J-4-2 Low Pressure Gathering Line Closure Report Duke Energy Field Services Lea County, New Mexico

NOVEMBER 2, 2001

**Prepared** For:



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

Site Name:

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# **J-4-2 LOW PRESSURE GATHERING LINE**

Site Location:

# T19S, R35 E, SECTION 28, UNIT D

**Prepared By:** 

ENVIRONMEN

PO Box 7624 Midland, Texas 79708



November 2, 2001

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

Re: Removal of Hydrocarbon-Impacted Soils from the <u>J=4=2</u> Low-Pressure Gathering Line Site) (Township 19 South, Range 35 East, Section 28, Unit D)

#### Dear Mr. Weathers:

Trident Environmental (Trident) was retained by Duke Energy Field Services Inc. (DEFS) to oversee the removal of hydrocarbon-impacted soil from an area along a pipeline right-of-way operated by DEFS in Lea County, New Mexico. The site (J-4-2) is located in Section 28 (Unit D), Township 19 South, Range 35. The excavation work was conducted between July 26 and August 24, 2001 in accordance with the work plan submitted to Mr. Paul Sheely at the New Mexico Oil Conservation Division (OCD) Hobbs, New Mexico office. The site is located state land and the surface is leased to Ms. Faye Klein. 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 for documentation that closure requirements have been satisfied.

#### **Excavation and Sampling Procedures**

On July 26, 2001, Walton Construction Company, Inc. (Hobbs, New Mexico) initiated excavation of the hydrocarbon-impacted area. Walton used one track hoe, one dozer, one loader, and 12 yd<sup>3</sup> dump trucks for earthmoving services. During excavation operations, subsurface soil samples were collected and submitted to an analytical laboratory to determine if the remaining soils were within OCD guidelines. Upon completion of excavation activities, a minimum of the following closure samples was collected: one grab sample from each wall (north, south, east and west sides) in closest proximity to the location with the highest OVM reading. One grab sample was also collected from the floor of the excavation in closest proximity to the location with the highest OVM reading and/or in areas directly beneath the areas where hydrocarbon-stained soils were most evident on the surface. 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). Unless noted otherwise, 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),

567

34°C

Hobbs OCD

50862830<sup>3</sup>

- 10 mg/kg benzene,
- 50 mg/kg total benzene, toluene, ethylbenzene, and xylenes (BTEX)

Soil samples were submitted to both Cardinal Laboratories, Inc. (Hobbs, NM) and 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 only for soil samples that exceeded 100 ppm using the calibrated OVM 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 hydrocarbonimpacted 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 Land Farm, which is owned and operated by Ms. Kena Kay Cooper (OCD Rule 711 Permit Approval NM-01-0032). 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 well records from the Office of the State Engineer.

Approximately 2,772 cubic yards of hydrocarbon-impacted soils were transported by Walton Construction to cell B-5 at the South Monument Land Farm. Completed *Generator Certificate of Waste Status* form (C-143) and *Release Notification and Corrective Action* forms (C-141) are included in Attachment A. Approximately 2,592 cubic yards of native soil provided by Mr. Dale Cooper was backfilled into the excavation. An additional 180 cubic yards of native topsoil provided by Ms. Faye Klein was placed on the surface to restore the excavation to a level grade.

#### **Results**

At the completion of excavation activities all areas had petroleum hydrocarbon concentrations below the OCD guidelines 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

cc: Myra Meyers (New Mexico State Land Office, Hobbs, NM)

Attachments

C:DEFS\COOPER\J42\J42CLOSE.DOC

## ATTACHMENT A

## **TOPOGRAPHIC MAP**

## SITE MAP

## SITE DATA FORM

## C-141 AND C-143 FORMS

## **PHOTODOCUMENTATION**



Letter	Sample ID	Lab	Sample Depth (feet)	Sample Date	OVM (ppm)	GRO (mg/kg)	DRO (mg/kg)	Benzene (mg/kg)	BTEX (mg/kg)
a	E. Floor-1	Cardinal	11	08/02/01	297	< 50	212	< 0.005	0.237
b*	W. Floor-1	Cardinal	12	08/02/01	587	< 50	154	0.014	0.252
b*	W. Floor-1	Cardinal	12	08/03/01	360	59.7	606	NA	NA
b*	W. Floor-1	Env. Lab of TX	12	08/03/01	360	210	984	NA	NA
c	W. Wall-1	Cardinal	4	08/02/01	2	< 50	< 50	NA	NA
d	E. Wall-1	Cardinal	4	08/02/01	0	< 50	< 50	NA	NA
e	S. Wall-1	Cardinal	2	08/02/01	2	< 50	< 50	NA	NA
f	N. Wall-1	Cardinal	2	08/02/01	0	< 50	< 50	NA	NA
g	E. Floor-1	Cardinal	16	08/03/01	206	< 50	< 50	< 0.005	< 0.015
h	E. Floor-2	Env. Lab of TX	16	08/03/01	206	< 10	13	NA	NA
i	W. Floor-2	Cardinal	16	08/07/01	299	80.8	798	0.009	4.40
i _	W. Floor-3	Cardinal	19	08/09/01	50	< 50	< 50	0.005	0.038
k	E. Wall-2	Cardinal	12	08/14/01	221	110	1290	< 0.005	< 0.015
1	E. Wall-3	Cardinal	6	08/15/01	0	< 50	63.7	NA	NA
m	E. Floor-3	Cardinal	18	08/15/01	60	< 50	54.2	NA	NA
			NMO	CD Guidelines	100	100	100	10	50

en from the same gr

NA indicates sample was not analyzed for this constituent.

Values in red indicate concentrations are above NMOCD guidelines.





## Site Data Form

		<u>IV/DTL</u> Excavat le <u>32° 38. 9.1.</u>					-	-			
Section28 Township19 South Range35 East Unit       D         Begin Excavation (Date/Time)7/26/01       Complete Excavation (Date/Time)8/15/01											
Begin Ex	cavation (Da	$te/11me)$ _r_H26			ete Excavatio	n (Date/11me	<i></i>	8/15/01	<u> </u>		
LAND USE:       Image: Residential control industrial contro industrindustrial control industrial contro industrial control i											
Wellhead		$\square > 100$ Area: $\blacksquare > 1,000$ urfaceWaterBody	) feet from a	water source	$\Box < 20$	0 feet from p		tic water sour	ce		
SURF	ACE SOILS		•	□ Grave □ Clay		□ Silt ■ Othe	er <u>Silty san</u> d	ty clay and si	lty clay		
EXCAVATION         Length         Width         Average Depth         Maximum Depth           DIMENSIONS         65 – 120         feet         15 - 100         feet         12         feet         19         feet											
VOLUME EXCAVATED: $(-4,000^{-1/2})^{00}$ yd <sup>3</sup> VOLUME HAULED TO LANDFARM:       2,772       yd <sup>3</sup>											
		SUMMARY OF	OVM, GR	O, DRO, BE	NZENE & F	BTEX CONC	CENTRATIC	DNS			
Letter	Sample ID	Lab	Sample Depth (feet)	Sample Date	OVM (ppm)	GRO (mg/kg)	DRO (mg/kg)	Benzene (mg/kg)	BTEX (mg/kg)		
a	E. Floor-1	Cardinal	11	08/02/01	297	< 50	212	< 0.005	0.237		
b*	W. Floor-1	Cardinal	12	08/02/01	587	< 50	154	0.014	0.252		
b*	W. Floor-1	Cardinal	12	08/03/01	360	59.7	606	NA	NA		
b*	W. Floor-1	Env. Lab of TX	12	08/03/01	360	210	984	NA	NA		
C 1	W. Wall-1	Cardinal	4	08/02/01	2	< 50	< 50	NA	NA		
d	E. Wall-1 S. Wall-1	Cardinal Cardinal	2	08/02/01 08/02/01	0 2	< 50 < 50	< 50 < 50	NA NA	NA NA		
e f	N. Wall-1	Cardinal	2	08/02/01	0	< 50	< 50	NA NA	NA NA		
g	E. Floor-1	Cardinal	16	08/03/01	206	< 50	< 50	< 0.005	< 0.015		
h	E. Floor-2	Env. Lab of TX	16	08/03/01	206	< 10	13	NA	NA		
i	W. Floor-2	Cardinal	16	08/07/01	299	80.8	798	0.009	4.40		
j	W. Floor-3	Cardinal	19	08/09/01	50	< 50	< 50	0.005	0.038		
k	E. Wall-2	Cardinal	12	08/14/01	221	110	1290	< 0.005	< 0.015		
1	E. Wall-3	Cardinal	6	08/15/01	0	< 50	63.7	NA	NA		
m	E. Floor-3	Cardinal	18	08/15/01	60	< 50	54.2	NA	NA		
NMOCD Guidelines         100         100         10         50           b* - these samples are all duplicates taken from the same grab sample point.         50											
NA indicates sample was not analyzed for this constituent. Values in red indicate concentrations are above NMOCD guidelines.											
NA ind	-	-									

Comments:

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

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

2040 South Pac	neco, santa i	re, NIVI 87505			_		•, • ·				Side of for	4111		
	<b>Release Notification and Corrective Action</b>													
		. <u></u>			0	PERA	· · · · · · · · · · · · ·		Initi	al Report	Final Rep	ort		
Name of Cor		Energy Fiel	d Service	s Inc.			Contact Mr. Steve Weathers							
Address							Telephone No.							
Facility Nan		5493, Denve	er, Colora	ado 80	217	_	Facility T	vne	(303) 605	-1718				
		ow Pressure	Gatherin	ng Line	;				atural Gas	Pipeline	]			
Surface Own					Minera	l Owner				Lease No	).			
Net	v Mexico	State Land	Jince	-	L		Unkno			1	,,,,,,			
Unit Letter	Section	Township	Range		<b>OCA</b>		OF RELE South Line	EASE Feet from the	East/W	est Line	County			
	-	-		raar				Teet nom me						
D	28	198	35E	<u> </u>		<u>{ 32° 3</u>	8'9.I"N)		/103° <u>28</u> 2	10.5" W	) Iea			
		<u></u>			NATU	J <b>RE O</b>	F RELEA			<b>.</b>				
Type of Relea		eline liquids	(Condens	ate)			Volume of	Release 3	obbls		Recovered 2 yd <sup>3</sup> soil removed			
Source of Rel	ease	Pressure Gath						lour of Occurre 5/31/01 12:01 A		Date ar	d Hour of Discover 11/01 08:45 PM			
Was Immedia		Given?	Yes 🗌	<u>Νο</u> Γ		equired	If YES, To	Whom?		<u> </u>				
By Whom?						equileu	E. L. Gonzales, NMOCD Date and Hour							
		Stan Sh	aver				0	5/31/01						
Was a Water	course Read		Yes	No			II YES, Vo N/A	lume Impacting	g the Waterc	ourse.				
If a Watercou	rse was Im	pacted, Descr	ibe Fully.	*			<u> </u>		····/	<u>,</u>	<u>,,</u>			
N/A														
Describe Cau	se of Probl	em and Reme	dial Actio	on Taker	n. <b>*</b>		7748-1							
							peline was fi	rst clamped on	June 1, 200	l and later i	replaced with 8"			
polyethylene Describe Are			Action Ta	ken.*	cavation v	NOLK.								
On 7/26/01 o	ver-excava	tion was initia	ated. Exca	'ما 33 vation c	ontinued	until 8/1	5/01 when to	tal petroleum h	vdrocarbons	on floor an	d walls were below	,		
100 mg/kg. F	inal dimen	sions of the e	xcavation	directly	beneath t	the pipeli	ne varied fro	m approx. 15 - 1	27 ft wide x	65 long x 1	9 ft deep. Also, a la	rge		
from 2 to 5 fe	et. Approx	ximately 2,77	2-cu yds o	f soil w	as transpo	orted to c	ell B-5 at the	South Monum			ted to a depth rangi ing of excavation w			
completed on									1 understand	that pursua	ant to NMOCD rule	25		
and regulation	ns all opera	ators are requ	ired to rep	ort and/	or file ce	rtain rele	ase notificati	ions and perform	n corrective	actions for	releases which may	,		
of liability sh	ould their o	operations hav	ve failed t	o adequ	ately inve	stigate a	nd remediate	contamination	that pose a t	hreat to gro	not relieve the opera und water, surface	ator		
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.														
							OIL CON	SERVAT	ION DIV	/ISION				
Signature: Sort Comment						Approved	by							
Printed Name	e: Step	hen Weathers	5				District Supervisor:							
Title:	Envi	ronmental Sp	ecialist				Approval I	Date:		Expiration I	Date:			
Date: 11/	9/01		Pho	ne: (303	3) 605-17	18		of Approval:			Attached			

\* Attach Additional Sheets If Necessary

07/17/2001 07:06 FA	X 3033891997		12/003/004					
- (505) 393-6161 French Dr		New Mexico	Form C-143					
م, NM 88240	Energy Minerals a	and Natural Resources Depa	artment 3/15/00					
<u>strict II</u> - (503) 748-1283 811 S. First	•••	Oil Conservation Division						
Antesia, NM 88210 <u>District III</u> - (505) 334-6178		)40 South Pacheco Street	Submit to OCD					
1000 Rio Brazos Road		ita Fe, New Mexico 87505	Permitted Surface					
Aztec, NM 87410 District IV - (505) 827-7131		(505) 827-7131	• Waste Management					
2040 S. Pacheco Santa Fe, NM 87505			Facility					
			-					
	GENERATOR CER	TIFICATE OF WASTES	STATUS					
1. Waste Generator Name	and Address:	2.Permit Number (if	waste generated at an OCD permitted facility)					
Duke Energy Field Servi P. O. Box 5493	ces Inc.		,					
Denver, Colorado 80217								
3. Description of Waste ar	d Generating Process:	4. Location of Waste	(Street address &/or ULSTR):					
Hydrocarbon-impacted s pipeline leak from low pr		Site Name: J-4 Sec. 28, T19S	I-2 low pressure gathering line , R35E					
5. Destination (Surface W	aste Management Facility):	6. Transporter:						
S. Monument Land Fa	rm (NM-01-0032)	Walton Construction	on (Hobbs, NM)					
For NON-EXEMPT waste	, only, the following documenta	tion is attached (check appropriate	items):					
MSDS Informa			Analysis (With Chain of Custody).					
Other (Descrip	ion)							
Generator certifies that, ac Agency's July 1988 regulat	cording to the Resource Cons ory determination, the above	servation and Recovery Act (RCRA described waste is: (check approp	) and the Environmental Protection riate classification)					
ХЕ	(EMPT oilfield waste.		field waste that is non-hazardous					
	LINF I UNICIA WADLE.	pursuant to 40 CFR Part						
In addition, Generator certi does not contain Naturally Subpart 1403.	Occurring Radioactive Materia	al (NORM) regulated pursuant to 2	on-hazardous waste and that this was 0 NMAC 3.1					
Generator Signature: 🥭	Laca	Dat	e: <u> </u>					
Print Name: <u>Stephen N</u>								
Title:Environm	ental Specialist		· · · · · · · · · · · · · · · · · · ·					
•								
<b>I</b>								



Digital Photographs of the J-4-2 Low-Pressure Pipeline Leak Site





#### Digital Photographs of the J-4-2 Low-Pressure Pipeline Leak Site



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Digital Photographs of the J-4-2 Low-Pressure Pipeline Leak Site



## ATTACHMENT B

## LABORATORY ANALYTICAL REPORTS

8

Page 3

### AND

## CHAIN-OF-CUSTODY DOCUMENTATION



PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR TRIDENT ENVIRONMENTAL ATTN: GILBERT J. VANDENTER P.O. BOX 7624 MIDLAND, TX 79708 FAX TO: (915) 682-0727

Receiving Date: 08/02/01 Reporting Date: 08/03/01 Project Number: NOT GIVEN Project Name: DUKE ENRGY FIELD SERVICES Project Location: J-4-2 LINE LEAK Sampling Date: 08/02/01 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: BC Analyzed By: BC

GRO	DRO
(C <sub>6</sub> -C <sub>10</sub> )	(>C <sub>10</sub> -C <sub>28</sub> )
(mg/Kg)	(mg/Kg)

LAB NUMBER SAMPLE ID

ANALYSIS [	DATE:	08/02/01	08/02/01
H6039-1	a) E. FLOOR-1 (11')	<50	212
H6039-2	b) W. FLOOR-1 (12')	<50	154
H6039-3	c) W. WALL-1 (4')	<50	<50
H6039-4	d) E. WALL-1 (4')	<50	<50
H6039-5	e) S. WALL-1 (2')	<50	<50
H6039-6	f) N. WALL-1 (2')	<50	<50
Quality Cont	rol	713	762
True Value (	20	800	800
% Recovery		89.1	95.3
Relative Per	cent Difference	7.1	2.9

METHOD: SW-846 8015 M

6/8/01

#### H6039A.XLS

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incidental subsidiaries, affiliates or successors arising out of or related to the performance of services hersunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR TRIDENT ENVIRONMENTAL ATTN: GILBERT J. VANDENTER P.O. BOX 7624 MIDLAND, TX 79708 FAX TO: (915) 682-0727

Receiving Date: 08/02/01 Reporting Date: 08/03/01 Project Number: NOT GIVEN Project Name: DUKE ENRGY FIELD SERVICES Project Location: J-4-2 LINE LEAK Sampling Date: 08/02/01 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: BC Analyzed By: BC

·		BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES
LAB NO.	SAMPLE ID	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
ANALYSIS D	ATE	08/02/01	08/02/01	08/02/01	08/02/01
H6039-1	a) E. FLOOR-1 (11')	<0.005	0.027	0.036	0.174
H6039-2	b) W. FLOOR-1 (12')	0.014	0.043	0.043	0.152
					· · · · · · · · · · · · · · · · · · ·
	·				
Quality Contr	-01	0.109	0.102	0.106	0.217
					0.317
True Value C		0.100	0.100	0.100	0.300
% Recovery		109	102	106	106
Relative Perc	cent Difference	7.9	12.6	14.7	14.3

METHOD: EPA SW-846 8260

Date

H6039B.XLS

PLEASE NOTE: Liability and Dameges. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negigence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of soft incidental or consequential damages, including, without limitation, business interruptions, loss of profits incurred by client, its substances, artifiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



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

V-109-0701-1

# Chain of Custody

Date 8-2-01 Page 1 of 1

**Analysis Request** ARDINAL PHONE (915) 673-7001 - 2111 BEECHWOOD - ABILENE, TEXAS 79603 LABORATORIES PHONE (505) 393-2326 · 101 E. MARLAND · HOBBS, NEW MEXICO 88240 of Containers Composite Sample Type: G - Grab, C- Compos BTEX (EPA 8021B) MTBE (EPA 8021B) GRO (EPA 8015G) DRO (EPA 8015D) SVOC (EPA 8270) TPH (EPA 418.1) TDS (EPA 160.1) PAH (EPA 8270) VOC (EPA 8260) TPH (TX-1005) Samplers (SIGNATURES) PH (TX-1006) Anions/Cations **Fotal Metals ICLP Metals** Number Sample Identification Time Matrix Date Floor Soi 8-201 111 1045  $\checkmark$ 12-Soil 8-2-01 1055 loor (4-) Soil 8-2-01 1100 Soi (41) 8-2-01 1105 Soi (21) 1125 8-2-01 ρ 1 Spi (21) Wall-NI 2 8-2-01 1130 Relinquished By: Relinguished By: Relinguished By: Project Information Sample Receipt (1) (Company) (2) (Company) (3) (Company) Trident Environmental **Duke Energy Field Services** Total Containers: Project Name: (Printed Name) Gilbert J. Vam (Printed Name) (Printed Name) J-4-2 Line Leak Veventa COC Seals: Project Location: (Signature) (Signature) Gil Van Deventer 1 Ia. Rec'd Good Cond/Cold: Project Manager: (Date) (Time) (Date) (Time) 3-2-01 V-109 Cost Center No.: Conforms to Records: 1000 H(6039-), 2,3,4(S(47), (Company) CARP/VAL Lab No .: Received By: Received By: Shipping ID No.: (2) (Company) (3) (Company) Bill to (see below): Printed Name) (Printed Name) Special Instructions/Comments: Please send invoice direct to client: CONKE Duke Energy Field Services, Attention: Steve Weathers Signature) (Signature) (Signature) P. O. Box 5493, Denver, Colorado 80217 (Date) Date) (Time) (Date) (Time) 8/2 (Time) 1200.04

Copy signed original form for Trident Environmental records



PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR TRIDENT ENVIRONMENTAL ATTN: GILBERT J. VANDENTER P.O. BOX 7624 MIDLAND, TX 79708 FAX TO: (915) 682-0727

Receiving Date: 08/03/01 Reporting Date: 08/06/01 Project Number: NOT GIVEN Project Name: DUKE ENERGY FIELD SERVICES Project Location: J-4-2 LINE LEAK Sampling Date: 08/03/01 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: BC Analyzed By: BC

GRO DRO (C<sub>6</sub>-C<sub>10</sub>) (>C<sub>10</sub>-C<sub>28</sub>) (mg/Kg) (mg/Kg)

LAB NUMBER SAMPLE ID

ANALYSIS DATE:	08/03/01	08/03/01
H6049-1 b) W. FLOOR-1 (12')	59.7	606
H6049-2 6 #E. FLOOR-1 (16')	<50	<50
- Ini		
, cu l'		
· ·		
Quality Control	730	728
True Value QC	800	800
% Recovery	91.3	91.0
Relative Percent Difference	2.5	3.8

METHOD: SW-846 8015 M

H6049A.XLS

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incidental or subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



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LAB NO. SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE	08/02/01	08/02/01	08/02/01	08/02/01
H6049-2 q #E. FLOOR-1 (16')	<0.005	<0.005	<0.005	<0.015
<u> </u>				
Quality Control	0.098	0.095	0.096	0.293
True Value QC	0.100	0.100	0.100	0.293
% Recovery	97.3	95.3	95.9	97.6
Relative Percent Difference	3.3	6.0	5.3	7.3

METHOD: EPA SW-846 8260

8/6/01

#### H6049B.XLS

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.

TRIDENT ENVIRONMENTAL Trident Env P.O. Box 70 Midland, Te (915) 682-0 (915) 682-0	524 xas 79708 808												Da	te 7				10	f C	Cu	070 stc	ody	
Lab Name:		<b>T</b>						_			۸n	alve		eque					<b>``</b>				
Address: ARDINAL LABORATORIES Telephone: 101 E. MARLAND + HOBBS, NEW MEXICO 8824		omposite	6	3)										eque	:31								ainers
PHONE (505) 393-2328 - Samplers (SIGNATURES)				MTBE (EPA 8021B)	SVOC (EPA 8270)	PAH (EPA 8270)	VOC (EPA 8260)	TPH (EPA 418.1)	ТРН (ТХ-1005)	тРН (ТХ-1006)	GRO (EPA 8015G)	DRO (EPA 8015D)	TDS (EPA 160.1)	Anions/Cations	Total Metals	TCLP Metals			÷				Number of Containers
Sample Identification Matrix		Sample Type: G - Grab, C- Compos	ВП	¥	Š	PAI	ş	Ē	Ē	Ē	ß	å	Ĕ	Ani	Tot	겉					┉┿	$ \rightarrow $	<sup>n</sup> z
b) W, Floor -1 (12') Soil	8-3-01 0920										V	<u> </u>					ļ					$ \rightarrow $	
F) E. Floor -2 (16) soil	8-3-01 0905		$\checkmark$								~											$\dashv$	┶┥
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Project Information	Sample Receipt			uishec mpany							uished	-	-					uisheo ompany	-				
Project Name: Duke Energy Field Services	Total Containers:		Trid	ent l	Envi	ronr	nent	al															
Project Location: J-4-2 Line Leak	COC Seals:			d Name ber	°7 ↓	lan	De	<u>lent</u>	le-	`	d Name)						Ì.	d Name	)				
Project Manager: Gil Van Deventer	Rec'd Good Cond/Cold:	V	(Signat	21	th	Va	l	ment	6	(Signat	ure)						(Signa	ture)					
Cost Center No.: V-109	Conforms to Records:	$V^{-}$	(Date)	8-3	-01		(Time)	12:	ŚOp	(Date)				(Time)			(Date)				(Time)		
Shipping ID No.:	Lab No.:		(1) (Co	/ed By: mpany)	)			_			ved By: pmpany)				_	_		ved By ompany		_			
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Duke Energy Field Services,			1 4	IL IN	<u>ze</u>	ų f	10	oph	e	(Signal (Date)				(Time)			(Signa (Date)				(Time)		
P. O. Box 549	3, Denver, Colorado 8	021/	(Date)	<u>Y/3</u> Į	/bi	V		00						(1000)									

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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/ 4.0 deg C Project #: V-109 Project Name: Duke Energy Field Services Project Location: J-4-2 Line Leak

Sampling Date: 08/03/01 Receiving Date: 08/03/01 Analysis Date: 08/05/01

ELT# FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg	
0101279-01 W. Floor-2 (12') 0101279-02 E. Floor-2 (16')	210 <10	984 13	

QUALITY CONTROL	473	440
TRUE VALUE	500	500
% INSTRUMENT ACCURACY	95	88
SPIKED AMOUNT	476	476
ORIGINAL SAMPLE	<10	<10
SPIKE	579	545
SPIKE DUP	588	545
% EXTRACTION ACCURACY	 122	114
BLANK	 <10	<10
RPD	1.5	0.0

Methods: EPA SW 846-8015M GRO/DRO

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8-&D1 Date

TRIDENT TENVIRONMENTAL	Trident Env P.O. Box 7 Midland, Te (915) 682-0 (915) 682-0	624 exas 79708 0808													Da	nte _ 8				0	f C	Cu	070 stc	dy	
Lab Name: Environmer Address: 12600 W I-2	20 East	as											Ar	nalys	is R	eque	est								
Odessa, Te Telephone: (915) 563-1		·····		mposite	21B)	21B)	10)	6	6	(1			2G)	5D)	6										ntainers
Samplers (SIGNATURES)	Ret	•		Sample Type: G - Grab, C- Composite	EPA 80:	MTBE (EPA 8021B)	SVOC (EPA 8270)	PAH (EPA 8270)	VOC (EPA 8260)	TPH (EPA 418.1)	TPH (TX-1005)	тРН (ТХ-1006)	GRO (EPA 8015G)	DRO (EPA 8015D)	TDS (EPA 160.1)	Anions/Cations	Total Metals	P Metals							Number of Containers
Sample Identification	Matrix	Date	Time	ບ້ິຍ	BTB	۴.	Š	<u></u>	Š	É.	đ	Ē	GR	DRG	Ĕ	Anic	Tota	TCLP						_	NN
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2 E. Floor - 2 (16")	Soil	8-3-01	0905	<u> </u>	<u> </u>		ļ	<u> </u>					1	$\leq$			<u> </u>	<b> </b>						$\rightarrow$	
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Project Information			nple Receipt	1	(1) (C	ompany	n) <sup>`</sup>					(2) (C								ompany	•				
	Field Services					lent d Name タイ			nent	1		(Printe	d Name	<u>)</u>					(Printe	d Name	)			_	
								Van	Per	ente	2	(Signa	ture)						(Signa	ture)					
Project Manager: Gil Van De Cost Center No.: V-109	venter	Rec'd Good		<u>  4,0`</u>	(Signa (Date)	<u> </u>		ant	(Time)		-	(Date)				(Time)			(Date)				(Time)		. <u> </u>
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Shipping ID No.: Bill to (see below):		1			(1) (0	ompany	DEN	1170- NAC	mer	of	طم Tx	(2) (C	ompany	り					(3) (C	ompany	)				
Special Instructions/Comments:	Please sen	d invoice d	irect to clien	it:	(Printe	d Name	3)		1ur			(Printe	d Name	<u>)</u>					(Printe	d Name	)				
Duke Energy					(Sight	ture)	<u>ne</u>	me	<u>m</u> 10	ML DO	<b>}</b>	(Signa	ture)						(Signa	ture)				_	—
	Duke Energy Field Services, Attention: Steve P. O. Box 5493, Denver, Colora								(Time)	00		(Date)				(Time)			(Date)				(Time)		

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PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR TRIDENT ENVIRONMENTAL ATTN: GILBERT VAN DEVENTER P.O. BOX 7624 MIDLAND, TX 79708 FAX TO: (915) 682-0727

Receiving Date: 08/07/01 Reporting Date: 08/08/01 Project Number: V-109 (DEFS) Project Name: J-4-2 GATHERING LINE LEAK Project Location: UNIT A, SEC29 T19S R35E Sampling Date: 08/07/01 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: GP Analyzed By: BC

		GRO	DRO
		(C <sub>6</sub> -C <sub>10</sub> )	(>C <sub>10</sub> -C <sub>28</sub> )
LAB NUMBER	SAMPLE ID	(mg/Kg)	(mg/Kg)

ANALYSIS DATE:	08/07/01	08/07/01
H6059-1 W. FLOOR-2 (16')	80.8	798
pu v		
	······································	
Quality Control	741	783
True Value QC	800	800
% Recovery	92.6	97.9
Relative Percent Difference	1.5	8.5

METHOD: SW-846 8015 M

A Cooke

Date

H6059.XLS

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ANALYTICAL RESULTS FOR TRIDENT ENVIRONMENTAL ATTN: GILBERT VAN DEVENTER P.O. BOX 7624 MIDLAND, TX 79708 FAX TO: (915) 682-0727

Receiving Date: 08/07/01 Reporting Date: 08/09/01 Project Number: V-109 (DEFS) Project Name: J-4-2 GATHERING LINE LEAK Project Location: UNIT A, SEC29 T19S R35E Sampling Date: 08/07/01 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: GP Analyzed By: BC

LAB NO. SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE	08/09/01	08/09/01	08/09/01	08/09/01
H6059-1 () 🔊 W. FLOOR-2 (16')	0.009	0.589	0.873	2.93
Quality Control	0.105	0.093	0.095	0.286
True Value QC	0.100	0.100	0.100	0.300
% Recovery	105	92.7	95.3	95.2
Relative Percent Difference	6.0	7.8	10.3	8.9

METHOD: EPA SW-846 8260

Alashe

#### H6059B.XLS

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#### CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

ARDINAL LABORATORIES, INC.

2	111 Beechwood, Ab (915) 673-7001 Fax																•	Page		of	_	
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Address: P	0 Box 7624						C	mpi	any:	DEFS			ļ	· -	ľ							
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	682-0808	Fax #: 915	16	82-	07:	27	A	idre	<b>55:</b>	O Box	5493							t		<b>.</b>		
Project #: -2	#= V-109	Project Owner:	D	ÊF	5		C	ty:	De	nver		2			1			ł			ł	
Project Name:	J-4-2 6.	athering Line		-en	<u>k</u>		St	ate:	CC	> Zip: 80	1217	0RO,					[				·	
Project Locatio	n: Unif A, Sec		ŝ., i	<u>R3</u>	<u>5Ē</u>		_		_	03/605-			X		1							
Sampler Name:	Gilbert Vo	in Deventer					Fa			3/389-		680	R TEX)									
FOR LAB USE ONLY					TAM	RIX	T	PRE	ESER	V. SAMPI	_ING <sub>.</sub>	2	U D						1			
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affiliates or successors aris	cerdinal be liable for incidential or consequ ing out of or related to the performance of	f services hereunder by Cardin	l, regin	dess of w	hether suc						ns er otherwise.			 				u, including	attorny's	feas.	-	
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† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.

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PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR TRIDENT ENVIRONMENTAL ATTN: GIL VAN DEVENTER P.O. BOX 7624 **MIDLAND, TX 79708** FAX TO: (915) 682-0727

Receiving Date: 08/09/01 Reporting Date: 08/10/01 Project Number: NOT GIVEN Project Name: DUKE ENERGY FIELD SERVICES Project Location: J-4-2 LINE LEAK

Sampling Date: 08/09/01 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: BC Analyzed By: BC

LAB NUMBER SAMPLE ID	GRO (C <sub>6</sub> -C <sub>10</sub> ) (mg/Kg)	DRO (>C <sub>10</sub> -C <sub>28</sub> ) (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE:	08/09/01	08/09/01	08/09/01	08/09/01	08/09/01	08/09/01
H6068-1 3) W. FLOOR-3	<50	<50	<0.005	0.011	0.005	0.022
(19') BGS						
						ļ
Quality Control	741	783	0.105	0.093	0.095	0.286
True Value QC	800	800	0.100	0.100	0.100	0.300
% Recovery	92.6	97.9	105	92.7	95.3	95.2
Relative Percent Difference	1.5	8.5	6.0	7.8	10.3	8.9

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

Burgess J. A. Cobke. Ph. D.

8/10/01 Date

H6068.XLS

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	Lab Name: Cardinal Lab				I							· · ·		An	alys	is Re	que	st							
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	Telephone: 505-393-232	<u>6</u>			t tsodu	<b>(</b> 8)	18)	â	-					6	۰ ۵										taine
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	Valit Litt	tur			Sample Type G - Grab, C-	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	Totel Metals	Metak						Number of Containers
	Sample Identification	Matrix	Date	Time	E 0 - 0	BTB	BUN	SVO	PAH	Š Š	Ŧ	Ŧ	Hen	GRO	DRO	SQL	Anior	Totel	TOLP						LUN
N	Floor-3 (19') BGS	Soil	8/9/01	12:45		$\checkmark$								V	V										1
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	Project Information	·····	Sarr	nple Receipt		Relinq (1)/Co	uished moanv)						Relinqi (2) (Co					-71		Relinquit 3) (Com		r:			
Pro	ect Name: Duke Energy F	ield Services	Total Contair	ners:					ronm		al		-											·	
Pro	ect Location: J-4-2 Line		COC Seals:			Dal	<u>e T.</u>	44	tler	<u>n 11</u>			Printed	-	)					Printed N					
Pro	ect Manager: Gil Van Dev	enter	Rec'd Good	Cond/Cold:	ľ,		2	īΒ	, poie	<u>-</u>	<b></b>		(Signatu	4ne ) 		<u> </u>	fime)			Signature	") 		(Time)		
:01	Center No.: V-109		Conforms to	Records:	<u> </u>	(Date)	3/9 red By:		2	Time)	<u>y</u>		(Date) Recelv	od Dr		(	. 44 HØ )	-		Data) Received	(Dr		(18776)		
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Van Deventer 915-682-0727

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PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR TRIDENT ENVIRONMENTAL ATTN: GIL VAN DEVENTER P.O. BOX 7624 MIDLAND, TX 79708 FAX TO: (915) 682-0727

Receiving Date: 08/14/01 Reporting Date: 08/15/01 Project Number: V-109 Project Name: DUKE ENERGY FIELD SERVICES Project Location: J-4-2 LINE LEAK Sampling Date: 08/14/01 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: GP Analyzed By: BC

GRO	DRO
(C <sub>6</sub> -C <sub>10</sub> )	(>C <sub>10</sub> -C <sub>28</sub> )
(mg/Kg)	(mg/Kg)

LAB NUMBER SAMPLE ID

ANALYSIS DATE:	08/14/01	08/14/01
H6078-1 K EAST WALL-2 (12')	110	1290
Quality Control	743	750
True Value QC	800	800
% Recovery	92.9	93.8
Relative Percent Difference	0.9	7.8

METHOD: SW-846 8015 M

A Cooke

H6078.XLS

PLEASE NOTE: Liability and Damagee. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



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ANALYTICAL RESULTS FOR TRIDENT ENVIRONMENTAL ATTN: GIL VAN DEVENTER P.O. BOX 7624 MIDLAND, TX 79708 FAX TO: (915) 682-0727

Receiving Date: 08/14/01 Reporting Date: 08/16/01 Project Number: V-109 Project Name: DUKE ENERGY FIELD SERVICES Project Location: J-4-2 LINE LEAK Sampling Date: 08/14/01 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: GP Analyzed By: BC

LAB NO. SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE	08/16/01	08/16/01	08/16/01	08/16/01
H6078-1 K) EAST WALL-2 (12')	<0.005	<0.005	<0.005	<0.015
Quality Control	0.099	0.090	0.093	0.274
True Value QC	0.100	0.100	0.100	0.300
% Recovery	99.1	90.2	93.2	91.3
Relative Percent Difference	7.3	9.9	6.4	7.9

METHOD: EPA SW-846 8260

9 John

16/0 Date

#### H6078B.XLS

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Rush Bois only



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

# V-109-0701-7

# Chain of Custody

								•					Da	ate			F	<sup>o</sup> age _		of _			
Lab Name: Cardinal Laboratories		Τ			4						A	nalys	sis R	eque	est								
Address: 101 East Marland Blvd. Hobbs, New Mexico 882 Telephone: (505) 393-2326	40	: Composite	18)	21B)	(0)		(				(0)	(D)	(										ntainers
Samplers (SIGNATURES)		Sample Type: G - Grab, C- Compos	IEX (EPA 802	MTBE (EPA 8021B)	SVOC (EPA 8270)	PAH (EPA 8270)	VOC (EPA 8260)	TPH (EPA 418.1)	TPH (TX-1005)	ТРН (ТХ-1006)	GRO (EPA 8015G)	DRO (EPA 8015D)	TDS (EPA 160.1)	Anions/Cations	Total Metals	TCLP Metals							Number of Containers
Sample Identification Matrix	Date Time			Σ	Ś	à	¥	14	<u></u> ⊭	15	<u> </u>		Ľ	Ar	4	¥	┝╼╼╼┥	┝╾╾┥	┝──┥	┝━━━┫			ž
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Project Information	Sample Receipt			quished ompany)						Reling (2) (Co	uishec mpany						•	quished ompany)					
Project Name: Duke Energy Field Services	Total Containers:		Trid	lent l	Envi	ironn	nent	al															
Project Location: J-4-2 Line Leak	COC Seals:		(Printed		) _cff	looh	S			(Printed	d Name	)					(Printed	d Name)	)				
Project Manager: Gil Van Deventer	Rec'd Good Cond/Cold:		(Signat (Date)	ure)	<u>Z</u> tt	Je st	٢			(Signat	ture)						(Signati	ure)					
Cost Center No.: V-109	Conforms to Records:		201	4 OC						(Date)			(T	'ime)			(Date)			(Ti	ime) _		
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	d invoice direct to clier			dName)		to	/	>		(Printed	d Name)	)					(Printed	d Name)	)				
Duke Energy Field Services	, Attention: Steve Wea	thers	(Signat	ふう	2001	1-1	15	5P	<b>,</b>	(Signat	ure)						(Signati	ure)					
	3, Denver, Colorado 8					(T	ime)			(Date)			П	ime)			(Date)			(Ti	ime)		

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Company Name:	Trident Er	NIVOUMEN	tal									<i>in to</i>						ANA	Lysk	S RE	QUE	ST			
Project Manager								ŀ	<b>?.O</b> .	<b>*</b>	Ben	<del>( 549</del>	3							Τ					
Address: PO	Box 7624	t						¢	>om	pan	<b>y:</b> .	Duke	Enarsy					ł						1	
City: Midla	and	State: TY	Zip:	<b>_</b>	197	08		/	lttn:	S	$t \sim$	e wat	thevs			1									1
Phone #: 915	and 1682-0808	Fax #: 915	168	2-	ירכ	27			lddr	965	; P	.0. 54	93	2	S	Į					ľ	l		l	1
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Project Name:	J-4-2							\$	State	: (	0	Zip: 80	7120	1	ā	·									I
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Lab I.D.	Sample I.	D.	(G)RAB OR (C)OMP	# CONTAINERS	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	ULTER : ACID/RASE:	CE / COOL	OTHER:	DATE	TIME	BTEX	DR0%										
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analyses. All claims including service. In no event shall Cen	Demages. Cardina's liability and elsent those for negligence and any other caus dinal be liable for incidential or conseque out of or related to the performance of	e whatscover shall be dee mini dameges, including wit	imed weiv thout limit	ed aris stion, b	eben: e shore i	in writir niemupti	g and ons, lo	receive es of u	d by Ca re, or k	ardinal ses of	i within 1 profits i	30 days after com incurred by client, i	plotion of the appli- its subsidiaries,	1 cable		<u> </u>		30		due at the s	nate of 24%	i per annun	ed on all ac m from the s s fees.		
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Dul 7 Z	ittersh	Time: [3\5]		S.	24	#	ア	>	$\leq$																
Delivered By: Sampler - UPS -	(Circle One)		c –		Co	nple ( ol li ]Yes ] No⁄		t Yes	n	Ċŀ		<b>(ED BY:</b> tials)							~						

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.



PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR TRIDENT ENVIRONMENTAL ATTN: GIL VAN DEVENTER P.O. BOX 7624 MIDLAND, TX 79708 FAX TO: (915) 682-0727

GRO

 $(C_6 - C_{10})$ 

(mg/Kg)

Receiving Date: 08/15/01 Reporting Date: 08/16/01 Project Number: V-109 Project Name: DEFS J-4-2 Project Location: UNIT X, SEC20 T20S R35E D 28 Sampling Date: 08/15/01 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: GP Analyzed By: BC

DRO

 $(>C_{10}-C_{28})$ 

(mg/Kg)

LAB NUMBER SAMPLE ID

BA

ANALYSIS DATE:	08/14/01	08/14/01				
H6087-1 () E. WALL-3 (6')	<50	63.7				
H6087-2 m) E. FLOOR-3 (18')	<50	54.2				
	:					
Quality Control	790	808				
True Value QC	800	800				
% Recovery	98.7	101				
Relative Percent Difference	1.4	3.0				

METHOD: SW-846 8015 M

H6087.XLS

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



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Lab Name: Cardinal Laboratories							<b></b>			Ar	nalys	is R	eque	est		<b></b>	······		<b>.</b>	·	<b>T</b>				
Address: 101 East Marland Blvd.																									
Hobbs, New Mexico 88240																								ŝ	
Telephone: 505-393-2326				6	â				1								l		l	l				aine	
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I'll DA	Sample Type: G - Grab, C- Composite	EP (EP		SVOC (EPA 8270)	PAH (EPA 8270)	VOC (EPA 8260)			Ϋ́	GRO (EPA 8015G)	DRO (EPA 8015D)	TDS (EPA 160.1)	s/Ca	Total Metals	Metals							Number of Containers			
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E, Floor -3 (18') Soi)	8-15-01	1350	6										$\checkmark$											)	
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Project Information		Relinquished By: (1) (Company)								Relinquished By:								Relinquished By:							
Project Name: Duke Energy Field Services		Trident Environmental								(2) (Company) (3) (Company)															
		(Drinted Mane)								(Printed Name)								(Printed Name)							
		(Signature) a ( )								(Signature)								(Signature)							
Project Manager: Gil Van Deventer		(Date) (Time) (Date)										(Time)		<u></u>	(Date) (Time)										
Cost Center No.: V-109		(Date) 8-15-01 (Time) 4:40 Am Received By:								Received By:								Received By:							
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Bill to (see below):	H608.	/			30	-	a	<u>_</u>	~	$\sim$															
Special Instructions/Comments: Please send		(Printed Name) GAPOTTON							(Printed Name) (Printed Name)									<del>)</del>							
Duke Energy Field Services,	Attention: \$	Steve Weat	hers	(Signat	ure) nO	INS	<u>ر</u> (	MAR	~		(Signal	ture)						(Signai	ture)						
P. O. Box 5493	3, Denver, 0	Colorado 80	)217	(Date)	15/z	001	4	(Time)	5P		(Date)				(Time)			(Date)				(Time)			

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	Project Manager	10 1014 0111							P.O. #								r—	1	1	T	-156		T	<u></u>	T	<b>1</b>	<b>—</b>		
	Address:	0.0.000							Company: DEFS							1							1						
-	City:	Midland		Tx Zip: # 79706					· · · · · · · · · · · · · · · · · · ·							1.		·											
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-	Project Name:	DEFJ-0 J-4									State: Zip:						ã					1			1				
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† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.



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ANALYTICAL RESULTS FOR TRIDENT ENVIRONMENTAL ATTN: GILBERT J. VANDENTER P.O. BOX 7624 MIDLAND, TX 79708 FAX TO: (915) 682-0727

Receiving Date: 08/02/01 Reporting Date: 08/03/01 Project Number: NOT GIVEN Project Name: DUKE ENRGY FIELD SERVICES Project Location: J-4-2 LINE LEAK

LAB NUMBER SAMPLE ID

Sampling Date: 08/02/01 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: BC Analyzed By: BC

GRO	DRO
(C <sub>6</sub> -C <sub>10</sub> )	(>C <sub>10</sub> -C <sub>28</sub> )
(mg/Kg)	(mg/Kg)

ANALYSIS DATE: 08/02/01 08/02/01 H6040-1 **BACKFILL-1** <50 <50 **Quality Control** 713 762 **True Value QC** 800 800 % Recovery 89.1 95.3 **Relative Percent Difference** 7.1 2.9

METHOD: SW-846 8015 M

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6/0

#### H6040A.XLS

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V-109-0701-2 Chain of Custody Date 8-2-01 Page ( of (

	-								Analysis Request															
ARDINAL PHONE (915) 673-7001 · 2111 BEECHWOOD · ABILENE, TEXAS 79603 LABORATORIES PHONE (505) 393-2326 · 101 E. MARLAND · HOBBS, NEW MEXICO 88240			Γ															Γ	Ī					
LABORATORIES PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NEW MEXICO 882		2									.,											ŝ		
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		(1) (Company)							(2) (Company) (3) (Company)															
Project Name: Duke Energy Field Services Total Containers:		(Printed Name)							(Printed Name)						(Printed Name)									
Project Location: J-4-2 Line Leak COC Seals:		(Printed Name) G.:/bert Van Deventer (Signature) Signature) Jeth Q Van Rut							(Signature)								(Signature)							
Project Manager: Gil Van Deventer Rec'd Good Cond/Co		(Date)	th	14	1 Va	<u>~ //.</u> (Time)	<u></u>		(Date)	•		··	(Time)			(Date) (Time)								
Cost Center No.: V-109 Conforms to Record		Rece	8 - Z	-01 r			1:00	ph_		ved B	c.				ويتوفيه فستك									
Shipping ID No.: Bill to (see below):	1	(1) (0	ompany	0	۸٨.	, ,	100			ompany						Received By: (3) (Company)								
		CARDINALABS							(Drint-	d Name			_		(Related Marco)									
Special Instructions/Comments: Please send invoice direct to	client:	(Printed Name)							(Printed Name)							<u> </u>	(Printed Name)							
Duke Energy Field Services, Attention: Steve	Veather	S	Su	yy	<u>4/</u>	<u>a C</u>	200	-	(Signa							(Signa	wre)							
P. O. Box 5493, Denver, Colora	lo 8021	7 (Date)	8/	(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/ -0.5 deg C Project #: None Given Project Name: Duke Energy Field Services Project Location: J-4-2 Sampling Date: 07/26/01 Receiving Date: 07/26/01 Analysis Date: 07/27/01

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
0101231-02	J-4-2 Exc. Soil	0.193	2.47	2.85	7.93	4.02

QUALITY CONTROL	0.093	0.092	0.089	0.196	0.091
TRUE VALUE	0.100	0.100	0.100	0.200	0.100
% INSTRUMENT ACCURACY	93	92	89	98	91
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	0.099	0.100	0.097	0.220	0.102
SPIKE DUP	0.097	0.097	0.095	0.214	0.099
% EXTRACTION ACCURACY	99	100	97	110	102
BLANK	<0.025	<0.025	<0.025	<0.025	<0.025
RPD	2	3	2	3	3
<ul> <li>A second s</li></ul>	and the set of the set				

METHODS: EPA SW 846-8021B ,5030

and

Ð, 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/ -0.5 deg C Project #: None Given Project Name: Duke Energy Field Services Project Location: J-4-2 Sampling Date: 07/26/01 Receiving Date: 07/26/01 Analysis Date: 07/27/01

			GRO DRO C6-C10 >C10-C28
÷	ELT#	FIELD CODE	mg/kg mg/kg
۰. ۱	0101231-01 0101231-02	J-4-2 Background J-4-2 Exc. Soil	<10 <10 561 2560

QUALITY CONTROL	533	524
TRUE VALUE	500	500
% INSTRUMENT ACCURACY	107	105
SPIKED AMOUNT	476	476
ORIGINAL SAMPLE	<10	116
SPIKE	498	504
SPIKE DUP	530	507
% EXTRACTION ACCURACY	105	106
BLANK	<10	<10
RPD	6	1
· · ·	and the second	

Methods: EPA SW 846-8015M GRO/DRO

dŁ

Raland K. Tuttle

7-30-0/ Date

12600 West I-20 East • Odessa, Texas 79765 • (915) 563-1800 • Fax (915) 563-1713



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

# V-106-J-4-2 A Chain of Custody

Date <u>7-26-01</u> Page \_\_\_\_\_ of \_\_\_\_

Lab Name: Environmental Lab of Texas												A	nalys	sis R	eque	est									
Address: 12600 W I-20 East Odessa, Texas 79765																									
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Telephone: (915) 563-1800					â							2			ļ									aine	
Samplers (SIGNATURES)			Ę	0216	021	270	<u>و</u>	60)	3.1)	6	6	150	150	<u> </u>	s									Sort	
Samplers (SIGNATORES)	/		ä٥.	A 8	9 A 8	8 <b>4</b> 0	82	A 82	418	002	8 8	A 80	88	16(	tion	s	sla				ľ			of C	
Zlatante	$\times$		Sample Type: G - Grab, C- Composite	EX (EF	MTBE (EPA 8021B)	SVOC (EPA 8270)	PAH (EPA 8270)	VOC (EPA 8260)	TPH (EPA 418.1)	тРН (ТХ-1005)	тРН (ТХ-1006)	GRO (EPA 8015G)	DRO (EPA 8015D)	TDS (EPA 160.1)	Anions/Cations	Total Metals	TCLP Metals							Number of Containers	
Sample Identification Matri	Date	Time		B	W	Ś	à	Š	₽	₽	₽.	Ö	ö	12	Ā	₽	<u> 2</u>							ž	
" J-4-2 Background Soil	7-26-01	0930	С									1	$\checkmark$											)	
02 J-4-2 Exc. Soil Soil	7-26-01	1155	C	$\checkmark$								~	~											1	
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Project Information	Sar	mple Receipt			uisheo							quishe		-				Relino							
Project Name: Duke Energy Field Servic	es Total Contai	iners:	12	- (1) (Company) - Trident Environmental							(2) (Company)								(3) (Company)						
Project Location: $J - 4 - 2$	COC Seals:		ľ.	(Printed Name) Gilbert Van Devente							(Printed Name)							(Printed Name)							
Project Manager: Gil Van Deventer	Rec'd Good	Cond/Cold:	485	(Sight	ture	141	h	R,	-		(Signature)						•	(Signature)							
Cost Center No.:	Conforms to		-	(Date)	7-20	6-01	<b></b>	(Time) -4	5-3	SPm,	(Date)				(Time)			(Date)				(Time)			
Shipping ID No.:	Lab No.:	-0.5°	Ċ	Recei	ved By	<i>[</i> :		,				ved By ompany						Received By: (3) (Company)							
Bill to (see below):				(1)(0	ompany	۷		1011	n l	ر	(2) (0	ompany	0					(3) (0	ompany						
	send invoice d	lirect to clier		(Printe	d Name	in l	Daw	41	Tak	<u>~</u>	(Printe	d Nam	)					(Printe	d Name	)					
Duke Energy Field Services, Attention: Steve Weath				(Printed Name) Environnenkillab (Signature) 7-26-01 17:35 17 (Date) (Time)						-	(Signature)						(Signature)								
Duke Energy Field Servi	es, Attention:	Steve Wea	thers	(Signa	ture)	21.0	1 .	17	130		(Signa	iture)						(Signa	ture)						

Copy signed original form for Trident Environmental records

### ATTACHMENT C

#### **FIELD BOOK NOTES**





7-76-0 -30-0 J-4-2 CCHL Started excaviting at source area Trackhore still excavating. No other equipment on ste Excavating area awound lenk un 7:1 Nooh Dozen working at land for today Toole photos of execution. West she dish. Mile rond is 3-(:11 Collected composite sample of excurred spil at 1155 am excavition east side first (almost ) and floor before errarating more West. Will have to take road a done) take road out. 256 ppi w OVM Brease holder Foye Klein CCHI Returned to CCH6 Mile N. still excaption. Didnit get very deep or wide be care he had to spend a lot of time clearing/ motiving clean dure sand One trackfor & one londer working today



8-2-01 5-4-2 7-2-01 J-4-2 Lettar Over (dopty) DVM Time a) E. Floor-1(11') Collecter backetil soil sauple 297 1045 W. Floor -1 (12) (Ballefill- @ 1150 MST) From 587 1055 ( d backfill being brought in W. Wall-1 (4) د) لم 2 1100 E. Wall-1 (4') 0 1105 from CCHG project Looks/smellic clean! (Oppm on DUM) e) f) S.Wall-1(2') 2 1125 N. Wall -1 (21) 0 1130 Based on OUMA readings from floor Deliveral samples to Cardinal - in Hobbs @ 1:30 Lab at low spots excavation needs to go deeper at least SFF (or more it ab to go to nert pase Left lab CC#6 ofor still moderately strong. Since the excavition is a roud, at about 10 500 below the pipe line it will be necessary & bring a trackboe (to replace backboe). Roy arranging to get trackboe Pron (CHG syle which will be suspended for a day or so. Used hand auger to get a &b floor samples (dugened about 3 ft below current excavation depth



5-4-2 8-8-01 5-4-2 Lond count por Ro Received verbal results for sample g) W-Floor 2 (16) from Gay & Potte of Lardinal Lab as follows GRO = 80,8 hg/kg DRO = 798 mg/kg 1008 yd > (84 londs) as of The Aug2 were sent to S. Monument Land Far 7924 (66 londs) of clean budchill". brought in from CCHG aren Callel Mike & later hand from resarding to lo to Roy said he would apply a load (43 yd3) discount at ~ 450 end of the job to hale up for a possible discrepence of short? loads per Paul Mulley who sail one the first few days of loading with the small loadchoe he thought the lesterling out to Fatt bith north & south directly Hy beneath and extending F about 6ft from squipe were ronning light DCation Run snid they had some belays and are a of other jobs going pu is going on

1-4-2 8/14/01 8/14/01 1-4-2 DU DTL 1310 Took Plotos of excavetion DOD (MST) Leave Midland Sor 1-4-2 (115 mi) Equipment on site · Samsang Track Loe To SE210 1230 Arrive at J-4-2 Execustion o Cat Front loader 930 Could not enter pit, sample o lat Dozer recoursed using track the (see protos), approvided 20' cast of randus stain area 4 Damp Tracks to brins (1 truck pulling a back his) pt On excavation wall (12' below the sandace) leave Site Sor Lab. 1320 \* PID calibrated at 99 ppm Leave that for Midland 1356 Sample Epst Wall - 2 (12') 1535 (MSt) Avrive at Midland contained 221 ppm PID will take sample to Lub (BTEX/GRO/DEO) (219 mi) BackSill -26'. × Soll Pipeline 5' 18' deep Eastern excavation made since yesterday (B/13/01)

3-24/01 8-30-01 CC#6 Per Ran -/ Waldon 7-A Leave Midland Arrive at CC6 Called Paul Sheely en route to not: for of sampling activity. Poul said he'd come out on site. 5-4.7 2772 oily dirt handed to and form' 2592 backfill sand brought in Mike w/ Walton (pust. has cleaned out & widened the north end of excavalish to depth of 33 Me also extended west end of south end of excavalion to a depth of 12 Me also toold out the access Alan to use ~ 180 yd top soil from plants / and our road to a depth of & feet