1RP-218
10.26.05

Jimmy Cooper #6 Closure Report
Duke Energy Field Services
Lea County, New Mexico

NOVEMBER 14, 2001

Prepared For:

Duke Energy Field Services
P. O. Box 5493
Denver, CO 80217

Site Name:

JIMMY COOPER #6 (JC#6)

Site Location:

T20S, R37 E, SECTION 8, UNIT O

Prepared By:

TRIDENT ENVIRONMENTAL

PO Box 7624
Midland, Texas 79708

TRIDENT ENVIRONMENTAL

November 14, 2001

Mr. Steve Weathers
Duke Energy Field Services, LP
P. O. Box 5493
Denver, Colorado 80217

Re: Removal of Hydrocarbon-Impacted Soils from the JC #6 site
Township 20 South, Range 37 East, Section 8, Unit O

Dear Mr. Weathers:

Trident Environmental (Trident) was retained by Duke Energy Field Services, LP. (DEFS) to oversee the removal of hydrocarbon-impacted soil from an area along a pipeline right-of-way operated by DEFS near Monument, New Mexico in Lea County. The site (JC #6) is located in Section 8 (Unit O), Township 20 South, Range 37 East on property owned by Jimmy T. Cooper. The location of the JC #6 site is shown on the topographic map in Attachment A. The work was conducted in accordance with the work plan submitted to the New Mexico Oil Conservation Division (OCD). Trident personnel periodically collected soil samples to characterize the extent of hydrocarbon-impact and to verify when cleanup target levels had been achieved. This letter report describes the methods and results of the excavation, sampling, waste disposition, and backfilling operations for documentation that closure requirements have been satisfied.

Excavation and Sampling Procedures

Allstate Services Environmental (Allstate) performed excavation. Allstate used one trackhoe, one dozer, and one loader for earthmoving services. An area was excavated where Mr. Cooper identified indications of hydrocarbon-impacted soils. During excavation operations, subsurface soil samples were collected by Trident with stainless steel trowels. Grab samples were collected from the floor and each wall (north, south, east, and west) of the excavation (Attachment A). During the course of excavation activities, samples were also collected for headspace analysis using an organic vapor meter (OVM), which was calibrated to assume a benzene response factor. All soil sampling, headspace analysis, and laboratory analysis were performed in accordance with OCD *"Guidelines for Remediation of Leaks, Spills, and Releases"* (August 13, 1993). Excavation operations were completed when laboratory analysis of collected samples indicated the extent of hydrocarbon-impacted soils remaining in the excavation were below the following concentrations:

- 100 milligrams per kilogram (mg/kg) of total petroleum hydrocarbons (TPH),
- 10 mg/kg benzene,
- 50 mg/kg total benzene, toluene, ethylbenzene, and xylenes (BTEX)

Soil samples were submitted to Environmental Laboratory of Texas (Odessa, Texas) and analyzed for gas and diesel range organics (GRO and DRO) using EPA Method 8015 to determine TPH concentrations. BTEX analyses were conducted for soil samples that exceeded OVM readings of 100 ppm or when GRO and/or DRO concentrations were above 100 mg/kg.

Soil Stockpiling, Waste Disposition, and Backfilling

An effort to segregate clean versus impacted soil during excavation was made. Only hydrocarbon-impacted soil that exceeded 100 mg/kg GRO/DRO, 10 mg/kg benzene, and/or 50 mg/kg total BTEX was transported to the C & C Landfarm. These target cleanup levels are based on the ranking criteria in the OCD *"Guidelines for Remediation of Leaks, Spills, and Releases"*. A total ranking score of greater than 19 points was assumed since groundwater is less than 50 feet below ground surface based on landowner's claims and well records from the Office of the State Engineer.

Approximately 504 cubic yards of hydrocarbon-impacted soils were transported by local hauling contractors (Allstate) to the C & C Landfarm, owned and operated by Mr. Jimmy T. Cooper (OCD Rule 711 Permit Approval NM-01-0016). Completed *Generator Certificate of Waste Status* (C-143) and *Release Notification and Corrective Action* (C-141) forms are included in Attachment A.

Excavated soils below the remediation action levels and as agreed upon by Mr. Cooper were returned to the excavation after sampling and analysis verification. Also, native soil from adjacent sand dunes in the area was provided by Mr. Cooper and used as additional backfill in the excavation to restore the excavation to a level grade.

Results

At the completion of excavation activities all areas had petroleum hydrocarbon concentrations below the OCD standards listed above. Soil sample locations and site features are depicted on the site map in Attachment A. A Site Data Form that includes a summary of the analytical results and photo documentation are also provided in Attachment A. Laboratory analytical reports, and chain-of-custody documentation for the samples collected are provided in Attachment B. Copies of the field logbook are in Attachment C.

Sincerely,

Gilbert J. Van Deventer, REM
Project Manager

Attachments

cc: Jimmy Cooper, landowner – Monument, NM

C:\DEFS\COOPER\JC6\JC6CLOSE.DOC

ATTACHMENT A

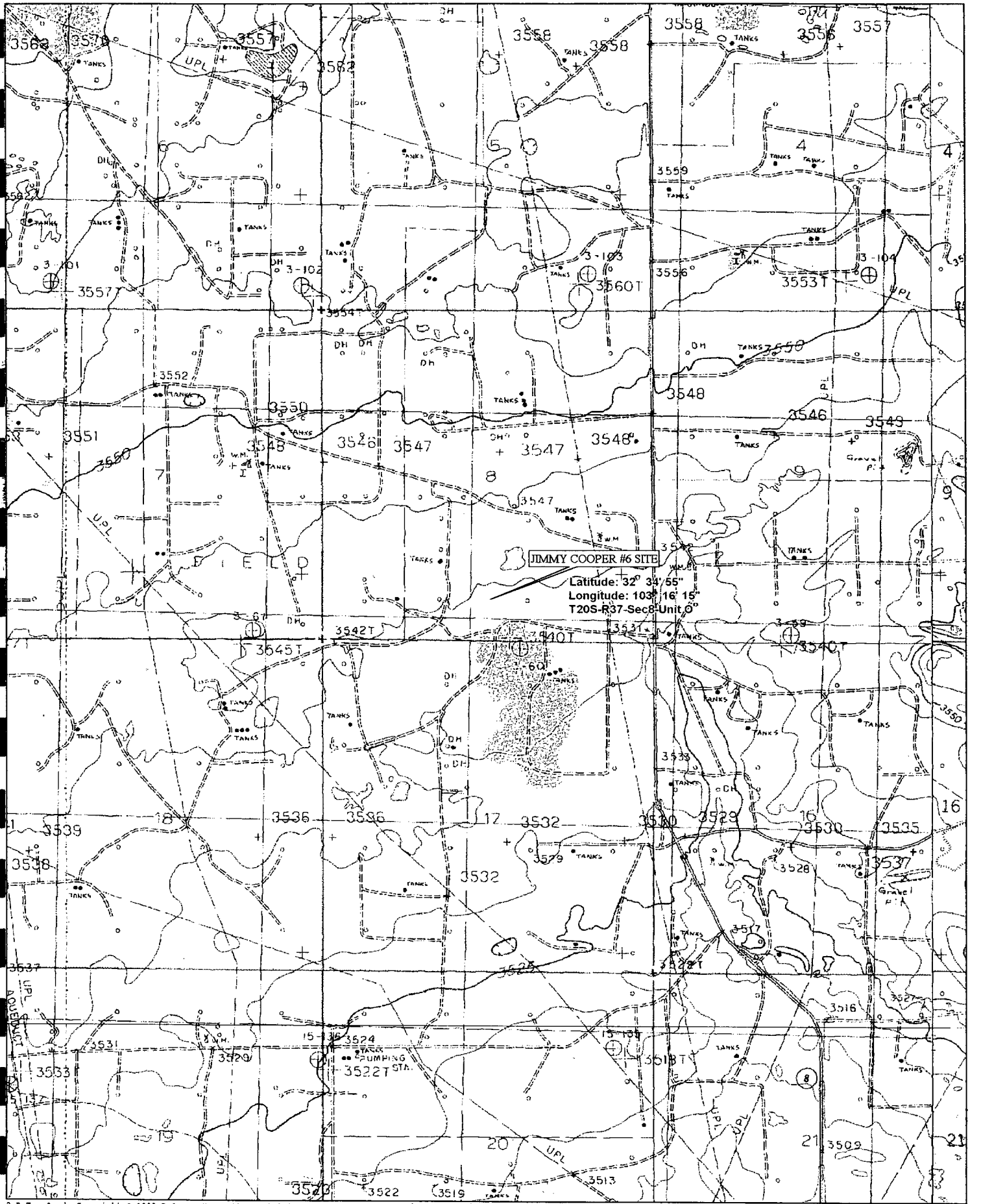
TOPOGRAPHIC MAP

SITE MAP

SITE DATA FORM

C-141 AND C-143 FORMS

PHOTODOCUMENTATION


JIMMY COOPER #6 SITE
Latitude: 32° 34' 55"
Longitude: 103° 16' 15"
T20S-R37-Sec8-Unit O
FIELD
3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS
950 ft Scale: 1 : 24,000 Detail: 13-0 Datum: WGS84

Map Original - 7/3/01

1 cm²—0.1550 in²
1 m²—6.452 cm²
1m²—10.764 ft²
1 ft²—929.0 cm²

1 acre—43,560 ft²
—4049 m²

1 hectare—10,000 m²
—2.471 acres

1 mi²—2.590 km²
—640 acres

Volume

1 m³—1000 liters
—35.314 ft³
—264 gal (U.S.)

1 ft³—28.320 liters
—7.481 gal (U.S.)

1 gal—3.785 liters

1 acre foot—43.560 ft³
—3.259 × 10⁵ gal
—1234 m³

Discharge

1ft³/min—0.472 liters/sec
1 acre foot/day
—3.259 × 10⁵ gal/day
1 ft³/sec—448.8 gal/min
—724 acre feet/year

Density

Water 1.000 g/cm³ at 4°C
0.998 g/cm³ at 20°C
Sea water 1.025 g/cm³
at 15°C
Mercury 13.55 g/cm³
at 20°C
Air 1.29 × 10⁻³ g/cm³
at 20°C and
atmospheric pressure

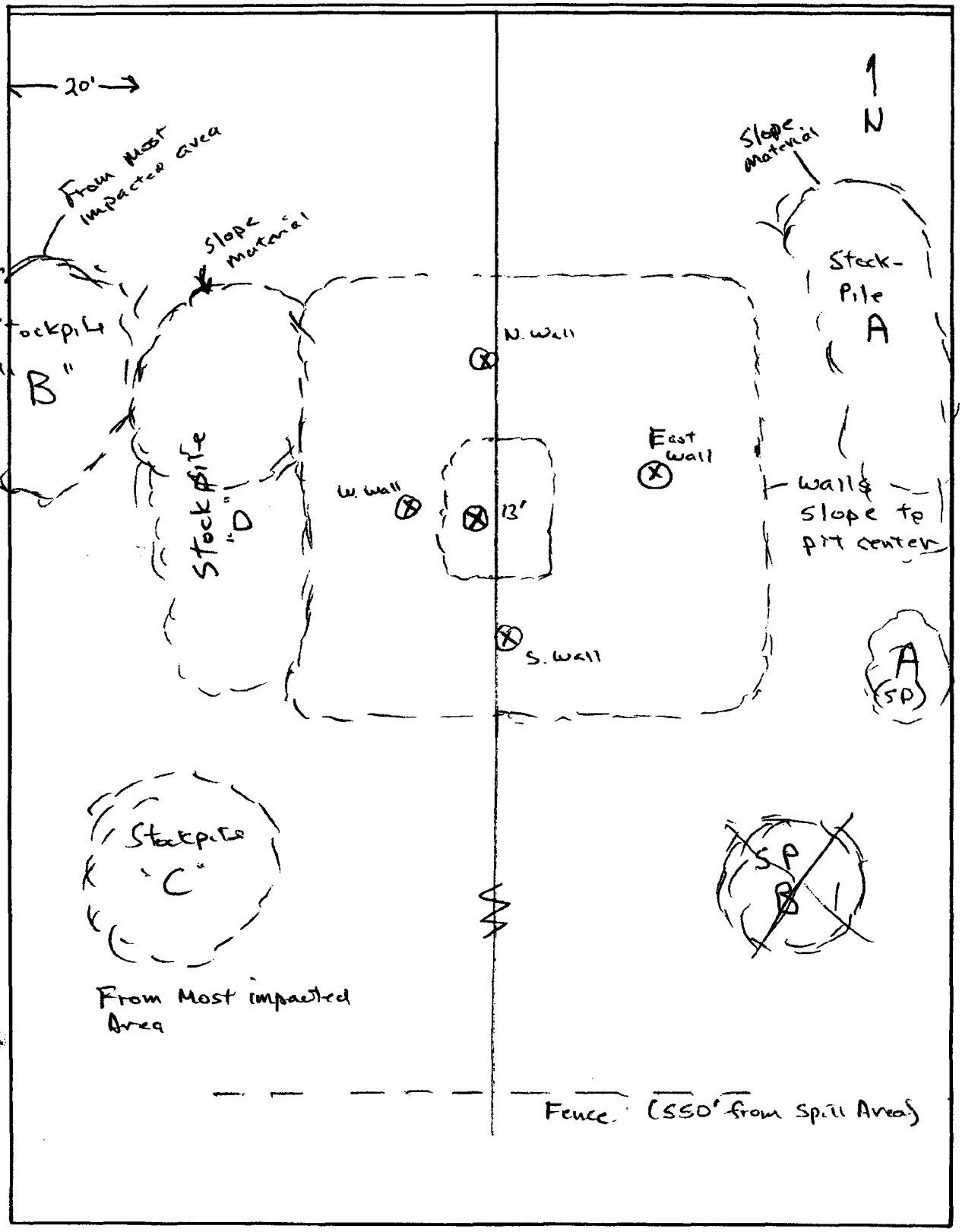
Specific weight
water in air

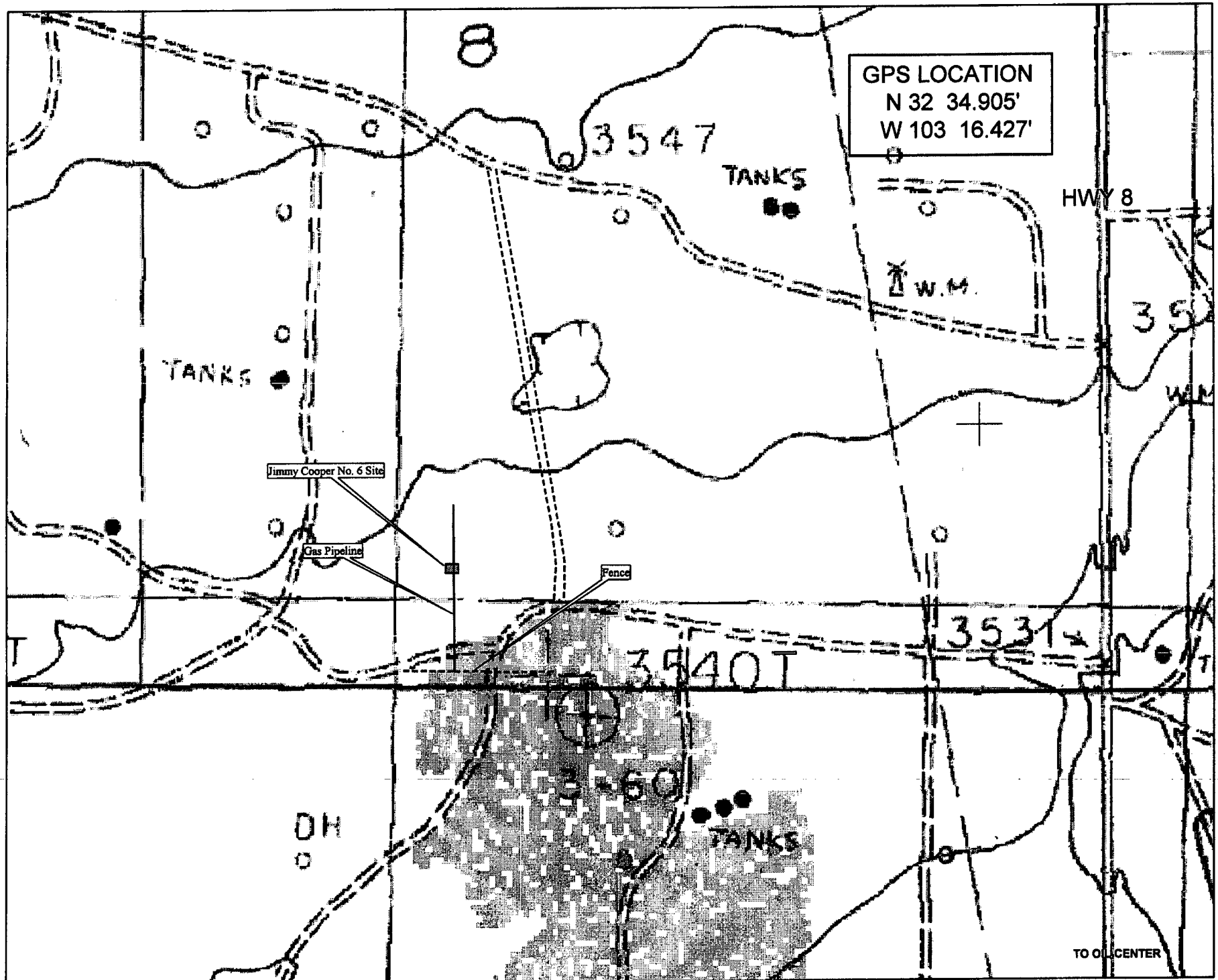
8.335 lb/gal at 0°C
8.328 lb/gal at 60° F
8.322 lb/gal at 20° C
62.18 lb/ft³ at 60° F

Pressure

1 bar—0.9869 atmosphere
—10⁶ dynes/cm²
—14.50 lb/in²

pressure developed
from static liquid
1 cm mercury
—0.01316 atmosphere
1 ft water
—0.02950 atmosphere
33.90 ft water
—1.00 atmosphere





3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS 250 ft Scale: 1 : 6,400 Detail: 15-0 Datum: WGS84

Site Data Form

TRW Technician: DTL Excavation Crew Names: Allstate Services Environmental Site ID: Jimmy Cooper #6

Site Location: Latitude 32° 34' 55" Longitude 103° 16' 15" County: Lea State: New Mexico

Section 8 Township 20 South Range 37 East Unit O

Begin Excavation (Date/Time) 07/03/01 8:00 AM 11/15/01 Complete Excavation (Date/Time) 07/03/01 5:00 PM

LAND USE: (Check all that apply)
- ☐ Residential
- ☐ Industrial
- ■ Oil & Gas
- ☐ Recreational
- ☐ School/Daycare
- ☐ Rural
- ☐ Farm land
- ■ Range land
- ☐ Other: _____

Depth to Groundwater: ☐ > 100 feet ☐ 50 - 99 ■ < 50 feet
Wellhead Protection Area: ■ > 1,000 feet from a water source ☐ < 200 feet from private domestic water source
Distance to Nearest Surface Water Body: ■ > 1,000 feet ☐ 200 – 1,000 feet ☐ < 200 feet

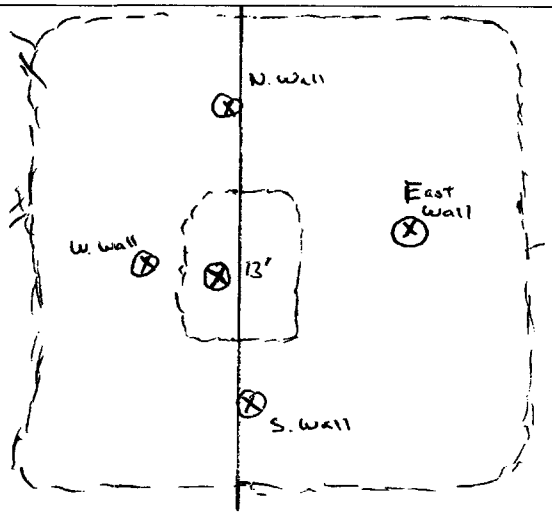
SURFACE SOILS:
- ■ Sand
- ■ Caliche
- ☐ Gravel
- ■ Clay
- ☐ Silt
- ☐ Other _____

EXCAVATION DIMENSIONS	Length	Width	Average Depth	Maximum Depth
	70 feet	65 (sloped) feet	8 feet	13 feet

VOLUME EXCAVATED: 350 ≈ 1,000 yd³ **VOLUME HAULED TO LANDFARM:** 504 yd³

SUMMARY OF OVM, GRO, AND DRO CONCENTRATIONS WITH SAMPLE LOCATION MAP

Sample Location (Depth)	Sample Type	OVM (ppm)	GRO (mg/kg)	DRO (mg/kg)	Benzene (mg/kg)	BTEX (mg/kg)
Pipeline Source Area (surface)	Grab	118	105	133	<0.025	0.054
Floor (10 ft)	Grab	67	< 10	< 10	<0.025	<0.025
Floor (13 ft)	Grab	<1	< 10	< 10	< 10	< 10
West Wall (11 ft)	Grab	<1	< 10	< 10	< 10	< 10
East Wall (8 ft)	Grab	<1	< 10	< 10	< 10	< 10
South Wall (8 ft)	Grab	5	< 10	< 10	< 10	< 10
North Wall (8 ft)	Grab	1	< 10	< 10	< 10	< 10
NMOCD Guidelines		100	100	100	10	50
Samples in red type indicate concentrations above NMOCD guidelines.						



District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Form C-141
Revised March 17, 1999

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ■ Final Report

Name of Company: Duke Energy Field Services Inc.	Contact: Mr. Steve Weathers
Address: P. O. Box 5493, Denver, Colorado 80217	Telephone No.: (303) 605-1718
Facility Name: Site Name: JC #6	Facility Type: Natural Gas Pipeline

Surface Owner: Jimmy Cooper	Mineral Owner: Unknown	Lease No.:

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the North/South Line	Latitude	Feet from the East/West Line	Longitude	County
O	8	20S	37E		32° 34' 55" N		103° 16' 15" W	Lea

NATURE OF RELEASE

Type of Release: Condensate	Volume of Release: Unknown	Volume Recovered: None (no release documented)
Source of Release: Pipeline	Date and Hour of Occurrence: Unknown	Date and Hour of Discovery: Unknown
Was Immediate Notice Given? ☐ Yes ☐ No ■ Not Required	If YES, To Whom? Paul Sheeley, NMOCD District 1	
By Whom? Steve Weathers	Date and Hour	
Was a Watercourse Reached? ☐ Yes ■ No	If YES, Volume Impacting the Watercourse. N/A	

If a Watercourse was Impacted, Describe Fully.*

N/A

Describe Cause of Problem and Remedial Action Taken.*
Historical condensate release caused by external corrosion of steel pipeline in subsurface. Steel pipeline had 5 clamps to repair historical leaks. Removal of impacted soil requested by landowner (Jimmy Cooper).

Describe Area Affected and Cleanup Action Taken.*
On 7/3/01 over-excavation was initiated and completed. At the completion of excavation activities all areas had GRO and DRO concentrations on floors and walls below 10 mg/kg. Final excavation dimensions were approx. 65 ft wide (sloped) by 70 long by 8-13 ft deep. Backfilling of excavation was completed on 7/6/01. Approx. 504 cu yds of soil was transported to the C&C Landfarm. Closure report, analytical results, photographs, and site map are attached. 1512' 3000' excavated

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: Stephen Weathers	Approved by District Supervisor:
Title: Environmental Specialist	Approval Date: / Expiration Date:
Date: 11/15/01 Phone: (303) 605-1718	Conditions of Approval: / Attached ☐

* Attach Additional Sheets If Necessary

(505) 393-6161
French Dr
NM 88240
District II - (505) 748-1283
1 S. First
rtesia, NM 88210
District III - (505) 334-6178
00 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131
2040 S. Pacheco
nta Fe, NM 87505

New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-143
3/15/00

Submit to OCD
Permitted Surface
Waste Management
Facility

GENERATOR CERTIFICATE OF WASTE STATUS

1. Waste Generator Name and Address:

Duke Energy Field Services Inc.
O. Box 5493
enver, Colorado 80217

2. Permit Number (if waste generated at an OCD permitted facility)

3. Description of Waste and Generating Process:

ydrocarbon-impacted soil
from historic pipeline leak

4. Location of Waste (Street address &/or ULSTR):

Site Name: JC#6
Sec. 8, Unit O, T20S, R36E

5. Destination (Surface Waste Management Facility):

C & C Landfarm, Inc. (NM-01-0012)
Sec 3, T20S, R37E
Box 55, Monument, NM 88265
(505) 397-2045

6. Transporter:

Allstate Services (subcontract haulers from Hobbs, NM)

7. Estimated Volume 1,000 cy/bbls

For NON-EXEMPT waste only, the following documentation is attached (check appropriate items):

_____ MSDS Information

_____ RCRA Hazardous Waste Analysis (With Chain of Custody).

_____ Other (Description)

Generator certifies that, according to the Resource Conservation and Recovery Act (RCRA) and the Environmental Protection ncy's July 1988 regulatory determination, the above described waste is: (check appropriate classification)

__X__ EXEMPT oilfield waste.

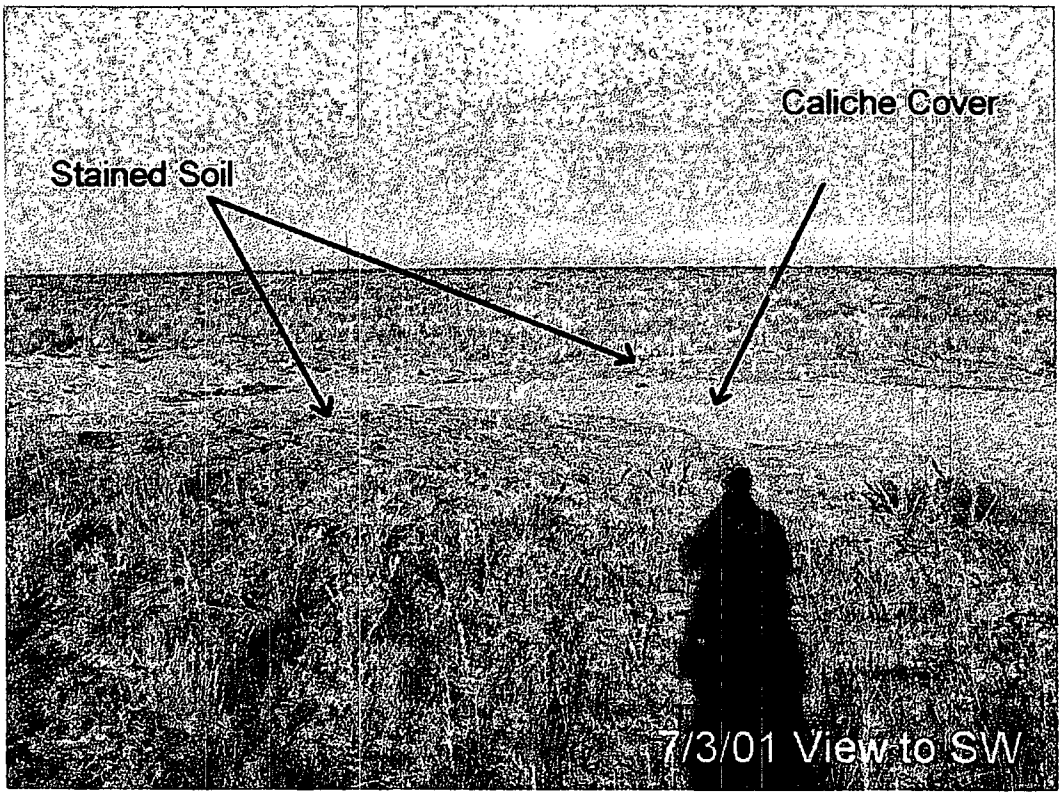
_____ NON-EXEMPT oilfield waste that is non-hazardous pursuant to 40 CFR Part 261. (Attach appropriate documentation)

addition, Generator certifies that nothing has been added to this exempt or non-exempt non-hazardous waste and that this waste s not contain Naturally Occurring Radioactive Material (NORM) regulated pursuant to 20 NMAC 3.1 part 1403.

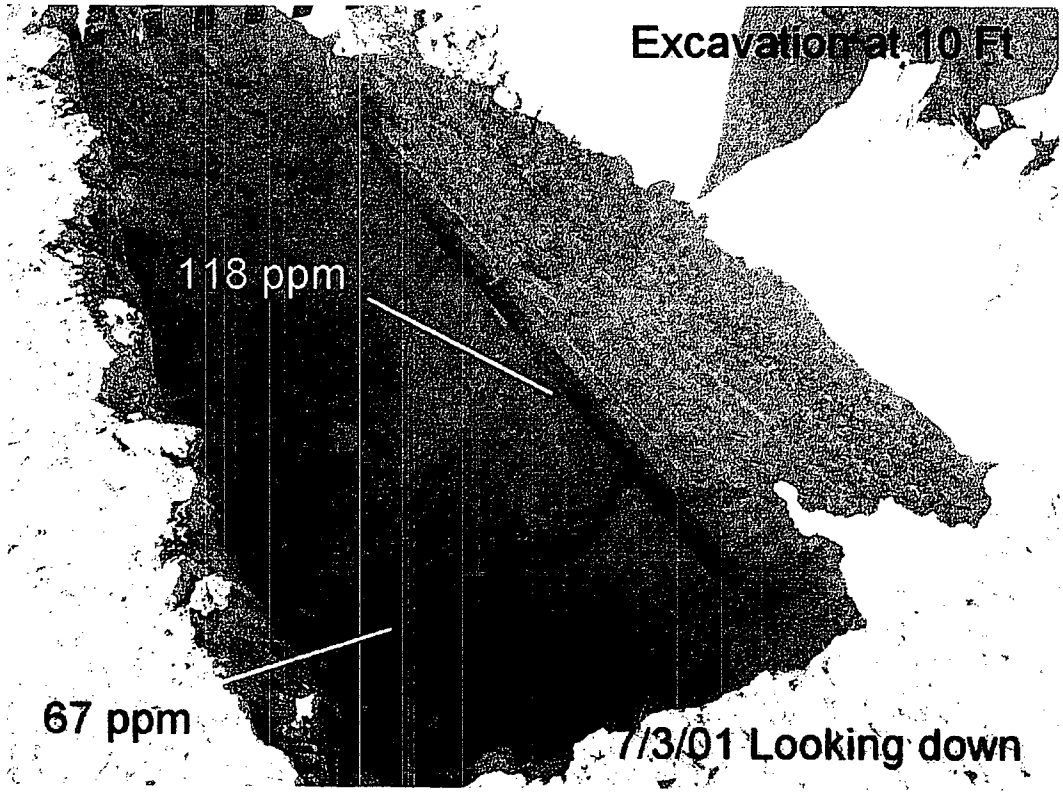
enerator Signature: _____ Date: 7/2/01

Name: Stephen W. Weathers

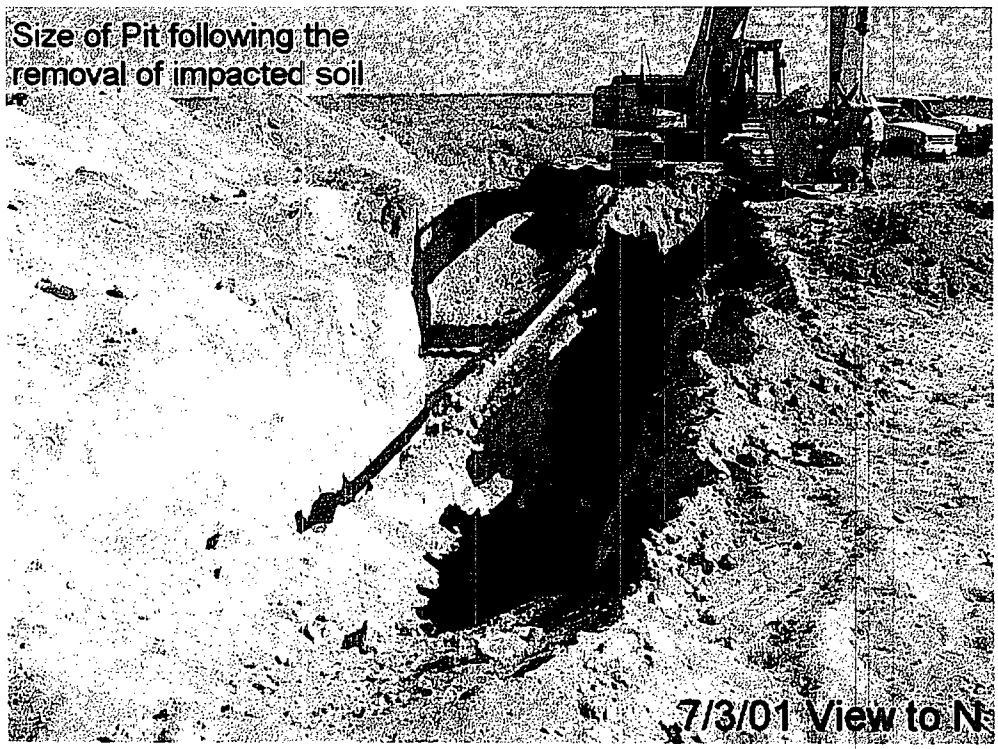
tle: Environmental Specialist



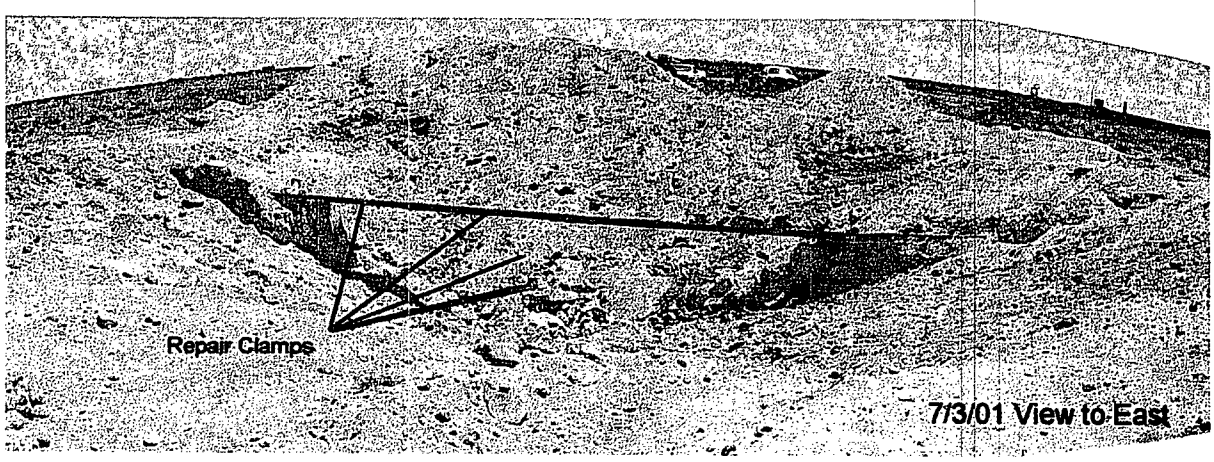
JC6-1 View of site just prior to excavation.



JC6-2 View showing floor and wall of excavation at depth of 10 feet with organic vapor monitor readings indicated.



JC6-3 View facing north showing completed excavation.



JC6-4 View facing east showing location of pipe clamps and completed excavation.

ATTACHMENT B

LABORATORY ANALYTICAL REPORTS

AND

CHAIN-OF-CUSTODY DOCUMENTATION

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

TRIDENT ENVIRONMENTAL
ATTN: MR. GILBERT VAN DEVENTER
P.O. BOX 7624
MIDLAND, TEXAS 79708
FAX: 689-4578

Sample Type: Soil
Sample Condition: Intact/ Iced/ 1.0 deg C
Project #: V-105
Project Name: Duke Energy Field Services
Project Location: JC #6

Sampling Date: 07/03/01
Receiving Date: 07/03/01
Analysis Date: 07/03/01

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
41628	Pipeline Source Area	105	133
41629	Floor (10 ft)	<10	<10
41630	Stockpile A (East)	<10	<10
41631	Stockpile (B) (Far West)	<10	<10
41632	Stockpile C (SW)	<10	<10
41633	Stockpile D (Near West)	<10	<10
	QUALITY CONTROL	437	462
	TRUE VALUE	500	500
	% INSTRUMENT ACCURACY	87	92
	SPIKED AMOUNT	476	476
	ORIGINAL SAMPLE	<10	<10
	SPIKE	419	412
	SPIKE DUP	431	427
	% EXTRACTION ACCURACY	88	86
	BLANK	<10	<10
	RPD	2.8	3.6

Methods: EPA SW 846-8015M GRO/DRO

Raland K. Tuttle

7-5-01
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

TRIDENT ENVIRONMENTAL
ATTN: MR. GILBERT VAN DEVENTER
P.O. BOX 7624
MIDLAND, TEXAS 79708
FAX: 689-4578

Sample Type: Soil
Sample Condition: Intact/ Iced/ 1.0 deg C
Project #: V-105
Project Name: Duke Energy Field Services
Project Location: JC #6

Sampling Date: 07/03/01
Receiving Date: 07/03/01
Analysis Date: 07/03/01

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
41628	Pipeline Source Area	<0.025	<0.025	<0.025	<0.025	0.054
41629	Floor (10 ft)	<0.025	<0.025	<0.025	<0.025	<0.025
41630	Stockpile A (East)	<0.025	<0.025	<0.025	<0.025	<0.025
41631	Stockpile (B) (Far West)	<0.025	<0.025	<0.025	<0.025	<0.025
41632	Stockpile C (SW)	<0.025	<0.025	<0.025	<0.025	<0.025
41633	Stockpile D (Near West)	<0.025	<0.025	<0.025	<0.025	<0.025
	QUALITY CONTROL	0.096	0.094	0.091	0.201	0.093
	TRUE VALUE	0.100	0.100	0.100	0.200	0.100
	% INSTRUMENT ACCURACY	96	94	91	101	93
	SPIKED AMOUNT	0.100	0.100	0.100	0.200	0.100
	ORIGINAL SAMPLE	<0.025	<0.025	<0.025	<0.025	<0.025
	SPIKE	0.097	0.097	0.094	0.212	0.099
	SPIKE DUP	0.099	0.099	0.097	0.218	0.101
	% EXTRACTION ACCURACY	97	97	94	106	99
	BLANK	<0.025	<0.025	<0.025	<0.025	<0.025
	RPD	2	2	3	3	2

METHODS: EPA SW 846-8021B ,5030

Raland K. Tuttle

7-5-01
Date

TRIDENT ENVIRONMENTAL

Trident Environmental
P.O. Box 7624
Midland, Texas 79708
(915) 528-3878
(915) 689-4578 (Fax)

V-105-JC6-7/3

Chain of Custody

Date _____ Page _____ of _____

Lab Name: Environmental Lab of Texas
Address: 12600 W I-20 East
Odessa, Texas 79765
Telephone: (915) 563-1800

Samplers (SIGNATURES): Dale T Littlejohn

Sample Identification	Matrix	Date	Time	Sample Type: G - Grab, C- Composite	BTEX (EPA 8021B)	MTBE (EPA 8021B)	SVOC (EPA 8270)	PAH (EPA 8270)	VOC (EPA 8260)	TPH (EPA 418.1)	TPH (TX-1005)	TPH (TX-1006)	GRO (EPA 8015G)	DRO (EPA 8015D)	TDS (EPA 160.1)	Anions/Cations	Total Metals	TCLP Metals						Number of Containers
Pipeline Source Area	Soil	7/3/01	0835	G	✓								✓	✓					4	1	6	2	8	1
Floor (10 Ft)	"	"	0900	G	✓								✓	✓					4	1	6	2	9	1
Stockpile A (East)	"	"	1202	C	✓								✓	✓					4	1	6	3	0	1
Stockpile B (Far West)	"	"	1215	C	✓								✓	✓					4	1	6	3	1	1
Stockpile C (SW)	"	"	1220	C	✓								✓	✓					4	1	6	3	2	1
Stockpile D (Near West)	"	"	1225	C	✓								✓	✓					4	1	6	3	3	1

Analysis Request

Project Information		Sample Receipt	
Project Name:	Duke Energy Field Services	Total Containers:	
Project Location:	JC#6	COC Seals:	
Project Manager:	Gil Van Deventer	Rec'd Good Cond/Cold:	1.0°
Cost Center No.:	V-105	Conforms to Records:	
Shipping ID No.:	Hand Delivered to Lab	Lab No.:	
Bill to (see below):			

Special Instructions/Comments: Please send invoice direct to client:
Duke Energy Field Services, Attention: Steve Weathers
P. O. Box 5493, Denver, Colorado 80217

Relinquished By: (1) (Company)	Relinquished By: (2) (Company)	Relinquished By: (3) (Company)
Trident Environmental		
(Printed Name) Dale Littlejohn	(Printed Name)	(Printed Name)
(Signature) Dale T Littlejohn	(Signature)	(Signature)
(Date) 7/3/01 (Time) 1507	(Date) (Time)	(Date) (Time)
Received By: (1) (Company)	**Received By: (2) (Company)**	**Received By: (3) (Company)**
Environmental Lab of Tx.		
(Printed Name) Jeanne McMurrey	(Printed Name)	(Printed Name)
(Signature) Jeanne McMurrey	(Signature)	(Signature)
(Date) 7-3-01 (Time) 1507	(Date) (Time)	(Date) (Time)

Copy signed original form for Trident Environmental records

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

TRIDENT ENVIRONMENTAL
ATTN: MR. GILBERT VAN DEVENTER
P.O. BOX 7624
MIDLAND, TEXAS 79708
FAX: 689-4578

Sample Type: Soil
Sample Condition: Intact/ Iced/ 1.0 deg C
Project #: V-105
Project Name: Duke Energy Field Services
Project Location: JC #6

Sampling Date: 07/03/01
Receiving Date: 07/03/01
Analysis Date: 07/03/01

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
41623	Floor 13ft	<10	<10
41624	West Wall (11 ft)	<10	<10
41625	East Wall (8 ft)	<10	<10
41626	South Wall (8 ft)	<10	<10
41627	North Wall (8 ft)	<10	<10
	QUALITY CONTROL	455	487
	TRUE VALUE	500	500
	% INSTRUMENT ACCURACY	91	97
	SPIKED AMOUNT	476	476
	ORIGINAL SAMPLE	<10	<10
	SPIKE	419	412
	SPIKE DUP	431	427
	% EXTRACTION ACCURACY	88	86
	BLANK	<10	<10
	RPD	2.8	3.6

Methods: EPA SW 846-8015M GRO/DRO

Raland K. Tuttle

7-4-01
Date

TRIDENT ENVIRONMENTAL

Trident Environmental
P.O. Box 7624
Midland, Texas 79708
(915) 528-3878
(915) 689-4578 (Fax)

RUSH

V-105-JC6-7/3

Chain of Custody

Date 7/3/01 Page _____ of _____

Lab Name: Environmental Lab of Texas
Address: 12600 W I-20 East
Odessa, Texas 79765
Telephone: (915) 563-1800

Samplers (SIGNATURES) Dale T Littlejohn

Sample Identification	Matrix	Date	Time	Sample Type: G - Grab, C- Composite	BTEX (EPA 8021B)	MTBE (EPA 8021B)	SVOC (EPA 8270)	PAH (EPA 8270)	VOC (EPA 8260)	TPH (EPA 418.1)	TPH (TX-1005)	TPH (TX-1006)	GRO (EPA 8015G)	DRO (EPA 8015D)	TDS (EPA 160.1)	Anions/Cations	Total Metals	TCLP Metals						Number of Containers
Analysis Request																								
Floor 13 ft	Soil	7/3/01	0920	G									✓	✓						4	1	6	2	3	1
West Wall (11 ft)	"	"	1205	G									✓	✓						4	1	6	2	4	1
East Wall (8 ft)	"	"	1154	G									✓	✓						4	1	6	2	5	1
South Wall (8 ft)	"	"	1208	G									✓	✓						4	1	6	2	6	1
North Wall (8 ft)	"	~~7/3~~	1210	G									✓	✓						4	1	6	2	7	1

Project Information		Sample Receipt	
Project Name:	Duke Energy Field Services	Total Containers:	
Project Location:	JC#6	COC Seals:	
Project Manager:	Gil Van Deventer	Rec'd Good Cond/Cold:	1.0°
Cost Center No.:	V-105	Conforms to Records:	
Shipping ID No.:	Hand Delivered to Lab	Lab No.:	
Bill to (see below):			

Special Instructions/Comments: Please send invoice direct to client:
Duke Energy Field Services, Attention: Steve Weathers
P. O. Box 5493, Denver, Colorado 80217

Relinquished By: (1) (Company)	Relinquished By: (2) (Company)	Relinquished By: (3) (Company)
Trident Environmental		
(Printed Name) Dale T. Littlejohn	(Printed Name)	(Printed Name)
(Signature) Dale T Littlejohn	(Signature)	(Signature)
(Date) 7/3/01 (Time) 1507	(Date) (Time)	(Date) (Time)
Received By: (1) (Company)	**Received By: (2) (Company)**	**Received By: (3) (Company)**
Environmental Lab of Tx		
(Printed Name) Jeanne McMurrey	(Printed Name)	(Printed Name)
(Signature) Jeanne McMurrey	(Signature)	(Signature)
(Date) 7-3-01 (Time) 1507	(Date) (Time)	(Date) (Time)

Copy signed original form for Trident Environmental records

ATTACHMENT C

FIELD BOOK NOTES

Jimmy Cooper No. 6 Activity Summary

Visibly stained soil was observed on both sides (east and west) of the pipeline across an 800 square foot area. The surface soil immediately above the pipeline appeared to consist of a thin layer of caliche, possibly added after the line repairs were made (see Photo 1). Mr. Cooper said the surface soil above the pipeline was salt contaminated natural soil; this however, seems unlikely since any salt contaminated soil immediately above the pipeline would have been removed when the line was repaired.

At 8:00 am CST the stained soil on the east side of the pipeline was excavated to a depth of approximately 3 feet below the surface. Soil samples were recovered and field screened with the PID. All of the samples contained <1-ppm volatile hydrocarbons (VHC). The area directly above the pipeline was then excavated. The line was discovered at a depth of approximately 5 feet below the surface. Soil samples taken directly adjacent to the pipeline contained 118-ppm VHC. The area of stained soil on the west side of the pipeline was excavated to approximately 3 feet. Soil samples at that depth contained <1-ppm VHC.

The pipeline excavation (center) was deepened in an effort to identify the vertical extent of hydrocarbon contamination. A soil sample was recovered at 10 feet below the surface immediately adjacent to the pipeline (Photo 2). The sample contained 67-ppm VHC. The excavation was advanced to 13 feet below the surface and soil samples were recovered with the track-hoe bucket. The samples (both sides of the pipeline) each contained <1-ppm VHC.

The excavation was then widened and cleaned out until soil samples recovered from the bucket on all four sides contained <1-ppm VHC (Photo 3). A grab sample was recovered from the floor of the excavation for laboratory analysis of DRO and GRO. The removed soil to this point (assumed to be contaminated) was segregated to the west of the excavation (Stockpiles "B" and "C") and the walls of the excavation were ramped on all sides to prevent injury to livestock or area workers (Photo 4 and 5). Soil from the ramping operation was placed adjacent to the excavation (Stockpiles "A" and "D").

Four additional grab samples, for laboratory analysis of DRO/GRO, were recovered from the highest VHC concentration areas of the slopped walls following field screening with the PID. The highest reading was observed and sampled on the south wall at approximately 8 feet below the surface (5 ppm). Soil samples for laboratory analysis of BTEX, DRO, and GRO were recovered from each stockpile.

It should be noted that five (5) repair clamps were discovered along the exposed section of pipeline. The northern most was surrounded (within a few inches) with moist, hydrocarbon-impacted soil. Mr. Blackwood (Allstate) indicated that he would contact a local Duke employee to come check the line prior to back-filling the excavation.

Also, Mr. Cooper indicated that he would like to see us analyze soil samples for chloride content. I decided not to do this because the ramping operation had removed all of the soil that he thought was salt-impacted.

The lithology can be summarized as follows:

Surface to 3 feet – Sand, light brown, very fine-grained (dune material)
3 feet to 6 feet – Sandy Clay, brown, fine grained
6 feet to 8 feet – Sand and caliche, tan, fine grained sand
8 feet to 13 feet – Sand with some clay, brown

The laboratory results for the samples recovered inside the excavation (rushed) were completed on Wednesday morning (7/4/01). All of the samples were below the detection limit of 10 mg/kg for DRO and GRO. The results of the stockpile soil should be available by Friday. This information was relayed to Mr. Blackwood (Allstate). Please call me if you have any further questions.

Thanks,

Dale Littlejohn
(915) 528-3878

7/3/01 DTL ①

0530 leave Midland for JC-6
0724 Arrive at JC-6, check PID calibration (97.5 ppm)
Photo #1 Stain soil at the surface on east & west side of fresh caliche covering the repaired pipeline
- Spill loc. ≈ 550' due north of fence line along North-South trending line.

0800 Started excavation at east stained area, NO visible contam. PID ≈ 1.0 ppm.
- Move to center, exposed pipeline, soil on top of pipeline contained strong odor (PID = 41 ppm) [118 ppm in bag]
- Moved to West side of line begin excavation, took sample at ≈ 3 ft below stained area (PID = < 1.0)

1.) 32° 34.905'
W 103° 16.427'

② JC-6 7/3/01 DTL

Sample	PID	Time
O- Source [Taken at pipline in center of stained soil area]	118 ppm	8:35
West Wall (Scrape)	<1. ppm - Mid 10 ppm - Btm	10:00
o Floor (10ft)	67 ppm	9:00
+ Floor (13ft)	< 1 ppm	9:20
+ West Wall (11')	< 1 ppm	12:05
+ East Wall (8ft)	< 1 ppm	11:54
o East Stockpile (A)	< 1 ppm	12:02
~~+ West Wall (11')~~		
+ South Wall (8')	5 ppm	12:08
+ North Wall (8')	1 ppm	12:10
o Stockpile "B"	8 ppm	12:15
o Stockpile "C"	15 ppm	12:20
o Stockpile "D"	< 1 ppm	1225

* Note - 5 clamps were observed on the exposed line.

JTL 7/3/01 JC6 (3)

0840 began excavating at pipeline (5' deep). Floor sample taken at 10 feet (67 ppm) Sample taken at 13 feet (21 ppm) West Wall - 1-10 ppm South wall (below line) 1.2 ppm

1000 Believe to have found the limits of the spill, will clean out hole, then recover final laboratory samples

~~Trident~~

Allstate Equipment

Deere	# 650 H	Dozier
"	# 644 H	Front Loader
"	# 410 E	Backhoe
CAT	# 325 B	Trackhoe

Trident Equip.

PPE wheel

PID Truck 206 miles

*camera

*GPS

1200 Cal PID 98.3 ppm

(4) 7/3/01 DTK

1325 Leave JC-6 for Env. Labs of Texas

1534 Arrive in Midland