Clay Cooper #5 Closure Report
Duke Energy Field Services
Lea County, New Mexico

OCTOBER 23, 2001

Prepared For:

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

1RP-208
10.24.05

Site Name:

CLAY COOPER #5 (CC#5)

Site Location:

T20S, R36 E, SECTION 24, UNIT J

Prepared By:

TRIDENT ENVIRONMENTAL

PO Box 7624
Midland, Texas 79708

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

November 16, 2001

Duke Energy Field Services
Attn: Stephen Weathers
POB 5493
Denver, CO 80217

Re: Spill Site Closure Approval for Duke Energy Field Services,LP (DEFS)
Clay Cooper sites #2, #3, #4 and #5.
Site Location(s): UL-O, Sec 24-T20S-R36E (#2, #3 and #4) and UL-J, Sec 24-T20S-R36E (#5)
Submitted: November 13, 2001

The Spill Sites Closure Reports referenced above and submitted to the New Mexico Oil Conservation Division (OCD) by Trident Environmental for DEFS are **hereby approved.**

Clay Cooper #6, Jimmy Cooper #3 and J-4-2 are on hold pending further examination.

Please be advised that OCD approval of this plan does not relieve DEFS of liability should their operations fail to adequately investigate and remediate contaminants that threaten ground water, surface water, human health or the environment. In addition, OCD approval does not relieve DEFS 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 write or call me at (505) 393-6161, x113 or email psheeeley@state.nm.us

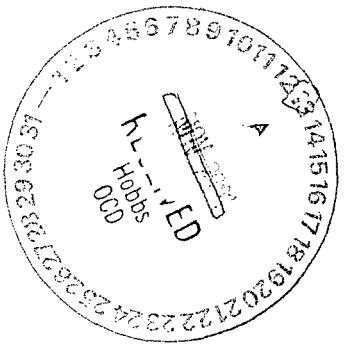
Sincerely,

Paul Sheeley-Environmental Engineer
Cc: Roger Anderson - Environmental Bureau Chief
Chris Williams - District I Supervisor
Bill Olson - Hydrologist
Larry Johnson - Environmental Engr.
Mr. Gilbert J. Van Deventer -Trident Environmental

TRIDENT ENVIRONMENTAL

October 23, 2001

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



Re: Removal of Hydrocarbon-Impacted Soils from the CC #5 site
Township 20 South, Range 36 East, Section 24, Unit J

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 (CC #5) is located in Section 24 (Unit J), Township 20 South, Range 36 East on property owned by Dale Cooper and managed by Clay Cooper. The location of the CC #5 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

Walton Construction Company, Inc. (Hobbs, New Mexico) performed excavation. Walton Construction used one trackhoe, one dozer, one loader, and 12 yd^3 dump trucks for earthmoving services. An area was excavated where Mr. Cooper identified indications of hydrocarbon-impacted soils. During excavation operations, subsurface soil samples were collected and submitted to an analytical laboratory to characterize the approximate lateral and vertical extent of hydrocarbon-impacted soil in each area. Samples were collected by Trident with stainless steel trowels. Composite samples consisting of a minimum of three aliquots and grab samples were collected from the floor and walls (north, south, east, and west), as specified in the site data form in 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 South Monument 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 1,584 cubic yards of hydrocarbon-impacted soils were transported by Walton Construction to cell B-5 at the South Monument Landfarm, which is owned and operated by Ms. Kena Kay Cooper (OCD Rule 711 Permit Approval NM-01-0032). 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: Clay Cooper, landowner – Hobbs, NM

C:DEFS\COOPER\CC5\CC5CLOSE.DOC

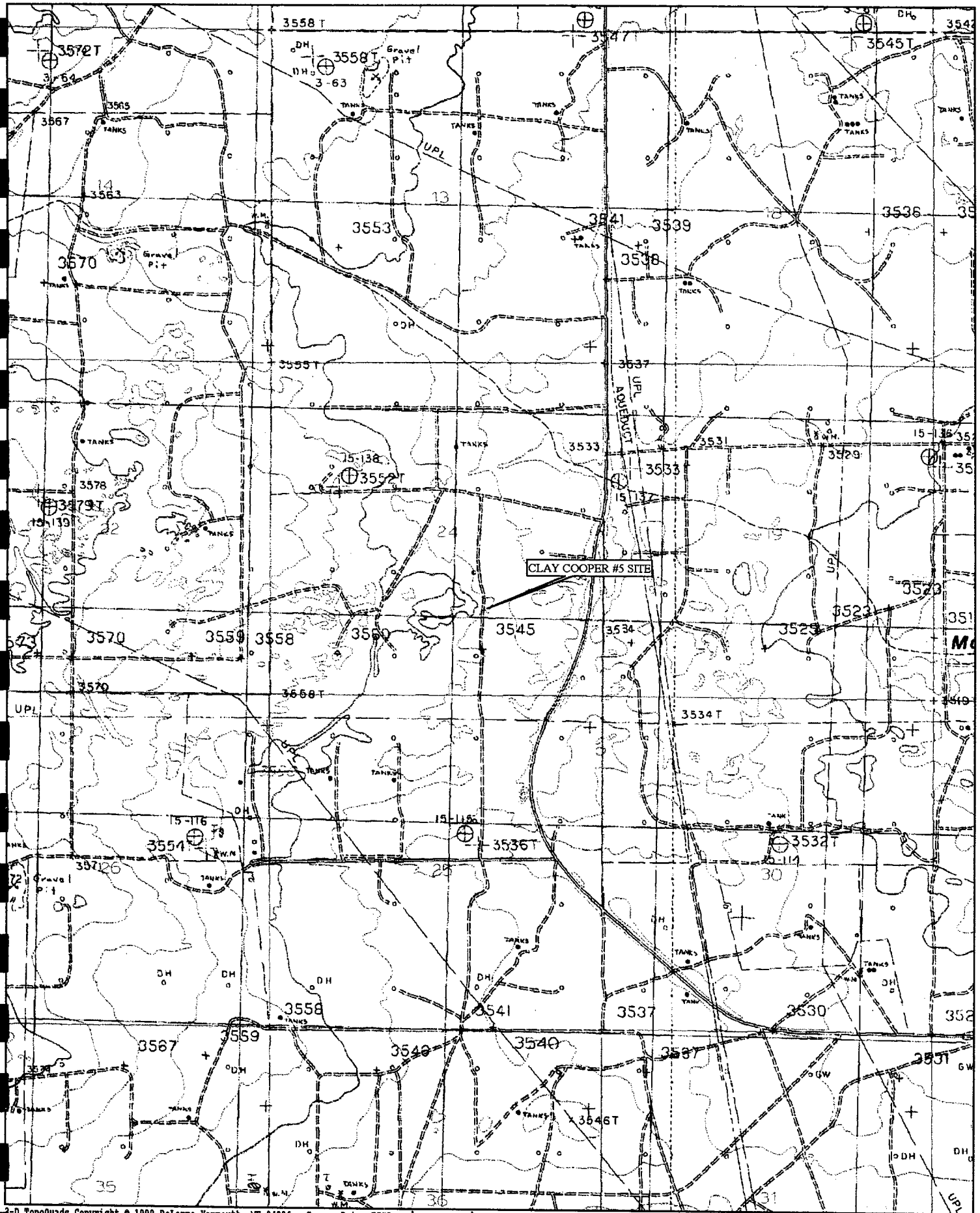
ATTACHMENT A

TOPOGRAPHIC MAP

SITE DATA FORM

C-141 AND C-143 FORMS

PHOTODOCUMENTATION



950 ft Scale: 1 : 24,000 Detail: 13-0 Datum: WGS84

TRIDENT ENVIRONMENTAL

Site Data Form

TRW Technician: DTL/GJV Excavation Crew Names: Walton Construction Site ID: Clay Cooper # 5

Site Location: Latitude 32° 33' 18" N Longitude 103° 18' 19" W County: Lea State: New Mexico

Township 20 South Range 36 East Section 24 Unit J

Begin Excavation (Date/Time) 07/10/01 Complete Excavation (Date/Time) 7/20/01

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 Sandy silty clay at depth

EXCAVATION DIMENSIONS	Length	Width	Average Depth	Maximum Depth
	54 feet	18 feet	Varied 10-29 feet	29 feet

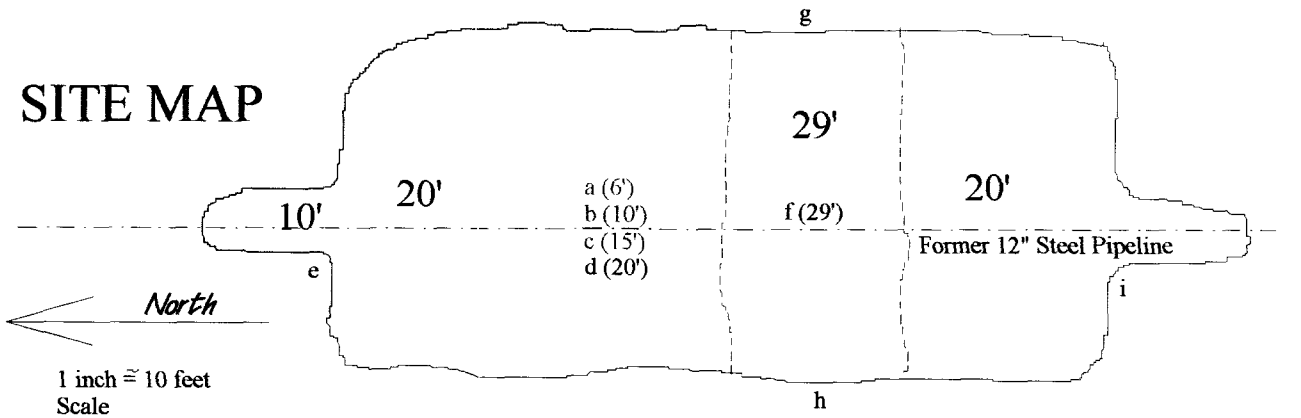
VOLUME EXCAVATED: ~2,000 yd³ **VOLUME HAULED TO LANDFARM:** 1,584 yd³

SUMMARY OF OVM, GRO, DRO, BENZENE & BTEX CONCENTRATIONS

Ltr	Sample ID (Depth)	Sample Type	Sample Date	OVM (ppm)	GRO (mg/kg)	DRO (mg/kg)	Benzene (mg/kg)	BTEX (mg/kg)
a	Source Area (6')	Grab	07-10-01	245	1250	3980	0.407	12.0
b	Source Area (10')	Grab	07-10-01	252	1760	5220	1.86	22.7
c	Source Area (15')	Grab	07-10-01	234	331	2330	0.234	4.82
d	Source Area (20')	Grab	07-10-01	7	< 10	< 10	<0.025	<0.025
e	North Wall	Grab	07-13-01	0.4	< 10	< 10	NA	NA
f	Floor (29')	Grab	07-13-01	0.0	< 10	< 10	NA	NA
g	East Wall	Grab	07-13-01	0.0	< 10	< 10	NA	NA
h	West Wall	Grab	07-13-01	0.4	< 10	< 10	NA	NA
i	South Wall	Grab	07-13-01	0.0	< 10	< 10	NA	NA
	Exc. Soil-1	Comp	07-13-01	40	34	1230	<0.025	0.051
	Background	Comp	07-10-01	0.0	< 10	< 10	NA	NA
			NMOCD Guidelines	100	100	100	10	50

Samples in red type indicate concentrations above NMOCD guidelines.
NA indicates sample was not analyzed for this constituent.

SITE MAP



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	Contact
Duke Energy Field Services Inc.	Mr. Steve Weathers
Address	**Telephone No.**
P. O. Box 5493, Denver, Colorado 80217	(303) 605-1718
Facility Name	**Facility Type**
Site Name: CC #5	Natural Gas Pipeline

Surface Owner	Mineral Owner	Lease No.
Dale Cooper	Unknown	EMSU

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
J	24	20S	36E		32° 33' 18" N		103° 18' 19" W	Lea

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
Condensate	Unknown	~1,584 yd³ soil removed
Source of Release	**Date and Hour of Occurrence**	**Date and Hour of Discovery**
Pipeline	Unknown	Unknown
Was Immediate Notice Given? ☐ Yes ☐ No ■ Not Required	**If YES, To Whom?** Donna Williams, 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 subsurface external corrosion. Pipeline replaced with 6" plastic line inserted into original 10" steel pipeline prior to initiation of over-excavation work. Removal of impacted soil requested by landowner (Clay Cooper).

Describe Area Affected and Cleanup Action Taken.* (6000' excavated)

On 7/10/01 over-excavation was initiated. Excavation continued until 7/13/01 when total petroleum hydrocarbons on floor and walls were below 100 mg/kg. Final excavation dimensions were approx. 18 ft wide x 54 long x 20 -29 ft deep. Approximately 1,584 cu yds of soil was transported to cell B-5 at the South Monument Land Farm. Backfilling of excavation was completed on 7/20/01. Closure report, analytical results, photographs, and site map are attached.

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: 11/9/01 Phone: (303) 605-1718	Conditions of Approval: / Attached ☐

* Attach Additional Sheets If Necessary

...d. French Dr
...obs, NM 88240
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131
2040 S. Pacheco
Santa 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.
P. O. Box 5493
Denver, Colorado 80217

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

3. Description of Waste and Generating Process:

Exempt oilfield waste
Hydrocarbon-impacted soil from pipeline leak

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

Site Name: CC#5
Sec 24 T20S R36E Unit J

5. Destination (Surface Waste Management Facility):
South Monument Landfarm (Permit NM-01-0032)

6. Transporter: Walton Construction

7. Estimated Volume 1000 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 Agency'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)

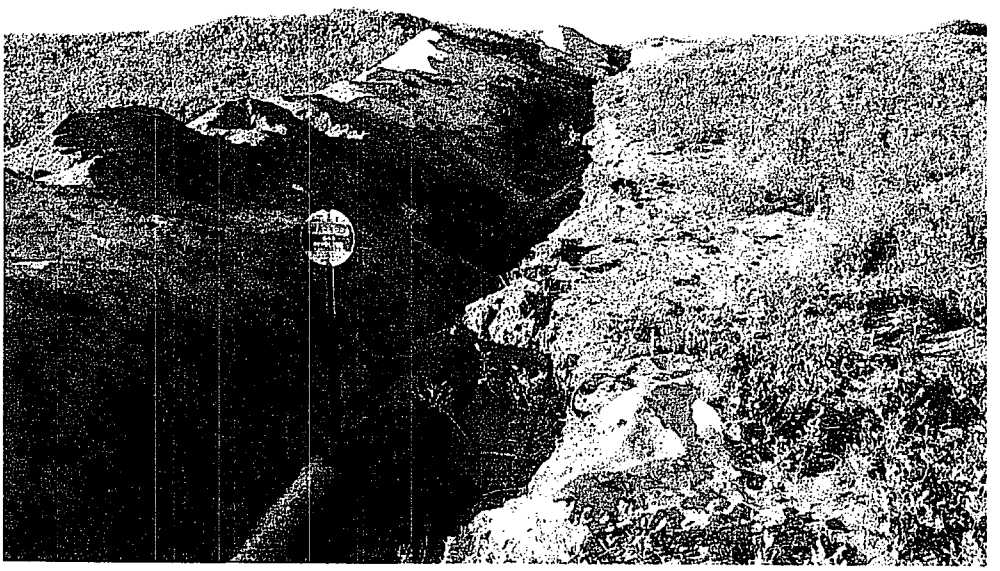
In addition, Generator certifies that nothing has been added to this exempt or non-exempt non-hazardous waste and that this waste does not contain Naturally Occurring Radioactive Material (NORM) regulated pursuant to 20 NMAC 3.1 Subpart 1403.

Generator Signature: _____ Date: 7/02/01

Print Name: Stephen Weathers

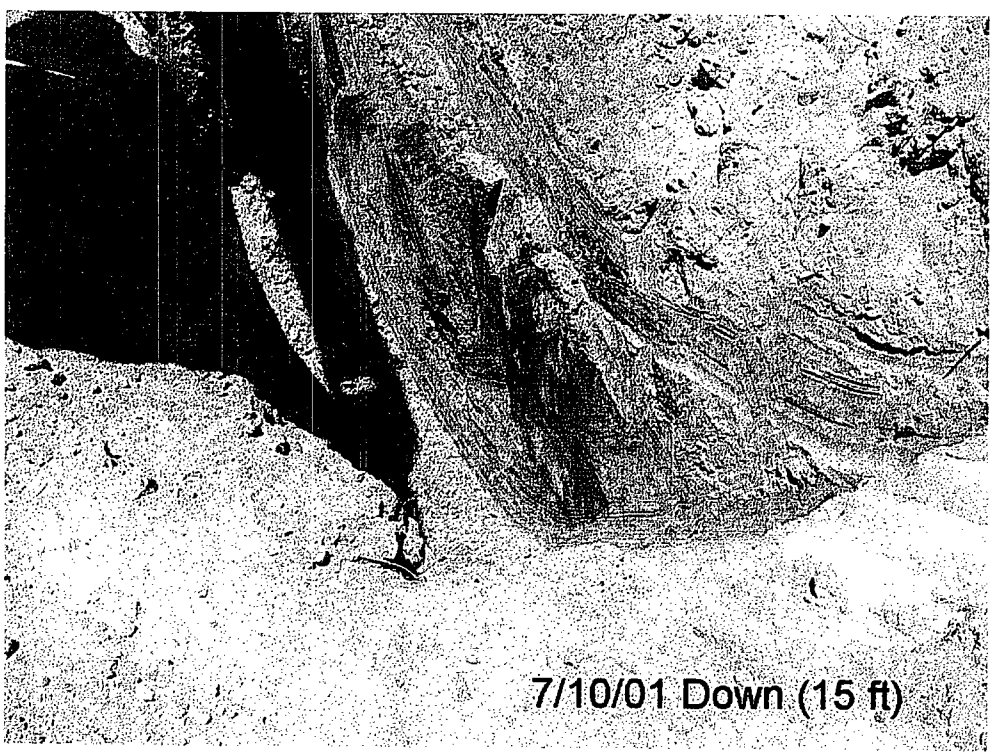
Title: Environmental Specialist

7/10/01 View to North



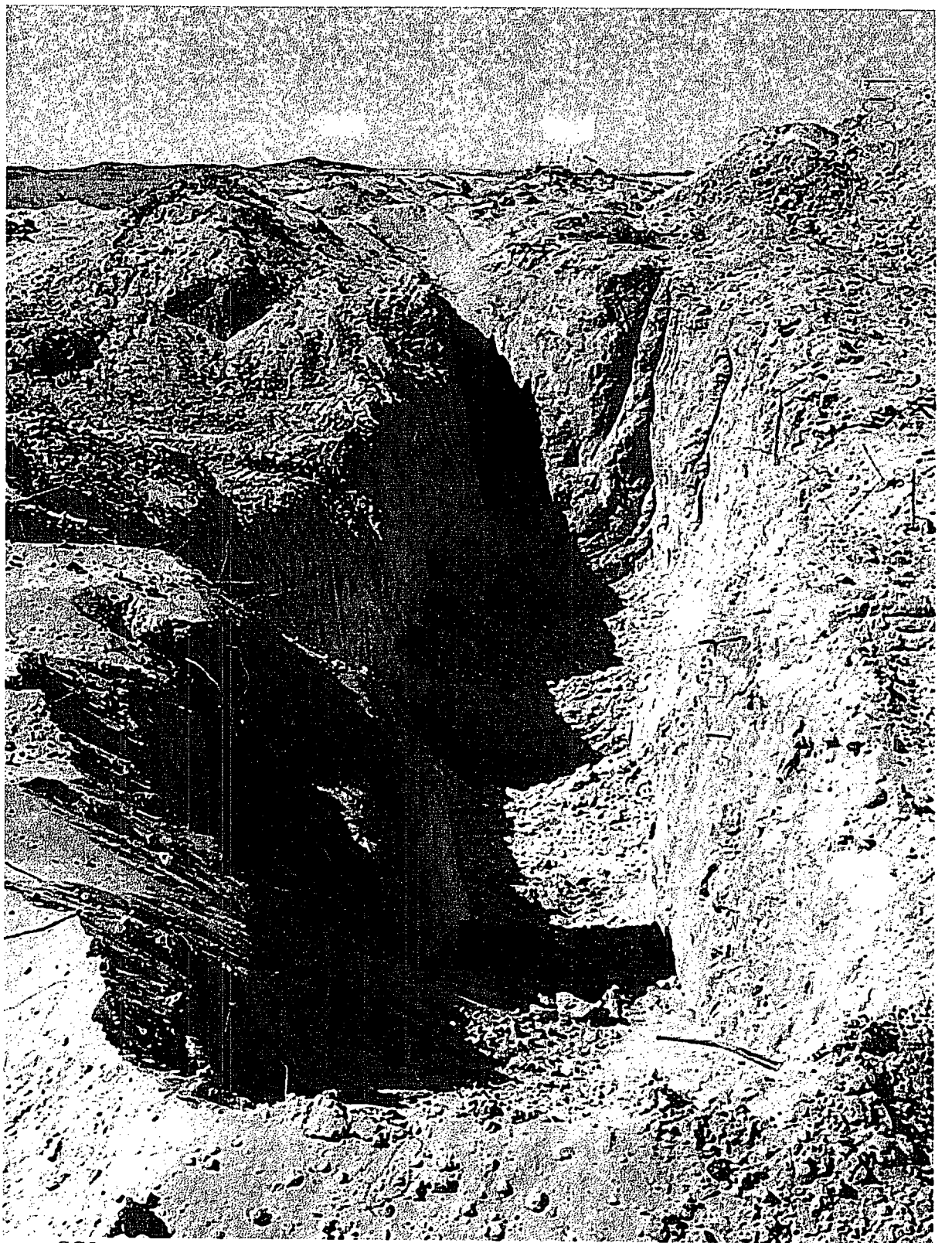
CC5
7/10 - 3

View facing north showing hydrocarbon-stained soil along pipeline right-of-way.



CC5
7/10 - 7

View of floor during initial excavation at CC#5 site.



CC5
7/13 - 1

View facing south showing 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 deg C
Project #: V-104
Project Name: Duke Energy Field Services
Project Location: CC #5

Sampling Date: 07/10/01
Receiving Date: 07/10/01
Analysis Date: 07/10/01

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
0101112-01	Source Area 6 ft	1250	3980
0101112-02	Source Area 10 ft	1760	5220
0101112-03	Source Area 15 ft	331	2330

QUALITY CONTROL	560	546
TRUE VALUE	500	500
% INSTRUMENT ACCURACY	112	109
SPIKED AMOUNT	476	476
ORIGINAL SAMPLE	<10	<10
SPIKE	445	469
SPIKE DUP	464	498
% EXTRACTION ACCURACY	93	99
BLANK	<10	<10
RPD	4	6

Methods: EPA SW 846-8015M GRO/DRO

Raland K. Tuttle

7-11-01
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 deg C
Project #: V-104
Project Name: Duke Energy Field Services
Project Location: CC #5

Sampling Date: 07/10/01
Receiving Date: 07/10/01
Analysis Date: 07/10/01

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
0101112-01	Source Area 6 ft	0.407	1.33	2.54	4.32	3.41
0101112-02	Source Area 10 ft	1.86	6.35	3.49	8.69	2.29
0101112-03	Source Area 15 ft	0.234	0.929	0.673	1.76	1.22

QUALITY CONTROL					
TRUE VALUE	0.097	0.098	0.098	0.219	0.103
% INSTRUMENT ACCURACY	0.100	0.100	0.100	0.200	0.100
SPIKED AMOUNT	97	98	98	110	103
ORIGINAL SAMPLE	0.100	0.100	0.100	0.200	0.100
SPIKE	<0.025	<0.025	<0.025	<0.025	<0.025
SPIKE DUP	0.098	0.099	0.097	0.221	0.102
% EXTRACTION ACCURACY	0.099	0.100	0.099	0.225	0.105
BLANK	98	99	97	111	102
RPD	<0.025	<0.025	<0.025	<0.025	<0.025
	1	1	2	2	3

METHODS: EPA SW 846-8021B ,5030

Raland K. Tuttle

7-11-01
Date

TRIDENT ENVIRONMENTAL

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

V-104-CC5-7/10

Chain of Custody

Date 7/10/01 Page 2 of 3

Lab Name: Environmental Lab of Texas
Address: 12600 W I-20 East
Odessa, TX
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
D1112-01	Source area 6 ft	Soil	7/10/01	1310	G	✓								✓	✓											1
-02	Source Area 10 ft	"	"	1350	G	✓								✓	✓											
-03	Source Area 15 ft	"	"	1400	G	✓								✓	✓											
	~~Source~~																									

Project Information

Project Name: Duke Energy Field Serv.
Project Location: CC #5
Project Manager: Gil Van Deventer
Cost Center No.: V-104
Shipping ID No.: Hand Deliver to Lab
Bill to (see below):

Sample Receipt

Total Containers:
COC Seals:
Rec'd Good Cond/Cold: 1°C
Conforms to Records:
Lab No.:

Special Instructions/Comments: Please send invoice direct to client:
Duke Energy Field Serv. (Attn. Steve Weathers)
P.O. Box 5493 Denver Co, 80217

Relinquished By: (1) (Company)	Relinquished By: (2) (Company)	Relinquished By: (3) (Company)
Trident Environmental	(Printed Name)	(Printed Name)
(Printed Name) Dale T. Littlejohn	(Signature)	(Signature)
(Signature) Dale T Littlejohn	(Date) (Time)	(Date) (Time)
(Date) 7/10/01 (Time)		
Received By: (1) (Company)	**Received By: (2) (Company)**	**Received By: (3) (Company)**
(Printed Name) Roland K Tuttle	(Printed Name)	(Printed Name)
(Signature)	(Signature)	(Signature)
(Date) 7-10-01 (Time) 1630.	(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/ 4 deg C
Project #: V-104
Project Name: DEFS
Project Location: CC #5

Sampling Date: 07/10/01
Receiving Date: 07/10/01
Analysis Date: 07/10/01

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
0101111-01	Source Area 20'	<10	<10

QUALITY CONTROL	560	546
TRUE VALUE	500	500
% INSTRUMENT ACCURACY	112	109
SPIKED AMOUNT	476	476
ORIGINAL SAMPLE	<10	<10
SPIKE	445	469
SPIKE DUP	464	498
% EXTRACTION ACCURACY	93	99
BLANK	<10	<10
RPD	4	6

Methods: EPA SW 846-8015M GRO/DRO

Raland K. Tuttle

7-11-01
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/ 4 deg C
Project #: V-104
Project Name: DEFS
Project Location: CC #5

Sampling Date: 07/10/01
Receiving Date: 07/10/01
Analysis Date: 07/10/01

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
0101111-01	Source Area 20'	<0.025	<0.025	<0.025	<0.025	<0.025

QUALITY CONTROL	0.097	0.098	0.098	0.219	0.103
TRUE VALUE	0.100	0.100	0.100	0.200	0.100
% INSTRUMENT ACCURACY	97	98	98	110	103
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	0.098	0.099	0.097	0.221	0.102
SPIKE DUP	0.099	0.100	0.099	0.225	0.105
% EXTRACTION ACCURACY	98	99	97	111	102
BLANK	<0.025	<0.025	<0.025	<0.025	<0.025
RPD	1	1	2	2	3

METHODS: EPA SW 846-8021B ,5030

Raland K. Tuttle

7-11-01
Date

Need more jars

TRIDENT ENVIRONMENTAL

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

Push

U-104-CCS-7/10

Chain of Custody

Date 7/10/01 Page 3 of 3

Lab Name: Environmental Labs of Texas
Address: 12600 W I-20 East
Odessa, TX
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
10111-1 Source Area 20'	Soil	7/10/01	1420	G	✓								✓	✓										1

Analysis Request

Project Information	Sample Receipt	
Project Name: DEFS	Total Containers:	
Project Location: CC #5	COC Seals:	
Project Manager: Gil VanDeventer	Rec'd Good Cond/Cold:	4C
Cost Center No.: U-104	Conforms to Records:	
Shipping ID No.: Hand Deliver	Lab No.:	
Bill to (see below):		

Special Instructions/Comments:
See other sheets

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) 7/10/01 (Time)	(Date) (Time)	(Date) (Time)
Received By: (1) (Company)	**Received By: (2) (Company)**	**Received By: (3) (Company)**
ELOT		
(Printed Name) Ralph Tuttle	(Printed Name)	(Printed Name)
(Signature) Ralph Tuttle	(Signature)	(Signature)
(Date) 7-10-01 (Time) 1430	(Date) (Time)	(Date) (Time)

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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: 682-0727

Sample Type: Soil
Sample Condition: Intact/ Iced/ -1.0 deg C
Project #: V-104
Project Name: Duke Energy Field Services
Project Location: CC #5

Sampling Date: 07/13/01
Receiving Date: 07/13/01
Analysis Date: 07/13/01

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
0101136-01	N-Wall	<10	<10
0101136-02	Source Area-Floor (29')	<10	<10
0101136-03	East Wall	<10	<10
0101136-04	West Wall	<10	<10
0101136-05	South Wall	<10	<10

QUALITY CONTROL	494	499
TRUE VALUE	500	500
% INSTRUMENT ACCURACY	99	100
SPIKED AMOUNT	476	476
ORIGINAL SAMPLE	<10	<10
SPIKE	441	567
SPIKE DUP	465	604
% EXTRACTION ACCURACY	93	119
BLANK	<10	<10
RPD	5	6

Methods: EPA SW 846-8015M GRO/DRO

Raland K. Tuttle

7-16-01
Date

TRIDENT ENVIRONMENTAL

Trident Environmental
P.O. Box 7624
Midland, Texas 79708
(915) 682-0808
(915) 682-0727 (Fax)

V-104-CC5-7-13-2

Chain of Custody

Date 7-13-01 Page 1 of 1

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

Samplers (SIGNATURES)

	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
101136-01	N-Wall	Soil	7-13-01	0920	G									✓	✓					1
02	Source Area-Floor (29')	Soil	7-13-01	0930	G									✓	✓					1
03	East Wall	Soil	7-13-01	0940	G									✓	✓					1
04	West Wall	Soil	7-13-01	0950	G									✓	✓					1
05	South Wall	Soil	7-13-01	1000	G									✓	✓					1

Analysis Request

Project Information		Sample Receipt	
Project Name:	Duke Energy Field Services	Total Containers:	
Project Location:	CC #5	COC Seals:	
Project Manager:	Gil Van Deventer	Rec'd Good Cond/Cold:	-1.0°
Cost Center No.:	V-104	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) Gil Van Deventer	(Printed Name)	(Printed Name)
(Signature)	(Signature)	(Signature)
(Date) 7-13-01 (Time) 3:25pm	(Date) (Time)	(Date) (Time)
Received By: (1) (Company)	**Received By: (2) (Company)**	**Received By: (3) (Company)**
Environmental Lab of Tx		
(Printed Name) Jeanne McMurray	(Printed Name)	(Printed Name)
(Signature)	(Signature)	(Signature)
(Date) 7-13-01 (Time) 1525	(Date) (Time)	(Date) (Time)

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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/ 4 deg C
Project #: V-104
Project Name: Duke Energy Field Services
Project Location: CC #5

Sampling Date: 07/10/01
Receiving Date: 07/10/01
Analysis Date: 07/10/01

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
0101113-01	Composite Background	<10	<10

QUALITY CONTROL	560	546
TRUE VALUE	500	500
% INSTRUMENT ACCURACY	112	109
SPIKED AMOUNT	476	476
ORIGINAL SAMPLE	<10	<10
SPIKE	445	469
SPIKE DUP	464	498
% EXTRACTION ACCURACY	93	99
BLANK	<10	<10
RPD	4	6

Methods: EPA SW 846-8015M GRO/DRO

Raland K. Tuttle

7-11-01
Date

TRIDENT ENVIRONMENTAL

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

V-104-CC5-7/10

Chain of Custody

Date 7/10/01 Page 1 of 3

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

Samplers (SIGNATURES): Dale T Luttrell

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
0113-01 Composite Background	Soil	7/10	1248	C										✓	✓				1

Project Information	Sample Receipt
Project Name: Duke Energy Field Services	Total Containers:
Project Location: CC#5	COC Seals:
Project Manager: Gil Van Deventer	Rec'd Good Cond/Cold: 4°C
Cost Center No.: V-104	Conforms to Records:
Shipping ID No.: Hand Deliver to Lab	Lab No.:
Bill to (see below):	

Special Instructions/Comments: Please Send invoice direct to client
Duke Energy Field Services.
P.O. Box 5493 Denver Co, 80217

Relinquished By: (1) (Company)	Relinquished By: (2) (Company)	Relinquished By: (3) (Company)
Trident Environmental	(Printed Name)	(Printed Name)
(Printed Name) Dale T. Luttrell	(Signature)	(Signature)
(Signature) Dale T Luttrell	(Date) (Time)	(Date) (Time)
(Date) 7/10/01 (Time)		
Received By: (1) (Company)	**Received By: (2) (Company)**	**Received By: (3) (Company)**
ECOT	(Printed Name)	(Printed Name)
(Printed Name) Ronald Tuttle	(Signature)	(Signature)
(Signature) Ronald Tuttle	(Date) (Time)	(Date) (Time)
(Date) 7-10-01 (Time) 1630		

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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: 682-0727

Sample Type: Soil
Sample Condition: Intact/ Iced/ -1.0 deg C
Project #: V-104
Project Name: Duke Energy Field Services
Project Location: CC #5

Sampling Date: 07/13/01
Receiving Date: 07/13/01
Analysis Date: 07/13/01

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
0101137-01	Exc. Soil-1	34	1230

QUALITY CONTROL	494	499
TRUE VALUE	500	500
% INSTRUMENT ACCURACY	99	100
SPIKED AMOUNT	476	476
ORIGINAL SAMPLE	<10	<10
SPIKE	441	567
SPIKE DUP	465	604
% EXTRACTION ACCURACY	93	119
BLANK	<10	<10
RPD	5	6

Methods: EPA SW 846-8015M GRO/DRO

Raland K. Tuttle

7-16-01
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: 682-0727

Sample Type: Soil
Sample Condition: Intact/ Iced/ -1.0 deg C
Project #: V-104
Project Name: Duke Energy Field Services
Project Location: CC #5

Sampling Date: 07/13/01
Receiving Date: 07/13/01
Analysis Date: 07/16/01

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
0101137-01	Exc. Soil-1	<0.025	<0.025	<0.025	0.051	<0.025

QUALITY CONTROL	0.090	0.090	0.090	0.202	0.094
TRUE VALUE	0.100	0.100	0.100	0.200	0.100
% INSTRUMENT ACCURACY	90	90	90	101	94
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	0.098	0.099	0.098	0.223	0.101
SPIKE DUP	0.101	0.101	0.100	0.231	0.107
% EXTRACTION ACCURACY	98	99	98	112	101
BLANK	<0.025	<0.025	<0.025	<0.025	<0.025
RPD	3	2	2	4	6

METHODS: EPA SW 846-8021B ,5030

Raland K. Tuttle

7-17-01
Date

TRIDENT ENVIRONMENTAL

Trident Environmental
P.O. Box 7624
Midland, Texas 79708
(915) 682-0808
(915) 682-0727 (Fax)

V-104-CC5-7-13-1

Chain of Custody

Date 7-13-01 Page 1 of 1

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

Samplers (SIGNATURES)

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
010137-01 Exc. Soil - 1	Soil	7-13-01	1120	C	✓								✓	✓					1

Project Information

Project Name:	Duke Energy Field Services
Project Location:	CC #5
Project Manager:	Gil Van Deventer
Cost Center No.:	V-104
Shipping ID No.:	Hand Delivered to Lab
Bill to (see below):	

Sample Receipt

Total Containers:	
COC Seals:	
Rec'd Good Cond/Cold:	-1.0°
Conforms to Records:	
Lab No.:	

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) Gil Van Deventer	(Printed Name)	(Printed Name)
(Signature)	(Signature)	(Signature)
(Date) 7-13-01 (Time) 3:25pm	(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)	(Signature)	(Signature)
(Date) 7-13-01 (Time) 1525	(Date) (Time)	(Date) (Time)

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ATTACHMENT C

FIELD BOOK NOTES

(4) 7/3/01 DK

1325 Leave JC-6 for Env. Labs of Texas

1534 Arrive in Midland

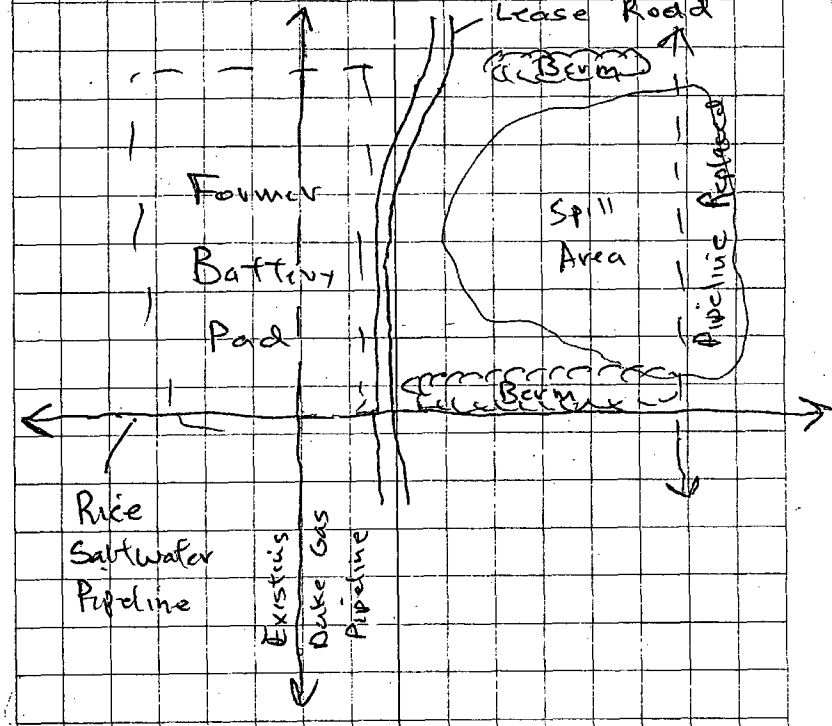
DTL 7/10/01 (1)

0600 Leave Midland for CLAY COOPER #5

0801 Arrive at CC#5 (87 mi)

0840 Walton Rep. arrive, Track hoe is on the way, will start w/ dozer to clear away surface stain from site

Site CC#5 is defined as follows:



0937 Cal. PID 99 ppm

(2) 7/10/01 DT

0946 Cat Model # 127 Dozer arrived (Walton)

1035 Deere Model 644C Front loader arrived (Walton) Dozer + Loader are moving clean stockpile (just east of line) to location farther east. (out of the way of the excavation.
Also moving clean berms (North + South of site) to clean stockpile area to east.

1240 Recovered 4-point composite Background sample (PID=0) from 1-foot below the surface

1300 Samsung SE 210 Trackhoe arrived (Walton), began digging most impacted area

(a)
* Sample taken at source, 6ft below surface in heavy stain area 010710 1310 (PID 245 ppm)

7/10/01 DTL (3)

* Sample @ 10' PID 252
010710 1350

* Sample @ 15' PID 234
010710 1400

* Sample @ 20 PID —
010710 1420 [RUSH]

Samples taken from area of darkest staining based on the observation of 4 holes along the line of similar depth.

- Battery on PID too low to measure last sample (will measure at home)

1435 leave site for EL of T

1703 Return to Midland (192 miles)

(4) 7/10/01 DTR

Supplies (Trident)
(1) PPE (2) Wheel (3) PID
(4) Truck (192 mi) (5) Camera
(6) GPS

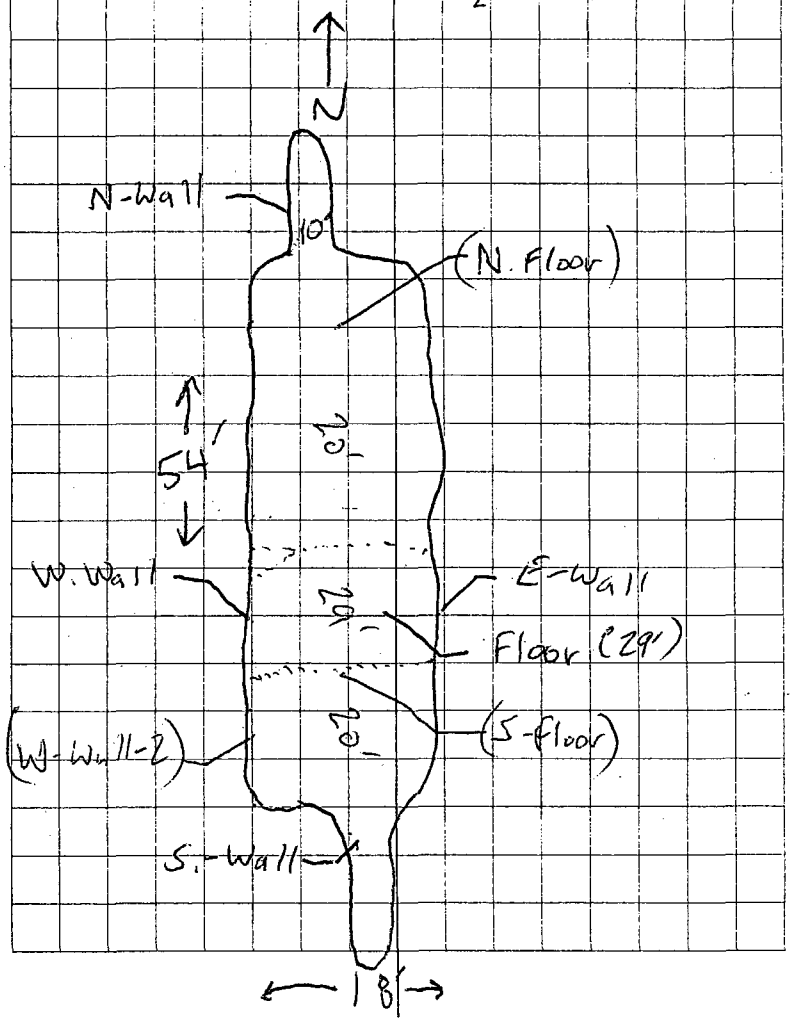
Re-run Samples, (compare ovm to hi Nu Readings

		on ovm	2nd ovm	hi Nu
(b)	source 10'	252	268	250
(c)	source 15'	234	184	120
(d)	source 20'	—	7	4

GPS reading?

7-13-01

0700 Leave Midland for CC#5
0900 Arrive CC#5 (105 mi)
Walton on site (Mike-trackhoe &)
Ramone Hernandez dozer/loader



7-13-01 CC5

Hydrocarbon-impacted soil will be hauled to cell 5C at the S. Monument Land farm

		OVM	Time
(e)	N-Wall-1	0.4	0920
(f)	Floor (29')	0.0	0930
(g)	E-Wall-1	0.0	0940
(h)	W-Wall-1	0.4	0950
(i)	S-Wall-1	0.0	1000
	W-Wall-2 (~~29'~~)	0.0	1010
	N-Floor-1 (20')	0.0	1020
	S-Floor-1 (10')	0.0	1030

Pre screen calibration w/ 100ppm isobutylene 97.4 ppm

Post screen calibration = 93 ppm

Exc. Soil-1 40 ppm 1120 mst

1130 Leave site for deliver samples to lab (Env Lab of TX)

7-13-01 CC5

Photos:

View facing south
View facing north
" " NE (East Wall)
" " NW (West Wall)
" " north (north end)
" " NW (Backfill soil & poly liner)
" " W (Exc. soil-1)
" " south (Exc soil-2)