REMEDIATION PROPOSAL

A-19-19-3-1

1RP # 1151
COMPANY NO. 36785
EPI REF: 130025

UL-M (SW¼ OF THE SW¼) OF SECTION 21 T18S R33E

~20.7 MILES WEST-SOUTHWEST OF BUCKEYE

LEA COUNTY, NEW MEXICO

LATITUDE: N 32° 43'33.8" LONGITUDE: W 103° 40' 28.6"

FEBRUARY 2007

PREPARED BY:

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

PREPARED FOR:

dcp Midstream

STANDARD OF CARE

Remediation Proposal

A-19-19-3-1

(NMOCD 1RP#1151; EPI Ref. #130025)

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

9 Feb. 2007
Date

This report was reviewed by:

David Duncan
Civil Engineer

2-09-07
Date

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1.0 PROJECT SYNOPSIS

Site Specific:

- ***Company Name:*** DCP Midstream, LLC (formerly Duke Energy Field Services)
- ***Facility Name:*** A-19-19-3-1
- ***Project Reference:*** NMOCD 1RP#1151; EPI Ref. #130025
- ***Company Contacts:*** Lynn Ward
- ***Site Location:*** WGS84 N32° 43' 33.8"; W103° 40' 28.6"
- ***Legal Description:*** Unit Letter-M, (SW¼ of the SW¼), Section 21, T 18 S, R 33 E
- ***General Description:*** Approximately 20.7-miles west-southwest of Buckeye, New Mexico
- ***Elevation:*** 3,805-ft amsl
- ***Land Ownership:*** State of New Mexico
- ***EPI Personnel:*** Project Consultant – Jason Stegemoller

Release Specific:

- ***Product Released:*** Natural Gas and Natural Gas Liquids (NGL)
- ***Volume Released:*** ~7 barrels ***Volume Recovered:*** none
- ***Time of Occurrence:*** June 29, 2005
- ***Time of Discovery:*** June 29, 2005
- ***Release Source:*** 6-inch steel low pressure natural gas pipeline operating at 15-20 lbs
- ***Initial Surface Area Affected:*** ~2,640 square feet

Remediation Specific:

- ***Final Vertical extent of contamination:*** 5-feet bgs at maximum depth
- ***Depth to Ground Water:*** ~76-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 thresholds ; b) transport a portion of the most severely impacted excavated material to landfarm for treatment; c) blend the remaining portion of excavated soil with clean soil obtained from the pipeline right-of-way; d) laboratory analyses to confirm soil below NMOCD remedial thresholds in excavation sidewalls and floor and blended material; e) backfill the excavation with blended soil and seed with a blend approved by the New Mexico State Land Office.
- ***Disposal Facility:*** Artesia Aeration, LLC.
- ***Volume disposed:*** To be determined
- ***Project Completion Date:*** Ongoing

2.0 SITE AND RELEASE INFORMATION

2.1 ***Describe the land use and pertinent geographic features within 1,000 feet of the site.***
In addition to oilfield activities, land surrounding the area is rangeland and utilized for livestock grazing.

2.2 ***Identify and describe the source or suspected source(s) of the release.***
Corrosion of 6-inch diameter steel natural gas pipeline.

2.3 ***What is the volume of the release? (if known):*** ~7 ***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):*** 29 June 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 Quercho Plains physiographic subdivision, described by Nicholson & Clebsch as an area that is "stable or semi-stable over most of the area, but which locally drifts. The surface is very irregular and has no drainage features except at the edges of several playas."

2.7 ***Ecological Description***
Typical vegetation consists primarily of an intergrade of High Plains and Northern Chihuahuan Desert grasses. Vegetation includes perennial grasses (eg. blue grama, buffalograss) and annual and perennial forbs (eg. broad-leafed milkweed and Russian thistle). Degraded/disturbed areas will consist primarily of annual grasses and forbs and mesquite exhibiting shrubby growth forms. Mammals represented include Orrd's and Merriam's Kangaroo Rats, Deer Mouse, White Throated Wood Rat, Cottontail Rabbit, Black Tailed Jackrabbit, Mule Deer, Bobcat, Red Fox and Coyote. Reptiles, amphibians and birds are numerous and typical of the area. A survey of Listed, Threatened or Endangered species was not conducted.

2.8 ***Area Groundwater***
The unconfined groundwater aquifer at this site is projected to be ~76 feet below ground surface (bgs) based on water depth data obtained from the New Mexico State Engineers Office and the United States Geological Survey data base (reference *Table 1*).

2.9 ***Area Water Wells***
No public water supply wells 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 (5) 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: *20 points*
Depth to GW 50 to 99 feet: *10 points*		200-1,000 horizontal feet: *10 points*
Depth to GW >100 feet: 0 points	If >1,000' from water source, or >200' from private domestic water source: *0 points*	>1,000 horizontal feet: *0 points*
Site Rank (1+2+3) = 10 + 0 + 0 = 10 points		

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

[1] A field soil vapor headspace measurement of 100 ppm 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: To be determined

Total volume removed: To be determined

4.2 ***Indicated soil treatment type:***

☐ ***Disposal***
☒ ***Land Treatement***
☐ ***Composting/Biopiling***
☒ ***Other*** 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 ~70º 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 were collected at 5-foot intervals from a series of four (4) soil borings utilizing a hollow stem drill. 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) and chloride concentrations.

5.3 Discuss sample locations and provide rationale for their locations.

On September 6, 2005, four soil borings (i.e., BH-1, BH-2, BH-3 and BH-4) were advanced within the release area. Soil samples were collected from BH-1 at 5, 10, 15 and 20-feet bgs; BH-2 and BH-3 at 5, 10 and 15-feet bgs and BH-4 at 5 and 10-feet bgs. Soil boring location was chosen to delineate the vertical extent of impacts along and adjacent to the pipeline (reference *Figure 4* and *Appendix III*).

6.0 ANALYTICAL RESULTS

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

Laboratory analyses of soil samples collected on September 6, 2005 from soil boring BH-1, BH-2, BH-3 and BH-4 indicated BTEX constituent concentrations were non-detectable (ND) at or above laboratory method detection limits (MDL). TPH concentrations ranged from ND to 62.0 mg/Kg, below the NMOCD remedial threshold of 1,000 mg/Kg. Chloride concentrations ranged from 48 to 208 mg/Kg, below the remedial goal of 250 mg/Kg. Sulfate concentrations ranged from ND to 62 mg/Kg, below the remedial goal of 600 mg/Kg (reference *Table 2, Figure 4* and *Appendix I*).

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.
Reference ***Figure 3***

7.0 DISCUSSION

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

Laboratory analyses of soil samples collected during the advancement of soil borings BH-1, BH-2, BH-3 and BH-4 indicate in situ soil below 5-feet bgs was not impacted by this release. Based on depth to groundwater (>50-feet bgs), low to non-detectable TPH, BTEX constituent, chloride and sulfate concentrations, groundwater should not be impacted by this release (reference *Table 2* and *Appendix I*).

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.***

Soil samples collected during the advancement of soil borings BH-1 through BH-4 indicate TPH and BTEX concentrations below 5-feet bgs were low to non-detectable at or above laboratory method detection limits. Chloride concentrations ranged from 48 to 208 mg/Kg, below the remediation goal of 250 mg/Kg. Sulfate concentrations ranged from non-detectable to 62 mg/Kg, below the remediation goal of 600 mg/Kg.

8.3 ***If additional groundwater monitoring is recommended, indicate the proposed monitoring schedule and frequency. Conduct quarterly monitoring until the NMOCD responds to this report.*** Not Applicable

8.4 ***If corrective action is recommended, provide a conceptual approach.*** Environmental Plus, Inc. recommends the following corrective actions:

a) Excavate NGL impacted/stained soil to approximately 4-feet bgs and stockpile; and
b) transport a portion of the most severely impacted excavated soil to Artesia Aeration, LLC for treatment; and
c) blend the remaining portion of excavated soil with clean soil obtained from the pipeline right-of-way and collect soil samples; and
d) collect soil samples from the excavation sidewalls and floor and blended material for laboratory quantification of TPH, BTEX constituent and sulfate concentrations; and
e) upon laboratory verification of achieved remedial goals, backfill the excavation with blended and clean soil and seed with a blend approved by the NMSLO.

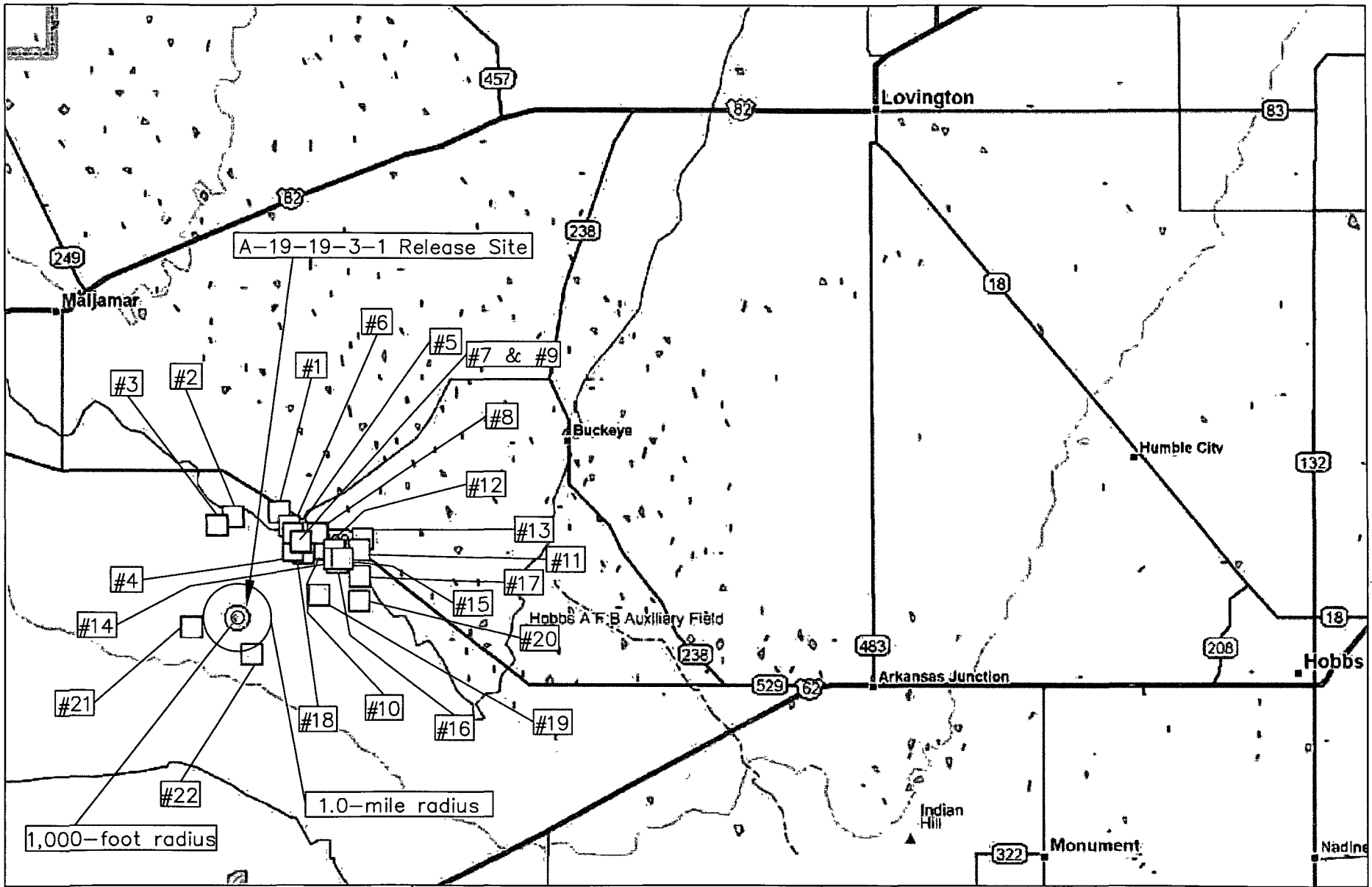

Figure 1 Area and Well Location Map DCP Midstream, L.L.C. A-19-19-3-1	Lea County, New Mexico SW 1/4 of the SW 1/4, Sec. 21, T18S, R33E N 32° 43' 33.8" W 103° 40' 28.6" Elevation: 3,805 feet amsl	DWG By: Iain Olness July 2005 0 4.0 8.0 Miles	REVISED: SHEET 1 of 1 N

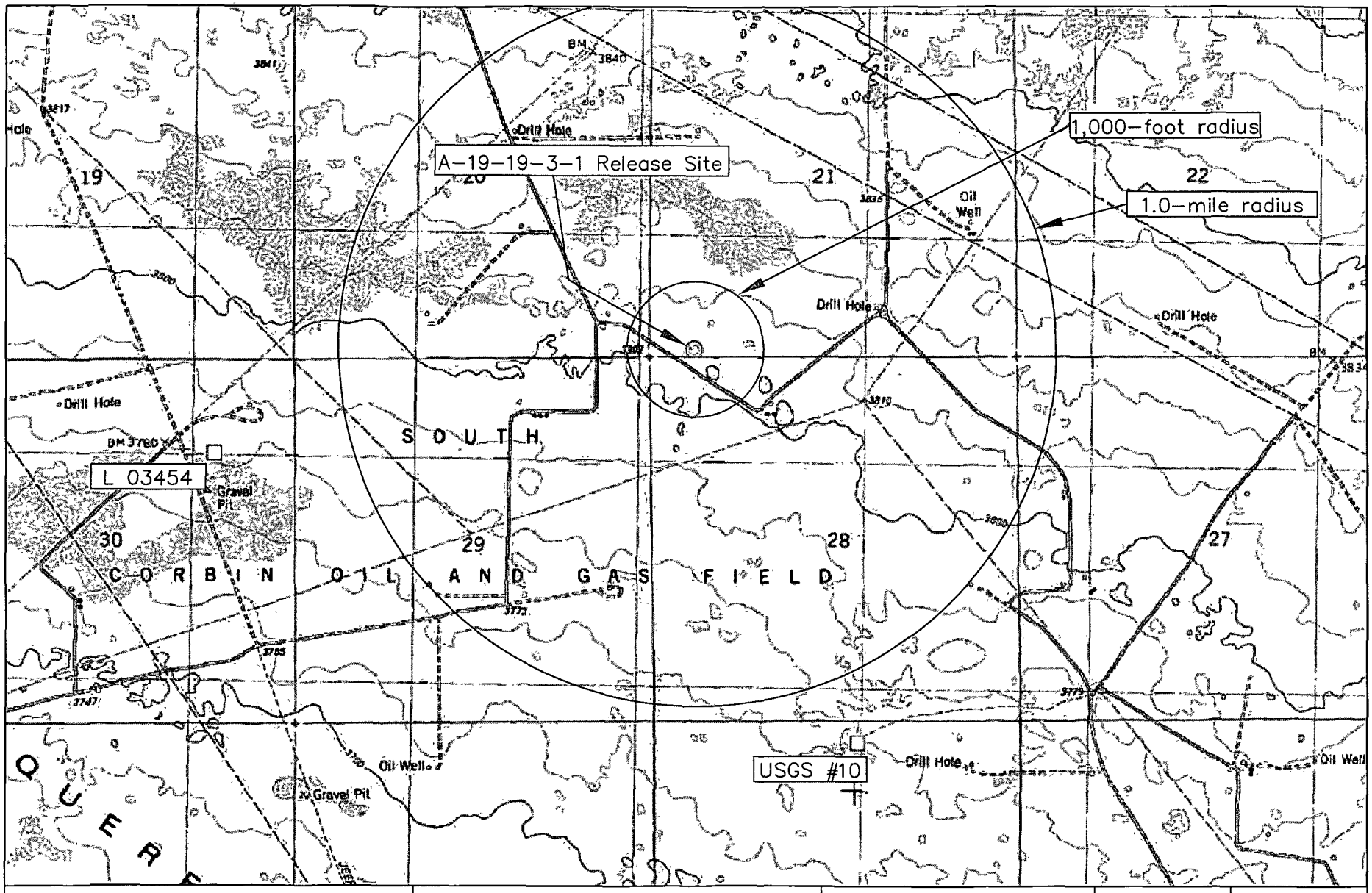

Figure 2 Site and Well Location Map DCP Midstream, L.L.C. A-19-19-3-1	Lea County, New Mexico SW 1/4 of the SW 1/4, Sec. 21, T18S, R33E N 32° 43' 33.8" W 103° 40' 28.6" Elevation: 3,805 feet amsl	DWG By: Iain Olness July 2005 0 2,000 4,000 Feet	REVISED: SHEET 1 of 1 N

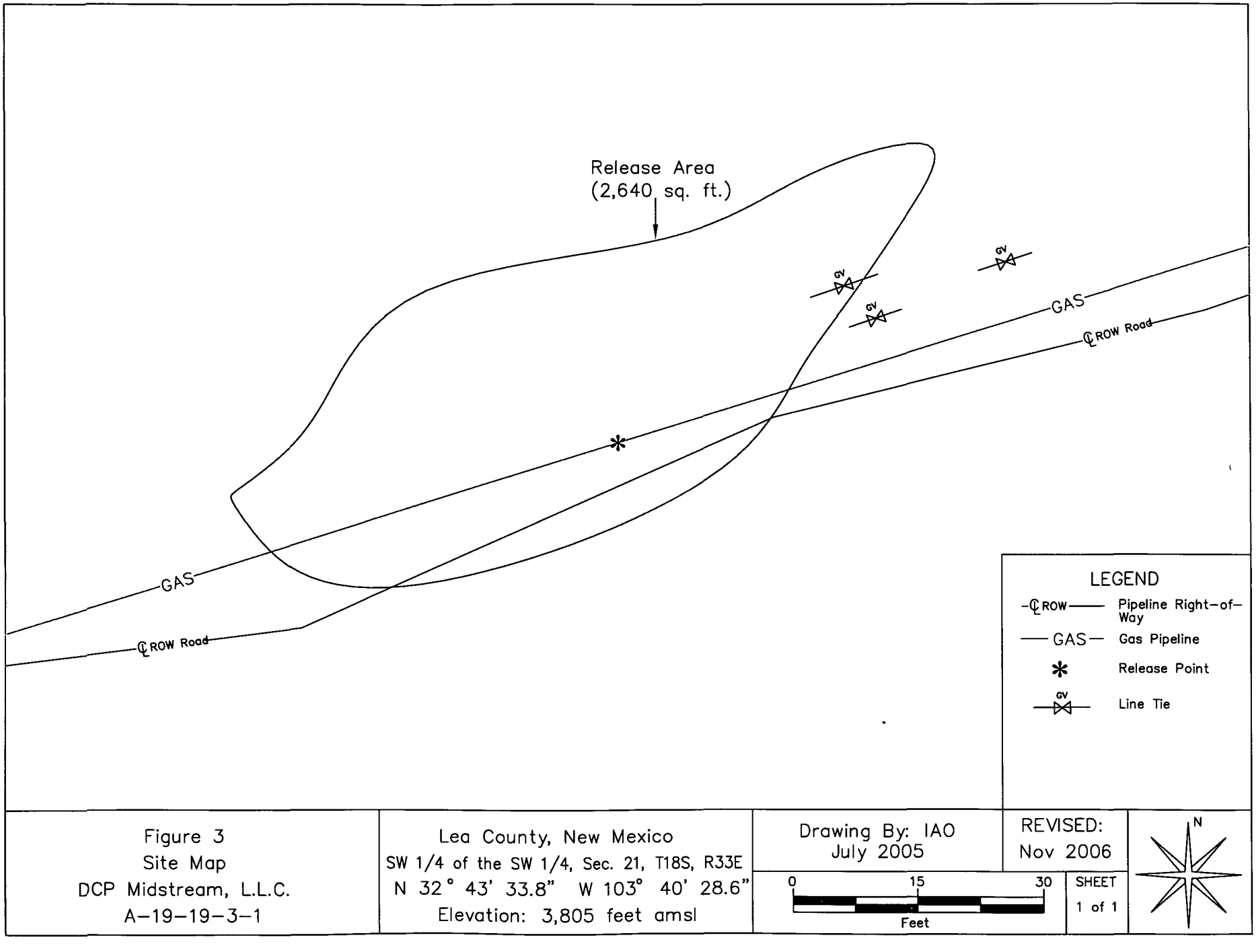

Figure 3 Site Map DCP Midstream, L.L.C. A-19-19-3-1	Lea County, New Mexico SW 1/4 of the SW 1/4, Sec. 21, T18S, R33E N 32 ° 43' 33.8" W 103° 40' 28.6" Elevation: 3,805 feet amsl	Drawing By: IAO July 2005	REVISED: Nov 2006	N
		0 15 30 Feet	SHEET 1 of 1	

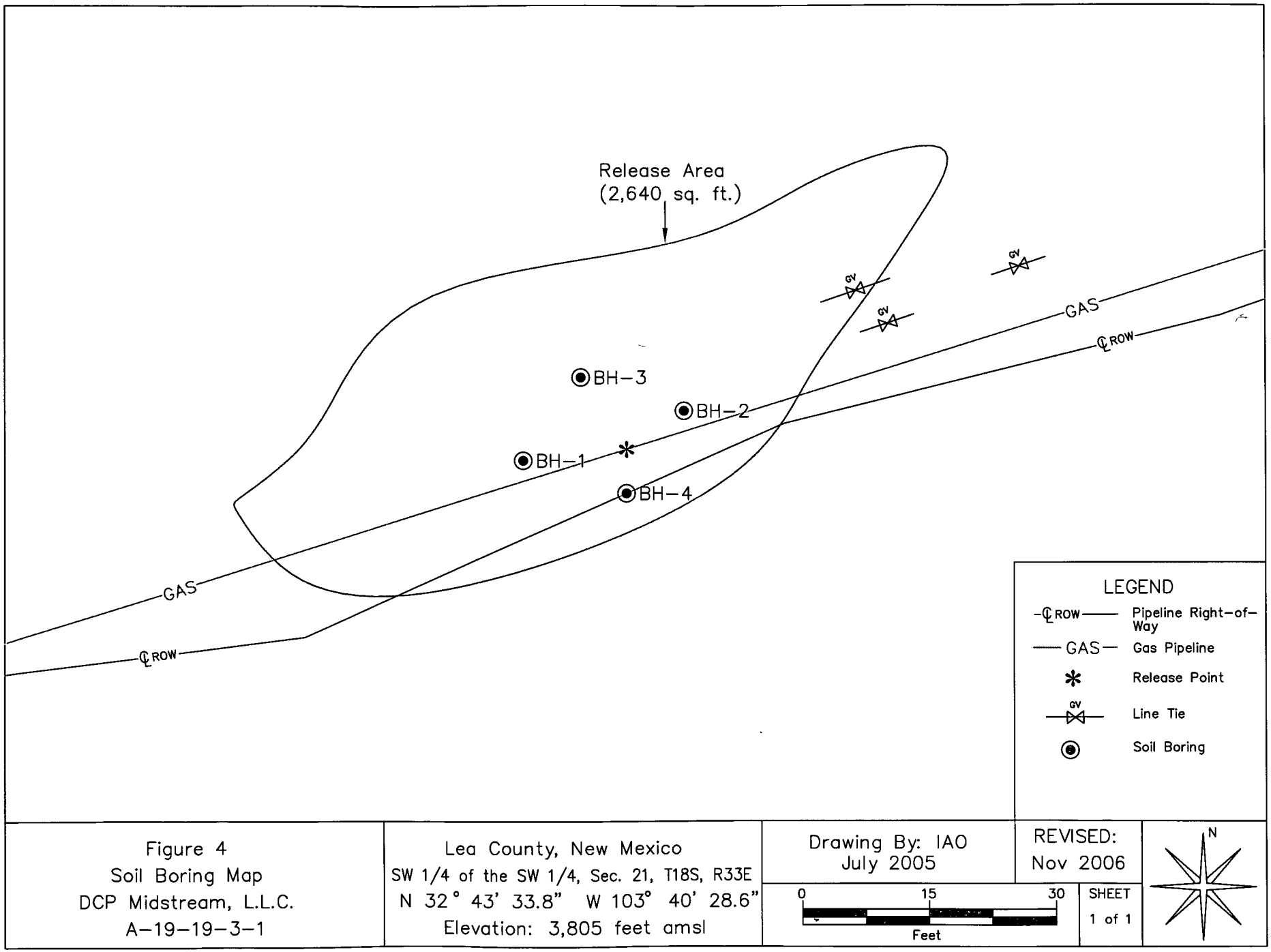

Figure 4 Soil Boring Map DCP Midstream, L.L.C. A-19-19-3-1	Lea County, New Mexico SW 1/4 of the SW 1/4, Sec. 21, T18S, R33E N 32 ° 43' 33.8" W 103° 40' 28.6" Elevation: 3,805 feet amsl	Drawing By: IAO July 2005	REVISED: Nov 2006	SHEET 1 of 1

TABLE 1

WELL INFORMATION REPORT*

DCP Midstream, LLC A-19-19-3-1 (NMOCD 1RP# 1151; EPI Ref #130025)

Well Number	Map ID	Diversion[A]	Owner	Use	Twsp	Rng	Sec q q q	Latitude	Longitude	Date Measured	Surface Elevation[B]	Well Depth (ft bgs)	Depth to Water (ft bgs)
USGS #1	1				18 S	33 E	03 3 4 1			05-Apr-66	4,021		60 1
										19-Feb-71			59 18R
CP 00758	2	3	Oxy USA, Inc	EXP	18 S	33 E	04 3	N 32° 46' 8.75"	W 103° 40' 34 24"	10-May-91	3,968	250	
L 06131	3	3	Scharbauer Cattle Company	STK	18 S	33 E	08 2 1 3	N 32° 45' 55.53"	W 103° 41' 5 21"	29-Apr-67	3,920	194	100
CP 00072 X-2	4	1,280	KRM, Inc.	IRR	18 S	33 E	10 4 4 2	N 32° 45' 16.96"	W 103° 38' 46.2"		3,968		
CP 00072 X-3	5	1,280	KRM, Inc	IRR	18 S	33 E	10 2 4 1	N 32° 45' 43.09"	W 103° 38' 46 21"		4,000		
USGS #2	6				18 S	33 E	10 2 3 2			15-Feb-96	4,004		59.18
USGS #3	7				18 S	33 E	10 4 4 2			18-Feb-76	3,985		44.75
CP 00072	8	1,280	KRM, Inc.	IRR	18 S	33 E	11 2 3	N 32° 45' 43.23"	W 103° 37' 59.83"		4,008		
CP 00072 X	8	1,280	KRM, Inc	IRR	18 S	33 E	11 2	N 32° 45' 43.23"	W 103° 37' 59 83"		4,008		
CP 00072	8	640	Connie Alexander	COM	18 S	33 E	11 2 3	N 32° 45' 43.23"	W 103° 37' 59.83"		4,008		
CP 00701	9	0	Heyco's Harvey Yates	PRO	18 S	33 E	11 3 1	N 32° 45' 30.1"	W 103° 38' 30.78"	20-Oct-86	3,990	100	
CP 00701 (9) EXP	9	0	Peterson Drilling	PRO	18 S	33 E	11 3 1	N 32° 45' 30.1"	W 103° 38' 30.78"		3,990		
CP 00702 EXP	9	0	Heyco's Harvey Yates	PRO	18 S	33 E	11 3 1 4	N 32° 45' 30.1"	W 103° 38' 30.78"		3,990		
CP 00702 (9) EXP	9	0	Peterson Drilling	PRO	18 S	33 E	11 3 1	N 32° 45' 30.1"	W 103° 38' 30.78"		3,990		
USGS #4	10				18 S	33 E	11 4 4 3			17-May-91	3,985		46 16
L 02878	11	3	S. P Yates Drilling Company	PRO	18 S	33 E	12 4 4	N 32° 45' 17.34"	W 103° 36' 42.56"	30-May-55	4,065	205	150
L 02878 APPRO	11				18 S	33 E	12 4 4	N 32° 45' 17 34"	W 103° 36' 42 56"		4,065		
L 06347	11	3	Scharbauer Cattle Company	STK	18 S	33 E	12 4 4	N 32° 45' 17 34"	W 103° 36' 42 56"	12-Jul-68	4,065	170	130
L 08288	12	35	Kenneth Smith, Inc.	COM	18 S	33 E	12 3 3 3	N 32° 45' 17 17"	W 103° 37' 28 86"		3,988		
USGS #5	13				18 S	33 E	12 4 4 2			15-Feb-96	4,070		142 81
CP 00623	14	58	Kenneth Smith, Inc.	COM	18 S	33 E	13 1 1 1	N 32° 45' 4 11"	W 103° 37' 28.85"	10-May-82	3,970	82	60
CP 00689	15	0	Sun Oil	PRO	18 S	33 E	13 1 2	N 32° 45' 4 16"	W 103° 37' 13.42"	07-Dec-85	3,980	100	
USGS #6	16				18 S	33 E	13 1 3 1			17-Feb-76	3,970		32.19
USGS #7	17				18 S	33 E	13 4 4 2			15-Feb-96	3,965		48.55
USGS #8	18				18 S	33 E				18-Feb-76	3,975		36 41
										15-Feb-96			40 27
USGS #9	19				18 S	33 E				20-Feb-81	3,885		47.63
										22-May-91			48 94
CP 00691	20	0	Sun Oil		18 S	33 E	24 2 4	N 32° 43' 58.96"	W 103° 36' 42.54"	14-Jan-86	3,950	215	195
L 03454	21	3	W. H. Ellison		18 S	33 E	30 2 2	N 32° 43' 18.69"	W 103° 41' 51.33"	30-Mar-57	3,782	100	35
USGS #10	22				18 S	33 E	33 2 1 1			09-Dec-58	3,770		177 35

* = Data obtained from the New Mexico Office of the State Engineer Website (http://iwaters ose state nm us.7001/iWATERS/wr_RegisServlet1) and USGS Database.
Shaded well information indicates well location shown on Figure 1

[A] = in acre feet per annum

[B] = Interpolated from USGS Topographical Map

PRO = Prospecting or development of a natural resource
DOM Domestic
COM = Commercial
STK = Stock
IRR = Irrigation
EXP = Expired
(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 Soil Boring Analytical Results

DCP Midstream, LLC A-19-19-3-1 (NMOCD 1RP# 1151; EPI Ref. #130025)

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)
Soil Boring BH-1	5	06-Sep-05	In Situ	5.3	200	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<10.0	64	<1
	10	06-Sep-05	In Situ	88.0	200	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	12.3	12.3	96	<1
	15	06-Sep-05	In Situ	20.5	200	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<10.0	64	<1
	20	06-Sep-05	In Situ	7.0	200	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<10.0	208	62
Soil Boring BH-2	5	06-Sep-05	In Situ	32.5	200	<0.005	<0.005	<0.005	<0.015	<0.030	13.7	48.3	62.0	48	30
	10	06-Sep-05	In Situ	29.3	200	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<10.0	160	<1
	15	06-Sep-05	In Situ	5.9	200	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<10.0	80	<1
Soil Boring BH-3	5	06-Sep-05	In Situ	22.5	960	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	14.4	14.4	80	<1
	10	06-Sep-05	In Situ	12.2	200	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	36.6	36.6	64	<1
	15	06-Sep-05	In Situ	13.0	200	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<10.0	48	<1
Soil Boring BH-4	5	06-Sep-05	In Situ	3.9	200	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<10.0	48	<1
	10	06-Sep-05	In Situ	16.8	200	<0.005	<0.005	<0.005	<0.015	<0.030	<10.0	<10.0	<10.0	48	<1
NMOCD Remedial Thresholds				**100**		**10**				**50**			**1,000**	**250** [A]	**600** [A]

Bolded *values are in excess of the NMOCD Remediation Thresholds and/or NMWQCC groundwater standards*

[A] *Chloride and sulfate residuals may not be capable of impacting local groundwater above the NMWQCC standards of 250 mg/L and 600 mg/L, respectively*

CARDINAL LABORATORIES

PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

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

Receiving Date: 09/07/01
Reporting Date: 09/13/05
Project Owner: DUKE ENERGY FIELD SERVICES
Project Name: A-19-19-3-1 (REF. #130025)
Project Location: UL-M, SEC21, T18S, R33E

Sampling Date: 09/06/05
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE:		09/08/05	09/08/05	09/08/05	09/08/05	09/08/05	09/08/05
H10160-1	BH-1 (5')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H10160-2	BH-1 (10')	<10.0	12.3	<0.005	<0.005	<0.005	<0.015
H10160-3	BH-1 (15')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H10160-4	BH-1 (20')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H10160-5	BH-2 (5')	13.7	48.3	<0.005	<0.005	<0.005	<0.015
H10160-6	BH-2 (10')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H10160-7	BH-2 (15')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H10160-8*	BH-3 (5')	<10.0	14.4	<0.005	<0.005	<0.005	<0.015
H10160-9*	BH-3 (10')	<10.0	36.6	<0.005	<0.005	<0.005	<0.015
H10160-10*	BH-3 (15')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H10160-11*	BH-4 (5')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H10160-12*	BH-4 (10')	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
Quality Control		761	770	0.100	0.090	0.095	0.302
True Value QC		800	800	0.100	0.100	0.100	0.300
% Recovery		95.2	96.3	99.5	91.2	94.8	101
Relative Percent Difference		3.3	3.9				

*Samples extracted on 09/08/05, but not analyzed until 09/12/05 for 8015M, due to instrument malfunction.

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

Burgess J.A. Cooke, Ph. D.

9/13/05
Date

H10160A.XLS

CARDINAL LABORATORIES

PHONE (325) 673-7001 · 2111 BEECHWOOD · ABILENE, TX 79603
PHONE (505) 393-2326 · 101 E. MARLAND · HOBBS, NM 88240

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

Receiving Date: 09/07/05
Reporting Date: 09/09/05
Project Owner: DUKE ENERGY FIELD SERVICES
Project Name: A-19-19-3-1 (REF. #130025)
Project Location: UL-M, SEC21, T18S, R33E

Sampling Date: 09/06/05
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH

LAB NUMBER	SAMPLE ID	SO_4 (mg/Kg)	Cl (mg/Kg)
ANALYSIS DATE:		09/09/05	09/09/05
H10160-1	BH-1 (5')	<1	64
H10160-2	BH-1 (10')	<1	96
H10160-3	BH-1 (15')	<1	64
H10160-4	BH-1 (20')	62	208
H10160-5	BH-2 (5')	30	48
H10160-6	BH-2 (10')	<1	160
H10160-7	BH-2 (15')	<1	80
H10160-8	BH-3 (5')	<1	80
H10160-9	BH-3 (10')	<1	64
H10160-10	BH-3 (15')	<1	48
H10160-11	BH-4 (5')	<1	48
H10160-12	BH-4 (10')	<1	48
Quality Control		48.52	1000
True Value QC		50.00	1000
% Recovery		97.0	100
Relative Percent Difference		4.8	2.0
METHODS: EPA 600/4-79-020		375.4	325.3

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

Amy Hill
Chemist

9/9/05
Date

H10160

Cardinal Laboratories Inc.

Chain of Custody Form

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:	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-19-19-3-1 (Ref. #130025)
Project Location:	UL-M, Sec 21, T18S, R33E
EPI Sampler Name:	George Blackburn

Bill To

Duke Energy

Attn: Ronnie Gilchrist
1625 West Marland
Hobbs, NM 88240

LAB I.D.	SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX 8021B	TPH 8015M	CHLORIDES (Cl^-)	SULFATES ($SO_4^{=}$)	pH	TCLP	OTHER >>>	PAH			
H10160-1 1	BH-1 (5')	G	1			X					X		06-Sep-05	9:00	X	X	X	X							
-2 2	BH-1 (10')	G	1			X					X		06-Sep-05	9:30	X	X	X	X							
-3 3	BH-1 (15')	G	1			X					X		06-Sep-05	9:45	X	X	X	X							
-4 4	BH-1 (20')	G	1			X					X		06-Sep-05	10:28	X	X	X	X							
-5 5	BH-2 (5')	G	1			X					X		06-Sep-05	10:50	X	X	X	X							
-6 6	BH-2 (10')	G	1			X					X		06-Sep-05	11:05	X	X	X	X							
-7 7	BH-2 (15')	G	1			X					X		06-Sep-05	11:25	X	X	X	X							
-8 8	BH-3 (5')	G	1			X					X		06-Sep-05	12:05	X	X	X	X							
-9 9	BH-3 (10')	G	1			X					X		06-Sep-05	12:30	X	X	X	X							
-10 10	BH-3 (15')	G	1			X					X		06-Sep-05	13:15	X	X	X	X							

Sampler Relinquished: Iain Olness	Date: 9/7/05 Time: 7:08	Received By:	E-mail results to: iolness@envplus.net
Relinquished by.	Date: 9/7/05 Time: 11:50	Received By: (lab staff)	REMARKS: ANY QUESTIONS. CONTACT IAIN OLNESS AT EPI AT (505) 394-3481.
Delivered by:	Sample Cool & Intact: Yes (No)	Checked By:	

Cardinal Laboratories Inc.

Chain of Custody Form

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:	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-19-19-3-1 (Ref. #130025)
Project Location:	UL-M, Sec 21, T18S, R33E
EPI Sampler Name:	George Blackburn

Bill To

Duke Energy.

Attn: Ronnie Gilchrist
1625 West Marland
Hobbs, NM 88240

LAB I.D.		SAMPLE I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUND WATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE/COOL	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX 8021B	TPH 8015M	CHLORIDES (Cl^-)	SULFATES ($SO_4^{=}$)	pH	TCLP	OTHER >>>	PAH
H10160-11	1	BH-4 (5')	G	1			X					X		06-Sep-05	14:00	X	X	X	X				
-12	2	BH-4 (10')	G	1			X					X		06-Sep-05	15:00	X	X	X	X				
	3																						
	4																						
	5																						
	6																						
	7																						
	8																						
	9																						
	10																						

Sampler Relinquished: Iain Olness	Date 9/7/05 Time 1038	Received By: Jesse Miller	E-mail results to: iolness@envplus.net
Relinquished by:	Date 9/7/05 Time 1163	Received By: (lab staff)	REMARKS: ANY QUESTIONS, CONTACT IAIN OLNESS AT EPI AT (505) 394-3481.
Delivered by:	Sample Cool & Intact: (Yes) No	Checked By:	

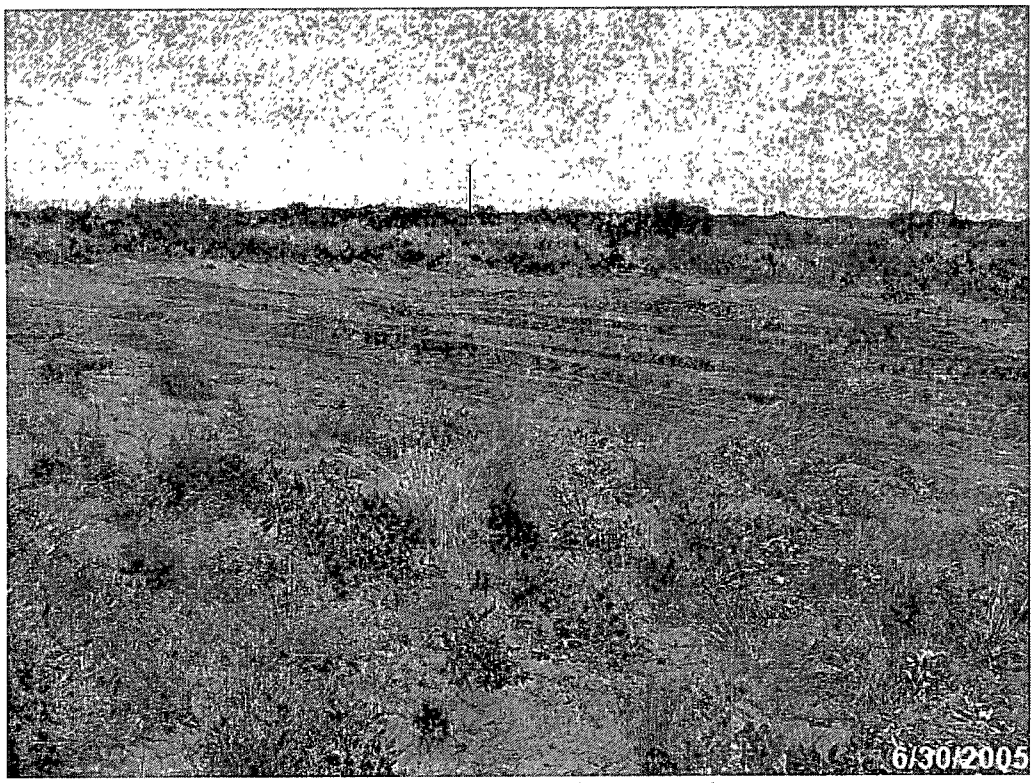

***Photo #1*:** Looking northwesterly across release area.

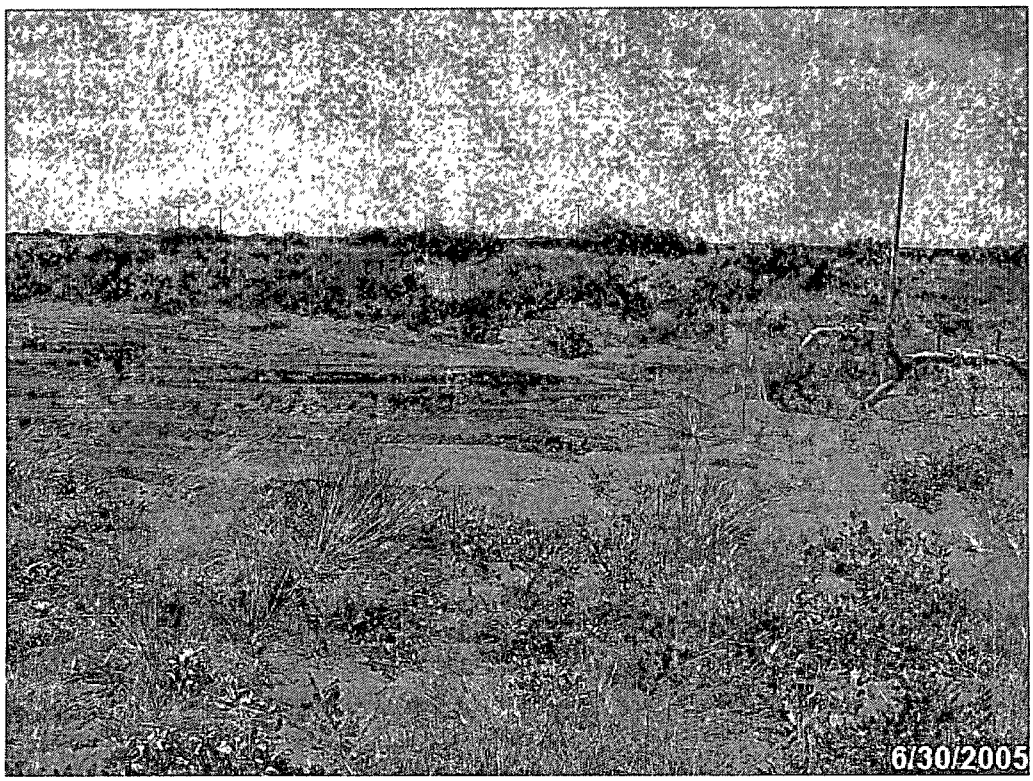

Photo #2: Looking northerly across release and overspray areas.

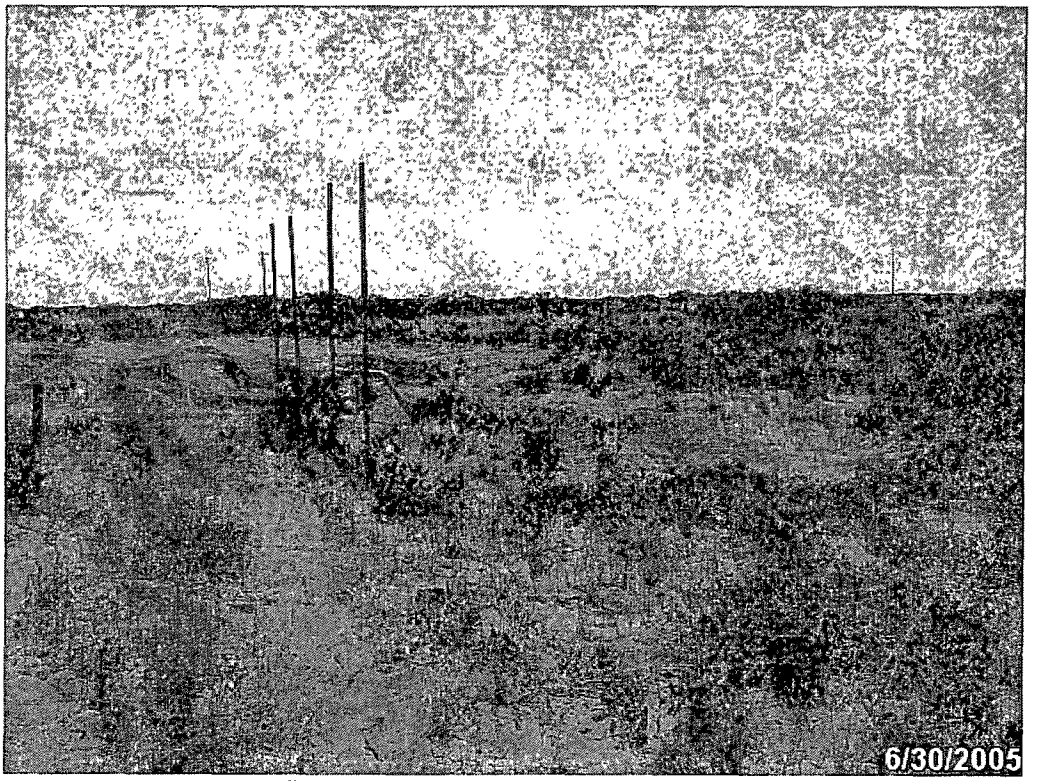

Photo #3: Looking southwesterly along right of way.

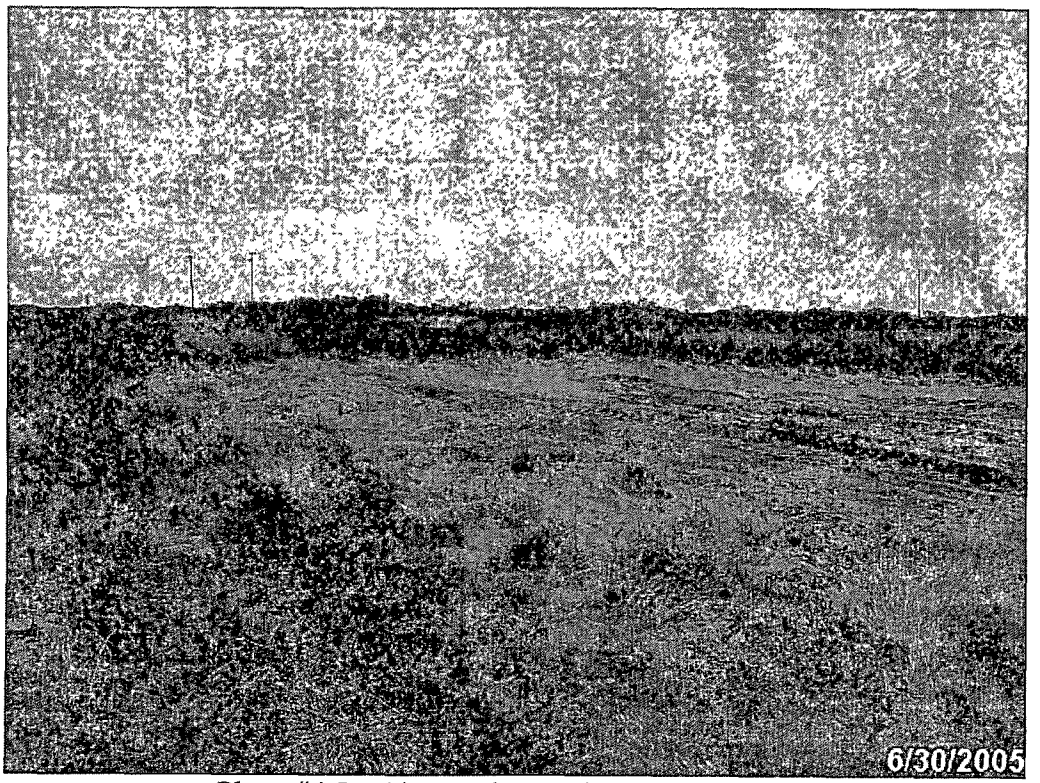

Photo #4: Looking northwesterly across release area.

Log Of Test Borings

(NOTE - Page 1 of 1)

ENVIRONMENTAL PLUS, INC.
CONSULTING AND
REMEDIAL CONSTRUCTION
EUNICE, NEW MEXICO
505-394-3481

Project Number: 130025

Project Name: DCP Midstream, L.L.C. - A-19-19-3-1

Location: UL-M, Section 21, Township 18 South, Range 33 East

Boring Number: SB-1 | Surface Elevation: 3,805-feet amsl

Start Date: 9-6-05 Time: 0900 hrs

Completion Date: 9-6-05 Time: 1500 hrs

Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	Chloride Analysis (mg/Kg)	U.S.C.S. Symbol	Depth (feet)	Description
0900			no	5.3	200		5	5' SAND-Dark Brown
0930			no	88.0	200		10	10' SAND
0945			no	20.5	200		15	15' SAND
1028			no	7.0	200		20	20' SAND/ROCK End of Soil Boring at 20' bgs
							25	
							30	

Water Level Measurements (feet)

Date	Time	Sample Depth	Casing Depth	Cave-in Depth	Water Level
-	-	-	-	-	-
-	-	-	-	-	-

Drilling Method: Auger Trailer

Backfill Method: Bentonite

Field Representative: GB

Log Of Test Borings

(NOTE - Page 1 of 1)

ENVIRONMENTAL PLUS, INC.
CONSULTING AND
REMEDIAL CONSTRUCTION
EUNICE, NEW MEXICO
505-394-3481

Project Number: 130025

Project Name: DCP Midstream, L.L.C. - A-19-19-3-1

Location: UL-M, Section 21, Township 18 South, Range 33 East

Boring Number: SB-2 | Surface Elevation: 3,805-feet amsl

Start Date: 9-6-05 Time: 0900 hrs

Completion Date: 9-6-05 Time: 1500 hrs

Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	Chloride Analysis (mg/Kg)	U.S.C.S. Symbol	Depth (feet)	Description
1050			no	32.5	200		5	5' SAND-Dark Grey
1105			no	29.3	200		10	10' SAND w/little rock
1125			no	5.9	200		15	15' SAND w/little rock
								End of Soil Boring at 15' bgs
							20	
							25	
							30	

Water Level Measurements (feet)

Date	Time	Sample Depth	Casing Depth	Cave-in Depth	Water Level
-	-	-	-	-	-
-	-	-	-	-	-	

Drilling Method: Auger Trailer

Backfill Method: Bentonite

Field Representative: GB

Log Of Test Borings

(NOTE - Page 1 of 1)

ENVIRONMENTAL PLUS, INC.
CONSULTING AND
REMEDIAL CONSTRUCTION
EUNICE, NEW MEXICO
505-394-3481

Project Number: 130025

Project Name: DCP Midstream, L.L.C. - A-19-19-3-1

Location: UL-M, Section 21, Township 18 South, Range 33 East

Boring Number: SB-3 | Surface Elevation: 3,805-feet amsl

Start Date: 9-6-05 Time: 0900 hrs

Completion Date: 9-6-05 Time: 1500 hrs

Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	Chloride Analysis (mg/Kg)	U.S.C.S. Symbol	Depth (feet)	Description
1205			no	22.5	960		5	5'
1230			no	12.2	200		10	10'
1315			no	13.0	200		15	15'
								End of Soil Boring at 15' bgs
							20	
							25	
							30	

Water Level Measurements (feet)

Date	Time	Sample Depth	Casing Depth	Cave-in Depth	Water Level
-	-	-	-	-	-
-	-	-	-	-	-

Drilling Method: Auger Trailer

Backfill Method: Bentonite

Field Representative: GB

Log Of Test Borings

ENVIRONMENTAL PLUS, INC.
CONSULTING AND
REMEDIAL CONSTRUCTION
EUNICE, NEW MEXICO
505-394-3481

Project Number: 130025

Project Name: DCP Midstream, L.L.C. - A-19-19-3-1

Location: UL-M, Section 21, Township 18 South, Range 33 East

Boring Number: SB-4 | Surface Elevation: 3,805-feet amsl

Start Date: 9-6-05 Time: 0900 hrs

Completion Date: 9-6-05 Time: 1500 hrs

Time	Sample Type	Recovery (inches)	Moisture	PID Readings (ppm)	Chloride Analysis (mg/Kg)	U.S.C.S. Symbol	Depth (feet)	Description
1400			no	3.9	200		5	5' SAND
1500			no	16.8	200		10	10' SAND End of Soil Boring at 10' bgs
							15	
							20	
							25	
							30	

Water Level Measurements (feet)

Date	Time	Sample Depth	Casing Depth	Cave-in Depth	Water Level
-	-	-	-	-	-
-	-	-	-	-	-

Drilling Method: Auger Trailer

Backfill Method: Bentonite

Field Representative: GB

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-14
Revised October 10, 200

Submit 2 Copies to appropriat
District Office in accordanc
with Rule 116 on bacl
side of form

RELEASE NOTIFICATION AND CORRECTIVE ACTION

OPERATOR ☒ Initial Report ☒ Final Repo

Name of Company: Duke Energy Field Services	**Contact:** Mark Owens
Address: 1625 West Marland, Hobbs, NM 88240	**Telephone No.:** (505) 397-5541
Facility Name: A-19-19-3-1	**Facility Type:** 6" steel pipeline

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

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
B	12	17 S	34 E					Lea

Latitude: N 32° 43' 33.805" **Longitude:** W 103° 40' 28.619"

NATURE OF RELEASE

Type of Release: Natural Gas Pipeline Fluids	**Volume of Release:** ≈ 7 barrels	**Volume Recovered:** 0 barrels
Source of Release: 6" low-pressure steel pipeline operating at 15-20 lbs	**Date and Hour of Occurrence:** 29 June 2005	**Date and Hour of Discovery:** 29 June 2005
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	**If YES, To Whom?** Larry Johnson, NMOCD Hobbs District	
By Whom? Lynn Ward, DEFS Midland	**Date and Hour** 1041hrs	
Was a Watercourse Reached? ☐ Yes ☒ No	**If YES, Volume Impacting the Watercourse.** Not Applicable	

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

Describe Cause of Problem and Remedial Action Taken.*
6" steel line began leaking, probably due to internal corrosion. A line repair clamp was installed.

Describe Area Affected and Cleanup Action Taken.* The affected area consists of approximately 2,640 square feet of pasture land owned by the State of New Mexico and leased by Herschel Caviness. A line repair clamp was installed and the line put back into operation.

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

Signature: Lynn Ward	**OIL CONSERVATION DIVISION**
Printed Name: Lynn Ward	Approved by District ~~Supervisor~~ Environ Engr
Title: Environmental Specialist	Approval Date: 8.14.07 Expiration Date:
E-mail Address: lward@Duke-Energy.com	Conditions of Approval: Attached ☐
Date: Phone:	

* Attach Additional Sheets If Necessary