# BD G-29 EOL 2013

DISCLOSURE

# RICE OPERATING COMPANY JUNCTION BOX DISCLOSURE\* REPORT

### BOX LOCATION

	SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUN			
	Blinebry-Drinkard (BD)	G-29 FOL	G	29	225	38F	Lea			leight 2'
		0 20 202			<u> </u>				eliminated	
	LAND TYPE:	BLM	STATE	FEE LA	NDOWNER	D.I	K. Boyd	OTHER		
	Depth to Grou	ndwater	124	_feet	NMOCI	O SITE ASS	ESSME	ENT RANKING S	OORE:(	<u>)                                    </u>
	Date Started	9/20/	2013	Date Co	mpleted	1/7/2014	0	CD Witness	no	
	Soil Excavated	177.8	cubic va	rds Exc	cavation Le	nath 20	v	Vidth 20	Depth 12	feet
						·				
	Soli Disposed		cubic ya	ras Oi	isite raciity	Sundance	Service	Location_	Eunice, N	IIVI
FIE	ELD SOURCE	E RESUL	TS:	Samole	11 e Date	/11/2013, 1 /11/21/2	1/14/20 013		oth 12	, ft
									** 1	
		•	•	•		•	•	•		
	ar	nd Chloride I	aboratory te					lab and testing p	ocedures	
	Sample	PID (fie	eld) G	RO	DRO	Chlorides		CHLORI	DE FIELD TES	STS
	Location	1	•	g/kg	mg/kg	mg/kg		LOCATION	DEPTH	mg/kg
Binestry Printered (RD)   G-29 EOL   G   29   22S   38E   Lea   eliminated										
Birretory-Director (BD)   G-29 EQL   G   29   22S   38E   Lea   Largith 4   Worth 2   eliminated		1020								
Binntey-Unificant (80)   C-29 EOL   G   29   Z2S   38E		1322								
	TOPSOIL			:10	<10	<16	_		4'	
	Binetry-Drivinsed (BD)   G-29 EOL   G   29   22S   38E   Lea   Leargha *   Wellon *   Height 2		<b></b>							
Gen	eral Description	of Remedia	al Action:	This junction	n box and line	were			6'	
	-				<del></del>			1	7'	
		Intercept Constance (BD) G-29 EDL G 29 22S 36E Lea Learge 4 Web 1 Relight 2 eliminated e								
sam	ples at regular inter	Processor   Proc								
tests	s performed on eac	h sample res	ulted in cond	centrations th	at did not rele	ent with	<del></del>	(Source) (2) 12	10'	1935
dept	h. Organic vapors	ND TYPE: BLM								
The	excavated soil was	blended on s	site, and rep	resentative c	omposite san	nples of the	<del></del>		12'	2262
exca	vation bottom, exc	avation walls	, and the ble	nded backfill	were sent to	a commercia	al			
labo	ratory for analysis o	of chloride an	d TPH. A to	tal of 256 yar	ds of excavat	ed soil was t	ransport	ted to a NMOCD ar	proved facility.	
									nd is expected t	.0
retur	n to a productive c	apacity at a n	ormal rate.	NMOCD was	notified of po	tential groun	dwater i	impact on 2/13/14.		
	Date Started 9/20/2013 Date Completed 1/7/2014 OCD Witness no Soil Excavated 177.8 cubic yards Excavation Length 20 Width 20 Depth 12 feet Soil Disposed 256 cubic yards Offsite Facility Sundance Services Location Eunice, NM 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 PID (field) GRO DRO Chlorides Depth May									
		posed 256 cubic yards Excavation Length 20 Width 20 Depth 12 feet posed 256 cubic yards Offsite Facility Sundance Services Location Eunice, NM  JRCE RESULTS: Sample Date 11/11/2013, 11/14/2013, 11/21/2013 Sample Depth 12 ft.  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.  PID (field) GRO DRO Chlorides pursuant to NMOCD guidelines.  PID (field) GRO DRO Chlorides pursuant to NMOCD guidelines.  PID (field) GRO DRO Chlorides pursuant to NMOCD guidelines.  PID (field) GRO DRO Chlorides pursuant to NMOCD guidelines.  CHLORIDE FIELD TESTS  LOCATION DEPTH mg/kg 4 wall comp. n/a 624 bottom comp. 12' 1020  ACKFILL < 10 47.3 640  Sit 1322								
	DEDV CERTIES									
I Ht	EKERY CEKTIFY	THAT THE	INFORMA	TION ABOV			LEIEI	IO THE BEST OF	· MY KNOWLE	DGE AND
AS		Laura Flore	esSIG	SNATURE_	Dura	e Al	re	2 COMPANY		-
SITE	SUPERVISOR	Dyllan Yarbro	ugh SIG	SNATURE	N	ot Available		COMPANY		•
PRO.					KNEN				3-3-14	4
	•	*This site is a "	DISCLOSUR	E." It will be pl	aced/on a prio	ritized list of si	imilar site	es for further conside	ration.	

Site Map NA 176 215 38E 33 EUNICE 3 9 8 9 10 12 Delaware Basin 13 18 17 16 15 228 38E 228 24 20 21 23 19 21 Vivian Lane **BD G-29 EOL** 26 25 28 28 31 32 33 36 33 ummit Road Source Esti, DigitalGlobe, GeoEye Poubeo, USDA, USOS, AEX. Getmapping, Percenti, IGN, IGN, swission 2010 54 65 Use Co. 233 37E



## BD G-29 EOL

UL/G Section 29 T-22-S R-38-E



0 3,000 6,000 HHH Feet

Drawing date: January 15, 2014 Drafted by: C. Ursanic

Area Map P 19 21 BD G-29 EOL 28 30 4 31 33 Stuar Equipipilal Globa, Geogra, Louted, USDA, USOS, AD Germaphing, Astoprial IGN, ISD, syraphoto, and the Gistuser o BD G-29 EOL **UL/G Section 29** 600 1,200 T-22-S R-38-E

> Drawing date: January 15, 2014 Drafted by: C. Ursanio

CONSULTING & SAFET

## BD G-29 EOL

Unit G, Section 29, T22S, R38E



Site prior, facing north

9/20/13



Collecting sample, facing northeast

9/20/13



Digging vertical, facing east

11/7/13



Installed 6" sand pad at base of excavation, facing south 11/14/13



Installed 20'x20', 20-mil poly liner at 11.5', facing east 11/15/13



Installed 6" pad above liner, facing northeast

11/15/13



Blending spoil pile, facing southwest

11/18/13



Exporting spoil pile, facing south

11/18/13



Backfilling excavation, facing southeast 11/22/13



Installed 20'x20', 20-mil poly liner at 4.5 ft bgs, facing southwest 11/26/13



Seeding site, facing north

1/7/14



Site completed, facing east

1/7/14



November 19, 2013

KYLE NORMAN

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD G-29 EOL

Enclosed are the results of analyses for samples received by the laboratory on 11/13/13 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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 <a href="https://doi.org/10.1007/j.ce/10

Cardinal Laboratories is accreditated 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.

Celeg & Keene

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



### Analytical Results For:

Rice Operating Company KYLE NORMAN 112 W. Taylor Hobbs NM, 88240

Fax To:

(575) 397-1471

Received:

11/13/2013

Reported:

11/19/2013

Project Name: Project Number: BD G-29 EOL NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

11/11/2013

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

### Sample ID: BOTTOM 5 PT. COMP (H302764-01)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	752	16.0	11/15/2013	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/13/2013	ND	217	108	200	4.00	
DRO >C10-C28	<10.0	10.0	11/13/2013	ND	215	107	200	6.89	
Surrogate: 1-Chlorooctane	113	% 65.2-14	0						

### Surrogate: 1-Chlorooctadecane 128 % 63.6-154

### Sample ID: 4 WALL COMP (H302764-02)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					-
Analyte	Result	Reporting Limit	Analyzed	Method Blank	<b>B</b> S	% Recovery	True Value QC	RPD	Qualifier
Chloride	1300	16.0	11/15/2013	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/13/2013	ND	217	108	200	4.00	
DRO >C10-C28	<10.0	10.0	11/13/2013	ND	215	107	200	6.89	
Surrogate: 1-Chlorooctane	116	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	123	% 63.6-15	4						

### 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. Keine



### **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 SM4500CI-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

Cardinal Laboratories \*=Accredited Analyte

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Celeg & Keine

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

# ARDINAL 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

company name.	RICE Operating						۲	ANALYSIS		REQUEST	T:		
Project Manage	Project Manager: Kyle Norman		P.O.#:					-			-		
Address: 112 W.	W. Taylor		Company:					s	-				
City: Hobbs	State: NM	Zip: 88240	Attn:					uo	···				
Phone #:	Fax#:		Address:					in					
Project #:	Project Owner:	er:	City:			141	F	<b>4</b> \2					
Project Name:			State: Zip:				ld.						
Project Location:	n: BD 6-29 EOL		#		bin FO	( <u>3</u>	T 8		 S0				
Sampler Name:	Sampler Name: Dyllan Yarbrough		Fax #:				(98		7 )			****	
FOR LAB USE ONLY		MATRIX	PRESERV. SAMPLING	ING			<del>(</del> ə				,		
Lab I.D.	Sample I.D.	OR (C)OMP.  ANDERS  BATAWGI  MATER  BATAWGI  ABATAWGI  ABATAWGI  BATAWGI  B	OOF V2E:		<del></del>		1	telqmo			<u>.</u>		<del>`</del>
H302764		тиоэ <del>"</del> Иоояэ	АСІБЛВА СЕ / СС ОТНЕЯ ОТНЕЯ	TIME				<u> </u>				:	
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LEASE NOTE: Liability and	LEASE NOTE: Liability and Demages. Cardinal's tability and cherits exclusive remedy for any claim artish	any claim arteing whether besed in contract or tort; shall	be firmled to	the amount peid by the client for the	- Pe		1	+	-		4	]	1
natytes. All defins including ervice. In no-event shall Cai filletes of successors arising	organs, Al edition including those for negligence and any other cases whateverve shall be deemed walved unless or ender. In prevent shall cardinel be liable for hickersh or consequental demages, including without limitation, bush Millates or successions shallow out our netested to the performance of services in fragments of the consequence.	e e e	30 days at Incurred by we stated n	ar completion of the applicable dient, he subsidiaries sesons or otherwise.	deplicati								
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Delivered By: (Circle One) Sampler - UPS ~ Bus ~ Other	(Circle One) - Bus - Other:	Sample Condition Cool Milact La Tes Tes	In CHECKER BY:	Lpena(	Lpena@riceswd.com;dyarbrough@rice-ecs.com	wd.co	m;dy	arbrot	gh@ gh@	rice-e	cs.com	, ,	
+ Cardinal o	Cardinal cannot accept verbal changes. Please fax written changes to $\pm 5$	o fax written changes to SI $+$	505-393-2446 H										

## RICE ENVIRONMENTAL CONSULTING & SAFETY

122 West Taylor Hobbs, NM 88240 PHONE: (505) 393-9174 FAX: (505) 397-1471

	PID METER (	CALIBRATIO	N & FIELD KEPOKT I	FORM	
CK. MODEL NO. X	MODEL: PGM 7300 MODEL: PGM 7300 MODEL: PGM 7320 MODEL: PGM 7300	SERIAL SERIAL	NO: 590-000508 NO: 590-000504 NO: 592-903318 NO: 590-000183		
	GAS COMPOSITION	ON: ISOBUTY	LENE 100PPM / AIR:	BALANCE	
LOT NO: HAL-248-	100-1		EXPIRATION DATE	: 7/1/2015	
	MET	ER READING	ACCURACY: 100		
		ACCURAG	CY: +/- 2%		
		CO	MPANY		
		RICE	OPERATING		
Γ	1	1	T		1
SYSTEM	JUNCTION	UNIT	SECTION	TOWN SHIP	RANGE
BD	G-29 EOL	G	29	228	38E

SYSTEM	JUNCTION	UNIT	SECTION	<b>TOWN SHIP</b>	RANGE
				•	
BD	G-29 EOL	G	29	228	38E

SAMPLE ID	PID	SAMPLE ID	PID
4-WALL COMPOSITE	0.4		
BOTTOM COMPOSITE	0.8		
		,	

I verify that I have calibrated the above instrument in accordance to the manufacture operation manual.

SIGNATURE:	Not Available	DATE:	11/11/2013



December 02, 2013

KYLE NORMAN

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD G-29 EOL

Enclosed are the results of analyses for samples received by the laboratory on 11/21/13 9:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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 <a href="https://doi.org/10.1007/journal.org/10.1007/jour

Cardinal Laboratories is accreditated 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.

Celeg & Keine

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





### Analytical Results For:

Rice Operating Company KYLE NORMAN 112 W. Taylor Hobbs NM, 88240

Fax To:

(575) 397-1471

Received:

11/21/2013

Reported:

12/02/2013

Project Name: Project Number: BD G-29 EOL NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

11/14/2013

Sampling Type:

Soil

Sampling Condition:

\*\* (See Notes)

Sample Received By:

Amanda Ponce

### Sample ID: TOP SOIL (H302842-01)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/22/2013	ND	416	104	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/23/2013	ND	200	99.8	200	0.526	
DRO >C10-C28	<10.0	10.0	11/23/2013	ND	203	102	200	1.71	
Surrogate: 1-Chlorooctane	98.6	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	96.4	% 63.6-15	4						

Cardinal Laboratories \*=Accredited Analyte

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Celey & Keene



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\*\*\* Insufficient time to reach temperature.

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Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keine

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

# ARDINAL LABORATORIES 101 East Marland, Hobbs, NM 88240 2111 Beechy

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101 Last infallation, from 10, will cozet 211 Deecliwood, Adiene, 17 (3603	(505) 393-2326 FAX (505) 393-2476 (325) 673-2004 EAX (226) 220

Company Name:	ie: RICE Operating							ANALYSIS		REQUEST			
Project Manag	Project Manager: Kyle Norman		P.O. #;			Ŀ		-	_		L	L	
Address: 112 W. Taylor	. W. Taylor		Company:					S			-	·	
city: Hobbs	State: NM 2	Zip: 88240	Attn:					uo					
Phone #:	Fax #:		Address:					ļuv					
Project #:	Project Owner:		City:			ΙΛΙ	F	√/S					
Project Name:			,.	Zip:			ld.						
Project Locatic	Project Location: BD 6-24 BBL		Phone #:		bin	E)	Γs	oite SC					
Sampler Name.	Sampler Name: Dyllan Yarbrough		Fax#:				(9)			<u>·</u>			
FOR LAB USE ONLY		MATRIX	PRESERV.	SAMPLING			(9	Э					
Lab I.D.	Sample I.D.	. 90 (С) Оме. Вязинека Вэтамдиц Вэтамэт Ээтамэт	COOF BYSE: EB:		· · · · · · · · · · · · · · · · · · ·	11	L	JəlqmoC			<del>i </del>		
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PLEASE NOTE: Liability and Demages, C	PLEASE NOTE: Liability and Demages. Cardinal's lability and cleants exclusive remedy for any claim arising whe	laim arising whether besed in contract o	or tert, shall be limited to	effet besed in contract or tart, shall be limited to the amount peid by the client for the	å								

oes. Al datins praiding these for registrone and any other cause whatsoome shall be deemed waked unless made in writing and received by Cardines within 30 days after completion of the applicable.

In no everyidabil Configure is bridgerate to consequental damages, including without hattain, bashess entrypition, because of these, for see to printe harmane of services hereunder by Cardinia including an applicable and any office of the development of services hereunder by Cardinia including a consequent in played upon any of the above stated research or determine.

Lweinheimer@rice-ecs.com; kjones@riceswd.com; knorman@rice-ecs.com;hconder@rice-ecs.com; Lpena@riceswd.com;dyarbrough@rice-ecs.com ☐ Yes ☑ No Add'! Phone#:
☐ Yes ☑ No Add'! Fax#: email results Phone Result: Fax Result: REMARKS: Sample Condition
Cool Infact
Yes Yes Received By: Received By Time: Date: Sampler - UPS - Bus - Other: Delivered By: (Circle One)

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



November 22, 2013

KYLE NORMAN

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD G-29 EOL

Enclosed are the results of analyses for samples received by the laboratory on 11/21/13 9:37.

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Cardinal Laboratories is accreditated 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.

Celeg & Keine

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





### Analytical Results For:

Rice Operating Company KYLE NORMAN 112 W. Taylor Hobbs NM, 88240

Fax To:

: (575) 397-1471

Received:

11/21/2013

Reported: Project Name: 11/22/2013 BD G-29 EOL

Project Number:

NONE GIVEN

Project Location:

NOT GIVEN

Sampling Date:

11/21/2013

Sampling Type:

Soil

Sampling Condition:

\*\* (See Notes)

Sample Received By:

Amanda Ponce

### Sample ID: BLENDED BACKFILL (H302841-01)

Chloride, SM4500Cl-B	mg.	/kg	Analyze	d By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	640	16.0	11/21/2013	ND	432	108	400	0.00	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/21/2013	ND	193	96.3	200	0.0809	
DRO >C10-C28	47.3	10.0	11/21/2013	ND	193	96.6	200	1.66	
Surrogate: 1-Chlorooctane	97.4	% 65.2-14	0						
Surrogate: 1-Chlorooctadecane	93.7	% 63.6-15	4						

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 subcladrates, affiliates or successors arising out of or related to the performance of the services harvander by Cardinal, regardless of whether such claims 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 Jaboratories.

Celey D. Keine



### **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 SM4500CI-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

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 whistoever 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 to profits incirculating, without limitation, business interruptions, loss of or profits incirculating without limitation, business interruptions, loss of or profits incirculating without limitation, business interruptions, loss of profits incirculating without limitation, and 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 Laboratornes.

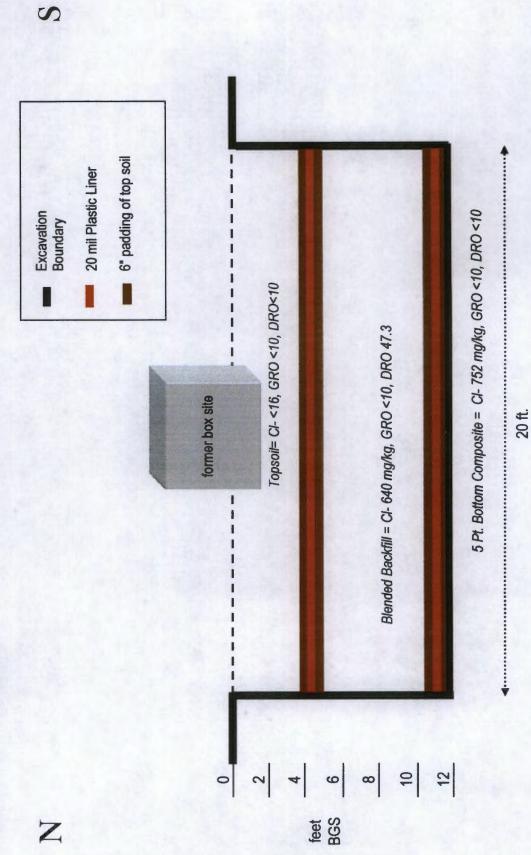
Celey & Keine

# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST ARDINAL LABORATORIES 101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603

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1	(202) 283-2270	<b>LAA (30.</b>	3) 333-4416	17-670 (076)	7	(505) 393-2328 FAA (503) 333-24/6 (325) 6/3-/001 FAA (325)6/3-/020
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Company Name:	RICE Operating						٩	ANALYSIS		REQUEST	_		
Project Manage	Project Manager: Kyle Norman		P.O. #:										
Address: 112 W. Taylor	W. Taylor		Company:					SI					
city: Hobbs	State: NM	4 Zip: 88240	Attn:					JO		·			
Phone #:	 		Address:					ļu\					
Project #:	Project Owner:	ner:	City:			IAI	Н	<del>/</del> /S	<u>;</u>		•		
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Project Location:	11 BD 6-29 EOL		Phone #:		oric 501	(E)	L S		SC		·····		
Sampler Name:	Sampler Name: Dyllan Yarbrough	-	Fax#:				EX		 I I				
FOR LAB USE ONLY		MATRIX	PRESERV. SAMPLING	0		·	æ_	ə					
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affliates or successors arising Redirective head/Bro	solutions or successors arising out of or related to the performance of services hereunder by Cardinal, regardees of whe Reliation this had ABV:	by Cardinal, regardess of whether such daim in Received By:	to bered upon any of the above stated reason	Phone Result	١			dd'l Pho	ne #:				Γ
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† Cardinal c	f Cardinal cannot accept verbal changes. Please fax writte	I 5	505-393-2476			-							

**Excavation Cross-Section** 



# **BD G-29 EOL** Unit 'G', Sec. 29, T22S, R38E

Backhoe samples at the junction (source)

[Cl] ppm	1322	6988	4108	3301	2730	2408	2458	1935	1432	2262
Depth bgs (ft)	3'	4,	5'	.9	7.	8'	9'	10,	11'	12'

		- 72
		10, 11, 12,
		10,
۲	<b>/</b>	- <b>o</b>
Chloride Concentration vs. Depth		7' 8' Depth bgs (ft)
ration v	<b>&gt;</b>	7' Depth b
Soncent	<b>/</b>	.9
loride (		.72
טֿ		<b>.</b> 4
	5000 4000 3000 1000	<b>D</b>

Groundwater = 124 ft



PO Box 5630 Hobbs, NM 88241 Phone: (575) 393-4411 Fax: (575) 393-0293

### **VEGETATION FORM**

### 1. General Information

1. General Information	)n									
Site name: BD (	3-29 EOL									
U/L	Section		Township		Range	С	ounty	Latitude		Longitude
G	29		T-22-S		R-38-E		Lea	32.36363-	N	103.08083-W
Contact Name: Zach	Conder									
	nder@rice-ecs.com									
Site size:				squa	re feet 1800 sq ft					
2. Soils		not rip			ocks brought to the		ipping shall b			,
Salvaged from site	Bioremediated		X Impo		X Ble	nded		Depth (in)		
Texture:				Describe s	soil & subsoil:					
Soil prep methods:	Rip		Dep	th (in)		Disc		Depth (in)		Rollerpack
Date completed:	12/3/2013									
3. Bioremediation Fertilizer Type:			Нау		在 有什么一种。"她也的 你这个的是不是不是的人,我们就是一个人,我们就是一个人,我们就是一个人的人们的人们就是一个人的人们,我们就是一个人们的人们,我们就是一个人们的人们,我们们就是一个人们们,我们们们们们们们们们们们们们们们们们们们们们们们们们们们们们们们们们们		Other Describe:	_		N Hance, 2 bags
Lbs/acre:			<u> </u>		t-1		of Pottir	ig Soil, 2 bags	of Mar	nure
4. Seeding Custom Seed Mix	*Attach seed bag tags to X Prescribed Mix	this fo		Mix Name	2 lbs. of and 2 lbs	Winter Whe of Blue Gr		ide Oats, Dat	e:	1/7/2014
Broadcast	Method:				eeder was ueed t	seed this l	ocation.			
Soil conditions during	<u> </u>	X	Damp	Wet						
Observations:	The amendment	s and s	seed were ra	ked into the	soil					
5. Certification	I hereby certify that the infor	mation i	n this form and	attachments is	true and complete to	the best of my	knowledge and l	pelief.		
Name: Jose Flores	S			Title:	Environmental	Tech		Dat	e:	1/7/2014
Signature:	Jose		=/era	. <						

# RICE Operating Company

122 West Taylor • Hobbs, New Mexico 88240 Phone: (575) 393-9174 • Fax: (575) 397-1471

April 1, 2014

Mr. Leonard Lowe New Mexico Energy, Minerals, & Natural Resources Oil Conservation Division, Environmental Bureau 1220 S. St. Francis Drive Santa Fe, New Mexico 87505

RE: JUNCTION BOX UPGRADE REPORT for 2013

BD SWD SYSTEM Lea County, New Mexico

Mr. Lowe:

Rice Operating Company (ROC) takes this opportunity to submit the Junction Box Upgrade results for the year 2013. Enclosed is a list of the completed junction boxes and their respective closure/disclosure dates. These boxes are located in the Blinebry-Drinkard (BD) Salt Water Disposal (SWD) System located in the vicinity of Eunice, New Mexico.

ROC completed 12 junction boxes in 2013. Junction box upgrades in 2014 will be conducted in conjunction with scheduled pipeline replacements.

Enclosed are the 2008 results (17 sites evaluated with 22 sampling locations) from the PID/BTEX study described in the NMOCD-approved Revised Junction Box Upgrade Work Plan (July 16, 2003). A third-party analysis, conducted by Peter Galusky, Jr. Ph.D. of Texerra, concluded from the data collected thus far that field-composited values tend to produce slightly higher BTEX numbers above the point at which BTEX concentrations become significant. This is likely due to the fact that BTEX is volatile and quickly biodegradable. This analysis was submitted to NMOCD on March 12, 2009. An appropriate number of sample sites could not be obtained to conduct a 2013 BTEX comparison analysis. Peter Galusky, Jr. Ph.D. of Texerra also compared ROC's 2013 chloride field tests to chloride laboratory analyses; the analysis is also enclosed. The study of this data continues to validate the accuracy of the chloride field tests employed by ROC.

ROC is the service provider (agent) for the BD SWD System and has no ownership of any portion of the pipeline, well, or facility. The System is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis.

Replacement/closure projects of this magnitude require System Party AFE approval and work begins as funds are received.

Thank you for your consideration of this Junction Box Upgrade Report for 2013.

RICE OPERATING COMPANY

Hack Conder

**Environmental Manager** 

enclosures as stated

cc: SC, file,

Mr. Geoffrey Leking

NMOCD, District I Office 1625 N. French Drive Hobbs, NM 88240

Rice Operating Company BD SWD System Junction Box Upgrade Project 2013 Completed Boxes

		Leg	al De	scrip	коп		er e dank		
	Jot Box Name	Unit	Sec	Т	R	Completion Date	OOD Assessment Score	Report Status	Çaqe Number
1	G-29 EOL	G	29	<b>22S</b>	38E	1/7/2014	0	Disclosure	
2	Jct. G-31	G	31	225	38E	1/7/2014	20	Disclosure	
3	JCT. M-29	М	29	225	38E	11/1/2013	0	Disclosure	
4	JCT. N-29	N	29	225	38E	9/11/2013	0	Disclosure	
5	JCT. N-30	N	30	225	38E	8/19/2013	10	Disclosure	
6	O-29-1 VENT	0	29	225	38E	7/26/2013	0	Disclosure	
7	O-30 VENT	0	30	225	38E	11/6/2013	10	Disclosure	
8	Jct. P-14	Р	14	225	37E	8/21/2012	10	Disclosure	
9	J-29 Vent	J	29	225	38E	n/a	0	Closure	
10	J-30 EOL	J	30	<b>22S</b>	38E	10/22/2013	10	Closure	
11	JCT. J-29	٦	29	225	38E	n/a	0	Closure	
12	M-28 EOL	М	28	<b>22S</b>	38E	11/5/2013	0	Closure	

### L. Peter Galusky, Jr. Ph.D., P.G.

### Texerra

505 N Big Spring, Suite 404 Midland, Texas 79701 Tel: 432-634-9257 E-mail: lpg@texerra.com

March 10<sup>th</sup>, 2009

Mr. Brad Jones New Mexico Energy, Minerals, & Natural Resources Oil Conservation Division, Environmental Bureau 1220 S. St. Francis Drive Santa Fe, New Mexico 87504

Re: Comparison of Field versus Lab Compositing of BTEX soil samples

Rice Operating Company, Junction Box Upgrade Work Plan

Sent via Certified Mail w/ Return Receipt No. 7006 0100 0001 2438 3944

Dear Mr. Jones:

On behalf of Rice Operating Company (ROC) I am submitting the attached comparison and analysis of field versus laboratory soil compositing for soil BTEX samples. This is to address the question of whether it is better to mix multiple samples in the field or to do so in the laboratory in order to produce a composite, representative sample for analysis. This work was undertaken in support of ROC's Junction Box Upgrade Work Plan to ensure the quality of their field analysis program.

In brief, this work indicates that field compositing of soil samples generally gives rise to *slightly* higher BTEX values than does laboratory compositing of multiple samples. This is presumably due to the likelihood that field compositing and packaging of soil samples better preserves sample integrity. It would therefore appear that field compositing would represent the better method of procuring soil samples for subsequent analysis of BTEX.

Please call me if you have any questions or wish to discuss any of the details of this study.

ROC is the service provider (agent) for various Salt Water Disposal Systems (SWDs) and has no ownership of any portion of pipeline, well or facility. The SWD Systems that ROC operates are owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis.

Sincerely,

L. Peter Galusky, Jr. Ph.D.

Principal

Copy: Rice Operating Company,

Edward Hansen (NMOCD) sent certified mail w/ return receipt

No. 7006 0100 0001 2438 3937

Attachment: As noted, above.

### Rice Operating Company Comparison of Field Compositing versus Laboratory Compositing of Soil BTEX Samples<sup>1</sup>

The careful mixing of multiple soil samples is critical in order to produce a representative, composite sample from a respective study area (such as a excavation face or bottom). Field technicians typically take four or five "grab" samples from excavation walls and/or bottom and send each of these to a laboratory for analysis of the composite, or mixed, sample. It would be far simpler, however, to composite such samples in the field. This study was undertaken to determine if field compositing produced results substantially different than laboratory compositing for the analysis of BTEX. Data were provided by Rice Operating Company encompassing 22 sampling locations over the period of 2004 through 2008.

A comparison of lab-composited soil samples versus field-composited soil samples revealed a close correspondence for total BTEX between the two methods (Figure 1).

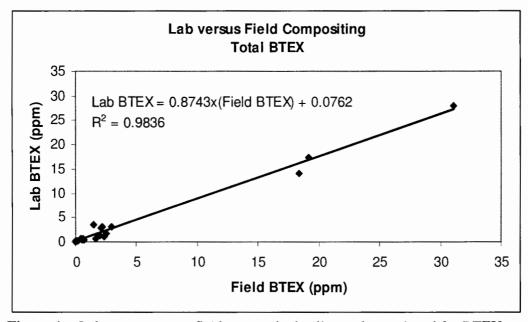


Figure 1 - Laboratory versus field-composited soil samples analyzed for BTEX.

The high R<sup>2</sup> value (0.9836) of the best-fit statistical regression line indicates a high degree of reliability in using the field-compositing method over the range of values observed. Below a "field-composited BTEX" value of 0.61 ppm the "lab-composited BTEX" values are slightly lower. However, above a field-composited BTEX value of 0.61 the lab-composited values run slightly lower. In other words, the field-composited values tended to produce slightly higher BTEX numbers above the point at which BTEX concentrations become significant.

There is a reason for this. BTEX is volatile and quickly biodegradable. The compositing and "packaging" of soil samples in the field minimize the handling and aeration that occur in the laboratory. Thus, field-composited soil samples lose less BTEX to evaporation and/or biodegradation prior to laboratory analysis. In other words, the field compositing and packaging of soil samples better preserves sample integrity, and for this reasons would appear to represent the better method of procuring soil samples for subsequent analysis of BTEX.

2

<sup>&</sup>lt;sup>1</sup> Prepared 03-12-09 by L. Peter Galusky, Jr. of Texerra.

### L. Peter Galusky, Jr. Ph.D., P.G.

### Texerra LLC

20055 Laredo Lane Monument, CO 80132 Tel: 719-339-6791 E-mail: lpg@texerra.com

March 25th, 2014

Mr. Leonard Lowe New Mexico Energy, Minerals, & Natural Resources Oil Conservation Division, Environmental Bureau 1220 S. St. Francis Drive Santa Fe, New Mexico 87505

Re: Comparison of 2013 Laboratory versus Field Measured Soil Chloride Values Rice Operating Company, Junction Box Upgrade Work Plan

Mr. Lowe:

The attached comparison and analysis of 2013 laboratory versus field measured soil chloride values is submitted in support of Rice Operating Company's (ROC's) Junction Box Upgrade Work Plan to ensure the quality of their field analysis program.

In brief, this work indicates that Rice's 2013 field chloride measurement efforts provided a reasonable qualitative approximation of the laboratory-measured (and presumed true) values.

ROC is the service provider (agent) for various Salt Water Disposal Systems (SWDs) and has no ownership of any portion of pipeline, well or facility. The SWD Systems that ROC operates are owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis.

Please call me if you have any questions or wish to discuss this study.

Sincerely,

L. Peter Galusky, Jr. Ph.D.

Principal

Copy: Glenn VonGonten, NMOCD; Rice Operating Company

Attachment: As noted, above.

### Rice Operating Company Comparison of Laboratory to Field Measured Soil Chloride Concentrations Based upon 2013 Field Data

A representative sample of 29 pairs of laboratory versus field measured soil chloride values was compared to determine how well field measurements matched laboratory measurements. It is assumed that laboratory measurements better represent the "true" values due to the controlled environment that a laboratory provides. A simple plot of the laboratory versus field measured soil chloride values is given below (Figure 1).

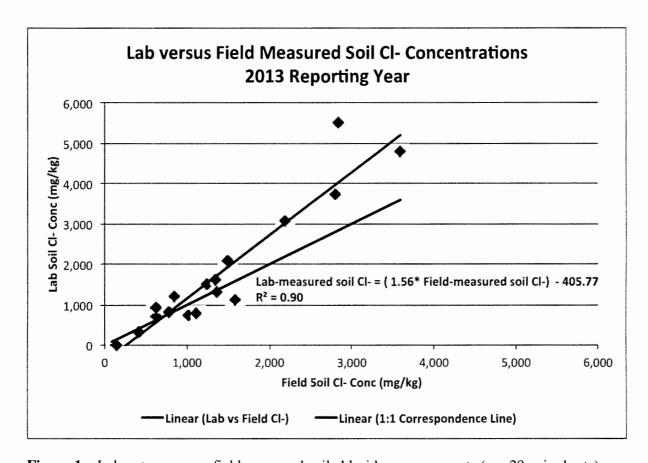


Figure 1 – Laboratory versus field measured soil chloride measurements (n = 29 paired sets).

A straight line fit to the data confirms a general linear trend over a wide range of soil chloride concentrations, and the R<sup>2</sup> value (0.90) indicates that field measurements provide a reliable approximation of laboratory-measured values. Based on the best-fit line of lab vs field measured values, field measured values overestimate lab measure values below a field measured value of 723 mg/kg and above this underestimate the lab-measured values. This is indicated in the graph where the (blue) best-fit line of lab vs field measured chlorides crosses the (black) line which would indicate a 1:1 correspondence.

Texerra LLC 2