

1R - 427-409

REPORTS

DATE:

3-15-13

1R427-409

RECEIVED

APR 2 2013

Oil Conservation Division
3220 S. St. Francis Drive
San Francisco, CA 94134

EME K-30 EOL

2012

DISCLOSURE

RECEIVED

RICE OPERATING COMPANY JUNCTION BOX DISCLOSURE* REPORT

APR 2 2013

Oil Conservation Division

1220 S. St. Francis Drive

BOX LOCATION							BOX-DIMENSIONS- FEET		
SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	Length	Width	Depth
Eunice Monument Eumont (EME)	K-30 EOL	K	30	19S	37E	Lea			Eliminated

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

Depth to Groundwater 37 feet NMOCD SITE ASSESSMENT RANKING SCORE: 40*

Date Started 8/14/2012 Date Completed 9/14/2012 OCD Witness No

Soil Excavated 400.0 cubic yards Excavation Length 30 Width 30 Depth 12 feet

Soil Disposed 576 cubic yards Offsite Facility Sundance Services, Inc. Location Eunice, NM

FINAL ANALYTICAL RESULTS: Sample Date 8/20/2012, 8/23/2012 Sample Depth 12'
Procure 5-point composite sample of bottom and 4-point composite sample of sidewalls. TPH and Chloride laboratory test results completed by using an approved lab and testing procedures pursuant to NMOCD guidelines.

Sample Location	PID (field) ppm	GRO mg/kg	DRO mg/kg	Chloride mg/kg
4-WALL COMP.		<10.0	17.4	960
BOTTOM COMP.		<10.0	<10.0	208
BLENDED BACKFILL		<10.0	<10.0	1170

CHLORIDE FIELD TESTS		
LOCATION	DEPTH	mg/kg
background	6"	111
4-WALL Comp	n/a	721
Bottom Comp	12'	305
Vertical delineation trench at 5' N of the former junction (source)	2'	750
	4'	894
	6'	1584
	8'	1232
	10'	1236
	12'	1315

General Description of Remedial Action: This junction box and line were eliminated during the pipeline replacement/upgrade program. After the former junction box was removed, an investigation was conducted using a backhoe to collect soil samples at regular intervals, producing a 30 x 30 x 12 ft deep excavation. Chloride field tests performed on soil samples did not decrease with depth. The excavated soil was blended on site and representative composite samples of the excavation bottom, the excavation walls, and the blended backfill were sent to a commercial laboratory for analysis of chloride and TPH. A total of analysis of chloride and TPH. All of the 576 yards of blended backfill was transported to a NMOCD approved disposal facility. On to a NMOCD approved disposal facility. On 9/11/2012, a 20-mil reinforced plastic liner was installed at 12 ft. BGS. The remaining excavation was backfilled with clean imported soil to ground surface and contoured to the surrounding area. NMOCD was notified of potential groundwater impact on 1/30/2013.

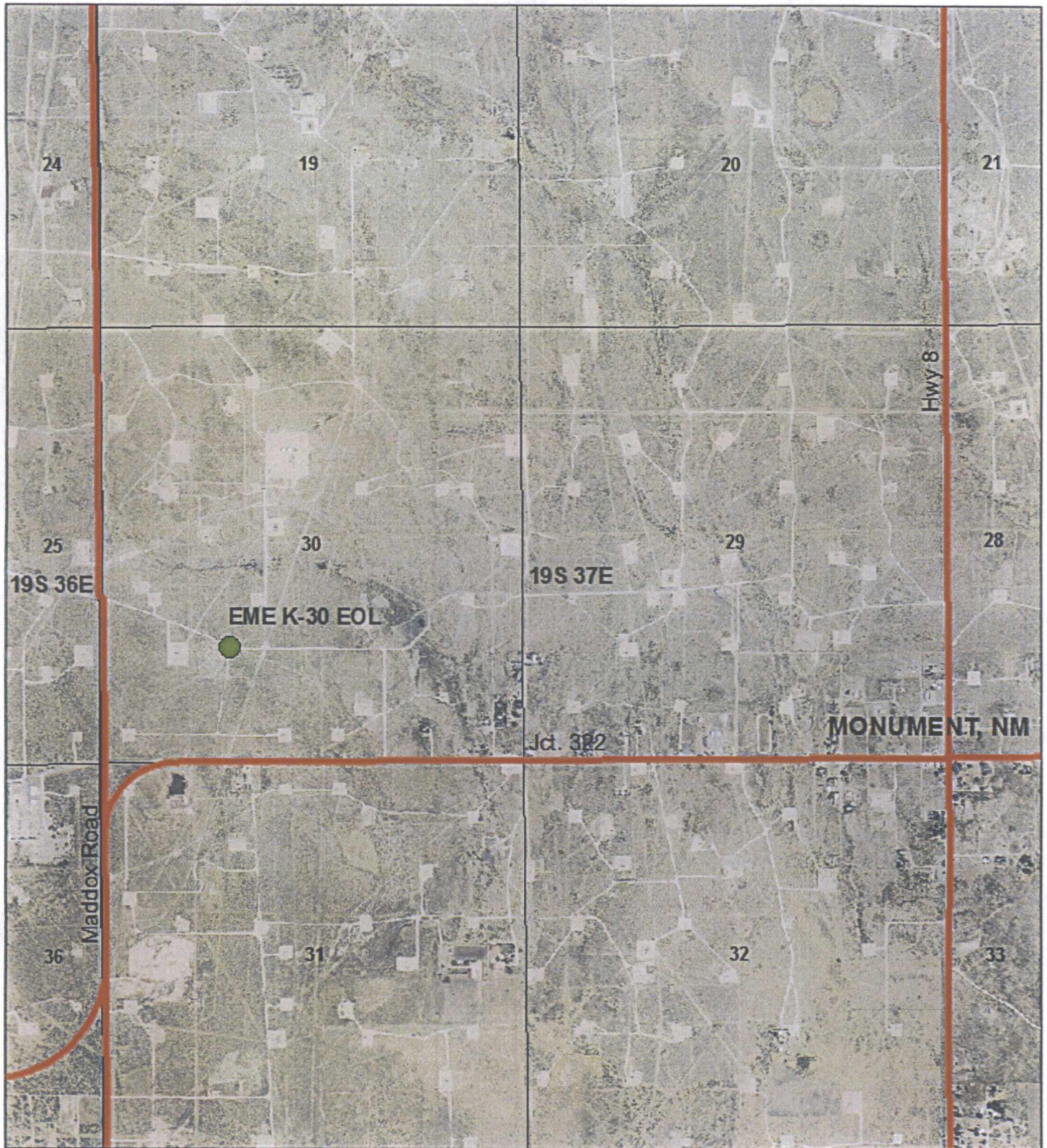
ADDITIONAL EVALUATION IS HIGH PRIORITY

*Windmill located 965 ft east from junction box.

Enclosures: site location map, photos, laboratory analysis, cross-section diagram, chloride graph

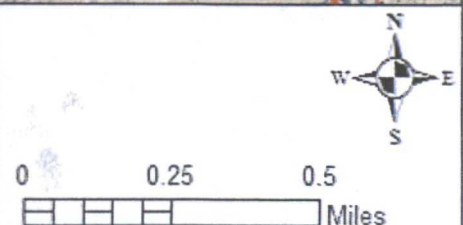
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REPORT ASSEMBLED BY Laura Peña SIGNATURE Laura Peña COMPANY Rice Operating
SITE SUPERVISOR Dustin Yarbrough SIGNATURE Not Available COMPANY Rice Environmental Consulting & Safety
PROJECT LEADER Zach Conder SIGNATURE Zach Conder DATE 3-15-13
*This site is a "DISCLOSURE." It will be placed on a prioritized list of similar sites for further consideration.



EME K-30 EOL

UL/K SECTION 30
T-19-S R-37-E
LEA COUNTY, NM



Drawing date: 11/7/12
Drafted by: Tony Grieco

EME K-30 EOL

UL/K Sec. 30 (T19S-R37E)



Excavating site

8/15/2012



Collecting sample

8/23/2012



Exporting soil

8/29/2012



Installed 30'x30' liner @ 12' bgs

9/11/2012



Backfilling site

9/11/2012



Importing soil

9/14/2012



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

August 23, 2012

ZACH CONDER

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: EME K-30 EOL

Enclosed are the results of analyses for samples received by the laboratory on 08/20/12 16:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

COPY



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Rice Operating Company
ZACH CONDER
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received: 08/20/2012
Reported: 08/23/2012
Project Name: EME K-30 EOL
Project Number: NONE GIVEN
Project Location: NONE GIVEN

Sampling Date: 08/20/2012
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: 8 PT BLENDED BACKFILL (H201965-01)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1170	16.0	08/22/2012	ND	400	100	400	0.00	
TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/23/2012	ND	200	100	200	4.43	
DRO >C10-C28	<10.0	10.0	08/23/2012	ND	198	99.0	200	4.04	

Surrogate: 1-Chlorooctane 79.6 % 65.2-140

Surrogate: 1-Chlorooctadecane 85.2 % 63.6-154

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Cardinal Laboratories

*=Accredited Analyte

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 the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

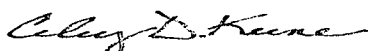
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: RICE Operating				BILL TO												ANALYSIS REQUEST											
Project Manager: Zach Conder				P.O. #:				<div style="display: flex; flex-direction: column; align-items: center;"> <div>Chlorides</div> <div>TPH 8015 M</div> <div>BTEX</div> <div>Texas TPH</div> <div>Complete Cations/Anions</div> <div>TDS</div> </div>																			
Address: 112 W. Taylor				Company:																							
City: Hobbs State: NM Zip: 88240				Attn:																							
Phone #: Fax #:				Address:																							
Project #: Project Owner:				City:																							
Project Name:				State: Zip:																							
Project Location: EME K-32 EOL				Phone #:																							
Sampler Name: Dusty Z. Younsworth				Fax #:																							
FOR LAB USE ONLY																											
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS														MATRIX		PRESERV.		SAMPLING			
								GROUNDWATER																			
								WASTEWATER																			
								SOIL																			
								OIL																			
								SLUDGE																			
								OTHER:																			
								ACID/BASE:																			
								ICE / COOL																			
								OTHER:																			
												DATE		TIME													
4201965		817 Blended Backfill CB		1								8-20-12		1:00P													

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.

Relinquished By:		Date: 8-20-12		Received By:		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Phone #:	
Time: 4:15P						Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Fax #:	
Relinquished By:		Date:		Received By:		REMARKS: email results Zconder@rice-ecs.com; Bbaker@rice-ecs.com; hconder@rice-ecs.com; Lweinheimer@rice-ecs.com; kjones@riceswd.com; @rice-ecs.com			
Time:									
Delivered By: (Circle One)				Sample Condition		CHECKED BY:			
Sampler - UPS - Bus - Other:				Cool Intact		(Initials)			
				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					

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

#26



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

August 30, 2012

ZACH CONDER

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: EME K-30 EOL

Enclosed are the results of analyses for samples received by the laboratory on 08/24/12 14:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

COPY



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Rice Operating Company
ZACH CONDER
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received: 08/24/2012
Reported: 08/30/2012
Project Name: EME K-30 EOL
Project Number: NONE GIVEN
Project Location: NONE GIVEN

Sampling Date: 08/23/2012
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: 4 WALL COMP (H202033-01)

Chloride, SM4500CI-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	960	16.0	08/28/2012	ND	416	104	400	3.92	
TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/29/2012	ND	201	100	200	0.929	
DRO >C10-C28	17.4	10.0	08/29/2012	ND	204	102	200	0.300	

Surrogate: 1-Chlorooctane 66.8 % 65.2-140

Surrogate: 1-Chlorooctadecane 81.2 % 63.6-154

Sample ID: 5 PT BTTM COMP (H202033-02)

Chloride, SM4500CI-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	08/28/2012	ND	416	104	400	3.92	
TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/29/2012	ND	201	100	200	0.929	
DRO >C10-C28	<10.0	10.0	08/29/2012	ND	204	102	200	0.300	

Surrogate: 1-Chlorooctane 78.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 94.9 % 63.6-154

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Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

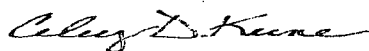
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Cardinal Laboratories

*=Accredited Analyte

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: RICE Operating				BILL TO				ANALYSIS REQUEST																		
Project Manager: Zach Conder				P.O. #:				<div style="display: flex; flex-direction: column; align-items: center;"> <div>Chlorides</div> <div>TPH 8015 M</div> <div>BTEX</div> <div>Texas TPH</div> <div>Complete Cations/Anions</div> <div>TDS</div> </div>																		
Address: 112 W. Taylor				Company:																						
City: Hobbs State: NM Zip: 88240				Attn:																						
Phone #: Fax #:				Address:																						
Project #: Project Owner:				City:																						
Project Name: EME K-3D EOL 19.37				State: Zip:																						
Project Location:				Phone #:																						
Sampler Name:				Fax #:																						
FOR LAB USE ONLY						MATRIX		PRESERV.		SAMPLING																
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE	TIME												
#202033	14 Wall Comp.	C	1										8/23/12	1:45P												
	25PT. Bottom Comp.	C	1										8/23/12	1:50P												

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 analysis. 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.

Relinquished By:	Date: 8/23/12	Received By:	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
<i>[Signature]</i>	Time: 5:00P	<i>[Signature]</i>	Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date: 8-24-12	Received By:	REMARKS:	
<i>[Signature]</i>	Time: 1425	Jodi Henson	email results	
Delivered By: (Circle One)		Sample Condition	Zconder@rice-ecs.com; Bbaker@rice-ecs.com;	
Sampler - UPS - Bus - Other:		Cool Intact	hconder@rice-ecs.com; Lweinheimer@rice-ecs.com;	
		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	kjones@riceswd.com; dwyarbrough@rice-ecs.com	
		<input type="checkbox"/> No <input type="checkbox"/> No		
		CHECKED BY: (Initials)		

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

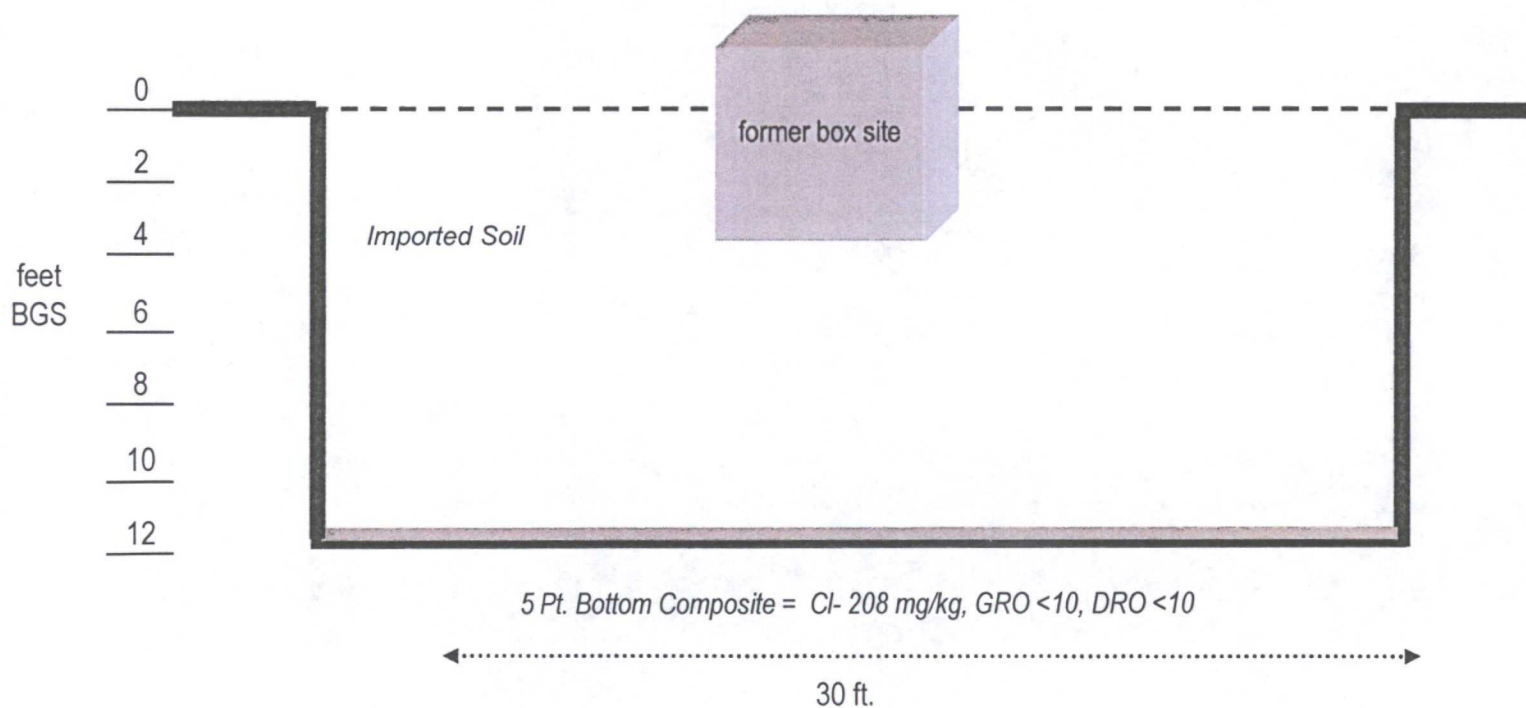
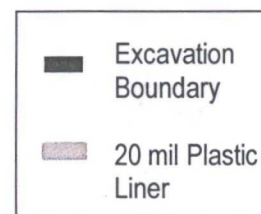
#26

EME K-30 EOL
Unit 'K', Sec. 30, T19S, R37E

Excavation Cross-Section

N

S



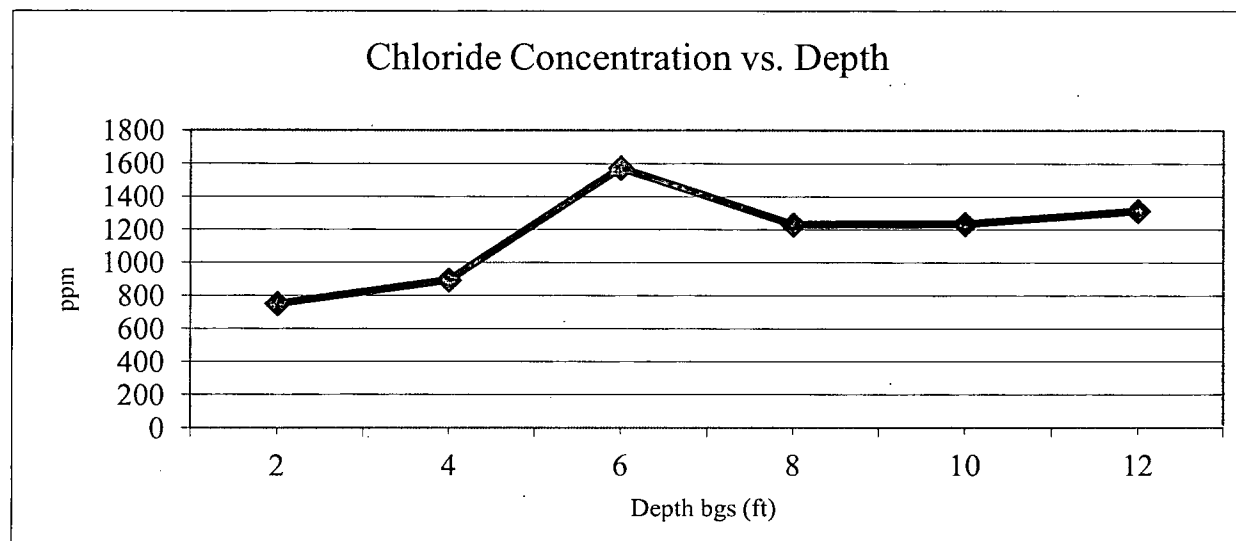
EME K-30 EOL

Unit 'K', Sec. 30, T19S, R37E

Backhoe samples at 5' N of the junction (source)

Depth bgs (ft)	[Cl ⁻] ppm
2	750
4	894
6	1574
8	1232
10	1236
12	1315

Groundwater = 37 ft



**RICE OPERATING COMPANY
JUNCTION BOX DISCLOSURE* REPORT**

BOX LOCATION

SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DIMENSIONS - FEET		
Eunice Monument Eumont (EME)	K-30 EOL	K	30	19S	37E	Lea	Length	Width	Depth
							Eliminated		

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

Depth to Groundwater 37 feet NMOCD SITE ASSESSMENT RANKING SCORE: 40*

Date Started 8/14/2012 Date Completed 9/14/2012 OCD Witness No

Soil Excavated 400.0 cubic yards Excavation Length 30 Width 30 Depth 12 feet

Soil Disposed 576 cubic yards Offsite Facility Sundance Services, Inc. Location Eunice, NM

FINAL ANALYTICAL RESULTS: Sample Date 8/20/2012, 8/23/2012 Sample Depth 12'
Procure 5-point composite sample of bottom and 4-point composite sample of sidewalls. TPH and Chloride laboratory test results completed by using an approved lab and testing procedures pursuant to NMOCD guidelines.

Sample Location	PID (field) ppm	GRO mg/kg	DRO mg/kg	Chloride mg/kg
4-WALL COMP.		<10.0	17.4	960
BOTTOM COMP.		<10.0	<10.0	208
BLENDED BACKFILL		<10.0	<10.0	1170

CHLORIDE FIELD TESTS		
LOCATION	DEPTH	mg/kg
background	6"	111
4-WALL Comp	n/a	721
Bottom Comp	12'	305
Vertical delineation trench at 5' N of the former junction (source)	2'	750
	4'	894
	6'	1584
	8'	1232
	10'	1236
	12'	1315

General Description of Remedial Action: This junction box and line were eliminated during the pipeline replacement/upgrade program. After the former junction box was removed, an investigation was conducted using a backhoe to collect soil samples at regular intervals, producing a 30 x 30 x 12 ft deep excavation. Chloride field tests performed on soil samples did not decrease with depth. The excavated soil was blended on site and representative composite samples of the excavation bottom, the excavation walls, and the blended backfill were sent to a commercial laboratory for analysis of chloride and TPH. A total of analysis of chloride and TPH. All of the 576 yards of blended backfill was transported to a NMOCD approved disposal facility. On to a NMOCD approved disposal facility. On 9/11/2012, a 20-mil reinforced plastic liner was installed at 12 ft. BGS. The remaining excavation was backfilled with clean imported soil to ground surface and contoured to the surrounding area. NMOCD was notified of potential groundwater impact on 1/30/2013.

ADDITIONAL EVALUATION IS HIGH PRIORITY

*Windmill located 965 ft east from junction box.

Enclosures: site location map, photos, laboratory analysis, cross-section diagram, chloride graph

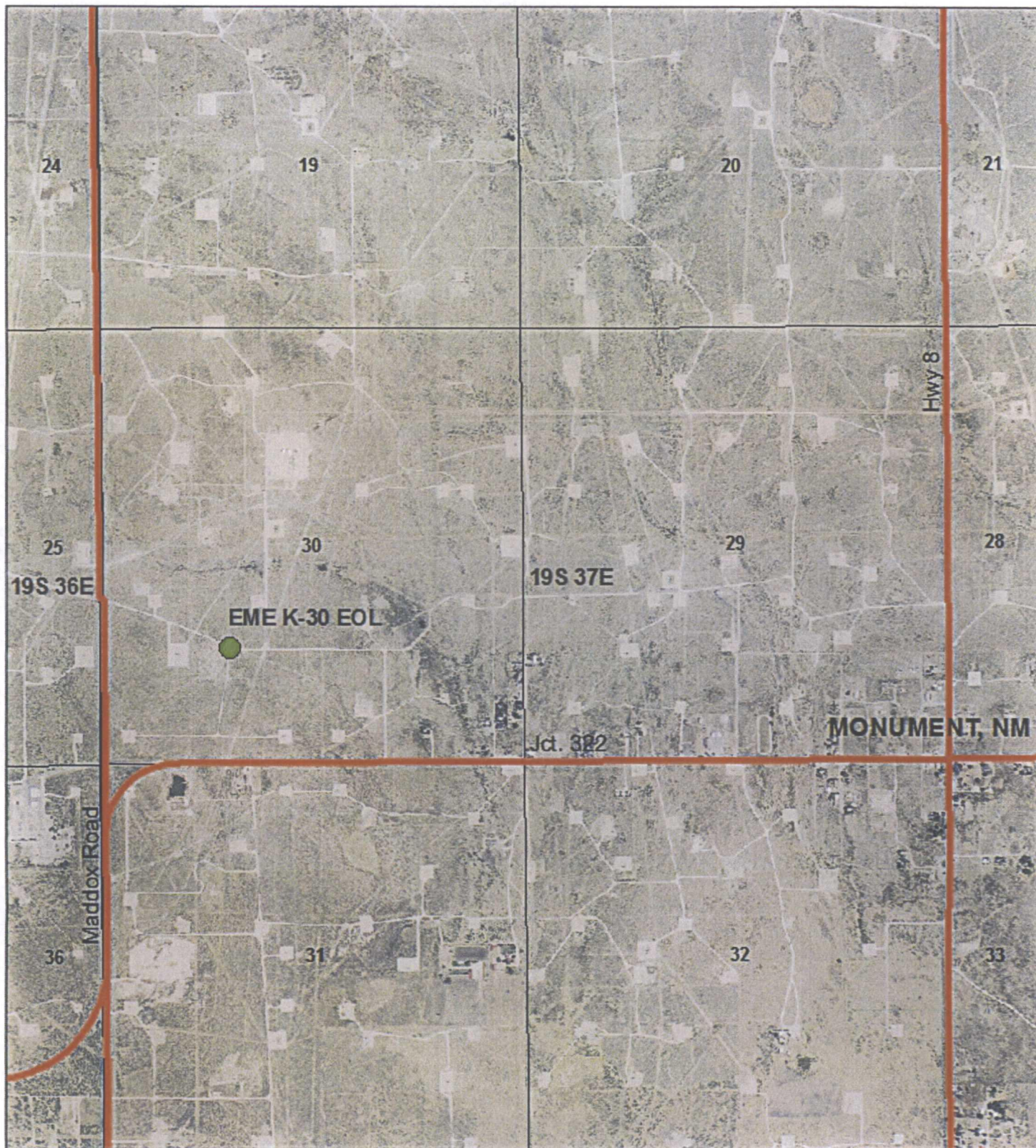
I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REPORT ASSEMBLED BY Laura Peña SIGNATURE *Laura Peña* COMPANY Rice Operating

SITE SUPERVISOR Dustin Yarbrough SIGNATURE Not Available COMPANY Rice Environmental Consulting & Safety

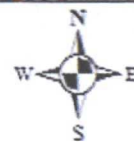
PROJECT LEADER Zach Conder SIGNATURE *Zach Conder* DATE 3-15-13

*This site is a "DISCLOSURE." It will be placed on a prioritized list of similar sites for further consideration.



EME K-30 EOL

UL/K SECTION 30
T-19-S R-37-E
LEA COUNTY, NM



0 0.25 0.5
Miles

Drawing date: 11/7/12
Drafted by: Tony Grieco

EME K-30 EOL

UL/K Sec. 30 (T19S-R37E)



Excavating site

8/15/2012



Collecting sample

8/23/2012



Exporting soil

8/29/2012



Installed 30'x30' liner @ 12' bgs

9/11/2012



Backfilling site

9/11/2012



Importing soil

9/14/2012



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

August 23, 2012

ZACH CONDER

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: EME K-30 EOL

Enclosed are the results of analyses for samples received by the laboratory on 08/20/12 16:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/ga/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

COPY



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Rice Operating Company
ZACH CONDER
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received: 08/20/2012
Reported: 08/23/2012
Project Name: EME K-30 EOL
Project Number: NONE GIVEN
Project Location: NONE GIVEN

Sampling Date: 08/20/2012
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: 8 PT BLENDED BACKFILL (H201965-01)

Chloride, SM4500CI-B			mg/kg		Analyzed By: HM				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1170	16.0	08/22/2012	ND	400	100	400	0.00	
TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/23/2012	ND	200	100	200	4.43	
DRO >C10-C28	<10.0	10.0	08/23/2012	ND	198	99.0	200	4.04	

Surrogate: 1-Chlorooctane 79.6 % 65.2-140

Surrogate: 1-Chlorooctadecane 85.2 % 63.6-154

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*=Accredited Analyte

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Celestine Keene

Celestine D. Keene, Lab Director/Quality Manager

Notes and Definitions

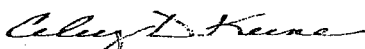
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

August 30, 2012

ZACH CONDER

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: EME K-30 EOL

Enclosed are the results of analyses for samples received by the laboratory on 08/24/12 14:25.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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Sincerely,

Celey D. Keene

Lab Director/Quality Manager

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PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

Rice Operating Company
ZACH CONDER
112 W. Taylor
Hobbs NM, 88240
Fax To: (575) 397-1471

Received: 08/24/2012
Reported: 08/30/2012
Project Name: EME K-30 EOL
Project Number: NONE GIVEN
Project Location: NONE GIVEN

Sampling Date: 08/23/2012
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: 4 WALL COMP (H202033-01)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	960	16.0	08/28/2012	ND	416	104	400	3.92	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/29/2012	ND	201	100	200	0.929	
DRO >C10-C28	17.4	10.0	08/29/2012	ND	204	102	200	0.300	

Surrogate: 1-Chlorooctane 66.8 % 65.2-140

Surrogate: 1-Chlorooctadecane 81.2 % 63.6-154

Sample ID: 5 PT BTM COMP (H202033-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	08/28/2012	ND	416	104	400	3.92	
TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	08/29/2012	ND	201	100	200	0.929	
DRO >C10-C28	<10.0	10.0	08/29/2012	ND	204	102	200	0.300	

Surrogate: 1-Chlorooctane 78.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 94.9 % 63.6-154

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

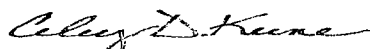
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: RICE Operating				BILL TO				ANALYSIS REQUEST													
Project Manager: Zach Conder				P.O. #:				<div style="display: flex; flex-direction: column; align-items: center;"> <div>Chlorides</div> <div>TPH 8015 M</div> <div>BTEX</div> <div>Texas TPH</div> <div>Complete Cations/Anions</div> <div>TDS</div> </div>													
Address: 112 W. Taylor				Company:																	
City: Hobbs State: NM Zip: 88240				Attn:																	
Phone #: Fax #:				Address:																	
Project #: Project Owner:				City:																	
Project Name: EME K-30 EDL 19.37				State: Zip:																	
Project Location:				Phone #:																	
Sampler Name:				Fax #:																	
FOR LAB USE ONLY				MATRIX		PRESERV.		SAMPLING													
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER	DATE	TIME								
4202033	14 Wall Comp.	C	1									8/23/12	1:45P								
	25P. Bottom Comp.	C	1									8/23/12	1:50P								

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Relinquished By:	Date: 8/23/12	Received By:	Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Phone #:
	Time: 5:00P		Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Add'l Fax #:
Relinquished By:	Date: 8-24-12	Received By:	REMARKS:	
	Time: 1425		email results	
Delivered By: (Circle One)		Sample Condition	Zconder@rice-ecs.com; Bbaker@rice-ecs.com;	
Sampler - UPS - Bus - Other:		Cool Intact	hconder@rice-ecs.com; Lweinheimer@rice-ecs.com;	
		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	kjones@riceswd.com; dwyarbrough@rice-ecs.com	
		Checked By: (Initials)		

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

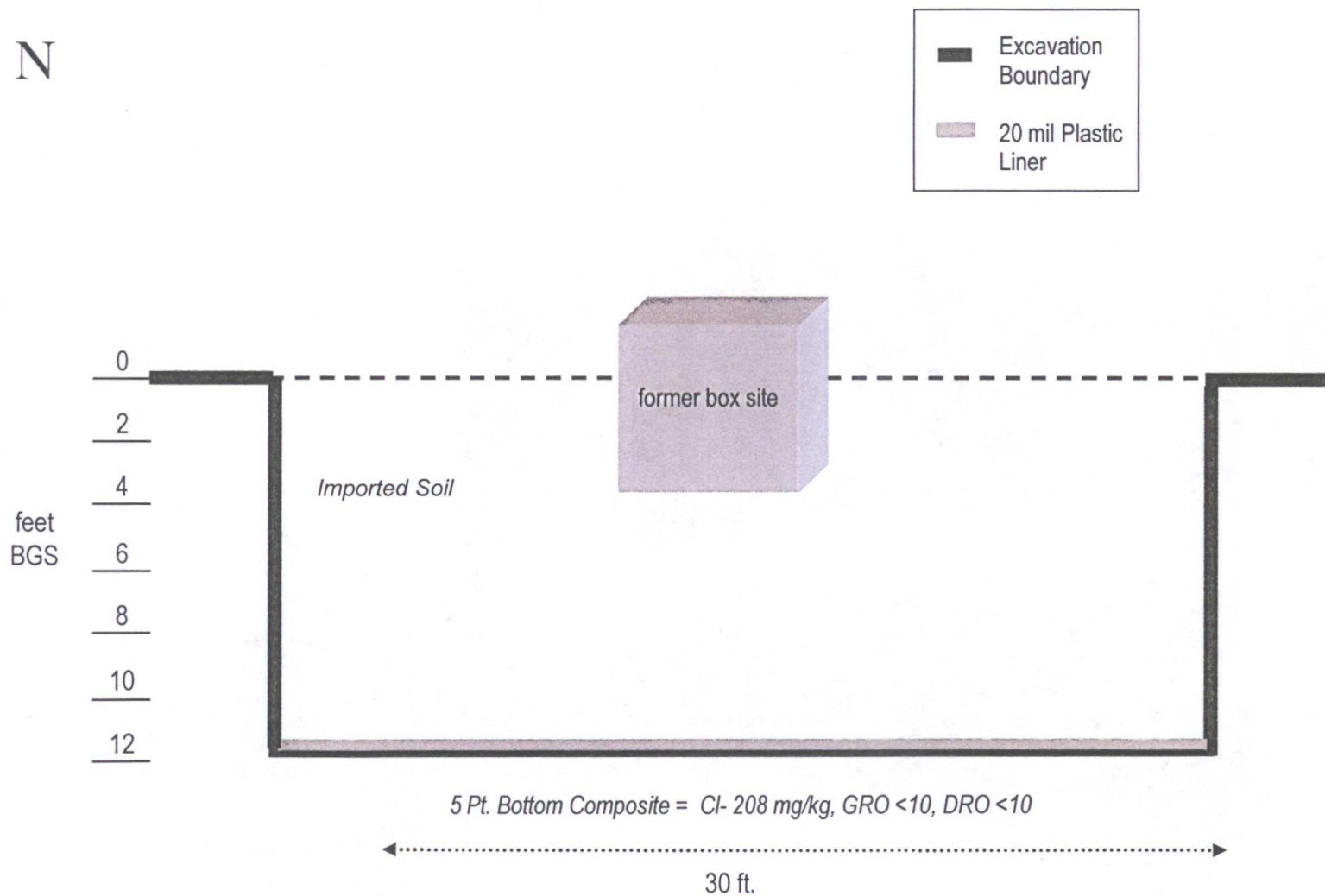
#26

EME K-30 EOL
Unit 'K', Sec. 30, T19S, R37E

Excavation Cross-Section

N

S



CHLORIDE CONCENTRATION CURVE

RICE Operating Company

EME K-30 EOL

Unit 'K', Sec. 30, T19S, R37E

Backhoe samples at 5' N of the junction (source)

Depth bgs (ft)	[Cl ⁻] ppm
2	750
4	894
6	1574
8	1232
10	1236
12	1315

Groundwater = 37 ft

