003

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	Paul Mulkey
Address	11525 W. Carlsbad Hwy. Hobbs, NM 88240	Telephone No.	505-391-5716
Facility Name	L-Extension-2 20"	Facility Type	Natural Gas Gathering Pipeline

Surface Owner	DASCO Cattle Co.	Mineral Owner	NA	Lease No.	NA
---------------	-------------------------	---------------	-----------	-----------	-----------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from South Line	Feet from West Line	Longitude	Latitude	County:
G	21	22S	36E	2651	3837	W103° 15' 58.71"	N32° 22' 38.41"	Lea

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
Natural Gas release and associated NGL's	5 bbl	3.5 bbl
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery
20" Steel Pipeline		12/11/03
Was Immediate Notice Given?	If YES, To Whom?	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	Larry Johnson - NMOCD, Hobbs	
By Whom?	Date and Hour	
Lynn Ward - DEFS, Midland	12/12/03 14:45	
Was a Watercourse Reached?	If YES, Volume Impacting the Watercourse.	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	NA	

If a Watercourse was Impacted, Describe Fully.*

NA

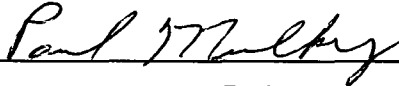
Describe Cause of Problem and Remedial Action Taken.*

Internally Corroded pipeline, repaired by clamping, then replacing pipeline section

Describe Area Affected and Cleanup Action Taken.*

~2000-ft² initial surface spill area affected. 3.5-bbl of NGL recovered from 5-bbl release. RCRA Exempt Non-hazardous contaminated soil above remedial goals was excavated from 1,344-ft² X 7-ft excavation and disposed of at the EPI approved land farm. The excavation was backfilled with clean caliche and topsoil.

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: 	<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Paul Mulkey	Approved by District Supervisor:	
Title: Construction/Maintenance Supervisor	Approval Date:	Expiration Date:
E-mail Address: pdmulkey@duke-energy.com	Conditions of Approval:	
Date: 1/16/04 Phone: 505-394-3481	<input type="checkbox"/> Attached.	



Incident Date and NMOCD Notified?

12/11/03

12/12/03 14:45

SITE: L-Extension-2 20" Assigned Site Reference 121103

Company: DUKE ENERGY FIELD SERVICES

Street Address: 5805 East Highway 80

Mailing Address: 11525 W. Carlsbad Hwy.

City, State, Zip: Hobbs, NM 88240

Representative: Paul Mulkey

Representative Telephone: 505-391-5716

Telephone:

Fluid volume released (bbls): 5 Recovered (bbls): 3.5

>25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days.

5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas)

Leak, Spill, or Pit (LSP) Name: L-Extension-2 20" 121103

Source of contamination: 20" Steel Pipeline

Land Owner, i.e., BLM, ST, Fee, Other: DASCO Cattle Co. 225 E. Bender, Suite 150, Hobbs, NM 88240

LSP Dimensions: (GPS Site Diagram attached)

LSP Area: ~2000 -ft²

Location of Reference Point (RP):

Location distance and direction from RP:

Latitude: N32° 22' 38.41"

Longitude: W103° 15' 58.71"

Elevation above mean sea level: 3519 -ft amsl

Feet from South Section Line: 2651

Feet from West Section Line: 3837

Location - Unit and 1/4 1/4: UL- G SW 1/4 of NE 1/4

Location - Section: 21

Location - Township: 22S

Location - Range: 36E

Surface water body within 1000' radius of Site: 0

Surface water body within 1000' radius of Site: 0

Domestic water wells within 1000' radius of Site: 0

Domestic water wells within 1000' radius of Site: 0

Agricultural water wells within 1000' radius of Site: 0

Agricultural water wells within 1000' radius of Site: 0

Public water supply wells within 1000' radius of Site: 0

Public water supply wells within 1000' radius of Site: 0

Depth (ft) from land surface to ground water (DG): 165

Depth (ft) of contamination (DC): 7

Depth (ft) to ground water (DG - DC = DtGW): 158

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

Total Site Ranking Score and Acceptable Concentrations

Parameter	20 or >	10	0
Benzene ¹	10 ppm	10 ppm	10 ppm
BTEX ¹	50 ppm	50 ppm	50 ppm
TPH	100 ppm	1000 ppm	5000 ppm

¹100 ppm field VOC headspace measurement may be substituted for lab analysis

District I

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District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-138

Revised March 17, 1999

Submit 2 Copies to appropriate

District Office in accordance

with Rule 116 on back

side of form

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input checked="" type="checkbox"/> Non-Exempt: <input type="checkbox"/>	4. Generator: DUKE ENERGY FIELD SERVICES
Verbal Approval Received?: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	5. Originating Site Designation: L-Extension-2 20" 121103
2. Management Facility Designation: Environmental Plus, Inc. Land Farm #NM-01-0013	6. Transporter: Environmental Plus, Inc.
3. Address of Facility Operator: 2100 Avenue O, P.O. Box 1558, Eunice, NM 88231	7. State New Mexico
8. Location of Material (Street Address or ULSTR) UL- G Section 21 T 22S R 36E	
9. Circle One: <div style="display: flex; align-items: flex-start;"><div style="margin-right: 10px;"><div style="border: 1px solid black; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin: 5px;">A.</div><div style="margin-top: 10px;"><div style="border: 1px solid black; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin: 5px;">B.</div></div></div><div><p>All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste status from the Generator; one certificate per job.</p><p>All requests for approval to accept non-exempt wastes must be accompanied by the necessary chemical analysis to PROVE the material is non-hazardous and the Generator's certification of origin. No waste classified as "HAZARDOUS" by listing or testing shall be approved.</p><p>All transporters must certify the wastes delivered are only those consigned for transport.</p></div></div>	

BRIEF DESCRIPTION OF MATERIAL:

**Contaminated Soil(s): hydrocarbon release involving -
Natural Gas release and associated NGL's**Estimated Volume: 600 yd³ Known volume (to be entered by the operator at the end of the haul: (yd³) 861 yd³

SIGNATURE: _____

Waste Management Facility Authorized Agent

TITLE: EPI Environmental Consultant DATE: _____12/19/03

TYPE OR PRINT NAME: _____

John Good

TELEPHONE NO.: _____

505-394-3481 FAX: 505-394-2601

(This space for State Use)

APPROVED BY: _____

TITLE: _____

DATE: _____

APPROVED BY: _____

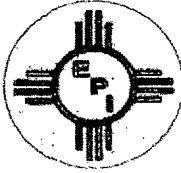
TITLE: _____

DATE: _____

Environmental Plus, Inc.

Environmental Services & Land Farm

Permit # NM-01-0013

Micro-Blaze**Certificate of Waste Status****"RCRA Exempt Waste"**Company: **DUKE ENERGY FIELD SERVICES**Origin: UL or 1/4 1/4: **G** Section: **21** Township: **22S** Range: **36E**Source Description (Pipeline, Lease, Battery, Flowline, etc.) **Natural Gas Gathering Pipeline****20" Steel Pipeline** **L-Extension-2 20"**

"As a condition of acceptance for disposal, I hereby certify that this waste is an exempt waste as defined by the Environmental Protection Agency (EPA) July 1988 Regulatory Determination and to my knowledge, this waste been characterized as "non-hazardous" pursuant to the provisions of EPA 40 CFR Part 261 Subpart C and has not been comingled with an EPA 40 CFR Part 261 Subpart D "Listed Waste."

NORM Exposure Rate: < 50 μ R/HourI, Paul Mulkey, the undersigned agent for**DUKE ENERGY FIELD SERVICES**

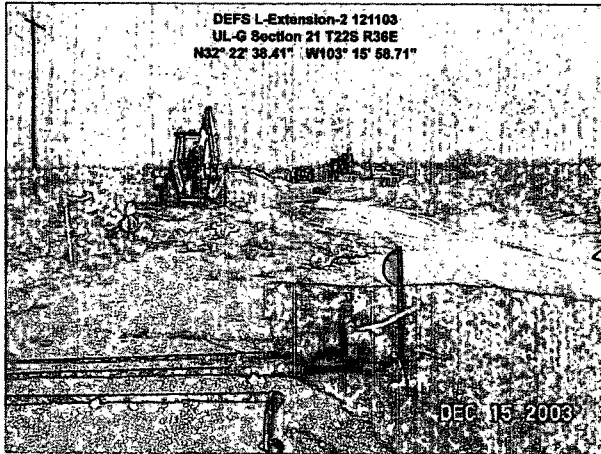
hereby certify that, based on personal knowledge,
the above statement is true and correct.

Name
Title
Address

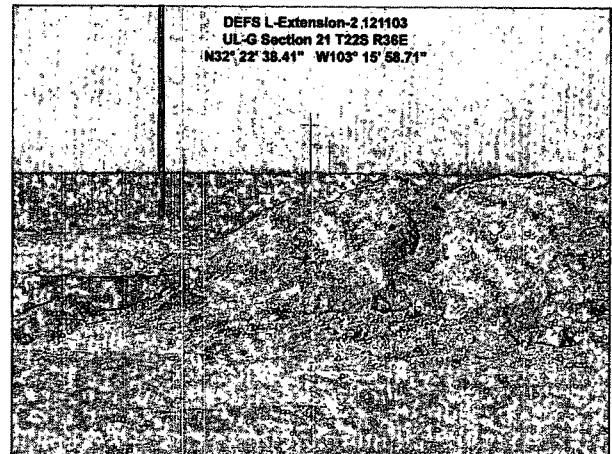
Paul Mulkey
Construction/Maintenance Supervisor
11525 W. Carlsbad Hwy.
Hobbs, NM 88240

Signature
Date

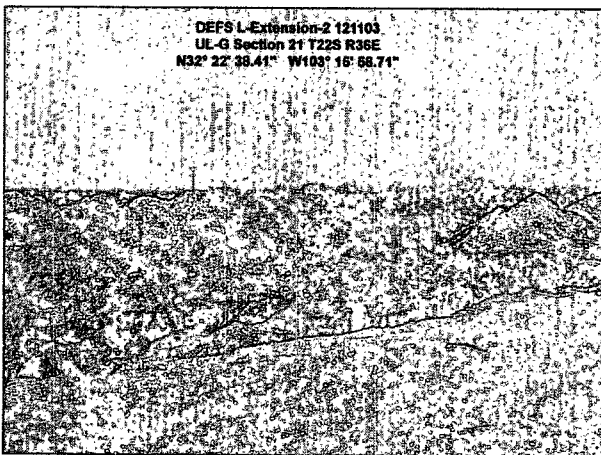
Paul Mulkey
Friday, December 19, 2003



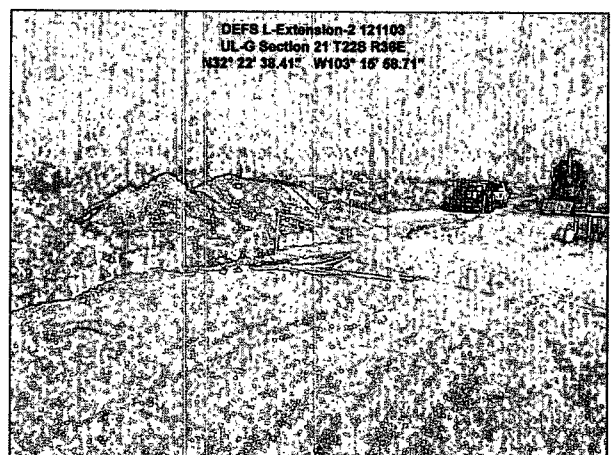
Initial Response: south looking north



Initial Response: clean soil stockpiled by DEFS



Initial Response: contaminated stockpile



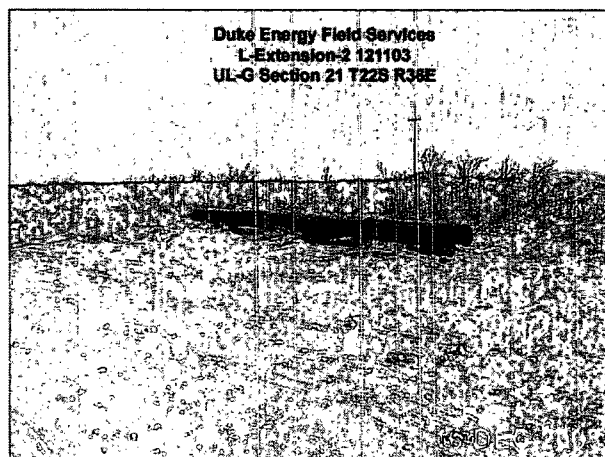
Initial Response: view from SE



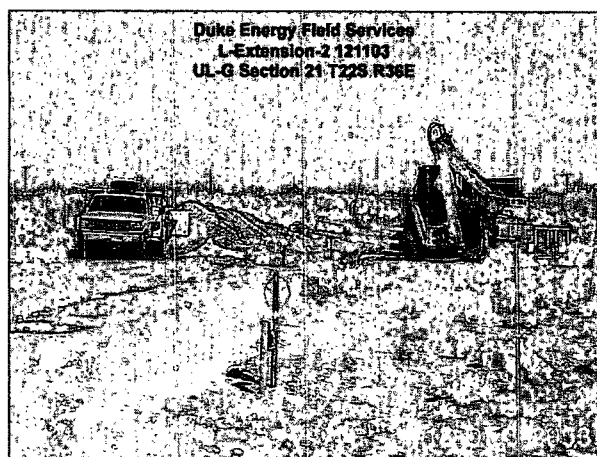
Initial Response: pipe section due for replacement



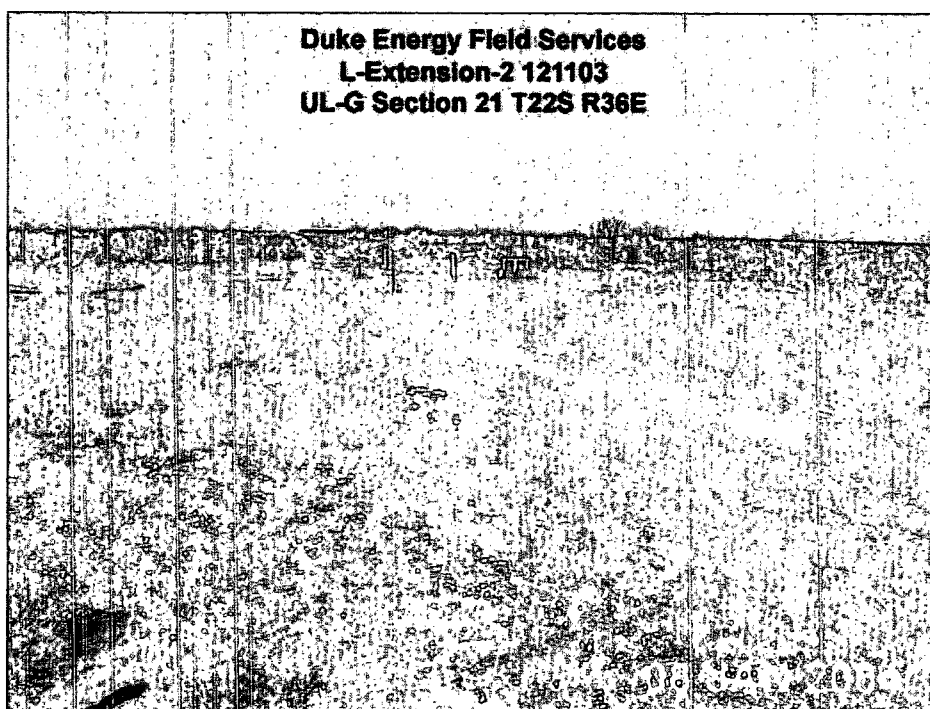
Initial response: POR + saturated sidewall



Second day: Pipe section removed



Second day: Site from SE



Closed Site: backfilled and contoured

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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 June 10, 2003

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	Paul Mulkey
Address	11525 W. Carlsbad Hwy. Hobbs, NM 88240	Telephone No.	505-391-5716
Facility Name	L-Extension-2 20"	Facility Type	Natural Gas Gathering Pipeline

Surface Owner	DASCO Cattle Co.	Mineral Owner	NA	Lease No.	NA
---------------	-------------------------	---------------	-----------	-----------	-----------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from South Line	Feet from West Line	Longitude	Latitude	County
G	21	22S	36E	2651	3837	W103° 15' 58.71"	N32° 22' 38.41"	Lea

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
Natural Gas release and associated NGL's	5 bbl	3.5 bbl
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery
20" Steel Pipeline		12/11/03
Was Immediate Notice Given?	If YES, To Whom?	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	Larry Johnson - NMOCD, Hobbs	
By Whom?	Date and Hour	
Lynn Ward - DEFS, Midland	12/12/03 14:45	
Was a Watercourse Reached?	If YES, Volume Impacting the Watercourse.	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	NA	
If a Watercourse was Impacted, Describe Fully.*		
NA		

Describe Cause of Problem and Remedial Action Taken.*

Internally Corroded pipeline, repaired by clamping, then replacing pipeline section

Describe Area Affected and Cleanup Action Taken.*

~2000-ft² initial surface spill area affected. 3.5-bbl of NGL recovered from 5-bbl release. RCRA Exempt Non-hazardous contaminated soil above remedial goals was excavated from 1,344-ft² X 7-ft excavation and disposed of at the EPI approved land farm. The excavation was backfilled with clean caliche and topsoil.

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>Paul Mulkey</i>	OIL CONSERVATION DIVISION	
Printed Name: Paul Mulkey	Approved by District Supervisor:	
Title: Construction/Maintenance Supervisor	Approval Date:	Expiration Date:
E-mail Address: pdmulkey@duke-energy.com	Conditions of Approval:	
Date: 1/16/04 Phone: 505-391-5716	<input type="checkbox"/> Attached.	

