

1R - 427 - 66

REPORTS

DATE:

5-17-2002

1RO 427-66

FINAL REPORT

**RICE OPERATING COMPANY
JUNCTION BOX FINAL REPORT**

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
EME	I-20	I	20	21S	36E	LEA	Length 12	Width 10	Depth 5

LAND TYPE: BLM _____ STATE X FEE LANDOWNER _____ OTHER _____

Depth to Groundwater 216 feet NMOCD SITE ASSESSMENT RANKING SCORE: 0

Date Started 4/12/2002 Date Completed 5/7/2002 OCD Witness NO

Soil Excavated 150 cubic yards Excavation Length 20 Width 20 Depth 15 feet

Soil Disposed 24 cubic yards Offsite Facility SUNDANCE Location EUNICE, NM

FINAL ANALYTICAL RESULTS: Sample Date 4/26/2002 Sample Depth 15'

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	92.1	41.1	18
BOTTOM	<0.025	<0.025	0.0443	0.1943	581	414	35

General Description of Remedial Action: Delineated vertical and lateral extent.

Vertical trench demonstrated TPH dropped from 9620 ppm @ 11' to 2000 ppm @ 15' and chloride dropped from 200 ppm @ 9' to 50 ppm @ 15'. Found a hard caliche layer at 11' bgs which impeded the vertical transmissivity of the TPH. High impact soil was removed and hauled to a permitted disposal facility. Installed a compacted clay liner and water proof junction box.

Backfilled with blended soil. Natural attenuation will remediate the remaining hydrocarbon.

TPH field tests were acquired using the 418.1 extraction method which does not distinguish

biodegraded oil products from GRO/DRO. The lab uses Method 8015M which analyzes for

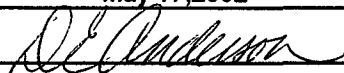
GRO and DRO exclusively which more accurately represents the non-degraded TPH present.

TPH FIELD TESTS (418.1)

LOCATION	DEPTH	mg/kg
SIDEWALLS	14'	403
BOTTOM	15'	1960
Vertical Trench	5'	3320
	7'	6220
	9'	5730
	11'	9620
	13'	1200
	15'	2000
Remediated Pile		1470

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

DATE May 17, 2002 PRINTED NAME D. E. Anderson

SIGNATURE  TITLE Project Leader - Environmental

ANALYTICAL REPORT

Prepared for:

DEREK ROBINSON
RE ENVIRONMENTAL
P.O. BOX 13418
ODESSA, TX 79768

Project: Rice Operating *I-20*

Order#: G0203209

Report Date: 05/03/2002

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#: G0203209
Project:
Project Name: Rice Operating
Location: I-20

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.

<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>
0203209-01	4 Pt. Wall Comp.	SOIL	4/26/02 9:40	4/29/02 8:20	4 oz Glass	ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 18.5C		
	8015M					
	8021B/5030 BTEX					
	Chloride					
0203209-02	5 Pt. Bottom Comp	SOIL	4/26/02 10:00	4/29/02 8:20	4 oz Glass	ice
	<u>Lab Testing:</u>	Rejected: No		Temp: 18.5C		
	8015M					
	8021B/5030 BTEX					
	Chloride					

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

DEREK ROBINSON
RE ENVIRONMENTAL
P.O. BOX 13418
ODESSA, TX 79768

Order#: G0203209
Project:
Project Name: Rice Operating
Location: I-20

Lab ID: 0203209-01
Sample ID: 4 Pt. Wall Comp.

8015M

Method	Date	Date	Sample	Dilution	Analyst	Method
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>		
		4/29/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
DRO, >C12-C35	92.1	10.0
GRO, C6-C12	41.1	10.0
TOTAL, C6-C35	133	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>		
0001480-02		4/29/02 20:23	1	25	CK	8021B

Parameter	Result µg/kg	RL
Benzene	<25.0	25.0
Ethylbenzene	<25.0	25.0
Toluene	<25.0	25.0
p/m-Xylene	<25.0	25.0
o-Xylene	<25.0	25.0

Lab ID: 0203209-02
Sample ID: 5 Pt. Bottom Comp

8015M

Method	Date	Date	Sample	Dilution	Analyst	Method
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>		
		4/29/02	1	5	CK	8015M

Parameter	Result mg/kg	RL
DRO, >C12-C35	581	50.0
GRO, C6-C12	414	50.0
TOTAL, C6-C35	995	50.0

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

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ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

DEREK ROBINSON
RE ENVIRONMENTAL
P.O. BOX 13418
ODESSA, TX 79768

Order#: G0203209
Project:
Project Name: Rice Operating
Location: I-20

Lab ID: 0203209-02
Sample ID: 5 Pt. Bottom Comp

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>		
0001480-02		4/29/02 20:45	1	25	CK	8021B

Parameter	Result µg/kg	RL
Benzene	<25.0	25.0
Ethylbenzene	44.3	25.0
Toluene	<25.0	25.0
p/m-Xylene	162	25.0
o-Xylene	32.3	25.0

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

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

DEREK ROBINSON
RE ENVIRONMENTAL
P.O. BOX 13418
ODESSA, TX 79768

Order#: G0203209
Project:
Project Name: Rice Operating
Location: I-20

Lab ID: 0203209-01
Sample ID: 4 Pt. Wall Comp.

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	18.0	mg/kg	1	10	9253	5/3/02	SB

Lab ID: 0203209-02
Sample ID: 5 Pt. Bottom Comp

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	35.0	mg/kg	1	10	9253	5/3/02	SB

Approval:

Raland K. Tuttle 5-6-02
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

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8015M

Order#: G0203209

BLANK	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0001485-02			<10.0		
CONTROL	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0001485-03		952	915	96.1%	
CONTROL DUP	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0001485-04		952	958	100.6%	4.6%
SRM	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg		0001485-05		1000	918	91.8%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0203209

BLANK	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-μg/kg		0001480-02			<25.0		
Ethylbenzene-μg/kg		0001480-02			<25.0		
Toluene-μg/kg		0001480-02			<25.0		
p/m-Xylene-μg/kg		0001480-02			<25.0		
o-Xylene-μg/kg		0001480-02			<25.0		
MS	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-μg/kg		0203212-07	0	100	108	108.0%	
Ethylbenzene-μg/kg		0203212-07	0	100	112	112.0%	
Toluene-μg/kg		0203212-07	0	100	110	110.0%	
p/m-Xylene-μg/kg		0203212-07	0	200	230	115.0%	
o-Xylene-μg/kg		0203212-07	0	100	112	112.0%	
MSD	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-μg/kg		0203212-07	0	100	109	109.0%	0.9%
Ethylbenzene-μg/kg		0203212-07	0	100	112	112.0%	0.0%
Toluene-μg/kg		0203212-07	0	100	111	111.0%	0.9%
p/m-Xylene-μg/kg		0203212-07	0	200	224	112.0%	2.6%
o-Xylene-μg/kg		0203212-07	0	100	112	112.0%	0.0%
SRM	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-μg/kg		0001480-05		100	112	112.0%	
Ethylbenzene-μg/kg		0001480-05		100	111	111.0%	
Toluene-μg/kg		0001480-05		100	113	113.0%	
p/m-Xylene-μg/kg		0001480-05		200	230	115.0%	
o-Xylene-μg/kg		0001480-05		100	112	112.0%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0203209

BLANK	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0001560-01			<5.00		
MS	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0203206-23	18	500	523	101.0%	
MSD	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0203206-23	18	500	523	101.0%	0.0%
SRM	SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0001560-04		5000	5050	101.0%	

Sundance Services, Inc. P.O. Box 1737 • Eunice, NM 88231 (505) 394-2511		Nº 54279
LEASE OPERATOR/SHIPPER/COMPANY: <u>RICE</u>		
LEASE NAME: <u>ENE SW 1st, I-20</u>		
TRANSPORTER COMPANY: <u>R.E. Hocking</u>		
DATE: <u>4-24-02</u> VEHICLE NO.: <u>#101</u> DRIVER NO.: _____		
CHARGE TO: <u>RICE</u>		
TYPE OF MATERIAL <u>Sr. 20 T215 R36E</u> <u>System ENE SW</u> <u>1st, I-20</u>		
☐ Production Water ☐ Tank Bottoms ☐ Other Material: _____		
Description: <u>cont. Soil</u>		
VOLUME OF MATERIAL [] BBLs : [] YARD <u>12</u> : []		
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: <u>54279</u> (SIGNATURE) <u>54279</u>		
FACILITY REPRESENTATIVE: _____ (SIGNATURE)		
White-Sundance Caury-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		Nº 54263
LEASE OPERATOR/SHIPPER/COMPANY: <u>RICE</u>		
LEASE NAME: <u>ENE SW 1st, I-20</u>		
TRANSPORTER COMPANY: <u>R.E. Hocking</u>		
DATE: <u>4-24-02</u> VEHICLE NO.: <u>#</u> DRIVER NO.: _____		
CHARGE TO: <u>RICE</u>		
TYPE OF MATERIAL <u>Sr. 20 T215 R36E</u> <u>System ENE SW</u> <u>1st, I-20</u>		
☐ Production Water ☐ Tank Bottoms ☐ Other Material: _____		
Description: <u>cont. Soil</u>		
VOLUME OF MATERIAL [] BBLs : [] YARD <u>12</u> : []		
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: <u>54263</u> (SIGNATURE) <u>54263</u>		
FACILITY REPRESENTATIVE: _____ (SIGNATURE)		
White-Sundance Caury-Sundance Acct#1 Pink-Sundance Acct#2 Gold-Transporter Revised 12/27/95		

EME I-20 Jet. Box Upgrade



Old Junction Box



NORM Removal



Remediation (with new plumbing)

EME I-20 Jct. Box Upgrade



Remediation



New Box Construction



Completed Junction Box