1R - 426-153

REPORTS

DATE:
OLIVINA



RECEIVED OCD

ARCADIS U.S., Inc. 1004 North Big Spring Street Suite 300 Midland Texas 79701 Tel 432.687.5400

Sent Certified Mail
Return Receipt No. 7002 2410 0001 5813 4026

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

Environmental

Fax 432.687.5401 www.arcadis-us.com

Subject:

Excavation Summary and Soil Closure Request
Blinebry-Drinkard (BD) N-32 vent
Unit N, SEC. 32, T21S, R37E, Eunice, Lea County, New Mexico
NMOCD CASE # 1R426-153

Mr. Hansen:

RICE Operating Company (ROC) has retained ARCADIS U.S., Inc. (ARCADIS) to address potential environmental concerns at the above-referenced site. ROC is the service provider (agent) for the Blinebry-Drinkard (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. Environmental projects of this magnitude require System Party AFE approval and work begins as funds are received.

On behalf of ROC, ARCADIS respectfully submits this Excavation Summary and Soil Closure Request for the above-referenced site.

SITE HISTORY AND BACKGROUND

The site is located west of the town of Eunice, New Mexico. Elevated chlorides in this area have been reported since early 1952 (Geology and ground-water conditions in southern Lea County, New Mexico [Groundwater Report 6 by A. Nicholson, Jr. and A. Clebsch, Jr.; United States Geological Society]). The depth to groundwater at this site is approximately 98 feet below ground surface (bgs).

The junction was eliminated and replaced with a new junction box located 80 feet northeast of the former junction box location. Initial delineation began in August 2007

Date

September 4, 2012

Contact:

Sharon Hall

Phone:

432.687.5400

Email:

sharon.hall@arcadis-us.cor

Our re

MT001015.0001

ARCADIS U.S., Inc. TX Engineering License # F-533 ARCADIS

Mr. Ed Hansen

September 4, 2012

and was completed on November 2, 2007. A backhoe was used to collect soil samples five, ten and fifteen feet north, south, east and west of the junction box locations at one foot intervals to a depth of 12 ft bgs. Soil samples were analyzed in the field for chlorides using field-adapted Method 9253 and screened in the field using a photoionization detector (PID).

A backhoe was used to excavate soils from an excavation around the former junction box measuring 30 feet by 30 feet by 12 feet deep. A four-point wall composite sample was collected from each of the four walls and five-point composite sample was collected from the bottom of the excavation and submitted to Cardinal Laboratories for gasoline range organics (GRO) and diesel range organics (DRO) and chloride analysis. Some elevated PID readings were observed near the source. DRO was detected at a concentration of 57.8 milligrams per kilogram (mg/kg) in the four-point wall composite sample and at a concentration of 36 mg/kg in the five-point bottom composite sample. GRO was not detected.

Based on the results of the soil sampling analytical results, elevated chloride concentrations are present at the subject site.

The excavated soils were blended on-site and returned to the excavation to a depth six feet below grade. A six-foot deep shelf extending five-feet from the north, south and west walls and ten-feet from the east wall was excavated to prepare the excavation for a clay barrier. A 40 x 45x 1-foot thick clay barrier was installed at a depth of five to six feet bgs. The clay layer was compacted to a dry density of 93.4% and 14% moisture. The remaining fill was used to backfill the excavation to ground surface and to contour the surrounding area. An identification plate was placed on the surface at the location of the former junction box to mark the presence of the clay liner.

A sample of the blended backfill material was submitted to Cardinal Laboratories for GRO, DRO and chloride analysis. DRO was detected at a concentration of 517 mg/kg and chlorides were detected at a concentration of 1,090 mg/kg.

To further investigate the depth of chloride impacts a soil boring (SB-1) was drilled to a depth of 90 feet bgs at a location five-feet north of the former junction box. Soil samples were collected every five-feet and analyzed in the field for chlorides using field-adapted Method 9253 and screened in the field using a PID. One sample, collected from a depth of 90 feet bgs was submitted to Cardinal Laboratories and

ARCADIS

Mr. Ed Hansen

September 4, 2012

analyzed for chlorides. Laboratory analysis confirmed the presence of an elevated chloride concentration (1,296 mg/kg) at a depth of 90 feet bgs.

ROC disclosed potential groundwater impact at the site to New Mexico Oil .

Conservation Division (NMOCD) via e-mail on December 6, 2007. A disclosure report was submitted to NMOCD with all of the ROC 2007 Junction Box Reports in March 2008 per the ROC Junction Box Upgrade Work plan.

On behalf of ROC, ARCADIS submitted an ICP to NMOCD on May 21, 2008.

The proposed ICP was approved by NMOCD on May 28, 2008. On June 2, 2008, NMOCD was informed by email that an electromagnetic (EM) survey would be performed at this site to assist on placement of the proposed monitoring well and soil borings. On July 30, 2008 ARCADIS emailed NMOCD the results of the EM survey and informed NMOCD that there were no proposed changes to the approved monitoring well and soil boring locations as a result of the EM survey.

ICP INVESTIGATION RESULTS

Four soil borings (SB 2 through SB 5) and one monitoring well were drilled at the site on October 6 and 7, 2008. The soil borings were each drilled to a depth of 80 feet and the monitoring well was drilled to a depth of 100 feet. Soil samples were collected every five-feet and analyzed in the field for chlorides using field-adapted Method 4500-Cl-B and screened in the field using a PID. Two samples from each boring were submitted to Cardinal Laboratories and analyzed for chlorides. Laboratory and field analysis confirm that elevated chloride concentrations are present in soils at the site.

One upgradient (MW-3) and one downgradient (MW-2) monitoring well was installed at the site to assess groundwater quality. The monitor wells were drilled on July 9, 2009. Two additional monitoring wells, one upgradient (MW-4) and one downgradient (MW-5) of the wells drilled in July, were drilled on September 21 and 22, 2009. These wells were installed to further assess regional groundwater conditions in order to evaluate a groundwater remedy.

The laboratory analytical results from groundwater samples collected from MW-3 confirm that elevated chlorides are present in groundwater upgradient of the site. Based on the fact that elevated chloride concentrations in groundwater have been reported in the area since the early 1950s and that elevated chloride concentrations

occur in the monitoring well upgradient of the site we propose a chloride mass estimation and removal plan.

CORRECTIVE ACTION PLAN (CAP)

A Corrective Action Plan (CAP) was submitted to the NMOCD on January 10, 2012 and was approved on March 26, 2012. The CAP proposed the following:

A modified 75 ft x 90 ft, 20-mil, reinforced liner would be installed at approximately 25 ft bgs with the northwest corner angled. Backfill soil would not exceed a chloride concentration of 500 mg/kg or PID reading of 100 ppm and the site would be seeded with native grasses. The CAP also proposed a groundwater recovery system being installed at the former junction box location and 1,523 kg of chloride would be removed from groundwater. NMOCD's March 26, 2012, approval of the CAP required that an additional 30% chloride mass be removed for a total chloride mass of 1,980 kg. Recovered groundwater would be utilized for pipeline and well maintenance or landowner usage (cow trough). The chloride mass is based on the difference between the average concentration of the near-source well (MW-1) and the up-gradient well (MW-3). In light of the fact that an infiltration barrier is proposed, an exposure assessment was run for this site using the United States Environmental Protection Agency Exposure Assessment Multimedia Model (MULTIMED Version 1.01, June 1991). The model output concludes that the peak increased concentration of chlorides in groundwater contributed by soils in the vadose zone would be 6.3 mg/L in 200 years. Since the estimated increase in chloride concentrations in groundwater would not result in a groundwater background concentration exceedance, vadose zone chloride mass removal estimates are not warranted for this site.

LINER INSTALLATION

Beginning May 18, 2012, the site was excavated to dimensions of 75 ft x 90 ft x 25 ft bgs. Approximately 6,680 yards of the excavated soil was disposed of at a NMOCD approved facility. Soil was scraped from the surface of the site location to use as a sand pad below and above the liner to protect it from punctures. The blowsand was field tested with a PID meter and returned a result of 0.1 ppm. The sample was then sent to a commercial laboratory for analysis of chloride, which resulted in a concentration of 32 mg/kg. The excavation was padded with six inches of the blowsand and the 20-mil reinforced poly liner was installed and properly seated in the bottom of the excavation on July 2, 2012. Clean soil was imported and used to pad

six inches above the liner and to backfill the excavation up to 20 ft bgs. The imported topsoil was field tested with a PID meter, resulting in a concentration 0.3 ppm. The sample was then sent to a commercial laboratory for analysis of chloride, resulting in a chloride concentration below detectable limits (<16 mg/kg). The excavation was backfilled with caliche from 20 ft bgs to 5 ft bgs. The remaining 5 ft of the excavation was backfilled with imported topsoil. A sample was sent to a commercial laboratory for analysis of chlorides, yielding a chloride concentration below detectable limits (<16 mg/kg). The area was contoured to the surrounding area and seeded with a blend of native vegetative and is expected to return to a normal vegetative capacity. Silt net fencing was installed around the excavation to help keep the seed in place. Photo documentation and laboratory analysis of these activities are attached.

The corrective actions for the vadose zone are complete, and ROC respectfully request 'soil closure' or similar closure status. ROC is now in the process of setting up a recovery system and will begin recovering groundwater by December 2012. Once the chloride mass is removed, a final CAP Report will be submitted to the NMOCD with a termination request of the regulatory file.

Thank you for your consideration concerning this Excavation Summary and Soil Closure Request. If you have any questions, do not hesitate to contact Hack Conder or me.

Sincerely,

ARCADIS U.S., Inc.

Shan E. Hay

Sharon E. Hall Associate Vice President

Copies:

Hack Conder, ROC

Attachments:

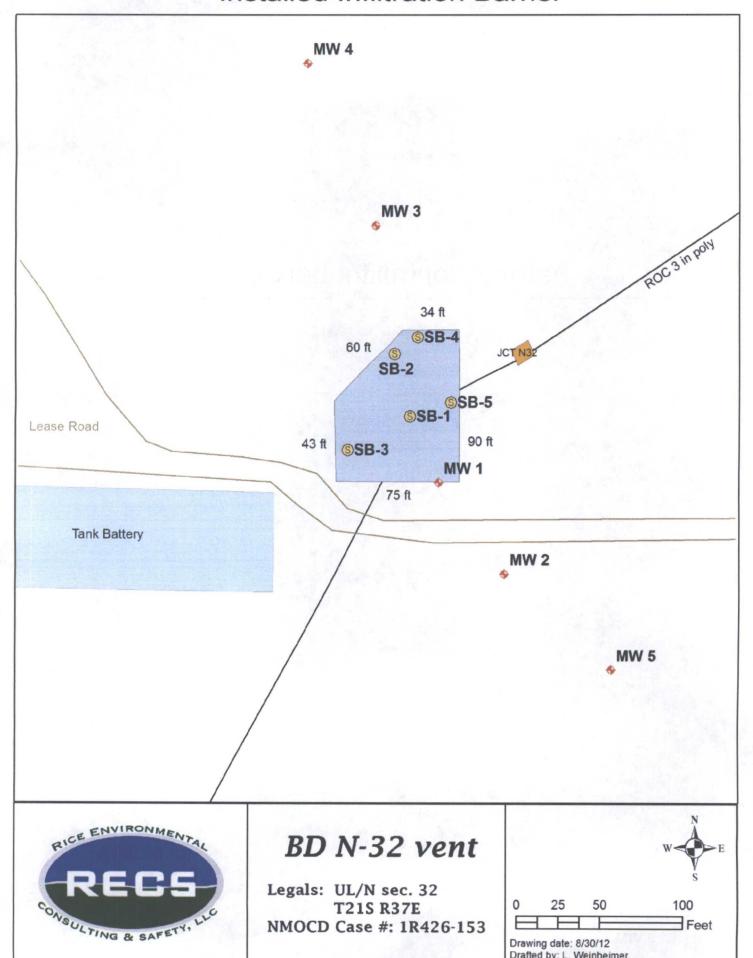
Installed Infiltration Barrier Figure

ARCADIS

Mr. Ed Hansen September 4, 2012

Liner Installation Photos Laboratory Analyses PID Forms Revegetation Form

Installed Infiltration Barrier



Drafted by: L. Weinheimer

BD N-32 Vent (1R426-153) Unit Letter N, Section 32, T21S, R37E



Site prior to excavation, facing southwest 4/4/2012



Excavating site, facing northeast





Exporting soil, facing east

6/8/2012



Installing 6" bottom sand pad, facing west 7/2/2012



Installing 75' x 90' 20-mil reinforced liner at 25' bgs, facing west 7/2/2012



Installing 6" sand pad above liner, facing 7/2/2012 north



Backfilling with imported topsoil, facing east 7/5/2012



Backfilling with caliche, facing south 7/9/2012



Installing topsoil above caliche, facing southwest 7/13/2012



Silt net fence installed, facing north
7/30/2012



Tilling and seeding, facing east 8/17/2012



Site complete, facing southwest 8/17/2012



July 03, 2012

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD N-32-VENT

Enclosed are the results of analyses for samples received by the laboratory on 07/02/12 16:36.

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 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.

alex to have

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 Hack Conder 112 W. Taylor Hobbs NM, 88240

Fax To:

(575) 397-1471

Received:

07/02/2012

Sampling Date:

07/02/2012

Reported:

07/03/2012

Sampling Type:

Soil

Project Name:

BD N-32-VENT

Sampling Condition:

50II

Project Number:

NONE GIVEN

Sample Received By:

** (See Notes) Jodi Henson

Project Location:

T21S R37E SEC32 N - LEA CTY., NM

Sample ID: BD N-32 VENT BLOWSAND (H201496-01)

Chloride, SM4500CI-B

mg/kg

Analyzed By: HM

Analyte

Chloride

Chloride

Result

Reporting Limit 16.0

Reporting Limit

Analyzed 07/03/2012

Analyzed

Method Blank ND 8S 416 % Recovery

True Value QC 400 RPD

Qualifier

Chloride, SM4500CI-B

ma /ka

Analyzed By: HM

Analyte Result <16.0

Sample ID: SIMS PIT TOP SOIL (H201496-02)

16.0 07/03/2012

012

ND

Method Blank

8S 416 % Recovery 104 True Value QC 400

RPD 0.00

0.00

Qualifier

Cardinal Laboratories

*=Accredited Analyte

PLEMES NOTE: Liability and Commanys. Cardina's liability and clients exclusive remody for any 'claim arising, whether based in contract or text, 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 waited 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 hieruptions, 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 inereunder 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 Laboratories.

alex Ethers

Celey D. Keene, Lab Director/Quality Manager

Page 2 of 4



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

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Demages. Cardinal's liability and clients exclusive remedy for any claim arising, whether based in contract or bort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whistocerer shall be deemed watered unless made in writing and received by Cardinal within thirty (30) days after competition of the applicable service. In no event shall Cardinal be liable for incidental or corresquential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its substitutes, difflictors or successors arising out of or related to the performance of the services hereunded 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 without popularity.

aleg to trung



101 East Marland, Hobbs, NM 88240

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Project Manager: Address: Company: City: State: Zip: Attn: Phone &: Project Same: Project Name: Project Location: Samplor Name: For Address: For Address: City: Project Location: Samplor Name: For Address: For Address: City: Project Attn: Phone &: Fax 8: Fax 8: Phone &: Fax 8: Phone &: Fax 8: Phone &: Fax 8: Fax 8: Phone &: Fax 8: Fax	Company Name	(575) 393-2326 FAX (575) 393- FTCE		BILL TO	#***	ANALYSIS	REQUEST	
City: State: Zip: Attn: Phone #: Fox #: Address: Project #: Project Owner: City: Project Name: Project Location: Di) N 32 Vant Majer Project Location: Bi) N 32 Vant Majer Project Location: For LARUSE DATY Lab I.D. Sample I.D. WATER PRESERV SAMPLING Lab I.D. Sample I.D. DATE TIME	Project Manage	r:	,					
Phone #: Fax #: Address: Project #: Project Owner: City: Project Location: BD N - 3 2 Vent Vennger project Thomas: Sampler Name: Sorianise Day Lab 1.D. Sample I.D. Sample I.D. Bampler IIIIII Bampler IIIII Bampler IIIII Bampler IIII Bampler IIIII Bampler IIII Bampler III B	Address:	treatment and the second		Company:				
Project Owner: City: Project Name: Project Location: Project Name: Phone #: Fax #: PRESERV. SAMPLING Sample I.D. Sample I.D. Sample I.D. Sampling Sampling	City:	State:	Zip:	Attn:				
Project Name: Project Location: Project Location: State: Zip: Phone #: Fax #: FOR LAB USE DMY Lab 1.D. Sample I.D. Sample I.D. State: State: Zip: Phone #: Fax #: Fax #: FOR LAB USE DMY AND CONTROL OF STATE AND CONTROL OF ST	Plione #:	Fax #:		Address:				
Project Location: BD N - 7 2 Ven-t Manger project Phone #: Sampler Name: For LAB USE DIMY Lab 1.D. Sample I.D. WATRIX PRESERV SAMPLING WATRIX	Project #:	Project Ov	vner:	City:		!		
Sampler Name: For the liber of	Project Name:			State: Zip:				
Lab I.D. Sample I.D. WATRIX PRESERV SAMPLING WATRIX PRESERV SAMPLING JUNE 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Project Location	1: BDN-32 Uc-t	major project	Phone #:		1 1		
Lab I.D. Sample I.					_			
Lab I.D. Sample I.D. Sawgle I.	FOR LARIUSE DNLY	·		PRESERV SAMPLING				1
H201496 Sample I.D. Sample I.D			NO ST RE PER PER PER PER PER PER PER PER PER					
H2D1496 DD N-32 Vest Bleavend C 1 2/2/12 1/40 C 2/2/12 1/49 C 1/2/12 1/49 C 2/2/12 1/	Lab I.D.	Sample I.D.	ATE ATE	띯넝	1)			
H2D1496 1 DD N-32 Vest Blands C 1		·	NTA UND TEW	USAK COO COO	6-1			
2 52 - 5 P. T top 50.1 C 1 772/12 1:40 C	H201496		GROOM SOUL	DATE THE				
2-5; -s Pit top soil C. 1 1 7/2/12 1:45		BD N-32 Vent Blows	JC1 11	1 1 1 1/2/12 12	40 -			
	2	15 ms Pit top 501		1 7/2/12/16	45//			
						J		
		and the first transfer of the same of the				. h		-
					· ·	1 1 1		
	e description of the control of the	and the state of t		· - -		de de la constante de la const		
		Companies as a minimum of the second	- - - - - - -					
The state of the s								_
		The state of the s						
	ISSMUS OF PROCESSIONS AND P	ta out of or related to the performence of cervices because	er by Cardinal, regardless of vinction costs o	ine, best of the, or loss of profin, incremed by them, a may is terring upon any of the above stated receives a	subsidiaries, otherwise			
atries. In the event shall Curded his book to incremental correspond correspond correspond to correct the fact of the extraction of the ex	relinquished By	11/2	77 Av 1	Pho	ne Result: CL Yes Result: CL Yes	J No Add Phon J No Add Fax#	2 W.	
Setting is, but no extend shall Control to both to incremental our expose, such as one perform its recording to extend the both to incremental our expose, such as one performs the control by density as incremental our expose, such as one performs the control by density as incremental our expose, such as one performs the control by density as incremental our expose, such as incremental our expose and otherwise. Relinquished By: Phone Result: Yes No Add'l Phone #:	* HALL	71 Time: 41	36 41/46 3	lendon REI	MARKS: Rush	Bru	ceBaker	
Relinquished By: Date: 1/2/12 Control of Lower Contr	Relinguished By	Date:	Received By:		11-17	For "		
Relinquished By: Date: Received By: Date: Received By:	•	Time:			HULL Come	T' L	aria W	
Relinquished By: Time: 3b	Delivered By:	(Circle One)	Sample Cor	dition CHECKED BY:	Zack Con	ice		
Delivered By: (Circle One) Delivered By: (Circle One) Sample Condition CHECKEDIBY	Sampler - UPS	- Bus - Other:	Cool Inta	Yes (Initials)				
Relinquished By: Date: Time:			oase fax written changes					1 1

RICE ENVIRONMENTAL CONSULTING & SAFETY

122 West Taylor Hobbs, NM 88240 PHONE: (505) 393-9174 FAX: (505) 397-1471 PID METER CALIBRATION & FIELD REPORT FORM

METER READING ACCURACY:100

CK.		MODEL: PGM 7300	SERIAL	NO: 590-000508
MODEL		MODEL: PGM 7300	SERIAL	NO: 590-000504
NO.		MODEL: PGM 7320	SERIAL	NO: 592-903318
		MODEL: PGM 7300	SERIAL 1	NO: 590-000183
		GAS COMPOSITION:	ISOBUTYI	ENE 100PPM / AIR: BALANCE
LOT NO	:HAL-248-100	-1		EXPIRATION DATE:7/1/2015

ACCURACY: +/- 2%

COMPANY	
RICE OPERATING	•

SYSTEM	JUNCTION	UNIT	SECTION	TOWN SHIP	RANGE
BD	N-32 VENT	N	32	T-21-S	R-37-E

SAMPLE ID	PID	SAMPLE ID	PID
BLOWSAND FROM BD N-32	0.1		
TOP SOIL FROM SIMS PIT	0.3		
		·	
		,	
		·	

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

SIGNATURE: July July

DATE: 7/2//12



July 23, 2012

Hack Conder

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD N-32-VENT

Enclosed are the results of analyses for samples received by the laboratory on 07/13/12 16:35.

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 accredited certif.html.

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.

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 Hack Conder 112 W. Taylor

Hobbs NM, 88240

Fax To:

(575) 397-1471

Received:

07/13/2012

Sampling Date:

07/13/2012

Reported:

07/23/2012

Sampling Type:

Soil

Project Name:

BD N-32-VENT

Sampling Condition:

** (See Notes)

Project Number:

NONE GIVEN

Sample Received By:

Jodi Henson

Project Location:

T21S R37E SEC32 N - LEA CTY., NM

Sample ID: IMPORTED TOPSOIL ZIEGLAR'S PIT (H201614-01)

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	07/17/2012	ND	400	100	400	3.92		

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and clients 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 whitshoerer shall be deemed waited unders 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 demogres, including, without limitation, justices interpretations, loss of or profits incrurated by 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 within approved of Cardinal Laboratories.

aleg to Keena



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

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim orising, 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 muste 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 corresequential damages, including, without limitation, business historypotrons, loss of use, or loss of profits incurred by Clerit, its adostinalies, affiliates auch claims to meet 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 purpored of Cardinal Laboratories.

Celey To Keena

1300	
<u>C</u> .	ļ

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	THOS. Operating					***	L		BI	LL TO	,					ANA	LYSK	RE	QUE	ST			
Project Manage	" Katie Jones	Bank and 11 and 1 a					ρ,	O. #;															
Address: 112							Ç¢	mpa	ny:			_				13						.	
City: Hobbs	W en in alot-littlempennings	State: NM	Zip: 8	8824	0		At	tn:								Cations/Anions							
Phone #:		Fart:			·		Ac	dres	s:			_		'		7	1						
Project #;	20.00	Project Owner:					Ci	y:				100	Σ		I	1/s	l						
Project Name:	BO-N-32-00	nt					St	ate:		Zip:	enderlande de la companya de la comp	Chlorides	PH 8015 M	×	exas TPH	6							
Project Location							P	one	#:		e applications are up	1 😤	18	BTEX	'n	ati	TDS		1				
Sampler Name:	Potrote Ruso	٧					Fa	x #:				1 ≍	Ī	8	ă		-						
103 TABLES DATA				-	MA	TRIX	-1	PRE	SERV	SAMP	ING	10	Į Ā		<u>e</u>	ē	l					1	
Lab I.D.	Sample I.	D.	(G)RAB OR (C)OMP	GROUNDWATER	WASTEWATER	001	. ER .	ACID/BASE:	/ COOL							Complete						· ·	
H201614			وَ ا	J K	SOIL	ð i	김동	ğ	OTHER OTHER			. L	L				<u> </u>						
	ropulations	Treat it is	6.	/	. 1	11			1/	2.3%	1 00	\mathbb{Z}	Ī										
	* 2	iegar 3			11	11:	1				+	Ĭ		<u> </u>			<u></u>		<u> </u>	.:	,		
r.	1 4 THE WAY WATER OF 1					<u> </u>			_ .			-							ļ				
		·				·	-ļ -	-			1								ļ				
.,	4 janyanyan - angenyenna	NA 1						\vdash		.	 	-				· ·							
	'di jay'n dhatand an waa is weer o c aqeeggame o				7 +-	+-+	÷	-		.]			ļ	}·									
* *** . **	commence of the contract of th			-	1 +	 						-		 				 					
er tellstenden en	activity agency of the speed of the speed			-	1	1-1	1				1												
		• • •				1:	1																
Abblises. All thanse, building service. Billio assers shall ()	nd Darmagers, Combineth Kateley und all my Brook for natuloperace and any other wrongs to hard the devalential as steed my red of an initial of the personness of White	prife archeoler remedy for an course, releasement estall be de released destroyers, metalogic of services becoming by Co 1 Dictor:		eived	des since business of about	ed exception is writing a startuption startuption	aci er to erej reer o, toes r re re bar	el, steali respoi tra el sese, co and sener	ber Krein Consticue 1 feste set 1 responde	d to the greated p within 3C days to profits incurred b the attorne stated	ter correction of close, to reduce mental to reduce Phone R	to the applications of the	*** [] Ye	-a Di	No	rha A	Phone	ž.					
Doberto	J&ANA	Time: 35	4	QE.	L	<u>`</u>	1	Ú.	W	bu_	Fax Res	ult: (S:	□ Ye			Addi		v		······································		******	
Tryinguisned B	r.	Time:	regio	eived	isy;						email Zcor	der@	@rice					-					
1. "	: (Circle One) - Bus - Other:			1	Sample Cool Ye	Cond Intact SEY	-		CHEC	KED BY:	hcon kjone	s@r	ices	wd.o	om;	Lpe	na@	rices	swď.	com			,
† Cardinal	cannot accept verbal	changes. Please	fax v	vritte	n char	iges (-247	3	* C	han	ged	as	P	u	La	ra	7	119/	12.	d	4



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

Contact Name: Bruce Baker Email: bbaker@rice-ecs.com Site size: 60' x 90' 5400 square feet	
Contact Name: Bruce Baker Email: bbaker@rice-ecs.com Site size: 60' x 90' 5400 square feet	d.
Email: bbaker@rice-ecs.com Site size: 60' x 90' 5400 square feet	
Site size: 60' x 90' 5400 square feet Map detail of site attached Additional information: 2. Soils *Do not rip caliche subsoils: caliche rocks brought to the surface by ripping shall be remove Salvaged from site Bioremediated Imported Blended Depth (in Sandy blow sand Describe soil & subsoils: Sandy blow sand Soil prep methods: Rip Depth(in): Disc Depth (in): 6 in Rollerpack Date completed: 8/17/12 3. Bioremediation Fertilizer Hay Other Describe: Lbs/acre: Describe: Lbs/acre: Describe: Lbs/acres Describes Describes	
Additional information: 2. Soils *Do not rip caliche subsoils: caliche rocks brought to the surface by ripping shall be remove Salvaged from site □ Bioremediated □ Imported ☑ Blended □ Depth (if Texture: sandy Describe soil & subsoils: Sandy blow sand Soil prep methods: Rip □ Depth (in): Disc ☑ Depth (in): 6 in Rollerpack □ Date completed: 8/17/12 3. Bioremediation Fertilizer □ Hay □ Other □ Describe: Describe: Ubs/acre: □ Custom seed mix ☑ Prescribed mix □ Seed mix name: 2.5 lbs side oats Seeding Broadcast ☑ Seeding	
2. Soils *Do not rip caliche subsoils: caliche rocks brought to the surface by ripping shall be remove Salvaged from site □ Bioremediated □ Imported ⋈ Blended □ Depth (instruction of the surface by ripping shall be remove Balvaged from site □ Bioremediated □ Imported ⋈ Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Blended □ Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripping shall be remove Blended □ Depth (instruction of the surface by ripp	
Salvaged from site Bioremediated Imported Blended Depth (Texture: sandy Describe soil & subsoil: Sandy blow sand Soil prep methods: Rip Depth(in): Disc Depth (in): 6 in Rollerpack Date completed: 8/17/12 3. Bioremediation Fertilizer Hay Other Describe: Describe: Describe: 4. Seeding *Attach seed bag tags to this form. Seed bag tags shall contain the site name and S-T-R. Custom seed mix Prescribed mix Seed mix name: 2.5 lbs side oats 2.5 lbs blue grama Broadcast Seeding	
Salvaged from site Bioremediated Depth (Imported Sandy blow sand Soil prep methods: Rip Depth(in): Disc Depth (in): 6 in Rollerpack Date completed: 8/17/12 3. Bioremediation Fertilizer Hay Other Describe: Describe: Describe: Describe: Describe: Describe: Describe: Describe: Describe: Seed mix name: 2.5 lbs side oats Seeding Broadcast Seeding	
Texture: sandy]
Attach seed bag tags to this form. Seed bag tags shall contain the site name and S-T-R. Custom seed mix □ Prescribed mix □ Seed mix name: 2.5 lbs side oats 2.5 lbs blue grama Broadcast □ Broadcast □ Proscribed mix □ Seed mix name: 2.5 lbs blue grama	
Fertilizer	***************************************
Fertilizer	
Fertilizer	
Type: Lbs/acre: 4. Seeding *Attach seed bag tags to this form. Seed bag tags shall contain the site name and S-T-R. Custom seed mix Prescribed mix Seed mix name: 2.5 lbs side oats 2.5 lbs blue grama Broadcast	
Lbs/acre: 4. Seeding *Attach seed bag tags to this form. Seed bag tags shall contain the site name and S-T-R. Custom seed mix □ Prescribed mix □ Seed mix name: 2.5 lbs side oats Seeding	
4. Seeding *Attach seed bag tags to this form. Seed bag tags shall contain the site name and S-T-R. Custom seed mix □ Prescribed mix □ Seed mix name: 2.5 lbs side oats 2.5 lbs blue grama Broadcast □	
Custom seed mix Prescribed mix Seed mix name: 2.5 lbs side oats 2.5 lbs blue grama Broadcast Seeding	
2.5 lbs blue grama Broadcast ⊠	
Broadcast 🛮	date: 8/17/12
	0/1//12
Mathod: Machanical Surgador	
Soil conditions during seeding: Dry Damp Wet Demo Hotos attached Descriptions: Seed was tilled into the soil.	
Number of photos: Observations: Seed was tilled into the soil.	
Number of photos.	
5. Certification I hereby certify that the information in this form and attachments is true and complete to the best of my k	nowledge and belief.
Name: Eduardo García Title: Environmental Tech	Date: 8/17/12
Signature: Educado Caulte	′
orginature. The Country Countr	