

1R - 426-55

REPORTS

DATE:

10/17/2002

IR-426-55

FINAL REPORT

**RICE OPERATING COMPANY
JUNCTION BOX FINAL REPORT**

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
Blinebry-Drinkard	O-17	O	17	21 S	37 E	Lea	Length 12'	Width 6'	Depth 8'

LAND TYPE: BLM _____ STATE _____ FEE LANDOWNER Millard-Deck Estate OTHER _____

Depth to Groundwater 70 feet NMOCD SITE ASSESSMENT RANKING SCORE: 10

Date Started 9/6/2002 Date Completed 9/18/2002 OCD Witness No

Soil Excavated 200 cubic yards Excavation Length 25 Width 16 Depth 14 feet

Soil Disposed 0 cubic yards Offsite Facility n/a Location n/a

FINAL ANALYTICAL RESULTS: Sample Date 9/17/2002 Sample Depth 14 ft BGS

Procure 5-point composite sample of bottom and 4-point composite sample of sidewalls. TPH, BTEX and Chloride laboratory test results completed by using an approved lab and testing procedures pursuant to NMOCD guidelines.

Sample Location	Benzene mg/kg	Toluene mg/kg	Ethyl Benzene mg/kg	Total Xylenes mg/kg	GRO mg/kg	DRO mg/kg	Chlorides mg/kg
SIDEWALLS	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	369
BOTTOM	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	1340
REMEDIATED	<0.025	<0.025	<0.025	<0.025	<10.0	481	1350

General Description of Remedial Action: This location exhibited a vertical chloride

decline, but TPH diminished vertically around 8 ft. TPH concentrations

continued to be minimal in all lateral directions.

A 25' x 16' area was excavated to a depth of 14' to ensure that all measurable TPH would be

removed, bottom and wall composite samples confirm this. The excavated soil was

remediated on location and backfilled with concentrations of 481 ppm TPH and 1350 ppm

chlorides. The remaining chloride concentration is not considered threatening to groundwater

because a compacted clay liner was installed to inhibit downward migration and the surface is

expected to re-vegetate. At 4' BGS, the 1' clay liner was installed and extended to connect with

another junction box (O-17-2) that was remediated at the same time (see attached diagram).

The top 3' of the excavation was backfilled with the blended soil. A water-tight junction box

has since been built at this location.

cc: lab results, diagram

CHLORIDE FIELD TESTS

LOCATION	DEPTH	ppm
Vertical	5	2061
	7	612
	9	762
	11	1551
	13	1748

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

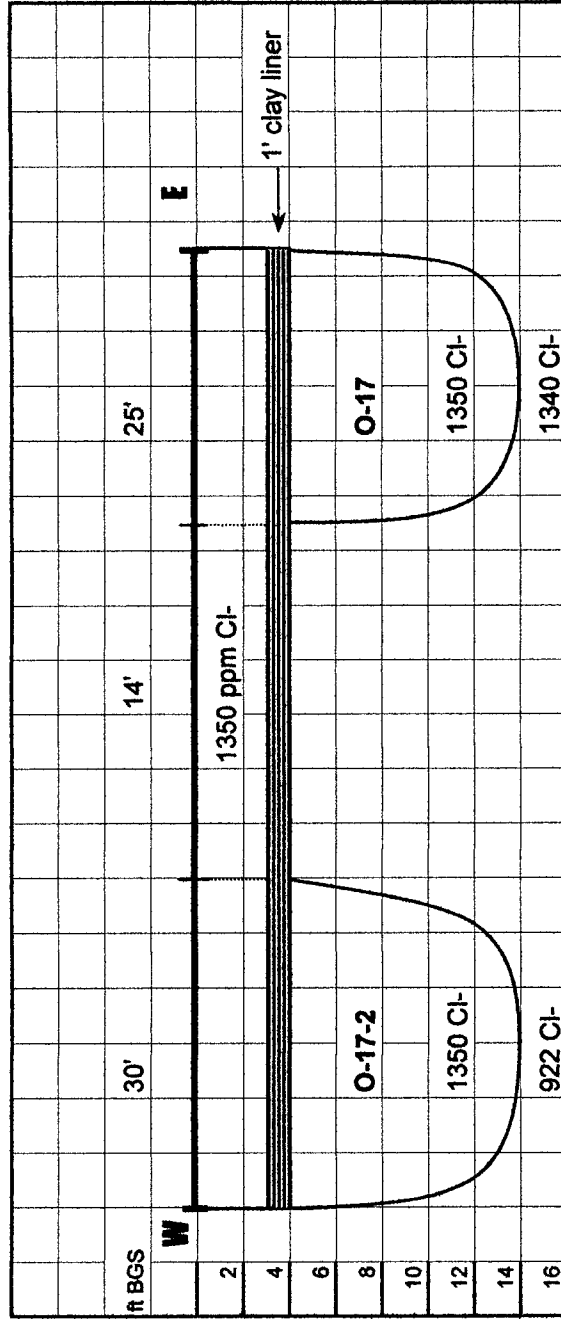
DATE 10-17-02

PRINTED NAME Kristin Farris

SIGNATURE Kristin Farris

TITLE Environmental Projects Scientist

BD O-17 O-17-2



old
0-17
btm + Wall

ANALYTICAL REPORT

Prepared for:

LOGAN ANDERSON
RE ENVIRONMENTAL
P.O. BOX 13418
ODESSA, TX 79768

Project: Rice

PO#:

Order#: G0204542

Report Date: 09/24/2002

Certificates

US EPA Laboratory Code TX00158

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

RE ENVIRONMENTAL
P.O. BOX 13418
ODESSA, TX 79768
366-0804

Order#: G0204542
Project:
Project Name: Rice
Location: O-17 (Old)

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u> <u>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</u>
0204542-01	5 pt. Bottom Comp. @ 14'	SOIL	9/17/02 11:00	9/18/02 8:45	4 oz glass	Ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 3.5 C		
	8015M					
	8021B/5030 BTEX					
	Chloride					
0204542-02	4 pt. Wall Comp. @ 13'	SOIL	9/17/02 11:00	9/18/02 8:45	4 oz glass	Ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 3.5 C		
	8015M					
	8021B/5030 BTEX					
	Chloride					

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

LOGAN ANDERSON
RE ENVIRONMENTAL
P.O. BOX 13418
ODESSA, TX 79768

Order#: G0204542
Project:
Project Name: Rice
Location: O-17 (Old)

Lab ID: 0204542-01
Sample ID: 5 pt. Bottom Comp. @ 14'

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		9/18/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003198-02		9/21/02 1:55	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	101%	80	120
Bromofluorobenzene	97%	80	120

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

LOGAN ANDERSON
RE ENVIRONMENTAL
P.O. BOX 13418
ODESSA, TX 79768

Order#: G0204542
Project:
Project Name: Rice
Location: O-17 (Old)

Lab ID: 0204542-02
Sample ID: 4 pt. Wall Comp. @ 13'

8015M

Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	Analyst	Method
		9/18/02	1	1	CK	8015M


Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

8021B/5030 BTEX

Method <u>Blank</u>	Date <u>Prepared</u>	Date <u>Analyzed</u>	Sample <u>Amount</u>	Dilution <u>Factor</u>	Analyst	Method
0003198-02		9/21/02 2:18	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	106%	80	120
Bromofluorobenzene	102%	80	120

Approval:  9/25/02
Raland K. Tuttle, Lab Director, QA Officer Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

LOGAN ANDERSON
RE ENVIRONMENTAL
P.O. BOX 13418
ODESSA, TX 79768

Order#: G0204542
Project:
Project Name: Rice
Location: O-17 (Old)

Lab ID: 0204542-01
Sample ID: 5 pt. Bottom Comp. @ 14'

Test Parameters

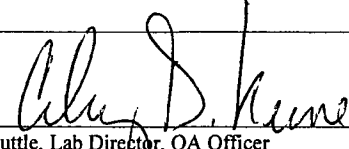
<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	1340	mg/kg	1	20.0	9253	9/20/02	CK

Lab ID: 0204542-02
Sample ID: 4 pt. Wall Comp. @ 13'

Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	369	mg/kg	1	20.0	9253	9/20/02	CK

Approval:


Raland K. Tuttle, Lab Director, QA Officer
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

Date

RL = Reporting Limit N/A = Not Applicable

Page 1 of 1

ENVIRONMENTAL LAB OF TEXAS I, LTD.

12600 West I-20 East, Odessa, TX 79765 Ph: 915-563-1800

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8015M

Order#: G0204542

BLANK	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003181-02			<10.0		
CONTROL	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003181-03		952	1120	117.6%	
CONTROL DUP	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003181-04		952	1120	117.6%	0.0%
SRM	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003181-05		1000	1120	112.0%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0204542

BLANK	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0003198-02			<0.025		
Ethylbenzene-mg/kg		0003198-02			<0.025		
Toluene-mg/kg		0003198-02			<0.025		
p/m-Xylene-mg/kg		0003198-02			<0.025		
o-Xylene-mg/kg		0003198-02			<0.025		
MS	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0204546-03	0	0.1	0.102	102.%	
Ethylbenzene-mg/kg		0204546-03	0	0.1	0.108	108.%	
Toluene-mg/kg		0204546-03	0	0.1	0.108	108.%	
p/m-Xylene-mg/kg		0204546-03	0	0.2	0.226	113.%	
o-Xylene-mg/kg		0204546-03	0	0.1	0.106	106.%	
MSD	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0204546-03	0	0.1	0.100	100.%	2.%
Ethylbenzene-mg/kg		0204546-03	0	0.1	0.109	109.%	0.9%
Toluene-mg/kg		0204546-03	0	0.1	0.104	104.%	3.8%
p/m-Xylene-mg/kg		0204546-03	0	0.2	0.225	112.5%	0.4%
o-Xylene-mg/kg		0204546-03	0	0.1	0.105	105.%	0.9%
SRM	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0003198-05		0.1	0.101	101.%	
Ethylbenzene-mg/kg		0003198-05		0.1	0.105	105.%	
Toluene-mg/kg		0003198-05		0.1	0.107	107.%	
p/m-Xylene-mg/kg		0003198-05		0.2	0.218	109.%	
o-Xylene-mg/kg		0003198-05		0.1	0.104	104.%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0204542

BLANK	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0003189-01			<20.0		
MS	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0204538-01	19500	10000	28000	85.0%	
MSD	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0204538-01	19500	10000	28500	90.0%	1.8%
SRM	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0003189-04		5000	4960	99.2%	

Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

Logan Anderson

Company Name

RE Environmental

Company Address:

City/State/Zip:

Telephone No:

Sampler Signature:

Fax No.:

[illegible]

0-17 + 0-17-2
Remediated

ANALYTICAL REPORT

Prepared for:

LOGAN ANDERSON
RE ENVIRONMENTAL
P.O. BOX 13418
ODESSA, TX 79768

Project: Rice
PO#:
Order#: G0204605
Report Date: 09/30/2002

Certificates

US EPA Laboratory Code TX00158

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

RE ENVIRONMENTAL
P.O. BOX 13418
ODESSA, TX 79768
366-0804

Order#: G0204605
Project:
Project Name: Rice
Location: O-17

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u> <u>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</u>
0204605-01	Remediated Composite Pile	SOIL	9/24/02 14:00	9/25/02 8:00	4 oz glass	Ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 13 C		
	8015M					
	8021B/5030 BTEX					
	Chloride					

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

LOGAN ANDERSON
RE ENVIRONMENTAL
P.O. BOX 13418
ODESSA, TX 79768

Order#: G0204605
Project:
Project Name: Rice
Location: O-17

Lab ID: 0204605-01
Sample ID: Remediated Composite Pile

8015M

Method	Date	Date	Sample	Dilution	Analyst	Method
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>		
		9/25/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	481	10.0
TOTAL, C6-C35	481	10.0

8021B/5030 BTEX

Method	Date	Date	Sample	Dilution	Analyst	Method
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>		
0003253-02		9/29/02 21:04	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	<0.025	0.025
Ethylbenzene	<0.025	0.025
Toluene	<0.025	0.025
p/m-Xylene	<0.025	0.025
o-Xylene	<0.025	0.025

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	95%	80	120
Bromofluorobenzene	96%	80	120

Approval: *Roland K. Tuttle*
Raland K. Tuttle, Lab Director, QA Officer
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

9-30-02
Date

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

LOGAN ANDERSON
RE ENVIRONMENTAL
P.O. BOX 13418
ODESSA, TX 79768

Order#: G0204605
Project:
Project Name: Rice
Location: O-17

Lab ID: 0204605-01
Sample ID: Remediated Composite Pile

Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Chloride	1350	mg/kg	1	20	9253	9/27/02	SB

Approval:

Raland K. Tuttle 9-30-02

Raland K. Tuttle, Lab Director, QA Officer

Date

Celey D. Keene, Org. Tech. Director

Jeanne McMurrey, Inorg. Tech. Director

Sandra Biezugbe, Lab Tech.

Sara Molina, Lab Tech.

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8015M

Order#: G0204605

BLANK	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003235-02			<10.0		
CONTROL	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003235-03		952	1120	117.6%	
CONTROL DUP	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003235-04		952	1200	126.1%	6.9%
SRM	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0003235-05		1000	1220	122.%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0204605

BLANK	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0003253-02			<0.025		
Ethylbenzene-mg/kg		0003253-02			<0.025		
Toluene-mg/kg		0003253-02			<0.025		
p/m-Xylene-mg/kg		0003253-02			<0.025		
o-Xylene-mg/kg		0003253-02			<0.025		
MS	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0204592-05	0	0.1	0.098	98.%	
Ethylbenzene-mg/kg		0204592-05	0	0.1	0.100	100.%	
Toluene-mg/kg		0204592-05	0	0.1	0.100	100.%	
p/m-Xylene-mg/kg		0204592-05	0	0.2	0.212	106.%	
o-Xylene-mg/kg		0204592-05	0	0.1	0.100	100.%	
MSD	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0204592-05	0	0.1	0.099	99.%	1.%
Ethylbenzene-mg/kg		0204592-05	0	0.1	0.102	102.%	2.%
Toluene-mg/kg		0204592-05	0	0.1	0.102	102.%	2.%
p/m-Xylene-mg/kg		0204592-05	0	0.2	0.217	108.5%	2.3%
o-Xylene-mg/kg		0204592-05	0	0.1	0.103	103.%	3.%
SRM	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg		0003253-05		0.1	0.100	100.%	
Ethylbenzene-mg/kg		0003253-05		0.1	0.103	103.%	
Toluene-mg/kg		0003253-05		0.1	0.103	103.%	
p/m-Xylene-mg/kg		0003253-05		0.2	0.218	109.%	
o-Xylene-mg/kg		0003253-05		0.1	0.103	103.%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0204605

BLANK	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0003244-01			<20.0		
MS	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0204605-01	1350	1000	2340	99.2%	
MSD	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0204605-01	1350	1000	2320	97.2%	0.9%
SRM	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0003244-04		5000	4960	99.2%	

BD jct. O-17



Before Remediation



NORM Removal

BD jct. O-17



Impact excavation from new jct. O-17



Impact excavation from old jct. O-17 location

BD jct. O-17



Excavation clay-lined and Backfilled



Complete Box

BD O-17 jct. box



Clay Liner Connecting Sites

**RICE OPERATING COMPANY
JUNCTION BOX FINAL REPORT**

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
BD	O-17	O	17	22S	37E	LEA	Length 6'	Width 5'	Depth 5'

Land Type: BLM ☐ STATE ☐ FEE LANDOWNER Millard Deck Estate OTHER _____

Depth to Groundwater 64' feet NMOCD SITE ASSESSMENT RANKING SCORE: 20

Date Started 03/01/2001 Date Completed 03/26/2001 OCD Witness No

Soil Excavated 72 cubic yards Excavation Length 15' Width 15' Depth 8 1/2' feet

Soil Disposed 72 cubic yards Offsite Facility Sundance Disposal Location Eunice N.M.

FINAL ANALYTICAL RESULTS: Sample Date March 26, 2001 Sample Depth 8 1/2'

Procure 5-point composite sample of bottom and 4-point composite sample of sidewalls. TPH, BTEX and Chloride laboratory test results completed by using an approved lab and testing procedures pursuant to NMOCD guidelines.

Sample Location	Benzene mg/kg	Toluene mg/kg	Ethyl Benzene mg/kg	Total Xylenes mg/kg	GRO mg/kg	DRO mg/kg	Chlorides mg/kg
SIDEWALLS	<0.005	<0.005	<0.005	0.015	<50	<50	2200
BOTTOM	<0.005	<0.005	<0.005	0.017	<50	<50	96

General Description of Remedial Action: Delineate vertical and lateral extent to below the NMOCD guidelines. Hauled off high impacted soil to Sundance Disposal Facility. Installed a compact clay liner followed by a water tight Junction box and then backfilled.

CHLORIDE FIELD TESTS

LOCATION	DEPTH	mg/kg
4 wall comp	2' to 5'	1150 ppm
East Wall	2' to 5'	650 ppm
West Wall	2' to 5'	1800 ppm
South Wall	2' to 5'	1200 ppm
North Wall	2' to 5'	990 ppm
bottom of Jct	5'	990 ppm
bottom of Jct	8 1/2'	100 ppm

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

DATE 03/26/2001

PRINTED NAME Chris Rodriguez

SIGNATURE Chris Rodriguez

TITLE ENVIRONMENTAL TECHNICIAN



ARDINAL LABORATORIES

PHONE (815) 873-7001 • 2111 BEECHWOOD • ABILENE, TX 79803

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

ANALYTICAL RESULTS FOR
RICE OPERATING CO.
ATTN: CHRIS RODRIQUEZ
122 W. TAYLOR
HOBBS, NM 88240
FAX TO:

Receiving Date: 03/26/01
Reporting Date: 03/28/01
Project Number: NOT GIVEN
Project Name: JCT 0-17
Project Location: BD SEC 17 T22 R37

Sampling Date: 03/26/01
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC/AH

LAB NUMBER SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/Kg)	DRO (>C ₁₀ -C ₂₈) (mg/Kg)	CI ^a (mg/Kg)
	03/27/01	03/27/01	03/27/01
H5736-1 WALL COMPOSITE	<50	<50	2200
H5736-2 BOTTOM	<50	<50	96
Quality Control	716	801	980
True Value QC	800	800	1000
% Recovery	89.5	100	98.0
Relative Percent Difference	1.7	1.9	1.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; CI: Std. Methods 4500-CI^aB

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

Barbara P. Cooke
Chemist

3/28/01
Date

H5736A.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.



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2328 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
RICE OPERATING CO.
ATTN: CHRIS RODRIQUEZ
122 W. TAYLOR
HOBBS, NM 88240
FAX TO:

Receiving Date: 03/26/01
Reporting Date: 03/28/01
Project Number: NOT GIVEN
Project Name: JCT 0-17
Project Location: BD SEC 17 T22 R37

Sampling Date: 03/26/01
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

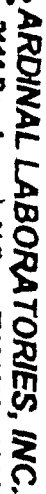
LAB NO.	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE		03/26/01	03/26/01	03/26/01	03/26/01
H5736-1	WALL COMPOSITE	<0.005	<0.005	<0.005	0.015
H5736-2	BOTTOM	<0.005	<0.005	<0.005	0.017
Quality Control		0.108	0.105	0.108	0.317
True Value QC		0.100	0.100	0.100	0.300
% Recovery		108	105	108	108
Relative Percent Difference		2.2	0.9	2.7	2.4

METHOD: EPA SW-846 8260

Bryce J. Cash
Chemist

3/28/01
Date

H5736B.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.



2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 4[illegible]

Sundance Services, Inc.

P.O. Box 1737 ★ Eunice, NM 88231
(505) 394-2511

111 33835

LEASE OPERATOR/SHIPPER/COMPANY: NICE

LEASE NAME: SEC 17 T225 A32

TRANSPORTER COMPANY: WILLIAMS

TIME:

AM/PM

DATE: 8-18-01

VEHICLE NO.:

DRIVER NO.:

CHARGE TO: NICE

TYPE OF MATERIAL

☐ Production Water

☐ Drilling Fluids

☐ Completion Fluids

☐ Tank Bottoms

☒ Contaminated soil

☐ C-117 No.:

☐ Other Material:

☐ BS&W Content: _____

Description: 2.2

VOLUME OF MATERIAL ☐ BBLs. _____ :

☐ YARD _____ :

☐ _____

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO SUNDANCE SERVICES, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: _____

(SIGNATURE)

FACILITY REPRESENTATIVE: _____

(SIGNATURE)

White-Sundance Canary-Sundance Acct#1 Pink-Sundance Acct#2 Gold-Transporter

Revised 12/27/95

Sundance Services, Inc.

P.O. Box 1737 ★ Eunice, NM 88231
(505) 394-2511

112 33539

LEASE OPERATOR/SHIPPER/COMPANY: *Price*

LEASE NAME: *Job 0-17*

TRANSPORTER COMPANY: *Price*

TIME:

AM/PM

DATE:

VEHICLE NO.:

DRIVER NO.:

CHARGE TO:

TYPE OF MATERIAL

☐ Production Water

☐ Drilling Fluids

☐ Completion Fluids

☐ Tank Bottoms

☒ Contaminated soil

☐ C-117 No.:

☐ Other Material:

☐ BS&W Content: _____

Description: *soil*

VOLUME OF MATERIAL ☐ BBLs. _____ :

☐ YARD *12* :

☐ _____

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

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DRIVER: _____

(SIGNATURE)

FACILITY REPRESENTATIVE: _____

(SIGNATURE)

White-Sundance Canary-Sundance Acct#1 Pink-Sundance Acct#2 Gold-Transporter
Revised 12/27/95

Sundance Services, Inc.

P.O. Box 1737 ★ Eunice, NM 88231
(505) 394-2511

38632

LEASE OPERATOR/SHIPPER/COMPANY: Alco

LEASE NAME: Oilwell 3-17

TRANSPORTER COMPANY: Alco

TIME:

AM/PM

DATE:

VEHICLE NO.: 21

DRIVER NO.:

CHARGE TO: Alco

TYPE OF MATERIAL

- ☐ Production Water
☐ Tank Bottoms
☐ Other Material:

- ☐ Drilling Fluids
☐ Contaminated soil
☐ BS&W Content: _____

- ☐ Completion Fluids
☐ C-117 No.: _____

Description: 0/0

VOLUME OF MATERIAL ☐ BBLs. _____ :

☐ YARD _____ :

☐ _____

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

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DRIVER: _____

(SIGNATURE)

FACILITY REPRESENTATIVE: _____

(SIGNATURE)

White-Sundance Canary-Sundance Acct#1 Pink-Sundance Acct#2 Gold-Transporter
Revised 12/27/95

Sundance Services, Inc.

P.O. Box 1737 ★ Eunice, NM 88231
(505) 394-2511

3881

LEASE OPERATOR/SHIPPER/COMPANY:

LEASE NAME:

TRANSPORTER COMPANY:

TIME:

AM/PM

DATE:

VEHICLE NO.:

DRIVER NO.:

CHARGE TO:

TYPE OF MATERIAL

☐ Production Water

☐ Drilling Fluids

☐ Completion Fluids

☐ Tank Bottoms

☐ Contaminated soil

☐ C-117 No.:

☐ Other Material:

☐ BS&W Content: _____

Description: _____

VOLUME OF MATERIAL ☐ BBLs. _____ : ☐ YARD _____ : ☐ _____

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

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DRIVER: _____
(SIGNATURE)

FACILITY REPRESENTATIVE: _____
(SIGNATURE)

White-Sundance Canary-Sundance Acct#1 Pink-Sundance Acct#2 Gold-Transporter
Revised 12/27/95

Sundance Services, Inc.

P.O. Box 1737 ★ Eunice, NM 88231
(505) 394-2511

111 38813

LEASE OPERATOR/SHIPPER/COMPANY: Rick

LEASE NAME: B-2-340 J-10-17 SKC 17.7225 7 725

TRANSPORTER COMPANY: 111-1111

TIME:

AM/PM

DATE: 3-12-95

VEHICLE NO.: 5

DRIVER NO.:

CHARGE TO: 111-1111

TYPE OF MATERIAL

☐ Production Water

☐ Drilling Fluids

☐ Completion Fluids

☐ Tank Bottoms

☒ Contaminated soil

☐ C-117 No.: _____

☐ Other Material:

☐ BS&W Content: _____

Description: 0.0

VOLUME OF MATERIAL ☐ BBLs. _____ :

☐ YARD 12 :

☐ _____

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

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DRIVER: _____

(SIGNATURE)

FACILITY REPRESENTATIVE: _____

(SIGNATURE)

White-Sundance Canary-Sundance Acct#1 Pink-Sundance Acct#2 Gold-Transporter
Revised 12/27/95

Sundance Services, Inc.

P.O. Box 1737 ★ Eunice, NM 88231
(505) 394-2511

38612

LEASE OPERATOR/SHIPPER/COMPANY: Oil

LEASE NAME: AD. 520 ICF 0-17

TRANSPORTER COMPANY: Det. work

TIME:

AM/PM

DATE: 12-2

VEHICLE NO.: 5

DRIVER NO.:

CHARGE TO: Oil

TYPE OF MATERIAL

52017 7223 A372

- ☐ Production Water
☐ Tank Bottoms
☐ Other Material:

- ☐ Drilling Fluids
☐ Contaminated soil
☐ BS&W Content: _____

- ☐ Completion Fluids
☐ C-117 No.: _____

Description: Oil

VOLUME OF MATERIAL ☐ BBLs. _____ :

☐ YARD 12 :

☐ _____

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DRIVER: _____

(SIGNATURE)

FACILITY REPRESENTATIVE: _____

(SIGNATURE)

White-Sundance Canary-Sundance Acct#1 Pink-Sundance Acct#2 Gold-Transporter
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