1R - 427 - 7L

REPORTS

DATE:

10-4-2002

IR0427-71

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
EME	G-36A	G	36	19 S	36 E	Lea	0	0	No Box

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

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

Date Started 4/12/2002 Date Completed 8/6/2002 OCD Witness No

Soil Excavated 775 cubic yards Excavation Length 52 Width 32 Depth 16 feet

Soil Disposed 0 cubic yards Offsite Facility N/A Location N/A

FINAL ANALYTICAL RESULTS: **Sample Date** 8/6/2002 **Sample Depth** 16 ft

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	<10	753
BOTTOM	<0.025	<0.025	0.029	<0.12	567	911	709
REMEDIATED	<0.005	<0.005	<0.005	<0.015	<10	205	432

General Description of Remedial Action: A cemented rock layer occurred below the location at 2-8 ft BGS. The rock that was visibly impacted with hydrocarbons was removed. Impact continued vertically directly below the old vent with a field test of 16,330 ppm TPH at 16', however, a bottom composite of the excavation at this depth revealed 1478 ppm. Chloride impact was minimal throughout except at 16' when impact consistently ranged 1000-1500 ppm. A background sample at 16' tested 1010 ppm which suggests that there is a natural occurrence of high chlorides at this depth. A 42' x 32' area was excavated to 16' BGS and on the north side a shelf was excavated to 8' to completely remove hydrocarbons from the rock. A poly liner was installed at 16' BGS to prevent impact migration. The excavated soil was landfarmed on location and then backfilled. The surface is expected to resume growth at a normal rate. Based on local boring results by Amerada Hess in 1992, ROC concludes that there is no groundwater at this location. A junction box is not required.

cc: lab results, 2 diagrams.

CHLORIDE FIELD TESTS

LOCATION	DEPTH	ppm
Vertical	3'	300
	9'	214
	16'	1200
17'W	4'	89
	16'	1286
10'E	8'	189
	16'	1491
18' S	8'	659
	16'	1194
background	16'	1010

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

DATE 10-4-02 PRINTED NAME Kristin Farris

SIGNATURE Kristin Farris TITLE Environmental Projects Scientist

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
RICE OPERATING CO.
ATTN: KRISTIN FARRIS
122 W. TAYLOR
HOBBS, NM 88240
FAX TO: (505) 397-1471

Receiving Date: 08/07/02
Reporting Date: 08/09/02
Project Number: 716
Project Name: BACKFILL COMPOSITE
Project Location: G-36A

Sampling Date: 08/07/02
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: BC/HM

LAB NUMBER	SAMPLE ID	GRO (C_6-C_{10}) (mg/Kg)	DRO (>C_{10}-C_{28}) (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE		08/08/02	08/08/02	08/07/02
H6940-1	G-36A BACKFILL	<10.0	205	432
Quality Control		812	788	910
True Value QC		800	800	1000
% Recovery		102	98.5	91.0
Relative Percent Difference		0.6	4.2	9.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; Cl^-: Std. Methods 4500-Cl^-B
*Analysis performed on a 1:4 w:v aqueous extract.

RECEIVED
AUG 13 2002
RICE OPERATING
HOBBS, NM

Chemist

8/9/02
Date

H6940A.XLS

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
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ATTN: KRISTIN FARRIS
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FAX TO: (505) 397-1471

Receiving Date: 08/07/02
Reporting Date: 08/08/02
Project Number: 716
Project Name: BACKFILL COMPOSITE
Project Location: G-36A

Sampling Date: 08/07/02
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: BC

LAB NUMBER	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE		08/07/02	08/07/02	08/07/02	08/07/02
H6940-1	G-36A BACKFILL	<0.005	<0.005	<0.005	<0.015
Quality Control		0.107	0.102	0.104	0.300
True Value QC		0.100	0.100	0.100	0.300
% Recovery		107	102	104	100
Relative Percent Difference		4.9	5.7	9.2	3.9

METHOD: EPA SW-846 8260

RECEIVED
AUG 13 2002
RICE OPERATING
HOBBS, NM

Chemist

8/9/02
Date

H6940B.XLS

CARDINAL LABORATORIES, INC.

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2111 Beechwood, Abilene, TX 79603 (915) 673-7001 Fax (915) 673-7020
101 East Marland, Hobbs, NM 88240 (505) 393-2326 Fax (505) 393-2476

Page ____ of ____

Company Name:	Rice Operating	BILL TO	
Project Manager:	Kristin Farris	P.O. #:	716
Address:	122 W. Taylor	Company:	ROC
City:	Hobbs State: NM Zip: 88240	Attn:	
Phone #:	393-9174 Fax #: 397-1471	Address:	
Project #:	716 Project Owner:	City:	
Project Name:	Backfill Composite	State: Zip:	
Project Location:	G-36A	Phone #:	
Sampler Name:	K. Farris	Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX	Cl-	8015M DRO, GRO
H6940-1	G-36A backfill	X	1			X					X		8-7-02	9:00am	X	X	X

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 the client for the 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 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.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished: K. Farris	Date: 8-7-02 Time: 11:30am	Received By:	Phone Result: ☐ Yes ☐ No
Relinquished By:	Date: 08/07/2002 Time: 11:30A	Received By: (Lab Staff)	Fax Result: ☐ Yes ☐ No REMARKS:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition Temp, °C: Intact? ☒ Yes ☐ No	Checked By: (Initials)	

† Cardinal cannot accept verbal changes. Please fax written changes to (915) 673-7020.

EME G-36A

Wall + Bottom Comp.

ANALYTICAL REPORT

Prepared for:

Kristin Farris
Rice Operating
122 W. Taylor
Hobbs, NM 88240

Project:	Rice Operating
PO#:	
Order#:	G0204133
Report Date:	08/13/2002

Certificates
US EPA Laboratory Code TX00158

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

Rice Operating
122 W. Taylor
Hobbs, NM 88240
505-397-1471

Order#: G0204133
Project:
Project Name: Rice Operating
Location: G-36A

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
0204133-01	4 pt Wall Comp. @ 15'	SOIL	8/6/02 11:30	8/6/02 16:55	4 oz glass	Ice
	Lab Testing:	**Rejected:** No		**Temp:** 4.0 C		
	8015M					
	8021B/5030 BTEX					
	Chloride					
0204133-02	5 pt Bottom Comp. @ 16'	SOIL	8/6/02 11:30	8/6/02 16:55	4 oz glass	Ice
	Lab Testing:	**Rejected:** No		**Temp:** 4.0 C		
	8015M					
	8021B/5030 BTEX					
	Chloride					

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Kristin Farris
Rice Operating
122 W. Taylor
Hobbs, NM 88240

Order#: G0204133
Project:
Project Name: Rice Operating
Location: G-36A

Lab ID: 0204133-01
Sample ID: 4 pt Wall Comp. @ 15'

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
	8/7/02	8/7/02	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
0002755-02		8/8/02 15:39	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

Lab ID: 0204133-02
Sample ID: 5 pt Bottom Comp. @ 16'

8015M

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
	8/7/02	8/7/02	1	1	CK	8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	567	10.0
DRO, >C12-C35	911	10.0
TOTAL, C6-C35	1,478	10.0

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

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Kristin Farris		Order#:	G0204133
Rice Operating		Project:	
122 W. Taylor		Project Name:	Rice Operating
Hobbs, NM 88240		Location:	G-36A

Lab ID: 0204133-02
Sample ID: 5 pt Bottom Comp. @ 16'

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0002755-02		8/8/02 16:01	1	25	CK	8021B

Parameter	Result mg/kg	RL
Benzene	**<0.025**	0.025
Ethylbenzene	**0.029**	0.025
Toluene	**<0.025**	0.025
p/m-Xylene	**0.095**	0.025
o-Xylene	**<0.025**	0.025

Approval: Celey D. Keene 8/16/02
Date

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.

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

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

Kristin Farris		**Order#:**	**G0204133**
Rice Operating		**Project:**	
122 W. Taylor		**Project Name:**	**Rice Operating**
Hobbs, NM 88240		**Location:**	**G-36A**

Lab ID: 0204133-01
Sample ID: 4 pt Wall Comp. @ 15'

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	753	mg/kg	2	20.0	9253	8/13/02	CK

Lab ID: 0204133-02
Sample ID: 5 pt Bottom Comp. @ 16'

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Chloride	709	mg/kg	2	20.0	9253	8/13/02	CK

Approval: Celey D. Keene 8/16/02
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#: G0204133

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0002738-02			<10.0		
CONTROL SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0002738-03		1000	1070	107.%	
CONTROL DUP SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0002738-04		1000	1060	106.%	0.9%
SRM SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0002738-05		1000	998	99.8%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0204133

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg	0002755-02			<0.025		
Ethylbenzene-mg/kg	0002755-02			<0.025		
Toluene-mg/kg	0002755-02			<0.025		
p/m-Xylene-mg/kg	0002755-02			<0.025		
o-Xylene-mg/kg	0002755-02			<0.025		
MS SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg	0204146-09	0	0.1	0.085	85.%	
Ethylbenzene-mg/kg	0204146-09	0	0.1	0.090	90.%	
Toluene-mg/kg	0204146-09	0	0.1	0.089	89.%	
p/m-Xylene-mg/kg	0204146-09	0	0.2	0.185	92.5%	
o-Xylene-mg/kg	0204146-09	0	0.1	0.089	89.%	
MSD SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg	0204146-09	0	0.1	0.088	88.%	3.5%
Ethylbenzene-mg/kg	0204146-09	0	0.1	0.092	92.%	2.2%
Toluene-mg/kg	0204146-09	0	0.1	0.091	91.%	2.2%
p/m-Xylene-mg/kg	0204146-09	0	0.2	0.191	95.5%	3.2%
o-Xylene-mg/kg	0204146-09	0	0.1	0.093	93.%	4.4%
SRM SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/kg	0002755-05		0.1	0.086	86.%	
Ethylbenzene-mg/kg	0002755-05		0.1	0.090	90.%	
Toluene-mg/kg	0002755-05		0.1	0.090	90.%	
p/m-Xylene-mg/kg	0002755-05		0.2	0.186	93.%	
o-Xylene-mg/kg	0002755-05		0.1	0.090	90.%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0204133

BLANK SOIL	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg	0002792-01			<20.0		
MS SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/kg	0204133-01	753	833	1566	97.6%	
MSD SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/kg	0204133-01	753	833	1625	104.7%	3.7%
SRM SOIL	**LAB-ID #**	**Sample Concentr.**	**Spike Concentr.**	**QC Test Result**	**Pct (%) Recovery**	**RPD**
Chloride-mg/kg	0002792-04		5000	4870	97.4%	

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: ~~Durk Robinson~~ / Kristen Farris
Company Name: ~~ELT Environmental~~ / Rice
Company Address:
City/State/Zip:
Telephone No:
Fax No:
Sampler Signature: Durk Robinson
also fax RE

Project Name: Rice Operating
Project #:
Project Loc: G-36A
PO #:

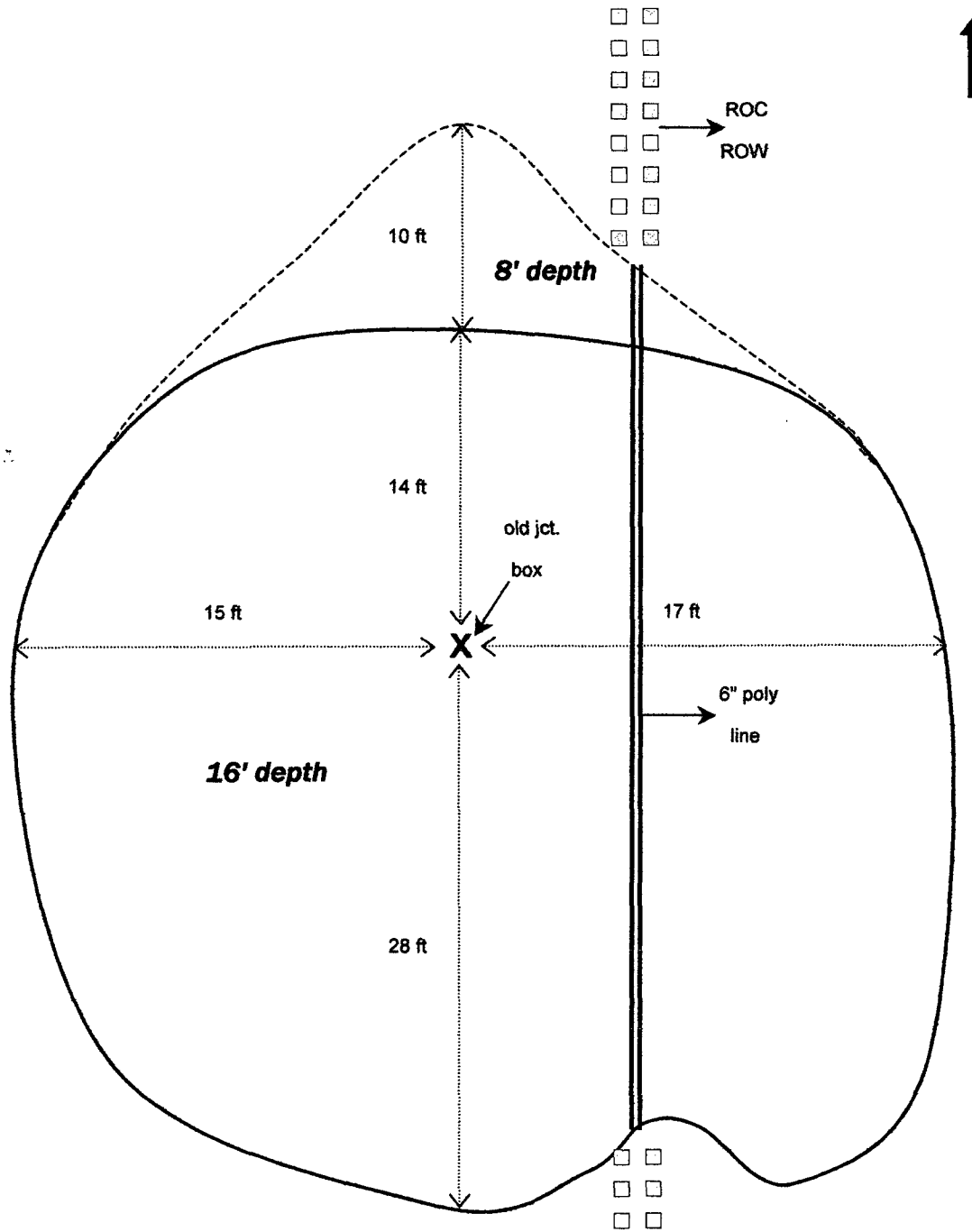
LAB # (lab use only)	FIELD CODE	Date Sampled	Time Sampled	No. of Containers	Preservative: Ice	HNO_3	HCl	NaOH	H_2SO_4	None	Other (Specify)	Matrix: Water	Sludge	Soil	Other (specify):	Analyze For: TCLP: TPH: 418.1 (8015M) 1005 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO_4, CO_3, HCO_3)	SAR / ESP / CEC	Metals: 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
0204133 01	4PT Wall Comp. @ 15'	8-6-02	11:30 AM	1	/									/		/		/					/					
02	5PT Bottom Comp. @ 16	8-6-02	11:30 AM	1	/									/		/		/					/					

Special Instructions

Sample Containers Intact? (Y) N
Temperature Upon Receipt:
Laboratory Comments: 4.0°C

Relinquished by:	Date	Time	Received by:	Date	Time
Durk Robinson	8/6/02	4:55pm			
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Jane McKinney	8-6-02	1655

EME G-36A



VEGETATION

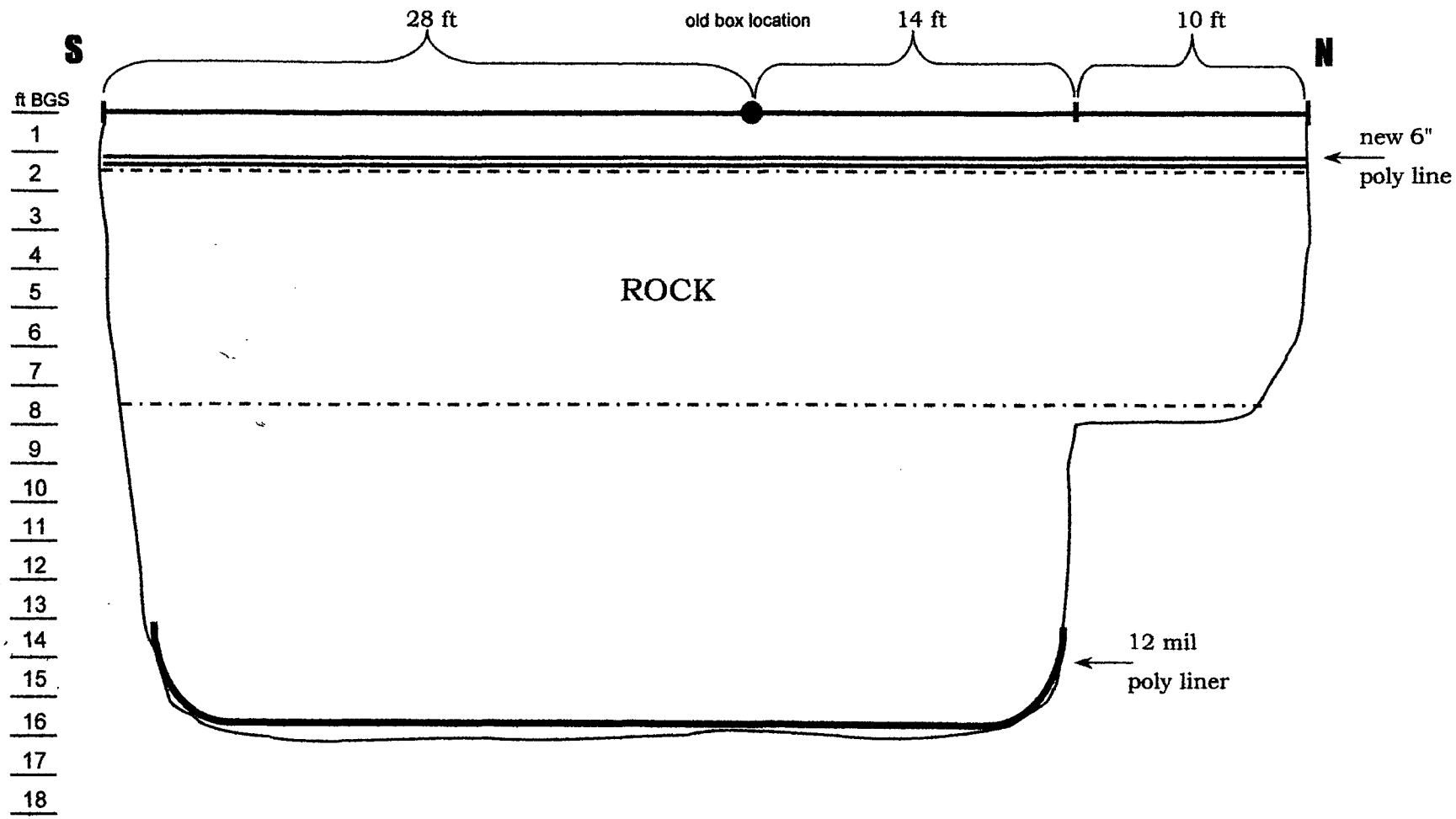
ROAD

X

background sample

(50' WSW)

EME G-36A


28 ft
old box location
14 ft
10 ft
S
N
ft BGS
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
new 6"
poly line
ROCK
12 mil
poly liner

Before Remediation

Impact Excavation

Installing Poly Liner

Backfilled


CAUTION
POLY LINER AT
16 FT BELOW GROUND
RICE OPERATING COMPANY
(505) 393-9174