9.9.05 9:30 AM VERBAL OK TO EMAIL CENTRAL - TO SUNDANCE FINISH THIS NEXT WEEK

1RP 45

1 September 2005

Mr. Larry Johnson
Environmental Engineer Specialist
New Mexico Oil Conservation Division
1625 North French Drive
Hobbs, NM 88240

RE: Duke Energy Field Services (DEFS)- Pure Resources B-2 Line – Reference #130026
UL-P (SE¼ of the SE¼) of Section 25, Township 16 South, Range 36 East
Latitude N 32° 53' 17.58" and Longitude W 103° 18' 2.04"

Dear Mr. Johnson:

On July 14, 2005, a release of approximately 25 barrels of production water occurred as a result of a cut in an unmarked Pure Resources 1 ½ inch fiberglass disposal line during a line removal. Due to the fact that a New Mexico One-Call had been made and the line was not marked, the New Mexico Oil Conservation Division instructed Pure Resources to file the Initial C-141 for the site. DEFS retained Environmental Plus, Inc. (EPI) in July 2005 to delineate the extent of impacted soil at the site. After delineation activities were completed, excavation of hydrocarbon and chloride impacted soil began. This letter report documents the results of the excavation activities, and recommends that the site be backfilled and closed.

Site Background

The site is located in the SE¼ of the SE¼ of Section 25, Township 16 South, Range 36 East at an elevation of approximately 3,830 feet above mean sea level (reference *Figures 1 and 2*). The property is owned by the City of Lovington, New Mexico. A search for area water wells was completed utilizing the *New Mexico Office of the State Engineers* website and a database maintained by the United States Geological Survey (USGS) indicates there are 36 water supply wells located near the release site area; 13 of these wells are within a one-mile radius and one is within a 1,000-foot radius (reference *Table 2* and *Figures 1 and 2*). Depth to water for these wells is approximately 59 feet below ground surface (bgs). Utilizing this information, it was determined that the New Mexico Oil Conservation Division (NMOCD) Remedial Goals for this site are as follows:

Parameter	Remedial Goal
Benzene	10 parts per million
BTEX	50 parts per million
TPH	100 parts per million

***Chloride and Sulfate residuals may not be capable of impacting groundwater above NMWQCC of 250 mg/L and 650 mg/L, respectively.*

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

Field Work

On July 22, 2005, EPI and DEFS personnel were on site to initiate cleanup activities. After the fluids were recovered, saturated soil was excavated and placed on plastic for later disposal. Excavation activities continued based on delineation results from field analyses for organic vapor concentrations and chlorides. The excavation would extend from a maximum depth of 15-feet bgs on the northwest side to a minimum depth of 3-feet bgs on the northeast side. On August 10, 2005, soil samples were collected from the excavation floors and sidewalls. A portion of each sample was analyzed in the field for the presence of organic vapors utilizing a calibrated MiniRae® photoionozation detector (PID) equipped with a 9.8 electron-volt (eV) lamp. Field analyses indicated organic vapor concentrations ranged from 0.1 to 5.4 ppm. The remaining portion of each sample was submitted for laboratory quantification of BTEX constituents, TPH and chlorides. Laboratory analyses indicated TPH concentrations remained above the NMOCD remedial thresholds in the northwestern (SP-3) and southwestern (SP-8) sidewall samples. Reported chloride concentrations remained elevated in the northwestern sidewall (SP-3) and central excavation (SP-2) samples (reference *Table 1* and *Figure 3*).

Excavation activities resumed, on August 19, 2005 concentrating on the removal of TPH and chloride impacted soils in the northwestern and southwestern sidewalls, and center of the excavation. Soil samples were collected from the recently excavated portion of the site (reference *Figure 3*). A portion of each sample was analyzed in the field for the presence of organic vapors. Field analyses indicated organic vapor concentrations ranged from 0.0 to 0.7 ppm. The remaining portion of each sample was submitted for laboratory quantification of BTEX constituents, TPH and chlorides. Analytical results indicated that impacted soil had been removed from the excavation (reference *Table 1*).

Analytical Data

Analytical results for the soil samples collected on August 10, 2005 indicated that benzene concentrations ranged from non-detectable at or above the laboratory method detection limit (MDL) to 0.008 mg/Kg, below the NMOCD remedial thresholds of 10 mg/Kg. Reported BTEX constituent concentrations ranged from not-detectable at or above laboratory MDL to 0.0230 mg/Kg, below the NMOCD remedial thresholds of 50 mg/Kg. Reported TPH concentrations were not-detectable for all samples, except the northwest (SP-3) and southwest (SP-8) sidewall samples. Analytical results indicated TPH concentrations in SP-3 were 960 mg/Kg and SP-8 were 156 mg/Kg. Reported chloride concentrations ranged from 32 to 576 mg/Kg (reference *Table 1* and *Figure 3*).

Analytical results for the soil samples collected on August 19, 2005 indicated that TPH and BTEX constituent concentrations were non-detectable at or above laboratory MDL. Reported chloride concentrations ranged from 48 to 64 mg/Kg, below NMWQCC chloride standards for groundwater of 250 mg/L (reference *Table 1*).

Conclusions

Based on field and laboratory analytical results, soil impacted above NMOCD remedial thresholds has been successfully removed from the excavation. Additionally, final chloride concentrations were reported below the NMWQCC standards for groundwater in all samples collected during the excavation phase. Due to the fact that

reported chloride levels were below the NMWQCC chloride standards for groundwater, groundwater should not be impacted by as a result of this release.

Recommendations

Based on field and analytical results, it is recommended that the excavation be backfilled with clean soil obtained from an off-site source, contoured to allow natural drainage and seeded with a native range type grass approved by the City of Lovington. Excavated contaminated soil, currently stockpiled on site, will be disposed of at a State of New Mexico approved disposal facility.

Should you have any questions or concerns, please feel free to contact me at (505) 394-3481 or via e-mail at iolness@envplus.~~com~~NET. Upon your approval, EPI will initiate the next phase of the remediation. All official correspondence should be submitted to Lynn Ward at:

Lynn Ward
Duke Energy Field Services
10 Desta Drive, Suite 400-W
Midland, Texas 79705

(432) 620-4207
lcward@duke-energy.com

Sincerely,

ENVIRONMENTAL PLUS, INC.

Iain A. Olness

Iain A. Olness, P.G.
Hydrogeologist

cc: Paul Mulkey, DEFS – Hobbs, NM
Mark Owens, DEFS – Hobbs, NM
Lynn Ward, DEFS – Midland, TX
Steve Weathers, DEFS – Denver, CO
Eddie Seay, City of Lovington Consultant – Hobbs, NM
Pat Wise, City of Lovington – Lovington, NM
File

encl. Figure 1 – Area Map
Figure 2 – Site Location Map
Figure 3 – Excavation and Sample Location Map
Table 1 – Summary of East Excavation Soil Sample Field Analyses and Laboratory Analytical Results
Table 2 – Well Information Report
Attachment I – Laboratory Results and Chain-of-Custody Form
Attachment II – Site Photographs

FIGURES

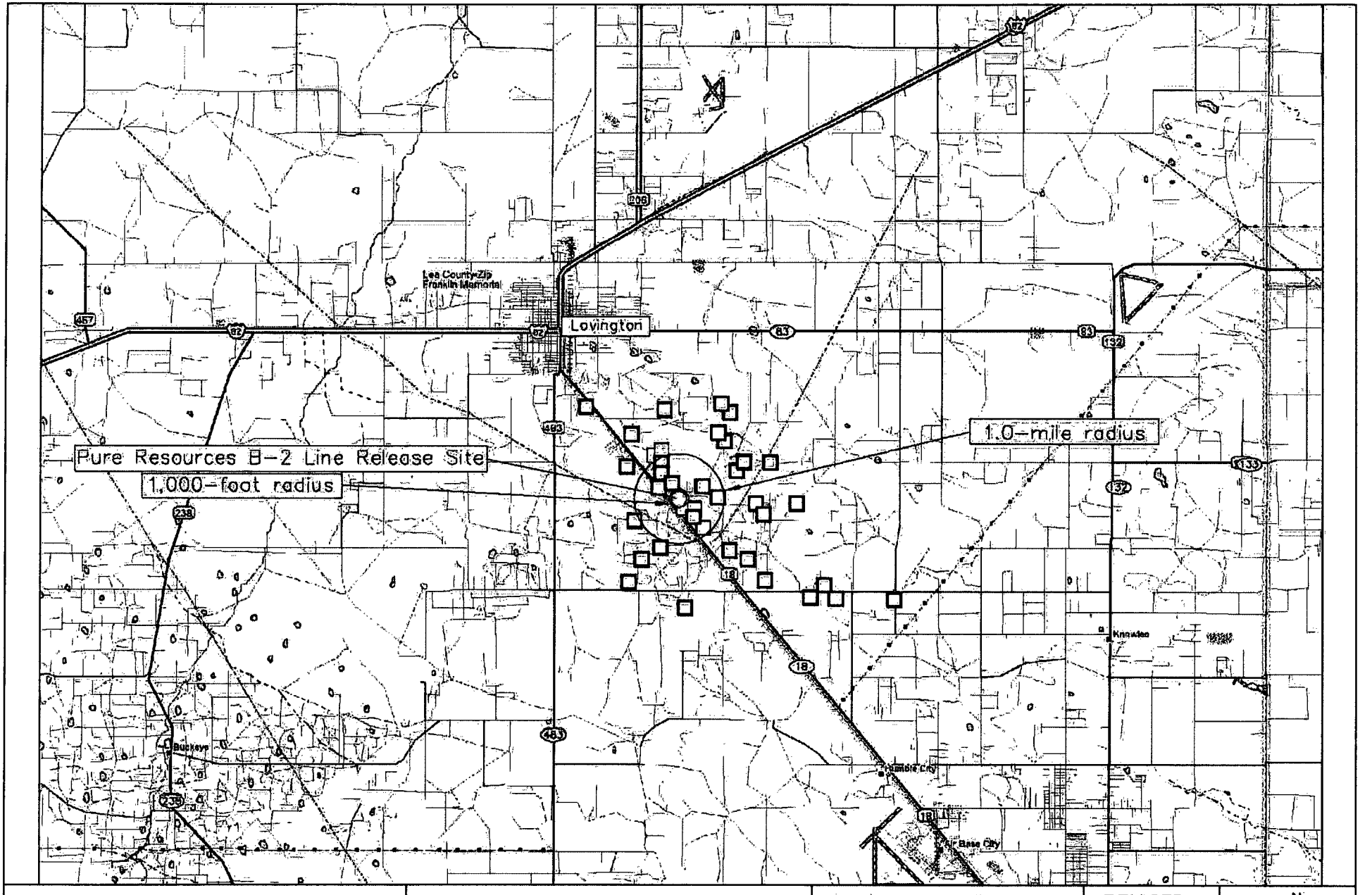

Figure 1
Area and Well Location Map
Duke Energy Field Services
Pure Resources B-2 Line

Lea County, New Mexico
SE 1/4 of the SE 1/4, Sec. 25, T16S, R36E
N 32° 53' 17.58" W 103° 18' 2.04"
Elevation: 3,830 feet amsl

DWG By: Jason Stegemoller
July 2005

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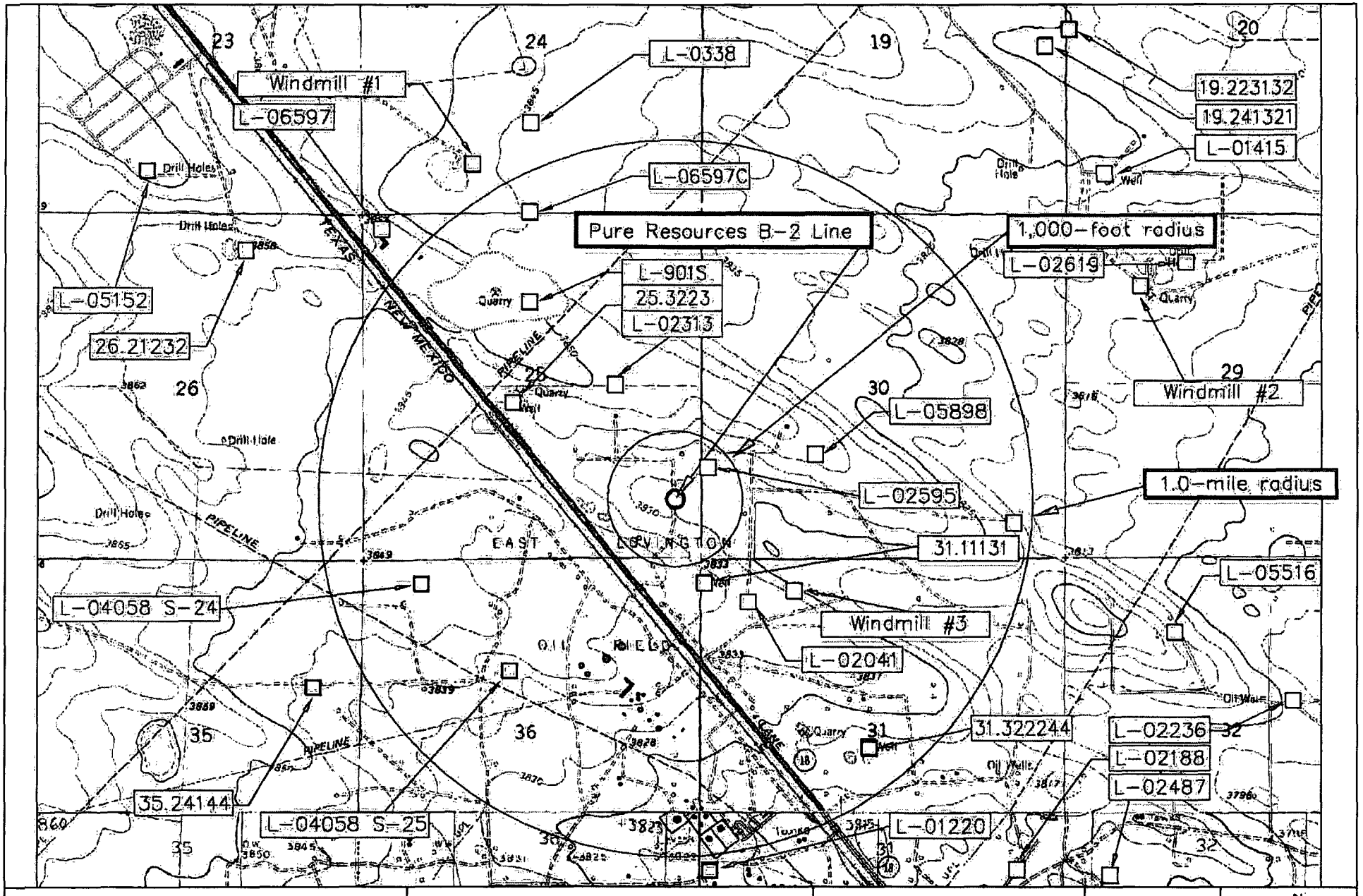

Figure 2
Site and Well Location Map
Duke Energy Field Services
Pure Resources B-2 Line

Lea County, New Mexico
SE 1/4 of the SE 1/4, Sec. 25, T16S, R36E
N 32° 53' 17.58" W 103° 18' 2.04"
Elevation: 3,830 feet amsl

DWG By: Jason Stegemoller
July 2005

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0 2,000 4,000
Feet

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1 of 1

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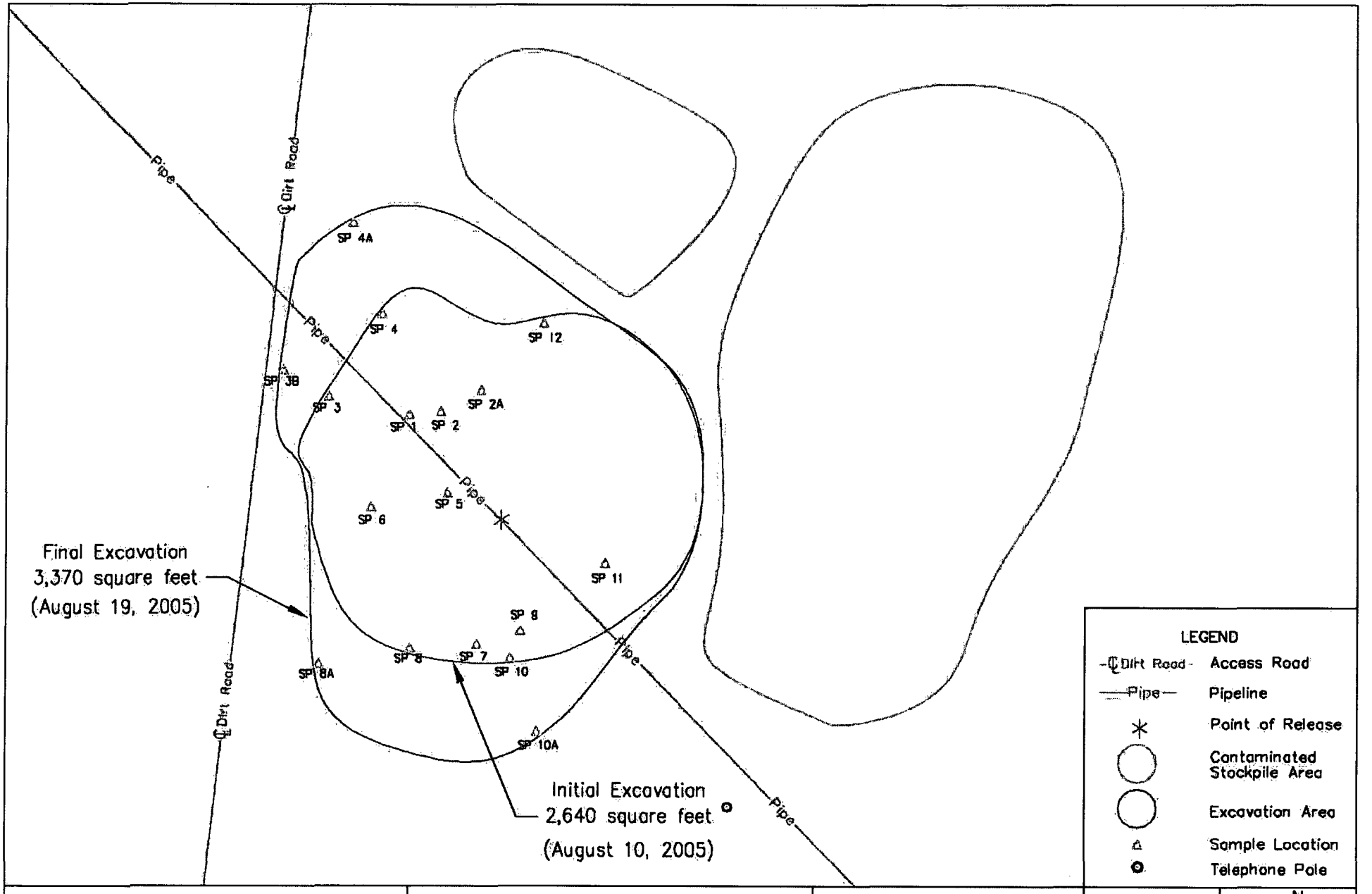


Figure 3 Excavation and Sample Location Map DEFS Pure Resources B-2 Line	Lea County, New Mexico SE 1/4 of the SE 1/4, Sec. 25, T16S, R36E N 32 53' 17.58" W 104° 18' 2.04" Elevation: 3,830 feet amsl	DWG By: Jason Stegemoller September 2005 0 20 40 Feet	REVISED: SHEET 1 of 1 N

TABLES

TABLE 1

Summary of Excavation Soil Field Analyses and Laboratory Analytical Results

DEFS-Pure Resources B-2 (Ref.#130026)

Soil Sample I.D.	Depth (feet)	Sample Date	PID Reading (ppm)	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)
SP-1	15	8/10/2005	0.1	<0.002	<0.002	<0.002	<0.006	<0.012	<50.0	<50.0	<50.0	80
SP-2	12	8/10/2005	0.2	<0.002	<0.002	<0.002	<0.006	<0.012	<50.0	<50.0	<50.0	576
SP-3	12	8/10/2005	5.4	0.008	0.008	<0.002	0.007	0.023	<50.0	960	**960**	576
SP-4	12	8/10/2005	1.5	<0.002	<0.002	<0.002	<0.006	<0.012	<50.0	<50.0	<50.0	240
SP-5	10	8/10/2005	0.7	0.004	<0.002	<0.002	<0.006	0.0040	<50.0	<50.0	<50.0	32
SP-6	7	8/10/2005	0.3	0.002	<0.002	<0.002	<0.006	0.0020	<50.0	<50.0	<50.0	64
SP-7	12	8/10/2005	1.4	0.003	<0.002	<0.002	<0.006	0.0030	<50.0	<50.0	<50.0	48
SP-8	9	8/10/2005	2.1	<0.002	<0.002	<0.002	<0.006	<0.012	<50.0	156	**156**	48
SP-9	9	8/10/2005	1.8	<0.002	<0.002	<0.002	<0.006	<0.012	<50.0	<50.0	<50.0	80
SP-10	9	8/10/2005	3.3	<0.002	<0.002	<0.002	<0.006	<0.012	<50.0	<50.0	<50.0	64
SP-11	4	8/10/2005	0.6	<0.002	<0.002	<0.002	<0.006	<0.012	<50.0	<50.0	<50.0	80
SP-12	3	8/10/2005	2.4	<0.002	<0.002	<0.002	<0.006	<0.012	<50.0	<50.0	<50.0	144
SP-10A (9')	9	8/19/2005	0.2	<0.005	<0.005	<0.005	<0.015	<0.03	<10.0	<10.0	<10.0	64
SP-8A (9')	9	8/19/2005	0.3	<0.005	<0.005	<0.005	<0.015	<0.03	<10.0	<10.0	<10.0	48
SP-2A (12')	12	8/19/2005	0.7	<0.005	<0.005	<0.005	<0.015	<0.03	<10.0	<10.0	<10.0	48
SP-3B (12')	12	8/19/2005	0.3	<0.005	<0.005	<0.005	<0.015	<0.03	<10.0	<10.0	<10.0	48
SP-4A (12')	12	8/19/2005	0.0	<0.005	<0.005	<0.005	<0.015	<0.03	<10.0	<10.0	<10.0	48
NMOCD Remedial Thresholds			**100**	**10**				**50**			**100**	**250** [3]

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

[2] *NA=Not Analyzed*

[3] *Chloride residuals may not be capable of impacting local groundwater above the NMWQCC standards of 250 mg/L.*

Duke Energy Field Services

TABLE 2

WELL INFORMATION REPORT*

Duke Energy Field Services Pure Resources B-2 Line - Ref #130026

Well Number	Diversion[A]	Owner	Use	Twsp	Rng	Sec q q q	Latitude	Longitude	Surface Elevation[B]	Well Depth (ft bgs)	Depth to Water (ft bgs)
L-05152	0	H.T. MR MONTIETH	STK	16S	36E	23 3 4	32° 52' 42.41"	103° 18' 42.52"	3,875	115	75
L-06957	10	SHELBY H. & NELLENE GILMORE	FPO	16S	36E	23 3 1 3	32° 54' 0.76"	103° 20' 0.19"	3,857	155	65
L-0338	316 S	WINFRED L. STROOPE	IRR	16S	36E	24 4 1 4	32° 54' 13.8"	103° 18' 26.67"	3,845	202	
L-06597C	27	DAIRY FARMERS OF AMERICA, INC.	IRR	16S	36E	24 4 3 4	32° 54' 0.63"	103° 18' 26.63"	3,845		
L-9018	13	DAIRY FARMERS OF AMERICA, INC.	IRR	16S	36E	25 2 1 4	32° 53' 47.59"	103° 18' 26.68"	3,850		
25.3223				16S	36E	25 3 2 2 2 3	32° 53' 31.74"	103° 18' 29.51"	3,845		75.9
L-02313	3	H.T. MONTIETH	STK	16S	36E	25 3 4	32° 53' 34.52"	103° 18' 11.18"			
19.223132				16S	37E	19 2 2 3 1 3 2	32° 53' 34.52"	103° 18' 11.18"	3,829		80.62
19.241321				16S	37E	19 2 4 1 3 2 1	32° 53' 34.52"	103° 18' 11.18"	3,821		52.77
L-01415	3	SHELBY H. GILMORE	STK	16S	37E	20 3 3	32° 54' 0.32"	103° 16' 49.89"	3,825	110	40
L-02619	3	GULF OIL CORPORATION	PRO	16S	37E	29 1 2 3	32° 53' 53.5"	103° 16' 26.6"	3,816	108	84
L-05898	0	ROBINSON BROTHERS DRILLING CO.	PRO	16S	37E	30 4 2 3	32° 52' 24.8"	103° 17' 32.7"	3,845	100	60
L-02595		MORAN DRILLING CO.	STK	16S	37E	30 3 1 3	32° 53' 21.24"	103° 17' 55.68"	3,885	105	48
31.111131				16S	37E	31 1 1 1 3 1	32° 53' 5.2"	103° 17' 54.92"	3,839		70.94
L-05516	0	TEXACO PRODUCING INC.	PRO	16S	37E	32 1 2 3	32° 52' 55.27"	103° 16' 34.59"			
L-02041	3	THE TEXAS COMPANY	PRO	16S	37E	31 1 1	32° 52' 55.27"	103° 17' 55.8"			
31.322344				16S	37E	31 3 2 2 3 4 4	32° 52' 39.83"	103° 17' 25.12"	3,822		61.93
L-02236	4	PARKER DRILLING CO.	PRO	16S	37E	32 2 3	32° 52' 42.28"	103° 16' 19.26"	3,802	100	
L-02188	3	H.T. MONTIETH	DOM	16S	37E	20 1 3	32° 52' 39.83"	103° 17' 25.12"	3,812	102	35
L-02487	3	LEE DRILLING CO.	PRO	16S	37E	32 3 3	32° 50' 16.32"	103° 16' 50.16"	3,810	90	35
L-01220	3	J.R. SHARP DRILLING CO.	PRO	16S	37E	31 3 3	32° 52' 16.29"	103° 17' 56.04"	3,819	120	55
L-04058 S-25	0	CITY OF LOVINGTON	MUN	16S	36E	36 1 4 2	32° 52' 42.41"	103° 18' 42.52"	3,889	256	88
35.24144				16S	36E	35 2 4 1 4 4	32° 52' 48.79"	103° 19' 5.78"	3,848		75.9
L-4058 S-24	20	CITY OF LOVINGTON	MUN	16S	36E	36 1 1 2	32° 52' 55.45"	103° 18' 18.58"	3,850	257	88
26.21232				16S	36E	26 2 1 2 3 2	32° 52' 54.76"	103° 19' 18.01"	3,858		65.95
WINDMILL #1				16S	36E		32° 54' 7.3"	103° 18' 37.5"	3,852		
WINDMILL #2				16S	36E		32° 53' 49.20"	103° 16' 35.83"	3,816		
WINDMILL #3				16S	36E		32° 53' 3.78"	103° 17' 38.7"	3,882		
L-00338 ETAL	27	WINFRED L. STROOPE	IRR	16S	36E	25 2 1 4	32° 55' 6.37"	103° 20' 13.65"	3,894		
WINDMILL				16S	37E		32° 55' 3.36"	103° 18' 21.58"			
WINDMILL				16S	37E		32° 53' 9.65"	103° 15' 9.93"			
12.11321				17S	37E	12 1 1 3 2 1	32° 51' 13"	103° 12' 50"	3,748	140	81.28
3.31324				17S	37E	03 3 1 3 2 4	32° 51' 31"	103° 14' 32"	3,773	130	60.75
5.412221				17S	37E	05 4 1 2 2 2 1	32° 51' 38"	103° 15' 57"	3,791	130	57.65
WINDMILL				16S	37E		32° 53' 59.55"	103° 15' 48.20"			
12.22322				17S	36E	12 2 2 3 2 2	32° 51' 3.61"	103° 17' 51.31"	3,811	110	55.32

* = Data obtained from the New Mexico Office of the State Engineer Website (http://iwaters.ose.state.nm.us:7001/iWATERS/wr_RegisServlet1), USGS Topographical Map and USGS Database.
Shaded well information indicates well location shown on Figure 2

[A] = in acre feet per annum

[B] = Interpolated from USGS Topographical Map

PRO = Prospecting or development of a natural resource
DOM= Domestic
COM = Commercial
STK = Stock
IRR = Irrigation
MUN= Municipal
FPO= Feed Pen Operation
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)

Duke Energy Field Services

ATTACHMENT I

LABORATORY RESULTS AND CHAIN-OF-CUSTODY FORM

ANALYTICAL RESULTS NOT INCLUDED IN THE DRAFT COPY OF THE REPORT

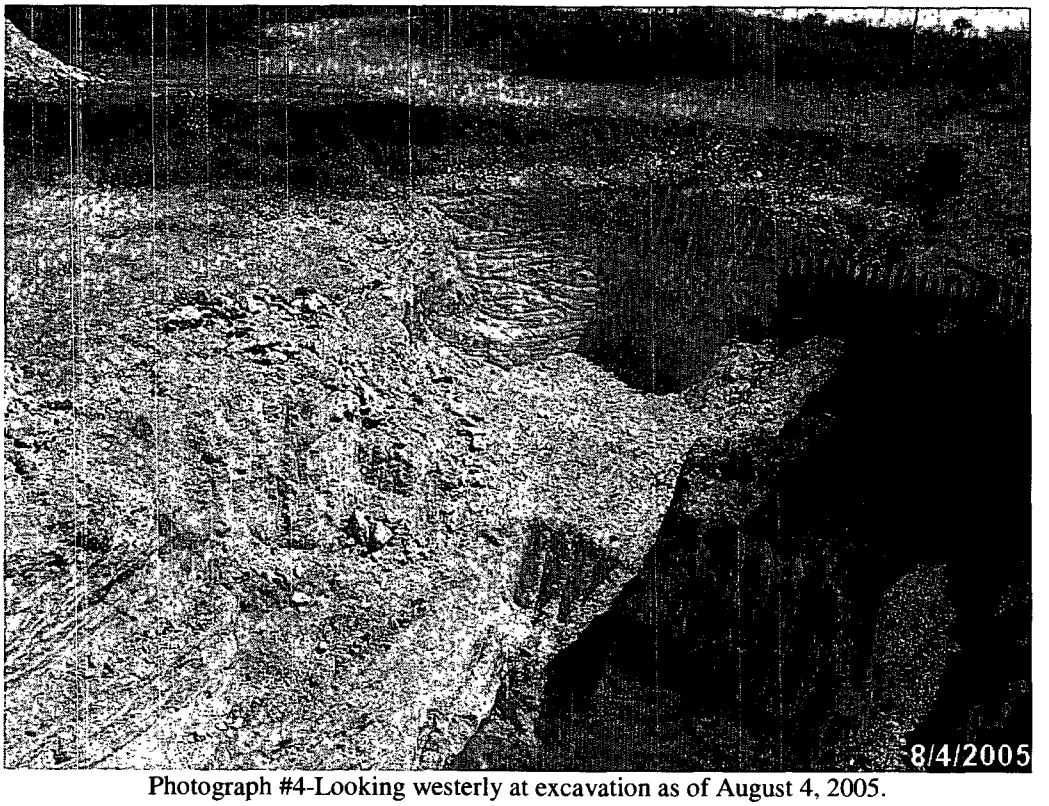
ATTACHMENT II

SITE PHOTOGRAPHS

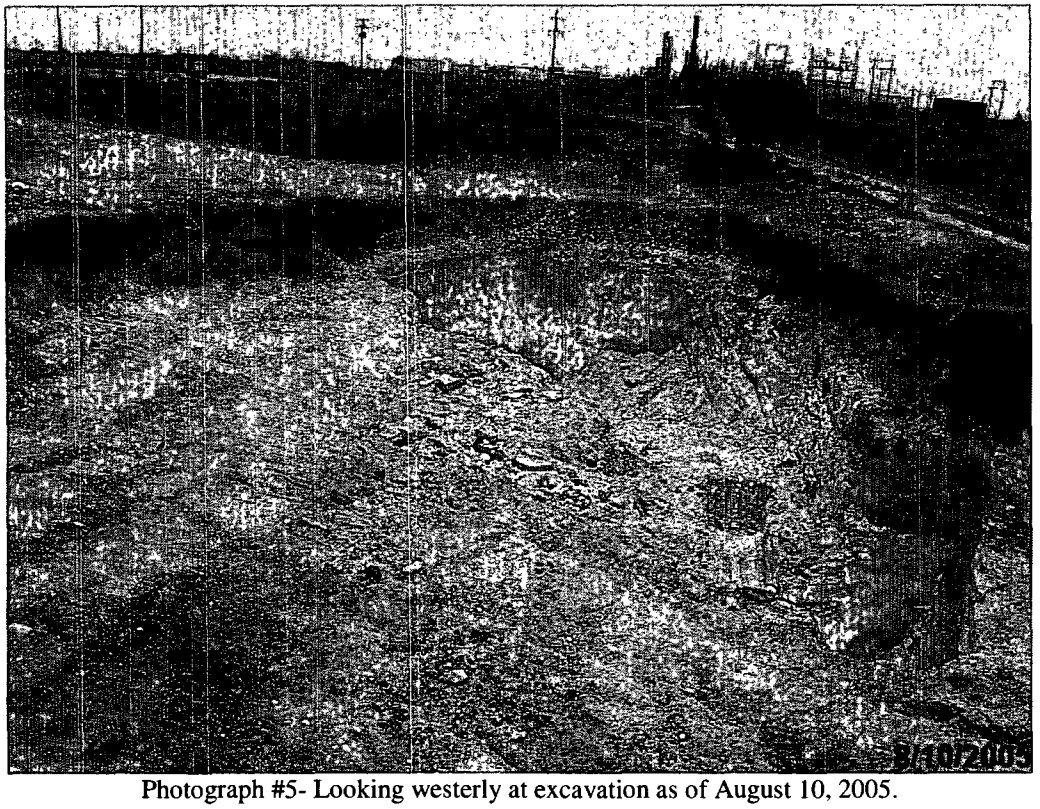
Photograph #1- Looking easterly at point of release.

Photograph #2- Looking southerly at excavation and stockpiling of saturated soil.

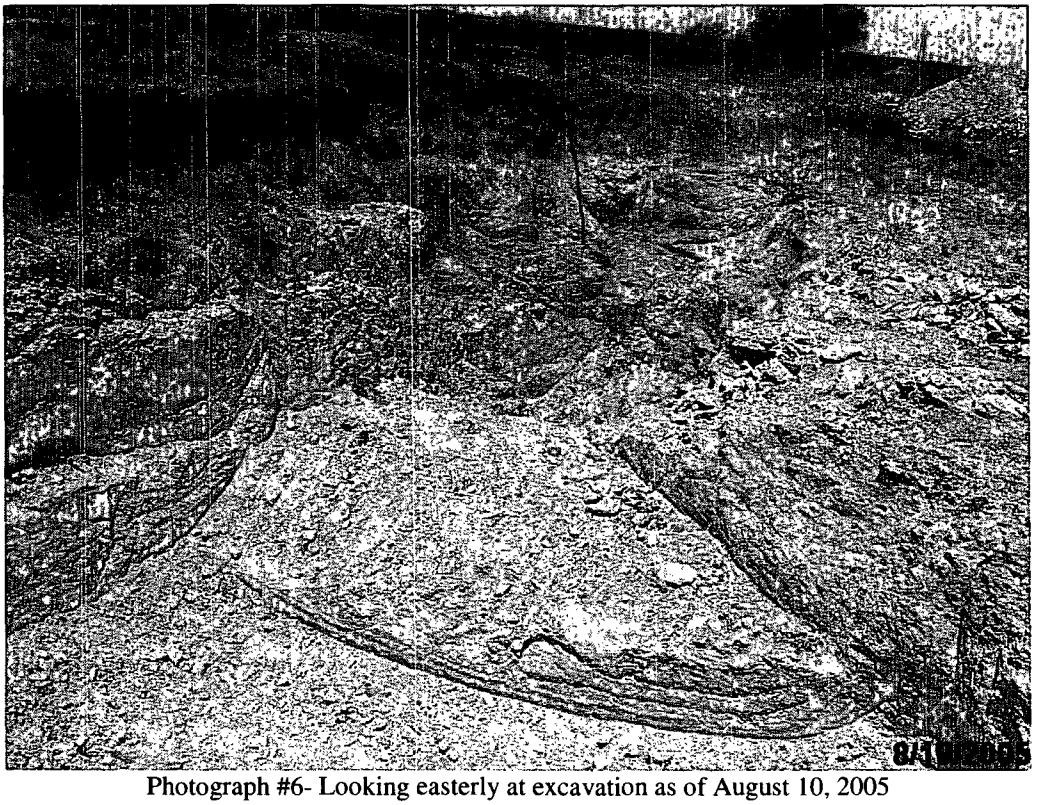
Photograph #3- Looking easterly at excavation as of August 4, 2005.



Photograph #4-Looking westerly at excavation as of August 4, 2005.

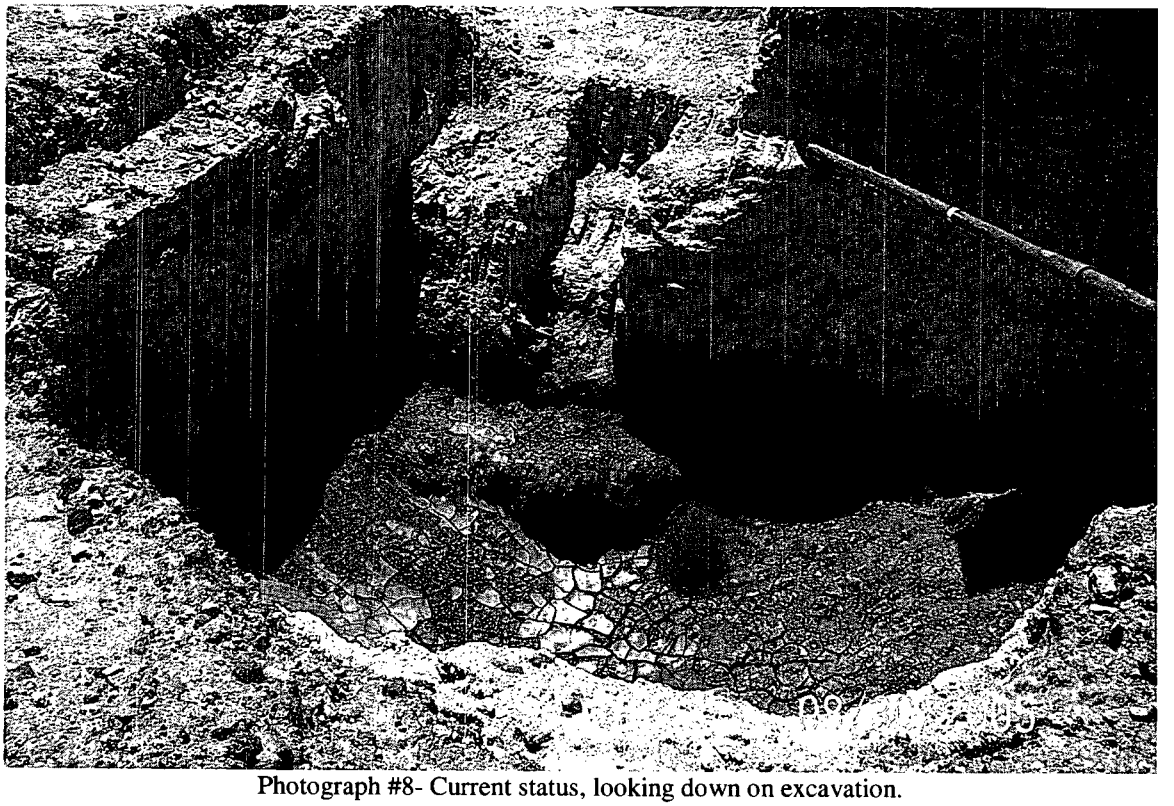


Photograph #5- Looking westerly at excavation as of August 10, 2005.



Photograph #6- Looking easterly at excavation as of August 10, 2005

Photograph #7- Current status of excavation, looking westerly.



Photograph #8- Current status, looking down on excavation.

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 Pure Resource	Contact☐Darryl Ruthardt
Address P.O. Box 609 Lovington, NM 88260	Telephone No.☐Office: 505-396-7503 Cellular: 505-390-8418
Facility Name Lovington Paddock Unit	Facility Type☐Oil and Gas Production Facility with Water Flood Operations

Surface Owner	Mineral Owner	Lease No.☐
City of Lovington		

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County☐
I	25	16S	36E					Lea

NATURE OF RELEASE

Type of Release Produced Water with Iron Sulfide Residual	Volume of Release Est 25 Barrels	Volume Recovered☐20 Barrels
Source of Release 1 ½" Fiberglass injection line	Date and Hour of Occurrence 11:30 am	Date and Hour of Discovery☐July 15, 2005 11:30 am
Was Immediate Notice Given? Yes ☐ No ☐ Not Required	If YES, To Whom? Duke was told that they needed to call NMOCD	
By Whom? ☐Duke Employee	Date and Hour☐July 15, 2005 (?)	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Duke was removing one of their old lines that ran across the field. They hit our inj line causing the leak. They called our office and reported the leak. We responded in driving time to the leak. The line was isolated within 10 – 15 min of the call. We informed Duke that they would need to call the NMOCD and the CITY OF Lovington.

Describe Area Affected and Cleanup Action Taken.*
Produced Water and Iron Sulfide residual spray on pasture land and vegetation adjacent to well location covering approximately 350 square feet of surface area. Source of leak was isolated by Pure. Duke had a vac truck at the leak site picking up the free standing fluid. We left the cleanup work to Duke. We were informed by the the NMOCD that we would need to file a C-141 since the injection line and produced water belonged to Pure Resources. (7-25-05)

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: Darryl Ruthardt	Approved by☐District Supervisor:	
Title: East Area Production Foreman	Approval Date:	Expiration Date:
Date: July 26,2005 Phone: 505-396-7503	Conditions of Approval:	Attached ☐

* Attach Additional Sheets If Necessary