Duke Energy®
Field Services

DUKE ENERGY FIELD SERVICES
370 17th Street
Suite 2500
Denver, CO 80202

303 595 3331

February 2, 2004

Mr. Larry Johnson
New Mexico Oil Conservation Division
1625 N. French Drive
Hobbs, New Mexico 88240

RE: Site Investigation, Remediation and Final C-141 Closure Documentation
A-8-2 Extension Pipeline Release
Duke Energy Field Services, LP
UL-G SW ¼ of the NE ¼ of Sec 26, T17S R34E
Lea County, NM

Mr. Johnson:

Enclosed please find for your review, one copy of the **Site Investigation, Remediation and Final C-141 Closure Documentation** for the A-8-2 pipeline release that occurred on May 22, 2003.

Based on the information provided in the above referenced report, Duke Energy Field Services, LP would like to request no further action for this site.

If you have any questions regarding the information provided in the closure reports, please give me a call at 303-605-1718.

Sincerely

Duke Energy Field Services, LP

Stephen Weathers P.G.
Sr. Environmental Specialist

cc: Lynn Ward, DEFS Midland
Environmental Files

Enclosure

Duke Energy Field Services

IRP-68
10/4/05

SITE INVESTIGATION, REMEDIATION AND FINAL C-141 CLOSURE DOCUMENTATION

A-8-2 EXTENSION

DEFS REF: #052203

UL-G SW¼ OF THE NE¼ OF SECTION 26 T17S R34E

~9.3 MILES WEST-NORTHWEST (BEARING 292.1°) OF EUNICE, LEA COUNTY, NEW MEXICO

LATITUDE: N32° 48' 28.64" LONGITUDE: W103° 31' 45.77"

JANUARY 7, 2004

PREPARED BY:

John Good
Environmental Consultant
ENVIRONMENTAL PLUS, INC.
PO Box 1558
2100 Ave. O
Eunice, NM 88231
Phone: 505-394-3481
Fax: 505-394-2601
Cell: 505-390-9804
Email: enviplus1@aol.com

Table of Contents

Project Summary

Site Specific:

- **Company Name**: Duke Energy Field Services
- **Facility Name**: A-8-2 Extension Natural Gas Gathering Line
- **Project Reference** 052203
- **Company Contact**: Paul Mulkey; pdmulkey@duke-energy.com
- **Site Location:** WGS84: N32° 48' 28.64" "; W103° 31' 45.77"
- **Legal Description**: Unit Letter G, (SW¼ of the NE¼), Section 26, T17S, R34E
- **General Description**: approximately ~1.4-miles west-northwest (286.5°) of Buckeye, Lea County, NM
- **Elevation**: 4026-ft amsl **Depth to Ground Water**: ~50-ft
- **Land Ownership**: State of New Mexico
- **EPI Personnel**: Technical Manager – Pat McCasland
  Consultant – John Good
  Foreman – Morris Burkett

Release Specific:

- **Product Released**: Produced Water (saline) from Exxon-Mobil Line
- **Volume Released**: ~190 bbl **Volume Recovered**: 180 bbl
- **Time of Occurrence**: 5/22/03 **Time of Discovery**: 5/22/03
- **Release Source**: Exxon-Mobil Produced Water Line
- **Initial Surface Area Affected**: 4,200-ft^2 **Final Area Affected**: 11,275-ft^2

Remediation Specific:

- **Final Vertical extent of contamination**: 10-ft bgs; Remaining depth to ground water: 40-ft
- **Water wells within 1000-ft**: 0 **Surface water bodies within 1000-ft**: 0
- **NMOCD Site Ranking Index**: 20 points (<50-ft to top of water table)
- **Remedial goals for Soil**: Chlorides: <250 ppm
- **RCRA Waste Classification**: Exempt
- **Remediation Option Selected**: a) Excavate and dispose of chloride (>250 mg/kg) contaminated soil; b) analytical confirmation of bottom-hole contaminant levels; c) backfill with clean caliche and contour so as to divert storm water runoff.
- **Disposal Facility**: Controlled Recovery Inc. **Volume disposed of**: 2,036-yd^3
- **Project Completion Date**: July 23, 2003
- **Additional Commentary**:

1.0 Introduction & Background

This report addresses the site investigation and remediation of the Duke Energy Field Services (DEFS) "A-8-2 Extension 052203 – Exxon Mobil Produced Water Line" pipeline remediation site. On June 18, 2003, Environmental Plus, Inc. (EPI) was notified by DEFS regarding a produced water release at a location where an Exxon-Mobil produced water pipeline intersects the DEFS A-8-2 Extension pipeline. The Exxon-Mobil fiberglass produced water pipeline was inadvertently punctured by a DEFS crew doing maintenance on the A-8-2 Extension natural gas gathering pipeline on May 22, 2003. The initial C-141 Form submitted to the New Mexico Oil Conservation Division (NMOCD) on May 30, 2003 reports the release volume as 190-bbl of Exxon-Mobil produced water, with 180-bbl recovered. EPI responded on June 19, 2003 and commenced GPS delineation, photography, preliminary excavation and characterization of the site. The site initially consisted of an approximate 4,200–ft^2 area with visibly discernible salt contamination at the surface *(Plate 3, Attachments)*. Remediation of this release site consisted of the excavating and disposing of 2,036-yd^3 (0-ft to 7-ft depth) of chloride-contaminated soil from an approximate 11,275-ft^2 final excavation extent *(Plate 3, Attachments)*. The contaminated soil was disposed of at the Controlled Recovery Inc. NMOCD approved surface waste facility. Due to the fragile nature of the 4" fiberglass Exxon-Mobil produced water pipeline, EPI requested and received approval from NMOCD to allow an approximate 2-ft wide column of caliche beneath the pipeline to remain in-place as support *(Pages 18-19, Attachments)*. NMOCD approved non-removal of this contaminated column contingent on the contouring of the final closed site such that any storm water runoff would be diverted around the excavation site. The excavation was backfilled with caliche (2,200-yd^3) purchased from the State of New Mexico. The site was contoured to divert runoff as per NMOCD requirements. The project was completed on July 23, 2003.

The release site is located in Unit Letter G (SW¼ of the NE¼), Section 26, T17S, R34E, N32° 48' 28.64" and W103° 31' 45.77". The site is located approximately 1.4-miles west-northwest (286.5°) of Buckeye, Lea County, NM. The property is owned by the State of New Mexico. A site location map, site topographical map and detailed GPS site diagrams are included in the Attachments as *Plates 1, 2, 3 and 5.*

The produced water release at this site occurred on May 22, 2003 and reported to NMOCD that morning by Ronnie Gilchrist, DEFS. The Initial NMOCD C-141 Form was submitted on May 30, 2003 by Lynn Ward, DEFS – Midland, TX. The leak was the result of accidental damage by DEFS employees. The pipeline was repaired with a clamp installed 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 High Plains (Llano Estacado) physiographic subdivision, described by Nicholson & Clebsch as an area "capped by a thick layer of resistant caliche, locally called caprock. The High Plains surface is uniformly flat and slopes ~17-ft per mile east-southeast."

The subsurface at the site is composed of a hard caliche base covered with 1-2-feet of reddish sand/clay topsoil.

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 (Querqus 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

Based on data obtained from the Office of the State Engineer for water wells in the general vicinity of the release, the estimated ground water depth at this site is 50-ft bgs.

2.4 Area Water Wells and/or Surface Water Features

There are no water wells and/or surface water features within 1000-ft of the release site.

There are no surface water bodies within 1000-ft of the site.

3.0 NMOCD Site Ranking

The release at this site involved only produced water after it had been processed by Exxon-Mobil to remove hydrocarbon content. Since no hydrocarbons are involved, the NMOCD threshold values for CoCs, as determined through the use of the Site Ranking Index, are not relevant. The relevant standard, when chloride contamination is the chief concern, is the 250 mg/kg standard for drinking water established by the NM Water Quality Control Commission.

4.0 Subsurface Soil Investigation

On June 19, 2003, two surface composite soil samples (north and south of the Exxon-Mobil pipeline) were collected from within the visible release area. Analytical results of these two samples confirmed significantly high levels of chloride contamination, 15,595 mg/kg and 9,597 mg/kg respectively. Test trenches were excavated to 10-ft bgs on both sides of the Exxon-Mobil pipeline and sampled at the 2-ft, 5-ft and 10-ft intervals on July 9, 2003. Analytical results of these samples indicated that the north side would be below 250 mg/kg at 5-ft bgs, and that the south side would be below 250 mg/kg at 7-ft bgs.

5.0 Ground Water Investigation

Ground water depth is estimated to be 50-ft bgs at the site, based on records obtained from the NM Office of the State Engineer. The site was excavated to a maximum depth of 7-ft to remove soil with chloride contamination above the 250 mg/kg remedial goal. A relatively narrow profile column of contaminated soil was left in-place to maintain support for the Exxon-Mobil produced water line. The excavation was backfilled and contoured to an above-grade level to prevent infiltration of storm water runoff that might approach the site from the north. Based on the removal of soil containing chlorides above 250 mg/kg (excepting the pipeline support column) and the prevention of storm water infiltration, there will be no need for further ground water investigation at this site.

6.0 Remediation Process

The remediation process at this site commenced on June 19, 2003 and continued through July 23, 2003. Remediation of the site consisted of excavation and disposal of 2,036 yd^3 of chloride-

contaminated soil from the excavation down to a maximum depth of 7-ft. All contaminated soil excavated from the site was disposed of at the Controlled Recovery Inc. NMOCD approved surface waste facility.

Test trenches were excavated parallel to, and on both sides of the fiberglass Exxon-Mobil pipeline to determine the vertical extent of the chloride contamination present. Analytical results indicated that the saline contamination (>250 mg/kg) extended to less than 5-ft bgs on the "north" side of the pipeline, and to less than 7-ft bgs on the "south" side of the pipeline. It was discovered that the areal extents of the release were more than the preliminary GPS survey had indicated. A combination of shallow excavation and some field chloride analyses revealed that much of the release affected surface had been covered with sand carried by the high winds of May and June. The final excavation surface extent of 11,275-ft^2 is shown on *Plate 3 of the Attachments*. The "north" portion of the release was excavated to 3-5-ft bgs, with the deeper portion being near the Exxon-Mobil pipeline. The "south" portion of the release was excavated to 3-7-ft bgs, with the deeper portion being near the Exxon-Mobil pipeline. The column of caliche supporting the 4" fiberglass pipeline was left in-place with the approval of NMOCD. Since the line could not be deactivated during the excavation phase of the project, it was deemed acceptable to leave this small footprint column of contaminated soil in-place, rather than risk another release even closer to the 50-ft water table beneath the site.

The excavation was backfilled with 2,200-yd^3 of clean caliche purchased for the State of New Mexico. The final contour of the fill excavation was above grade, so as to prevent infiltration of storm water runoff traversing the site from the north.

7.0 Closure Justification

This report documents successful implementation of the Remediation Plan approved by NMOCD for this release site. Soil contaminated with chlorides above the acceptable remedial concentration (250 mg/ml) was excavated and removed from the location. Disposal of RCRA exempt contaminated soils was at the Controlled Recovery Inc. approved surface waste facility. The excavation was backfilled with clean caliche and properly contoured to prevent storm water runoff infiltration. 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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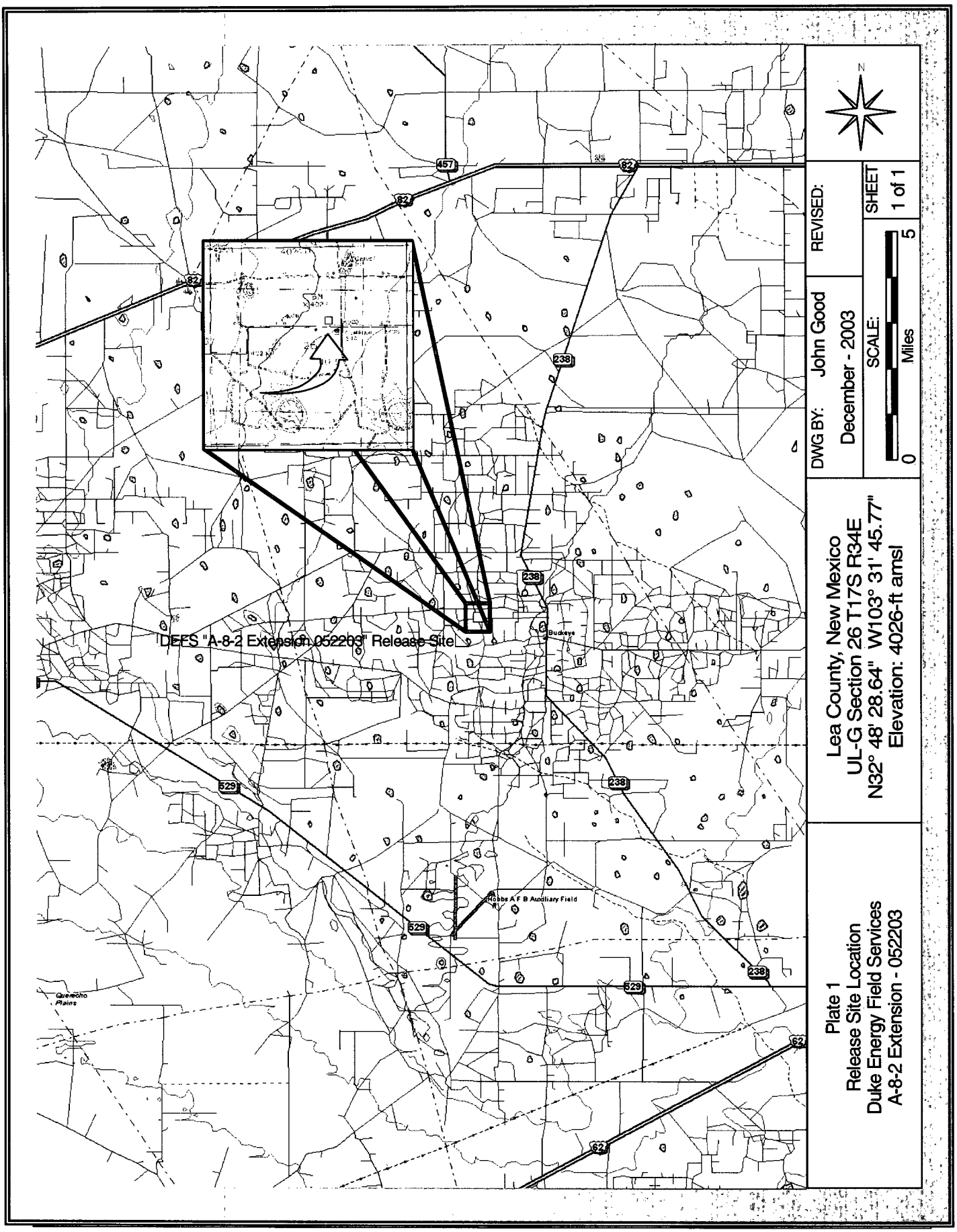
Attachments: (*pages 7-23*)


DEFS "A-8-2 Extension 052203" Release Site
Buckeye
Hobbs A F B Auxiliary Field
Quervecho Plains
457
82
238
529
62
Plate 1
Release Site Location
Duke Energy Field Services
A-8-2 Extension - 052203
Lea County, New Mexico
UL-G Section 26 T17S R34E
N32° 48' 28.64" W103° 31' 45.77"
Elevation: 4026-ft amsl
DWG BY: John Good
December - 2003
REVISED:
SCALE:
0
5
Miles
SHEET
1 of 1
N

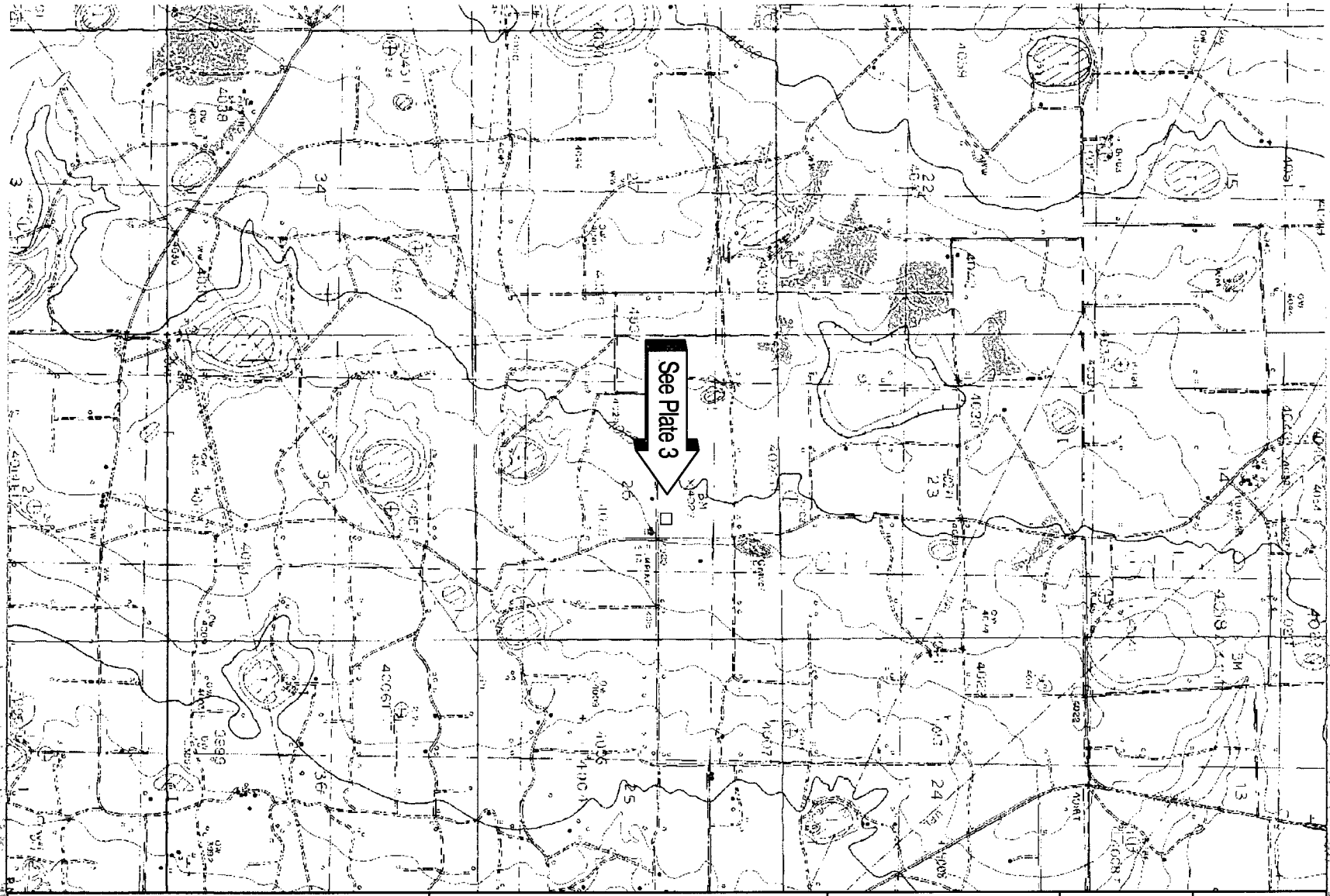


Plate 2
Release Site Topography
Duke Energy Field Services
A-8-2 Extension - 052203

Lea County, New Mexico
UL-G Section 26 T17S R34E
N32° 48' 28.64" W103° 31' 45.77"
Elevation: 4026-ft amsl

DWG BY: John Good
December - 2003

REVISED:

SCALE:
0 Mile 1

N

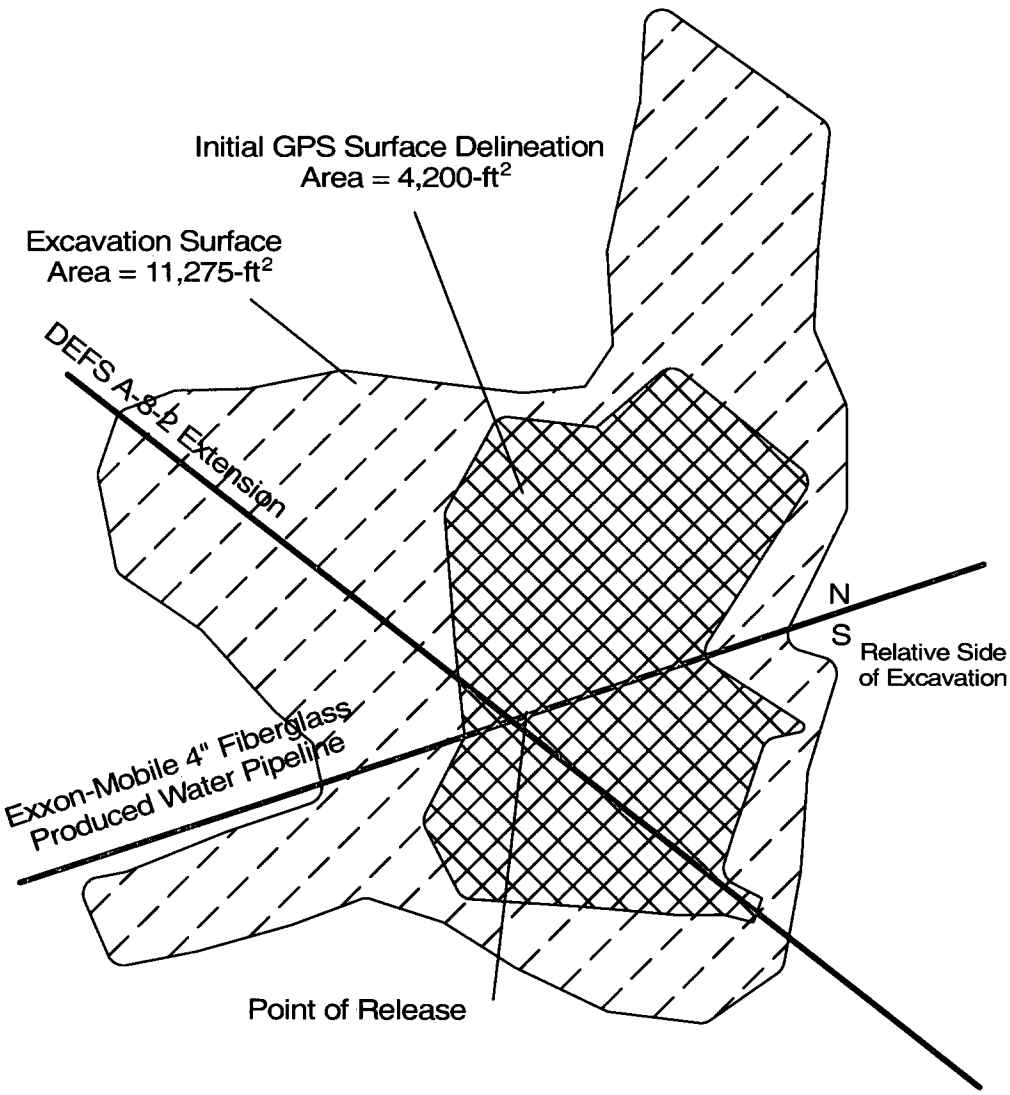


Plate 3 - Initial and Final GPS Demarcations
Duke Energy Field Services
A-8-2 Extension - 052203

Lea County, New Mexico
UL-G Section 26 T17S R34E
N32° 48' 28.64" W103° 31' 45.77"
Elevation: 4026-ft amsl

DWG BY: John Good
July - 2003

REVISED:

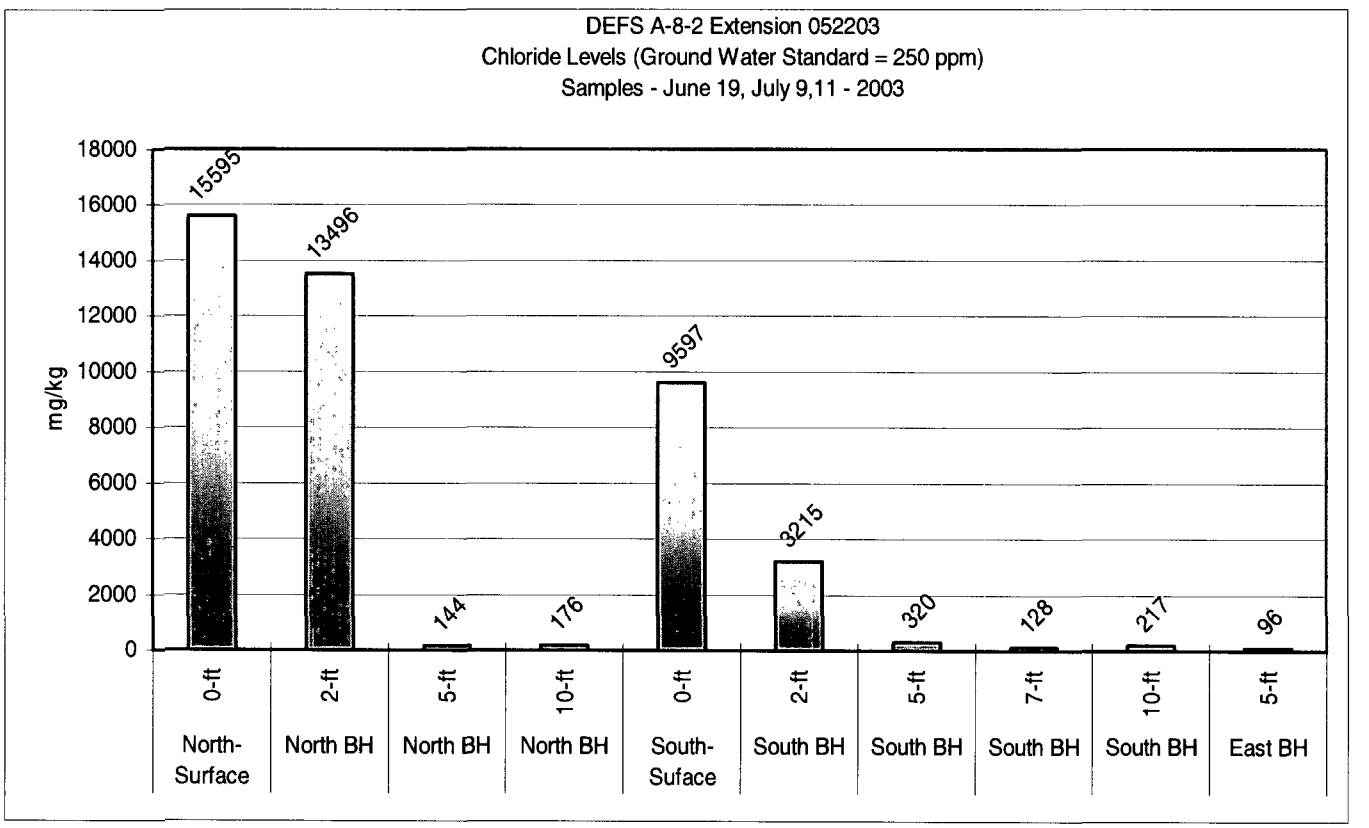
SCALE: 0 80 Feet

N

Plate 4 – Soil Sample Analytical Results (Chlorides)

Duke Energy Field Services - A-8-2 Extension 052203 - Excavation Sampling Results (chlorides)														
Bold highlighted cells indicate values in excess of the NMOCD remedial action guideline thresholds: TPH = 1000 mg/Kg; Benzene = 10 mg/Kg; BTEX = 50 mg/Kg; Cl = 250 + background														
Sample Date	Excavation Sampling Area	Depth (ft - bgs[1])	SAMPLE ID#	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	pH
19-Jun	North-Surface	0-ft	SDA8061903N									**15595**		
19-Jun	South-Suface	0-ft	SDA8061903S									**9597**		
9-Jul	North BH	2-ft	SDA82070903NBHC-2									**13496**		
9-Jul	North BH	5-ft	SDA82070903NBHC-5									144		
9-Jul	North BH	10-ft	SDA82070903NBHC-10									176		
9-Jul	South BH	2-ft	SDA82070903SBHC-2									**3215**		
9-Jul	South BH	5-ft	SDA82070903SBHC-5									**320**		
9-Jul	South BH	10-ft	SDA82070903SBHC-10									217		
9-Jul	East BH	5-ft	SDA82070903EBHC-5									96		
11-Jul	South BH	7-ft	SDA82071103SBHC-7									128		

[1] bgs = below ground surface [2] GRO - Gasoline Range Organics (Detection Limit = 10 mg/Kg) [3] DRO - Diesel Range Organics (Detection Limit = 10 mg/Kg) [4] TPH - Total Petroleum Hydrocarbon (GRO+DRO)
[5] BTEX = Sum of CoC's (Detection Limits = 0.005 mg/Kg; 0.015 mg/Kg) Note: Reported detection limits are considered "de minimus" values and are included in the TPH and BTEX summations.



LABORATORY ANALYTICAL RESULTS

Cardinal Laboratories Inc.

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

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

Company Name	Duke
Project Manager	Paul Mulkey
Address	
City, State, Zip	
Phone#/Fax#	390-3011
Project #/Owner	
Project Name	A-8-2 Extension
Project Location	UL G Sec 26 T 17S R 34E
Sampler Name	Cody Miller

Bill To

Environmental Plus Inc.

Analysis Request

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	MATRIX: WASTEWATER	MATRIX: SOIL	MATRIX: CUDE OIL	MATRIX: SLUDGE	MATRIX: OTHER:	PRESERV.: ACID/BASE	PRESERV.: ICE/COOL	PRESERV.: OTHER	SAMPLING: DATE	SAMPLING: TIME	BTEX 8021B	TPH 8015M	Cl
H7748-1	SDA8061903N	G	1			X					X		6/19	2:00			X
-2	SDA8061903S	G	1			X					X		6/19	2:10			X

Sampler Relinquished: Cody Miller	20-Jun 7:45	Received By: Roger Boone	Fax Results To John Good 505-394-2601
Relinquished by: Roger Boone	Date 6-20 Time 8:30	Received By: (lab staff)	REMARKS:
Delivered by Sampler	Sample Cool & Intact Yes / No	Checked By:	

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

Receiving Date: 06/20/03
Reporting Date: 06/23/03
Project Number: NOT GIVEN
Project Name: A-8-2 EXTENSION
Project Location: UL G SEC 26 T 17S R 34E

Analysis Date: 06/23/03
Sampling Date: 06/19/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl^- (mg/Kg)
H7748-1	SDA8061903N	15595
H7748-2	SDA8061903S	9597
Quality Control		950
True Value QC		1000
% Recovery		95.0
Relative Percent Difference		2.0
METHOD: Standard Methods		4500-ClB

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

Amy Hill
Chemist

6/23/03
Date

H7748

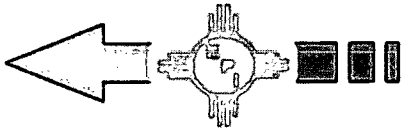
Cardinal Laboratories Inc.

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.
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	A-8-2 Extension Pipeline
Project Reference	DEFS A-8-2 Extension 052203
EPI Sampler Name	John Good

Bill To



LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl)	SULFATES (SO_4^{-2})	pH	TCLP	OTHER >>>
H7796-1	SDA82070903NBHC-10	C	1			X					X		9-Jul	12:15			X				
-2	SDA82070903NBHC-5	C	1			X					X		9-Jul	12:20			X				
-3	SDA82070903NBHC-2	C	1			X					X		9-Jul	12:25			X				
-4	SDA82070903SBHC-10	C	1			X					X		9-Jul	12:30			X				
-5	SDA82070903SBHC-5	C	1			X					X		9-Jul	12:35			X				
-6	SDA82070903SBHC-2	C	1			X					X		9-Jul	12:40			X				
-7	SDA82070903EBHC-5	C	1			X					X		9-Jul	12:45			X				
8																					
9																					
10																					

ANALYSIS REQUEST

Sampler Relinquished: John Good	Date 7-9-03 Time 4:10	Received By:	Fax Results To John Good 505-394-2601
Relinquished by:	Date 07/09/2003 Time 4:10P	Received By: (lab staff)	REMARKS:
Delivered by:	Sample Cool & Intact: Yes / No	Checked By:	

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

Receiving Date: 07/09/2003
Reporting Date: 07/10/2003
Project Number: NOT GIVEN
Project Name: A-8-2 EXTENSION PIPELINE
Project Location: DEFS A-8-2 EXTENSION 052203

Analysis Date: 07/10/2003
Sampling Date: 07/09/2003
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: GP

LAB NUMBER	SAMPLE ID	Cl^- (mg/L)
H7796-1	SDA82070903NBHC-10	176
H7796-2	SDA82070903NBHC-5	144
H7796-3	SDA82070903NBHC-2	13496
H7796-4	SDA82070903SBHC-10	217
H7796-5	SDA82070903SBHC-5	320
H7796-6	SDA82070903SBHC-2	3215
H7796-7	SDA82070903EBHC-5	96
Quality Control		1020
True Value QC		1000
% Recovery		102
Relative Percent Difference		4.9
METHOD: EPA 600/4-79-020,		325.3

Gayle A. Potter, Chemist

07/10/2003
Date

H7796

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.
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	A-8-2 Extension Pipeline
Project Reference	DEFS A-8-2 Extension 052203
EPI Sampler Name	John Good

Bill To

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	BTEX 8021B	TPH 8015M	CHLORIDES (Cl)	SULFATES (SO_4^{-2})	pH	TCLP	OTHER >>>
H7804-1	SDA820711038BHC-7	C	1			X					X		11-Jul	1:46			X				
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

ANALYSIS REQUEST

Sampler Relinquished: John Good	Date 7-11-03 Time 4:37	Received By:	Fax Results To John Good 505-394-2601
Relinquished by:	Date 07/11/2003 Time 4:40 PM	Received By: (lab staff)	REMARKS:
Delivered by:	Sample Cool & Intact: Yes / No	Checked By:	

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

Receiving Date: 07/11/03
Reporting Date: 07/14/03
Project Owner: DEFS
Project Name: A-8-2 EXTENSION PIPELINE
Project Location: DEFS A-8-2 EXTENSION 052203

Analysis Date: 07/14/03
Sampling Date: 07/11/03
Sample Type: SOIL;
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl^- (mg/Kg)
H7804-1	SDA82071103SBHC-7	128
Quality Control		1020
True Value QC		1000
% Recovery		102
Relative Percent Difference		4.9
METHOD: Standard Methods		4500-ClB

Amy Hill
Chemist

7/14/03
Date

H7804

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

July 15, 2003

Mr. Larry Johnson
New Mexico Oil Conservation Division
1625 North French
Hobbs, New Mexico 88240

Subject: Duke Energy Field Services A-8-2 Extension 052203 Closure Proposal

Dear Mr. Johnson:

Pursuant to yesterday's mutual inspection of the project and onsite discussion of closure options, on behalf of Duke Energy Field Services, EPI proposes to close the site as follows:

- The chloride contaminated soil has been excavated in two distinct sections divided by the Exxon-Mobil Produced Water pipeline. The excavation depths are: 7-ft bgs on the SW side of the Exxon-Mobil pipe and 5-ft bgs on the NE side. The total excavated surface are is ~11,500 ft^2, including areas that were superficially scraped. The fiberglass produced water line is supported by a 4-ft wide wall of caliche rock that was left intact. It is assumed that this supporting column displays the same contaminant profile as the soil excavated from either side of it, i.e. 15,000 ppm chlorides at the surface declining to <130 ppm at 7-ft bgs.
- Due to the inordinate expense to DEFS of deactivating the Exxon-Mobil PW line (~2,000 bbl/day) and re-routing it, EPI is proposing that the site be closed with the PW line (and supporting soil column) remaining in-place. The final backfill elevation will be above the surrounding undisturbed surface elevation and contoured such that any water flow from a major storm event will be channeled around the remediation site, rather than through it.

If there are any questions please call Mr. Ben Miller, or myself, at our office or at 505-390-0288 and 505-390-7864, respectively or Mr. Paul Mulkey at 505-397-5716. All official written communications should be addressed to:

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

Sincerely,

John Good
EPI Environmental Consultant

cc: Paul Mulkey, Duke Energy Field Services-Linam Ranch
Ronnie Gilchrist, Duke Energy Field Services-Linam Ranch
Steve Weathers, Duke Energy Field Services-Denver
Lynn Ward, Duke Energy Field Services-Midland
Ben Miller, EPI Vice President and General Manager
Pat McCasland, EPI Technical Manager

Attachments: Site Diagram and Photos

ENVIRONMENTAL PLUS, INC.

P.O. BOX 1558 ••• 2100 AVENUE O ••• EUNICE, NEW MEXICO 88231

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

July 16, 2003

Mr. Paul Mulkey
Duke Energy Field Services
11525 W. Carlsbad Hwy
Hobbs, NM 88240

pdmulkey@duke-energy.com

Re: Remediation Plan Approval, A-8-2 Ext.052203
Site Reference UL-G, Sec-26 T-17S R-34E
Request Plan Dated: July 15, 2003

Dear Mr. Mulkey,

The revised Closure Proposal submitted to the New Mexico Oil Conservation Division (OCD) by Environmental Plus, Inc. for Duke Energy Field Services is **hereby approved** as requested.

Please be advised that OCD approval of this plan does not relieve Duke Energy Field Services of liability should their operations fail to adequately investigate and remediate contaminants that threaten ground water, surface water, human health or the environment. Additionally, OCD approval does not relieve Duke Energy Field Services of responsibility for compliance with any other federal, state, or local laws and/or regulations.

If you have any questions or need assistance please feel free to call or e-mail me at (505) 393-6161, x111 or email lwjohnson@state.nm.us

Sincerely,

Larry Johnson - Environmental Engineer

Cc: Roger Anderson - Environmental Bureau Chief
Chris Williams - District I Supervisor
Bill Olson - Hydrologist
Paul Sheeley-Environmental Engineer
John Good – EPI Consultant

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	Contact
DUKE ENERGY FIELD SERVICES	**Steve Weathers**
Address	Telephone No.
PO Box 5493 Denver, CO 80217	**(303) 605-1718**
Facility Name	Facility Type
Exxon-Mobil Produced Water Line	**Produced Water Line**

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

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from South Line	Feet from West Line	Longitude	Latitude	County:
G	**26**	**17S**	**34E**	**3300**	**3180**	**W103° 31' 45.77"**	**N32° 48' 28.64"**	**Lea**

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
Produced Water	**190 bbl**	**180 bbl**
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery
Rupture of Exxon-Mobil Produced Water Line	**5/22/2003**	**5/22/03**
Was Immediate Notice Given? ☑ Yes ☐ No ☐ Not Required	If YES, To Whom? **Larry Johnson (NMOCD-Hobbs)**	
By Whom? **Ronnie Gilchrest (DEFS)**	Date and Hour **5/22/03 10:35 AM**	
Was a Watercourse Reached? ☐ Yes ☑ No	If YES, Volume Impacting the Watercourse. **NA**	

If a Watercourse was Impacted, Describe Fully.*
NA

Describe Cause of Problem and Remedial Action Taken.*
Exxon-Mobil did not respond to NM One-Call. DEFS personnel were hand spotting lines with a pick. Produced water line was punctured when struck with pick. Pipeline was repaired by DEFS personnel by clamping.

Describe Area Affected and Cleanup Action Taken.*
Final ~11,265-ft^2 surface area affected. 180-bbl of produced water recovered from ~190-bbl release. Contaminated soil above remedial goal of 250 ppm Chloride was excavated and disposed of by EPI at Controlled Recovery Inc.

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:	**OIL CONSERVATION DIVISION**	
Printed Name: **Steve Weathers**	Approved by District Supervisor:	
Title: **Environmental Specialist**		
Email: **swweathers@duke-energy.com**	Approval Date:	Expiration Date:
Date: **1/7/04** Phone: **(303) 605-1718**	Conditions of Approval:	☐ Attached

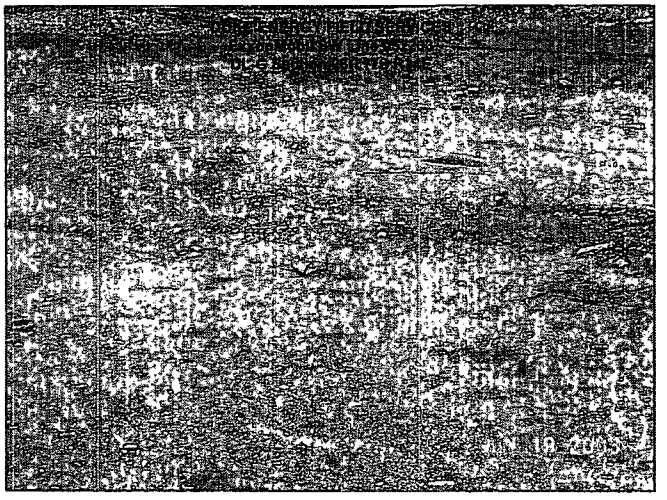
Duke Energy Field Services	Incident Date and NMOCD Notified? 5/22/03 5/22/03 10:35 AM

SITE:	Exxon-Mobil Produced Water Line	Assigned Site Reference A-8-2 Extension #052203	
Company:	DUKE ENERGY FIELD SERVICES		
Street Address:	5805 East Highway 80		
Mailing Address:	PO Box 5493		
City, State, Zip:	Denver, CO 80217		
Representative:	Steve Weathers		
Representative Telephone:	(303) 605-1718		
Telephone:			
Fluid volume released (bbls):	190	Recovered (bbls):	180
>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:	A-8-2 Extension #052203		
Source of contamination:	Rupture of Exxon-Mobil Produced Water Line		
Land Owner, i.e., BLM, ST, Fee, Other:	State of New Mexico State Land Office, Santa Fe, NM		
LSP Dimensions:	120' X 90' (GPS Site Diagram attached)		
LSP Area:	11,275 -ft^2		
Location of Reference Point (RP):			
Location distance and direction from RP:			
Latitude:	N32° 48' 28.64"		
Longitude:	W103° 31' 45.77"		
Elevation above mean sea level:	4026 -ft amsl		
Feet from South Section Line:	3300		
Feet from West Section Line:	3180		
Location - Unit and 1/4 1/4:	UL- G	SW 1/4 of NE 1/4	
Location - Section:	26		
Location - Township:	17S		
Location - Range:	34E		
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):	50		
Depth (ft) of contamination (DC):	10		
Depth (ft) to ground water (DG - DC = DtGW):	40		

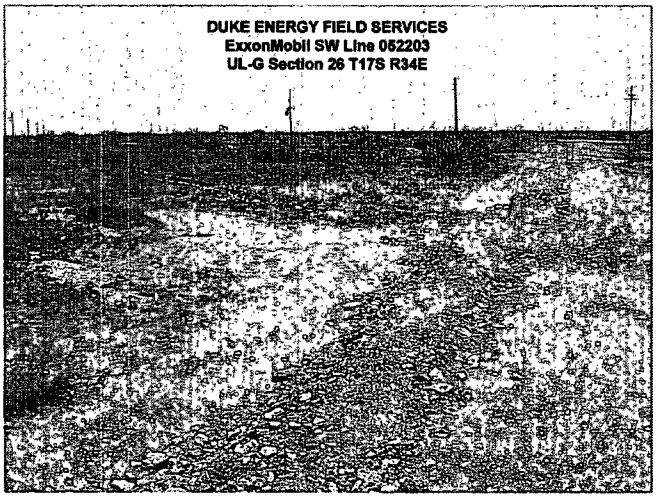
1. Ground Water	2. Wellhead Protection Area	3. Distance to Surface Water Body
If Depth to GW <50 feet: *20 points*	If <1000' from water source, or, <200' from private domestic water source: *20 points*	<200 horizontal feet: 20 points
If Depth to GW 50 to 99 feet: *10 points*		200-100 horizontal feet: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

Total Site Ranking Score and Acceptable Concentrations

Parameter	20		
Chlorides	**250 mg/kg**		



Initial surface evidence of release



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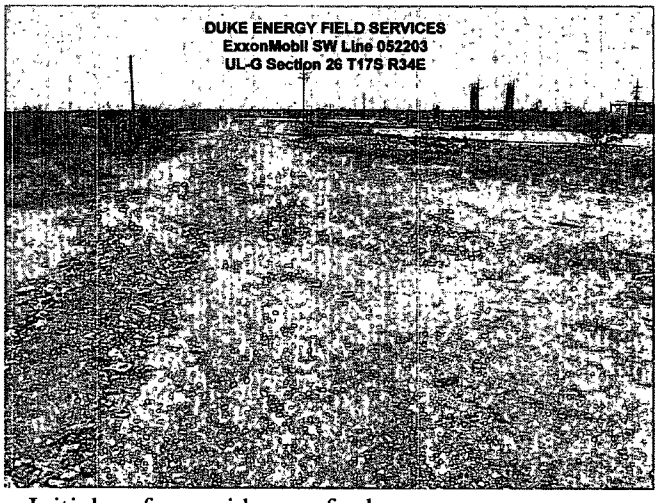

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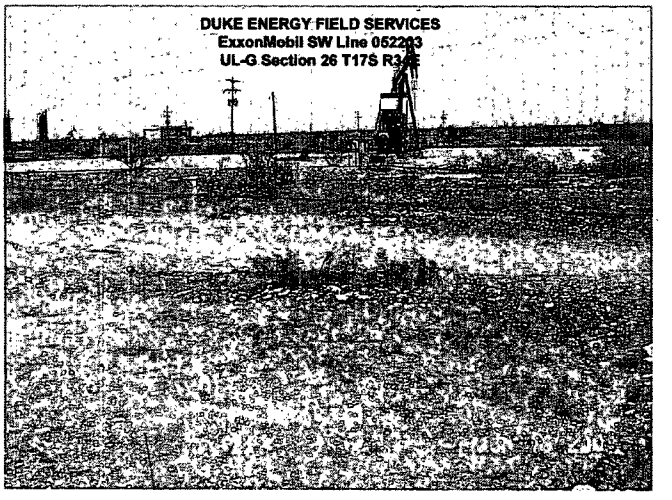

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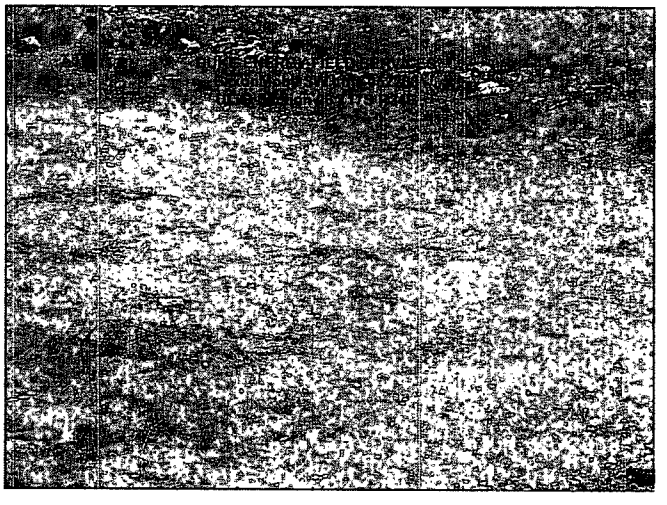
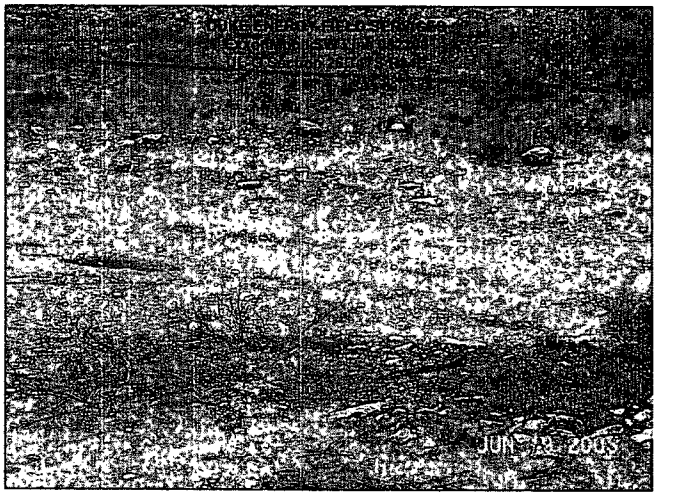


Salt crystals visible on surface



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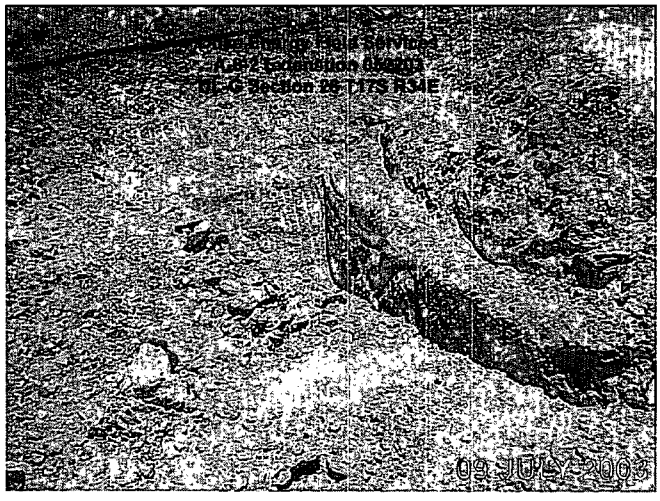
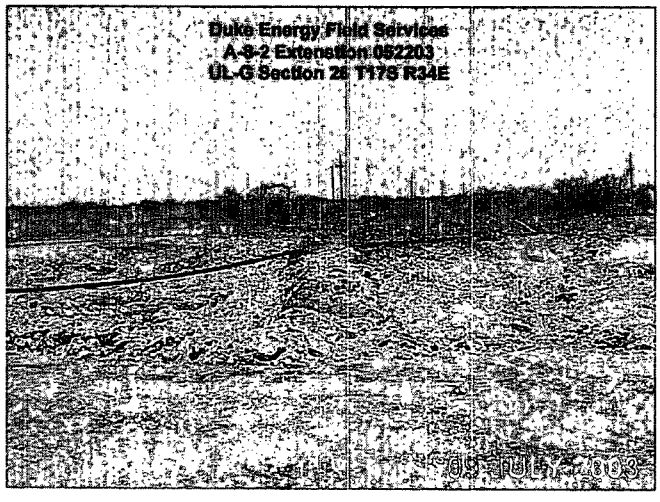
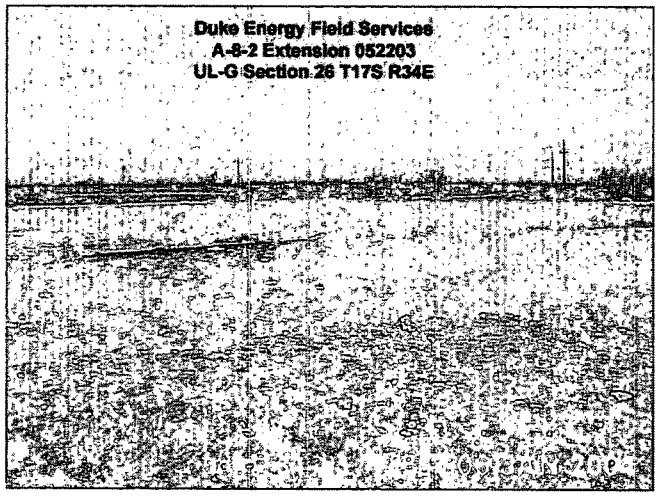


Test trench dug to 10-ft

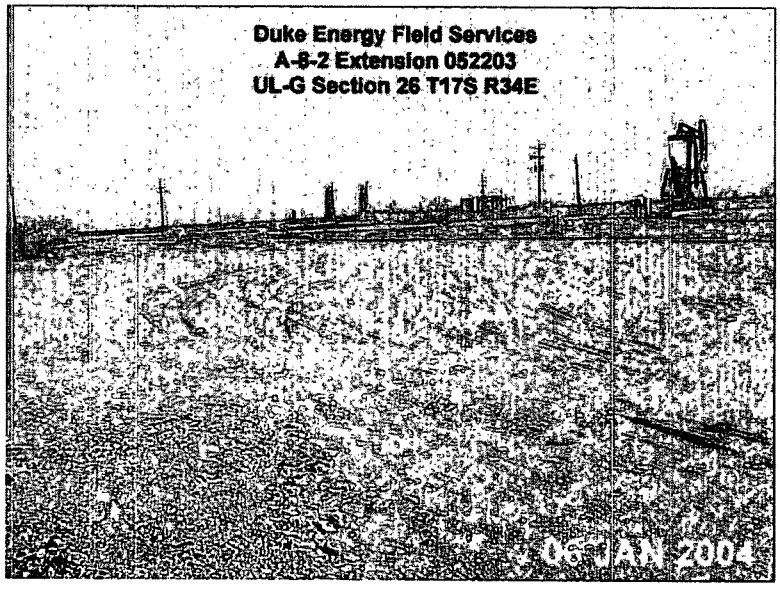
Excavation from SW to NE



Excavation looking NW along Exxon-Mobil line



Site contoured and completed



Site contoured and completed

ENVIRONMENTAL PLUS, INC. Micro-Blaze Micro-Blaze Gel
STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES

July 15, 2003

Mr. Larry Johnson
New Mexico Oil Conservation Division
1625 North French
Hobbs, New Mexico 88240

Subject: Duke Energy Field Services A-8-2 Extension 052203 Closure Proposal

Dear Mr. Johnson:

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Hobbs, New Mexico 88240

Sincerely,

John Good

John Good
EPI Environmental Consultant

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Ronnie Gilchrist, Duke Energy Field Services-Linam Ranch
Steve Weathers, Duke Energy Field Services-Denver
Lynn Ward, Duke Energy Field Services-Midland
Ben Miller, EPI Vice President and General Manager
Pat McCasland, EPI Technical Manager

Attachments: Site Diagram and Photos

ENVIRONMENTAL PLUS, INC.

P.O. BOX 1558 ••• 2100 AVENUE O ••• EUNICE, NEW MEXICO 88231
TELEPHONE 505•394•3481 ••• FAX 505•394•2601

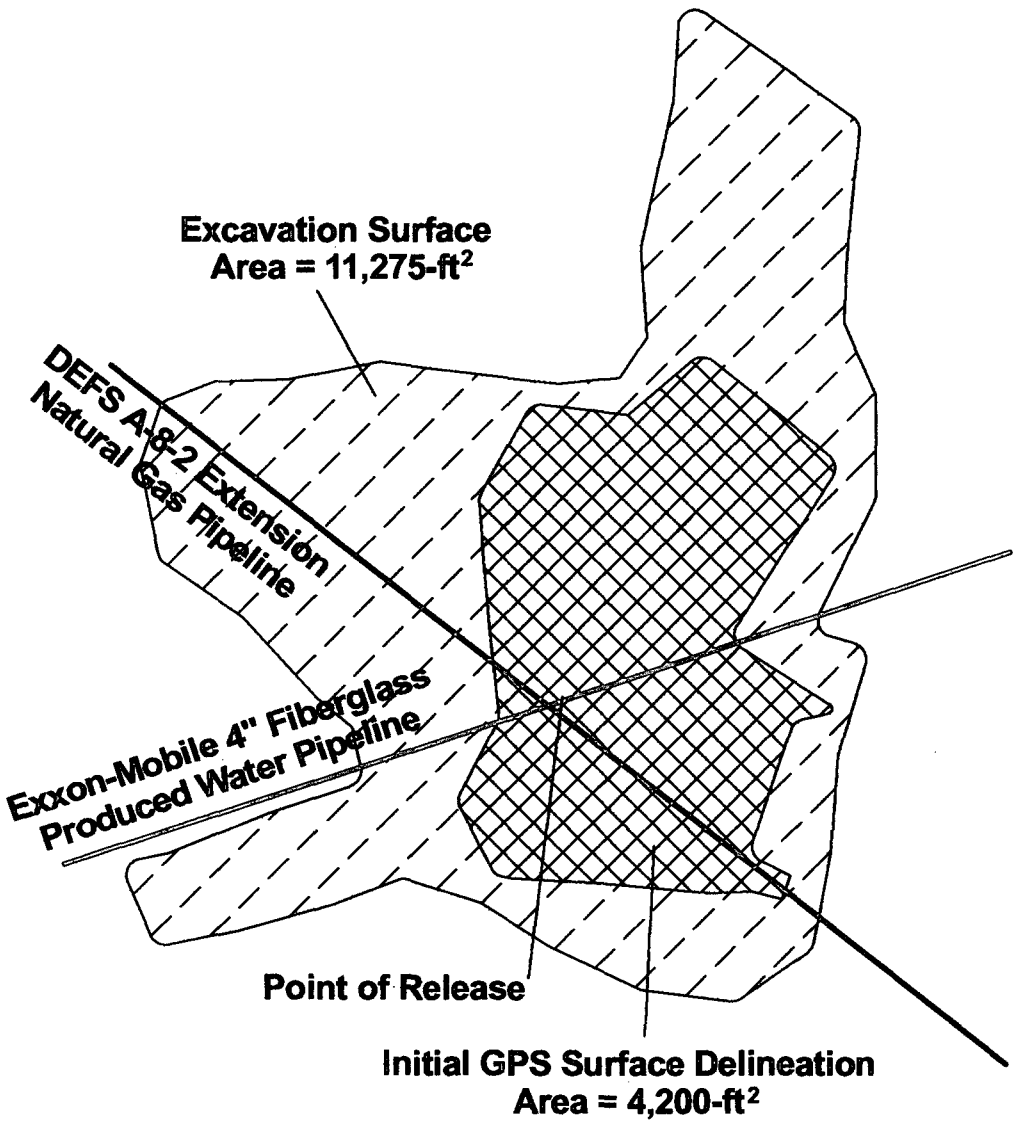

Plate 3 - Initial and Final GPS Demarcations
Duke Energy Field Services
A-8-2 Extension - 052203

Lea County, New Mexico
UL-G Section 26 T17S R34E
N32° 48' 28.64" W103° 31' 45.77"
Elevation: 4026-ft amsl

DWG BY: John Good
July - 2003

REVISED:

SCALE: 0 80 Feet

N