1R - 423-04

REPORTS

DATE:

11/26/2002

IR0423-04

FINAL

REPORT

RICE OPERATING COMPANY
JUNCTION BOX FINAL REPORT

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
							Length	Width	Depth
Justis	L-36	L	36	24 S	37 E	Lea	9'	7'	6'

LAND TYPE: BLM _____ STATE _____ FEE LANDOWNER G. Willis OTHER _____

Depth to Groundwater None feet NMOCD SITE ASSESSMENT RANKING SCORE: 0

Date Started 7/18/2002 Date Completed 10/2/2002 OCD Witness No

Soil Excavated 500 cubic yards Excavation Length 30 Width 25 Depth 20' feet

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

FINAL ANALYTICAL RESULTS: **Sample Date** 10/1/2002 **Sample Depth** 20'

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	674
BOTTOM	<0.025	<0.025	<0.025	<0.025	<10.0	523	922
REMEDIATED	<0.025	<0.025	<0.025	<0.025	13.7	634	1560

General Description of Remedial Action: Vertical delineation of jct. L-36 occurred in July and resulted in a field test of 8300 ppm TPH and 2515 ppm chlorides at 15.5' BGS. On 9/10/02 ROC conducted a soil bore during which chloride impact decreased significantly. Red bed clay was encountered at 67'BGS but no groundwater. Lateral delineation was started on 9/26/02. TPH ran out at 10' north, 20' south, 10' west, and 15' east. Chlorides also decreased significantly in these directions. The 30' x 25' area was excavated to 20' BGS which had 1700 ppm TPH. At 20', a 20 mil poly liner was installed to inhibit downward migration of impact. The excavated soil was blended and backfilled resulting in a composite of 1560 ppm chlorides and 648 ppm TPH. The remaining TPH is expected to naturally attenuate. A water-tight junction box has been built at this location.

cc: lab results, bore log, diagram

CHLORIDE FIELD TESTS

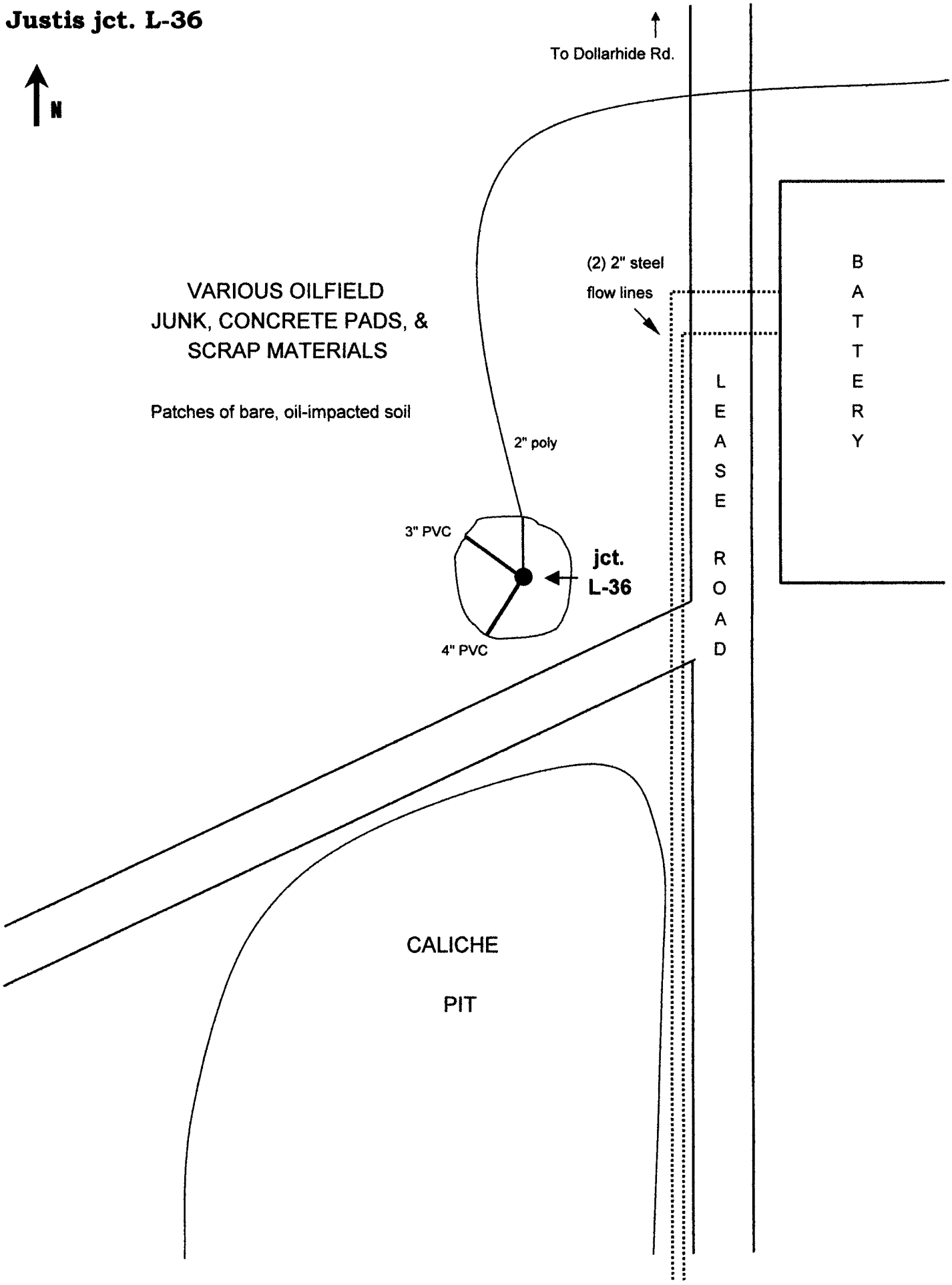
LOCATION	DEPTH	ppm
vertical	4	7850
	15.5	2515
Soil Bore	10	3195
	20	2431
	30	1913
	40	1385
	50	1611
	60	600
	70	343

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

DATE 11-26-02 PRINTED NAME Kristin Farris

SIGNATURE Kristin Farris TITLE Environmental Projects Scientist

Justis jct. L-36



DRILLING LOG	Site Name/Location	BORING/WELL INFORMATION			Logged by: Eades
RICE *Operarting Company*	**L-36**	Well No. SB-1	Date Drilled: 9/10/02	Driller: Eades	Completion:
122 West Taylor	**36-T24S-R37E**	Well Depth:	Boring Depth: 70'	Well Material:	Plugged
Hobbs, New Mexico 88240	**Justis SWD System**	Casing Length	Boring Diameter: 4.75"	Casing Size:	with
(505) 393-9174	**Lea County, NM**	Screen Length:	Drilling Method: Air Rotary	Slot Size:	cuttings.

DEPTH	SUBSURFACE LITHOLOGY	SAMPLE TYPE	Test Results (ppm) Cl^-	TPH	REMARKS	Boring
0	Ground surface		Titrate	EPA 418.1		
	Topsoil					
5	Caliche Sand	Grab	2913			
10	Dry Pink Sand	Grab	3195		cuttings	→
15	Caliche/Dry Pink Sand	Grab	2923			
20	Dry Pink Sand	Grab	2431			
25	Dry Pink Sand	Grab	2062			
30	Dry Pink Sand	Grab	1913			
35	Dry Pink Sand	Grab	1716			
38	Sand and Sandstone Stringers					
40	Sand	Grab	1385			
45	Sand	Grab	1138			
50	Sand	Grab	1611			
55	Sand	Grab	1955			
60	Red Wet Sandy Loam	Grab	600			
61	Sand					
62	Sandstone					
65	Dry Sandstone Layers	Grab	426			
67	Sand and Sandstone Stringers					
70	Sandy Red Clay (3' into Red Bed)	Grab	343			

Justis L-36 junction box upgrade

Old Junction Box

NORM Removal

New Plumbing

Justis L-36 junction box upgrade

↓ 20 mil poly liner @ 20'bgs ↑

New Junction Box

L-36

ANALYTICAL REPORT

Prepared for:

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

Project: Rice

PO#:

Order#: G0204701

Report Date: 10/08/2002

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#: G0204701
Project: None Given
Project Name: Rice
Location: L-36

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.

Lab ID:	Sample :	Matrix:	Date / Time Collected	Date / Time Received	Container	Preservative
0204701-01	Comp. Remediated Pile	SOIL	10/2/02 13:00	10/3/02 8:35	8 oz Bottle	Ice
	Lab Testing:	**Rejected:** No		**Temp:** 11 C		
	8015M					
	8021B/5030 BTEX					
	Chloride					
0204701-02	4 Pt. Wall Comp. @ 18'	SOIL	10/1/02 13:00	10/3/02 8:35	4 oz Bottle	Ice
	Lab Testing:	**Rejected:** No		**Temp:** 11 C		
	8015M					
	8021B/5030 BTEX					
	Chloride					
0204701-03	5 Pt. Bottom Comp. @ 20'	SOIL	10/1/02 13:00	10/3/02 8:35	4 oz Bottle	Ice
	Lab Testing:	**Rejected:** No		**Temp:** 11 C		
	8015M					
	8021B/5030 BTEX					
	Chloride					

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0204701
Project: None Given
Project Name: Rice
Location: L-36

Lab ID: 0204701-01
Sample ID: Comp. Remediated Pile

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		10/3/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	**13.7**	10.0
DRO, >C12-C35	**634**	10.0
TOTAL, C6-C35	**648**	10.0

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003374-02		10/5/02 13:34	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	**88%**	**80**	**120**
Bromofluorobenzene	**96%**	**80**	**120**

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

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

LOGAN ANDERSON		Order#:	G0204701
RE ENVIRONMENTAL		Project:	None Given
P.O. BOX 13418		Project Name:	Rice
ODESSA, TX 79768		Location:	L-36

Lab ID: 0204701-02 18
Sample ID: 4 Pt. Wall Comp. @ ~~16~~'

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		10/4/02	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
0003374-02		10/5/02 13:57	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	**97%**	**80**	**120**

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

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

LOGAN ANDERSON		Order#:	G0204701
RE ENVIRONMENTAL		Project:	None Given
P.O. BOX 13418		Project Name:	Rice
ODESSA, TX 79768		Location:	L-36

Lab ID: 0204701-03
Sample ID: 5 Pt. Bottom Comp. @ 20'

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
		10/4/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	**<10.0**	10.0
DRO, >C12-C35	**523**	10.0
TOTAL, C6-C35	**523**	10.0

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0003374-02		10/5/02 14:19	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	**80%**	**80**	**120**
Bromofluorobenzene	**91%**	**80**	**120**

Approval: Jeanne McMurrey 10-09-02
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.

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

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

LOGAN ANDERSON		Order#:	G0204701
RE ENVIRONMENTAL		Project:	None Given
P.O. BOX 13418		Project Name:	Rice
ODESSA, TX 79768		Location:	L-36

Lab ID: 0204701-01
Sample ID: Comp. Remediated Pile

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	1560	mg/kg	1	20	9253	10/4/02	SB

Lab ID: 0204701-02
Sample ID: 4 Pt. Wall Comp. @ ~~15~~ 18

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	674	mg/kg	1	20	9253	10/4/02	SB

Lab ID: 0204701-03
Sample ID: 5 Pt. Bottom Comp. @ ~~18~~ 20

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	922	mg/kg	1	20	9253	10/4/02	SB

Approval: Jeanne McMurrey 10-09-02
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.

RL = Reporting Limit N/A = Not Applicable

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#: G0204701

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0003335-02			<10.0		
TOTAL, C6-C35-mg/kg	0003338-02			<10.0		
CONTROL SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
TOTAL, C6-C35-mg/kg	0003335-03		952	1010	106.1%	
TOTAL, C6-C35-mg/kg	0003338-03		952	863	90.7%	
CONTROL DUP SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
TOTAL, C6-C35-mg/kg	0003335-04		952	1020	107.1%	1.%
TOTAL, C6-C35-mg/kg	0003338-04		952	862	90.5%	0.1%
SRM SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
TOTAL, C6-C35-mg/kg	0003335-05		1000	815	81.5%	
TOTAL, C6-C35-mg/kg	0003338-05		1000	790	79.%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0204701

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg	0003374-02			<0.025		
Ethylbenzene-mg/kg	0003374-02			<0.025		
Toluene-mg/kg	0003374-02			<0.025		
p/m-Xylene-mg/kg	0003374-02			<0.025		
o-Xylene-mg/kg	0003374-02			<0.025		
MS SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Benzene-mg/kg	0204712-01	0	0.1	0.088	88.%	
Ethylbenzene-mg/kg	0204712-01	0	0.1	0.091	91.%	
Toluene-mg/kg	0204712-01	0	0.1	0.090	90.%	
p/m-Xylene-mg/kg	0204712-01	0	0.2	0.194	97.%	
o-Xylene-mg/kg	0204712-01	0	0.1	0.091	91.%	
MSD SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Benzene-mg/kg	0204712-01	0	0.1	0.097	97.%	9.7%
Ethylbenzene-mg/kg	0204712-01	0	0.1	0.100	100.%	9.4%
Toluene-mg/kg	0204712-01	0	0.1	0.099	99.%	9.5%
p/m-Xylene-mg/kg	0204712-01	0	0.2	0.212	106.%	8.9%
o-Xylene-mg/kg	0204712-01	0	0.1	0.100	100.%	9.4%
SRM SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Benzene-mg/kg	0003374-05		0.1	0.088	88.%	
Ethylbenzene-mg/kg	0003374-05		0.1	0.093	93.%	
Toluene-mg/kg	0003374-05		0.1	0.091	91.%	
p/m-Xylene-mg/kg	0003374-05		0.2	0.198	99.%	
o-Xylene-mg/kg	0003374-05		0.1	0.094	94.%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0204701

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg	0003348-01			<20.0		
MS SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/kg	0204701-01	1560	1000	2550	99.%	
MSD SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/kg	0204701-01	1560	1000	2540	98.%	0.4%
SRM SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/kg	0003348-04		5000	4960	99.2%	

Environmental Lab of Texas I, Ltd.

12600 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Logan Anderson
Company Name: RE
Company Address:
City/State/Zip:
Telephone No: Fax No:
Sampler Signature:

Project Name: Rice
Project #:
Project Loc: L-36
PO #:

0204701

LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO_3	HCl	NaOH	H_2SO_4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TCLP: TPH: 418.1 / 8015M / 1005 / 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, CO3, HCO3)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030	RCI	N.O.R.M.	Total Gamma	RUSH TAT (Pre-Schedule)	Standard TAT
01	Comp. Remediated Pile	10-02-02	1:00P	1	X									X		X		X					X					
02	4Pt. Wall Comp. @ 4'	10-1-02	1:00P	1	X									X		X		X					X					
03	5pt. Bottom Comp. @ 8'-20	10-1-02	1:00P	1	X									X		X		X					X					

Special Instructions

Sample Containers Intact? Y N
Temperature Upon Receipt: 1°C
Laboratory Comments: 1/8oz 2/4oz GLASS

Relinquished by:	Date	Time	Received by:	Date	Time
Logan Anderson	10-3-02	8:00A			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Laurell Candill	~~8-3~~ 10-3-02	8:35