



AE Order Number Banner

Report Description

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.



App Number: pGRL1401526860

1RP - 3003

RICE OPERATING COMPANY

3/10/2016

HOBBS OCD

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

JAN 02 2014

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
conformance with 19.15.29 NMAC.

RECEIVED

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Rice Operating Company	Contact	Hack Conder
Address	122 W. Taylor St., Hobbs, NM 88240	Telephone No.	(575) 631-6432
Facility Name	BD Jct. N-31-1	Facility Type	Junction Box
Surface Owner	G.P. Sims	Mineral Owner	
		API No.	3002538528

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	31	21S	37E	1018	FSL	2229	FWL	Lea

Latitude 32.431016 Longitude -103.203183

NATURE OF RELEASE

Type of Release	Produced water	Volume of Release	60 bbls	Volume Recovered	20 bbls
Source of Release	Junction box	Date and Hour of Occurrence	12/31/13 11:00 am	Date and Hour of Discovery	12/31/13 11:00 am
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Geoff Leking - NMOCD		
By Whom?	Hack Conder	Date and Hour	12/31/13 2:20 pm		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

DTW = 95'



Describe Cause of Problem and Remedial Action Taken.*

The PVC flange in the junction box cracked releasing 60 barrels of produced water. The line was shut in and isolated. A vacuum truck was called to the site and recovered 20 barrels of produced water. The flange will be repaired on 1/2/14.

Describe Area Affected and Cleanup Action Taken.*

A total of 10,995 sq ft of pasture land and lease road was affected. Initial assessment and remediation will begin on 1/2/14 and the site will be remediated to NMOCD guidelines.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	OIL CONSERVATION DIVISION 	
Printed Name: Hack Conder	Approved by Environmental Specialist	
Title: Environmental Manager	Approval Date: 01/02/14	Expiration Date: 03/03/14
E-mail Address: hconder@riceswd.com	Conditions of Approval: SUBMIT FINAL C-141 BY 03/03/14	Attached <input type="checkbox"/> IRP-01-14-3003
Date: 12/31/2013	Phone: (575) 631-6432	

* Attach Additional Sheets If Necessary

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
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State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	Rice Operating Company	Contact	Hack Conder
Address	122 W Taylor St., Hobbs, NM 88240	Telephone No.	(575) 631-6432
Facility Name	BD Jct. N-31-1	Facility Type	Junction Box

Surface Owner	G.P. Sims	Mineral Owner		API No.	3002538528
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
N	31	21S	37E	1018	FSL	2229	FWL	Lea

Latitude 32.431016 Longitude -103.203183

NATURE OF RELEASE

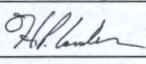

Type of Release	Produced Water	Volume of Release	60 bbls	Volume Recovered	20 bbls
Source of Release	Junction Box	Date and Hour of Occurrence	12/31/13 11:00 am	Date and Hour of Discovery	12/31/13 11:00 am
Was Immediate Notice Given?	If YES, To Whom?				
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	Geoff Leking – NMOCD				
By Whom?	Hack Conder	Date and Hour	12/31/13 2:20 pm		
Was a Watercourse Reached?	If YES, Volume Impacting the Watercourse.				
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* The PVC flange in the junction box cracked releasing 60 barrels of produced water. The line was shut in and isolated. A vacuum truck was called to the site and recovered 20 barrels of produced water. The flange will be repaired on 1/2/14.

Describe Area Affected and Cleanup Action Taken.* A total of 7,188 square feet of lease pad and pasture land was affected. Beginning on January 13, 2014, REC personnel were on site to begin excavating the site. Area 1 was excavated to a depth of 1 to 1.5 ft bgs, based on the low chloride concentrations observed during the initial soil sampling conducted at auger point 1 and 2. To verify chloride concentrations in Area 2, soil samples were collected from two separate points. Point 1 was excavated and sampled to a depth of 4 ft bgs and Point 2 was excavated and sampled to a depth of 7.5 ft bgs. The bottom sample from each point was analyzed by a commercial laboratory for chloride and TPH. The 4 ft sample in Point 1 resulted in a chloride concentration of 112 mg/kg and a TPH concentration below detectable limits. The field PID reading of that sample resulted in a reading of 0.0 ppm. The 7.5 ft sample in Point 2 resulted in a chloride concentration of 176 mg/kg and a TPH concentration below detectable limits. The field PID reading of that sample resulted in a reading of 0.3 ppm. Sample points were collected from 3 points on the east wall and 3 points on the west wall. The samples were field tested for hydrocarbons, resulting in low concentrations. Each sample was sent to a commercial laboratory for analysis of chloride, resulting in concentrations below detectable limits at Pt 1 and Pt 3 on the west wall and Pt 2 and Pt 3 on the east wall. Pt 2 on the west wall resulted in a chloride concentration of 240 mg/kg and Pt 1 on the east wall resulted in a chloride concentration of 112 mg/kg. GRO and DRO were below detectable limits throughout. Area 3 was excavated to a depth of 3 ft. At the base of the excavation, a 5 pt composite was collected and sent to a commercial laboratory for analysis of chloride and TPH, resulting in a chloride concentration of 432 mg/kg and concentrations of GRO and DRO below detectable limits. The samples were also analyzed in the field for the presence of hydrocarbon, resulting in a reading of 0.7 ppm. To prevent the migration of any residual constituents, a 20-mil reinforced liner was installed at the bottom of the excavation. The top of the liner was then padded with the imported topsoil. Padding below the liner was not necessary, due to the sandy lithology of the site. Area 4 was excavated to a depth of 2.5 ft bgs. A total of 1,541 yards of excavated soil was taken to a NMOCD approved facility for disposal. A total of 1,540 yards of soil was imported to the site to use as backfill. Each excavated area was backfilled with imported topsoil to ground surface, and the lease road was repaired with imported caliche. A sample of the imported caliche and topsoil were sent to a commercial laboratory for analysis of chloride, resulting in concentrations at or below detectable limits. The samples were also analyzed in the field for the presence of hydrocarbon, resulting in a reading of 0.1 ppm in the caliche and 0.2 in the topsoil. The site was contoured to the surrounding location and a silt net fence was placed around the site to prevent erosion and maintain seed integrity. On March 4, 2014, soil amendments were added to the site and the site was seeded with a blend of native vegetation. Vegetation provides a natural infiltration barrier, since plants capture water through their roots thereby reducing the amount of water traveling through the vadose zone.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	OIL CONSERVATION DIVISION  Environmental Specialist	
Printed Name: Hack Conder	Approved by Environmental Specialist:	
Title: Environmental Manager	Approval Date: 4/03/14	Expiration Date: —
E-mail Address: hconder@riceswd.com	Conditions of Approval: —	Attached <input type="checkbox"/>
Date: 4/2/2014	Phone: (575) 631-6432	IRP-01-14-3003

* Attach Additional Sheets If Necessary

March 2, 2014

Geoffrey Leking

New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau – District 1
1625 N. French Dr.
Hobbs, NM 88240-9273

approved
Geoffrey Leking
Environmental Specialist
NMOCD-DIST 1
4/03/14

RE: Corrective Action Plan (CAP) Report & Termination Request
BD Jct. N-31-1 Accidental Discharge (AD) (1RP-01-14-3003)
UL/N sec. 31 T21S R37E
API No. 30-025-38528
Rice Operating Company – Blinebry Drinkard SWD

Mr. Leking:

RICE Operating Company (ROC) has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the above-referenced site in the BD Salt Water Disposal (SWD) system. 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.

Background and Previous Work

An accidental discharge of produced water was discovered on December 31, 2013. The AD was located in unit letter N, section 31, T21S, R37E, as shown in Figure 1. The NMOCD District 1 office was notified that day, and an initial C-141 was submitted to the District 1 office on January 2, 2014 (Appendix A). According to the initial C-141, a PVC flange in the junction box cracked, releasing 60 bbls of produced water, which affected a total of 10,995 ft² of pasture and lease road. After the AD was discovered, the line was shut in and a vacuum truck was used to recover 20 bbls of the produced water, then the flange was permanently repaired.

On January 2, 2014, RECS personnel were onsite to collect hand auger soil samples at regular intervals in three separate areas. Each sample was field titrated for chloride and screen for hydrocarbons using a PID. Auger point 1 was collected near the source of the AD to a depth of 2 ft bgs. Chloride concentrations decreased from 7,494 mg/kg at the surface to a concentration of 152 mg/kg at 1.5 ft bgs and 87 mg/kg at 2 ft bgs. Auger point 2 was collected near the center of the AD to a depth of 1 ft bgs. Chloride concentrations decreased from 9,504 mg/kg at the surface to 245 mg/kg at 0.5 ft to 87 mg/kg at 1 ft bgs. Auger point 3 was collected from the southern part of the AD to a depth of 2.5 ft bgs. Chloride concentrations decreased from 7,109 mg/kg at the surface to 151 mg/kg at 2.5 ft bgs. Laboratory analysis confirmed chloride concentrations that decreased with depth and TPH concentrations below detectable limits.

During a meeting with the District 1 NMOCD office on January 3, 2013, the following corrective actions were discussed. The AD will be separated into four different sections, based on chloride concentration. Area 1 is the soil surrounding auger points 1 and 2, Area 2 is the ravine section, Area 3 is the soil surrounding a former drill pit, and Area 4 is the soil surrounding auger point 3. To protect groundwater quality, ROC proposed to excavate Area 1 to a depth of 1-1.5 ft bgs. Area 2 is proposed to be excavated and sampled to verify chloride concentrations. Area 3 is proposed to be excavated to a depth of 2.5 ft bgs with a 20-mil reinforced liner being installed and properly seated at that depth. Area 4 is proposed to be excavated to a depth of 2.5 ft bgs. The specified excavation depths will remove the highest chloride concentrations.

Each excavated area will then be backfilled with soil containing a chloride concentration below 500 mg/kg and a field PID reading below 100 ppm. Any soil requiring disposal will be properly disposed of at a NMOCD approved facility. The backfilled excavation will then be seeded with a blend of native vegetation.

The proposed work was submitted to the NMOCD in an Updated Corrective Action Plan (CAP), which was formally approved on January 14, 2014. The leak boundary, initial sampling data, and approved excavation boundaries are included in Figure 2.

Corrective Action Plan Report

Beginning on January 13, 2014, REC personnel were on site to begin excavating the site. Area 1 was excavated to a depth of 1 to 1.5 ft bgs, based on the low chloride concentrations observed during the initial soil sampling conducted at auger point 1 and 2.

To verify chloride concentrations in Area 2, soil samples were collected from two separate points (Figure 3). Point 1 was excavated and sampled to a depth of 4 ft bgs and Point 2 was excavated and sampled to a depth of 7.5 ft bgs. The bottom sample from each point was analyzed by a commercial laboratory for chloride and TPH. The 4 ft sample in Point 1 resulted in a chloride concentration of 112 mg/kg and a TPH concentration below detectable limits. The field PID reading of that sample resulted in a reading of 0.0 ppm. The 7.5 ft sample in Point 2 resulted in a chloride concentration of 176 mg/kg and a TPH concentration below detectable limits. The field PID reading of that sample resulted in a reading of 0.3 ppm. Sample points were collected from 3 points on the east wall and 3 points on the west wall. The samples were field tested for hydrocarbons, resulting in low concentrations. Each sample was sent to a commercial laboratory for analysis of chloride, resulting in concentrations below detectable limits at Pt 1 and Pt 3 on the west wall and Pt 2 and Pt 3 on the east wall. Pt 2 on the west wall resulted in a chloride concentration of 240 mg/kg and Pt 1 on the east wall resulted in a chloride concentration of 112 mg/kg. GRO and DRO were below detectable limits throughout.

Area 3 was excavated to a depth of 3 ft. At the base of the excavation, a 5 pt composite was collected and sent to a commercial laboratory for analysis of chloride and TPH, resulting in a chloride concentration of 432 mg/kg and concentrations of GRO and DRO below detectable limits. The samples were also analyzed in the field for the presence of hydrocarbon, resulting in a reading of 0.7 ppm. To prevent the migration of any residual constituents, a 20-mil reinforced liner was installed at the bottom of the excavation. The top of the liner was then padded with the

imported top soil. Padding below the liner was not necessary, due to the sandy lithology of the site. Area 4 was excavated to a depth of 2.5 ft bgs.

A total of 1,541 yards of excavated soil was taken to a NMOCD approved facility for disposal. A total of 1,540 yards of soil was imported to the site to use as backfill. Each excavated area was backfilled with imported topsoil to ground surface, and the lease road was repaired with imported caliche. A sample of the imported caliche and topsoil were sent to a commercial laboratory for analysis of chloride, resulting in concentrations at or below detectable limits. The samples were also analyzed in the field for the presence of hydrocarbon, resulting in a reading of 0.1 ppm in the caliche and 0.2 in the topsoil. The site was contoured to the surrounding location and a silt net fence was placed around the site to prevent erosion and maintain seed integrity. On March 4, 2014, soil amendments were added to the site and the site was seeded with a blend of native vegetation. Vegetation provides a natural infiltration barrier, since plants capture water through their roots thereby reducing the amount of water traveling through the vadose zone. Documentation of these activities can be found in Appendix B.

Since the CAP actions have been completed, ROC respectfully requests 'remediation termination' or similar site closure status for the site. A Final C-141 is included in Appendix C. ROC acknowledges they have met the requirements of 19.15.29 NMAC, and no further action is required.

RECS appreciates the opportunity to work with you on this project. Please call Hack Conder at (575) 393-2967 if you have any questions or wish to discuss the site.

Sincerely,

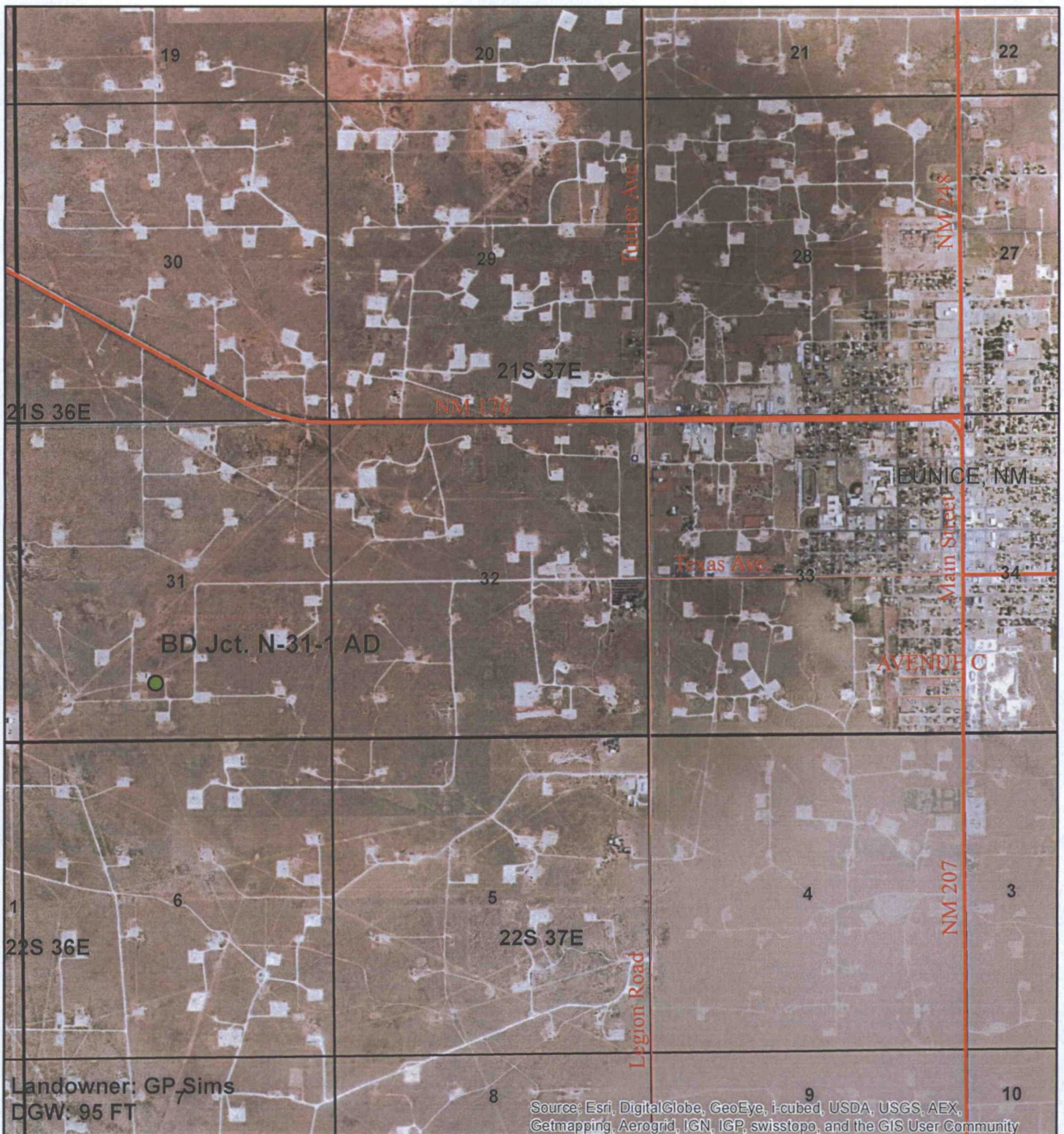


Laura Flores
Rice Environmental Consulting & Safety (RECS)
Project Manager

Attachments:

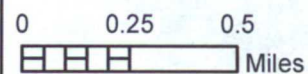
- Figure 1 – Site Map
- Figure 2 – Excavation Data
- Appendix A – Initial C-141
- Appendix B – CAP Activities Documentation
- Appendix C – Final C-141

Site Location Map



BD Jct.
N-31-1 AD
LEGALS: UL/N sec. 31
T-21-S R-37-E
LEA COUNTY
API No. 30-025-38528
NMOCD Case #: 1RP-01-14-3003

Figure 1



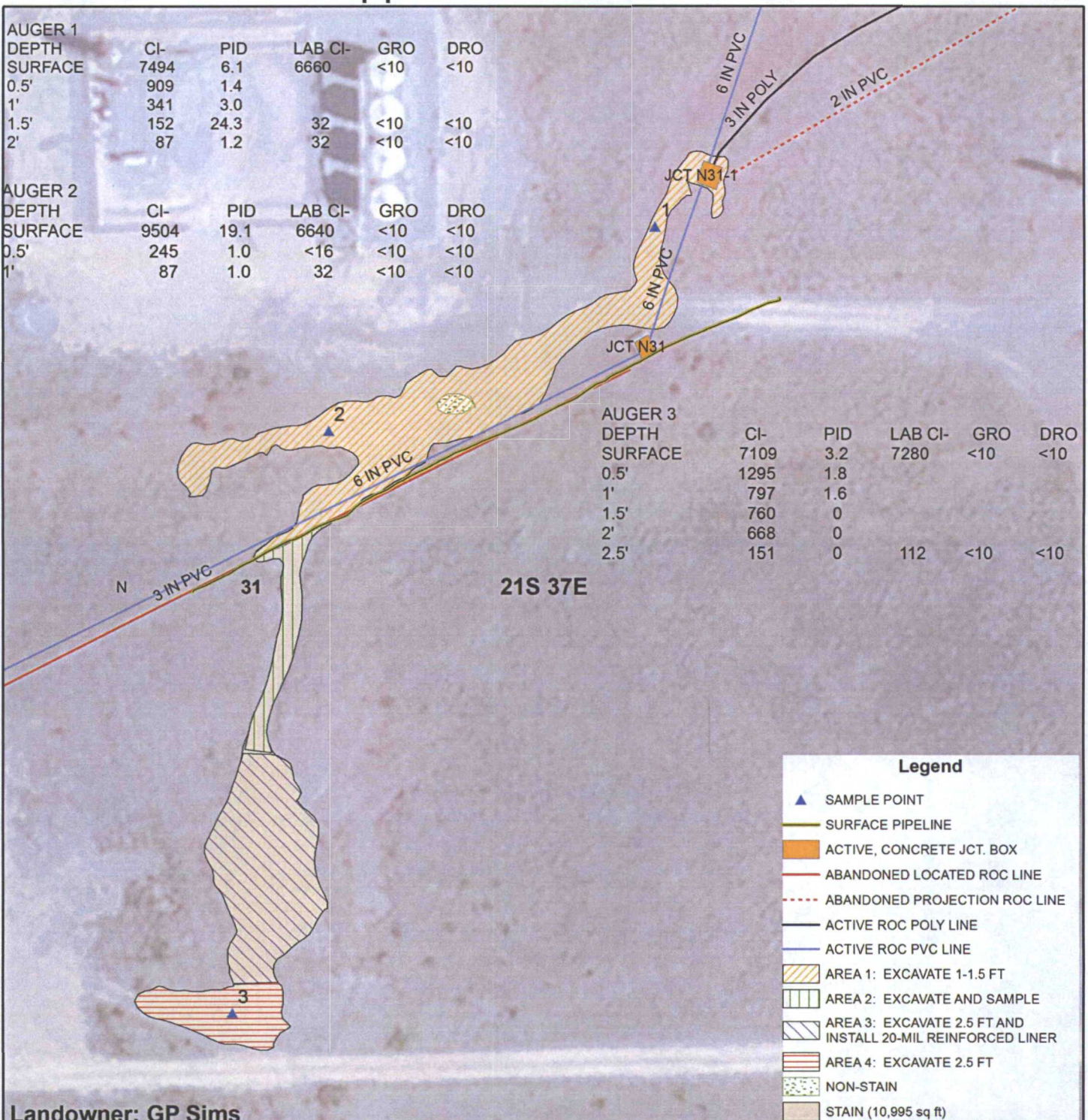
Drawing date: 1/3/14
Drafted by: T. Grieco

Approved Excavation Zones

AUGER 1					
DEPTH	CI-	PID	LAB CI-	GRO	DRO
SURFACE	7494	6.1	6660	<10	<10
0.5'	909	1.4			
1'	341	3.0			
1.5'	152	24.3	32	<10	<10
2'	87	1.2	32	<10	<10

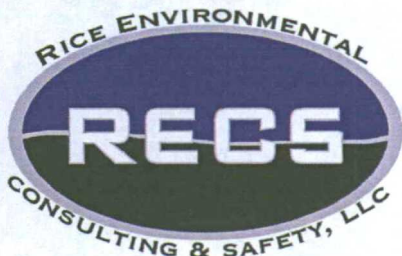
AUGER 2					
DEPTH	CI-	PID	LAB CI-	GRO	DRO
SURFACE	9504	19.1	6640	<10	<10
0.5'	245	1.0	<16	<10	<10
1'	87	1.0	32	<10	<10

AUGER 3					
DEPTH	CI-	PID	LAB CI-	GRO	DRO
SURFACE	7109	3.2	7280	<10	<10
0.5'	1295	1.8			
1'	797	1.6			
1.5'	760	0			
2'	668	0			
2.5'	151	0	112	<10	<10



Landowner: GP Sims
DGW: 95 FT

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



BD Jct. N-31-1 AD

LEGALS: UL/N sec. 31
T-21-S R-37-E
LEA COUNTY

API No. 30-025-38528
NMOCD Case #: 1RP-01-14-3003

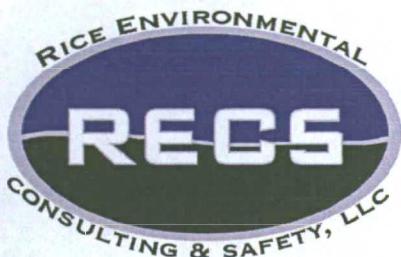
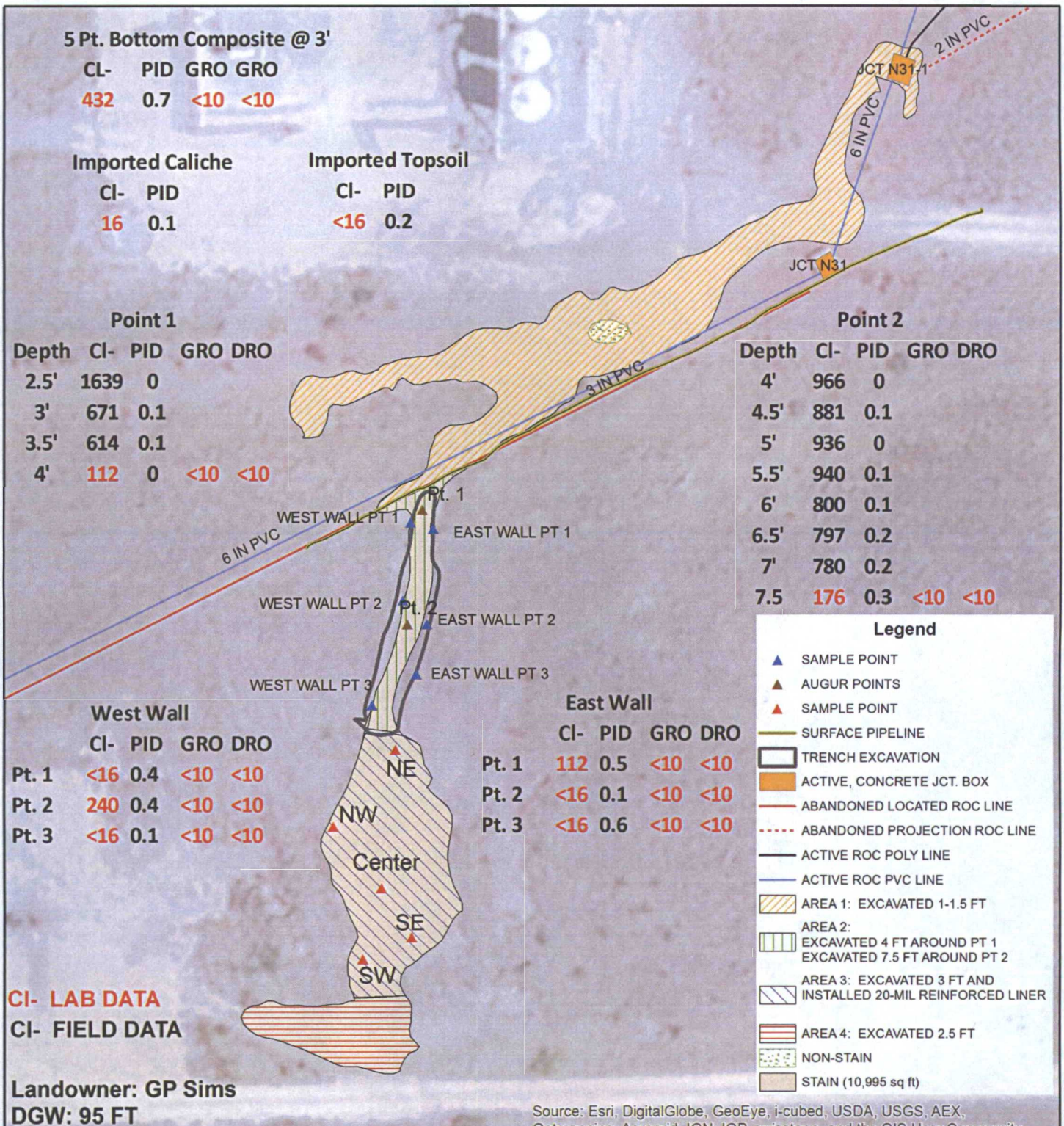
Figure 2

0 30 60
Feet

GPS date: 12/31/13 KN
Drawing date: 1/2/14
Drafted by: L. Weinheimer



Excavation Data



BD Jct. N-31-1 AD

LEGALS: UL/N sec. 31
T-21-S R-37-E
LEA COUNTY

API No. 30-025-38528
NMOCD Case #: 1RP-01-14-3003

Figure 3

0 30 60
Feet

GPS date: 2/4/14 KL
Drawing date: 2/5/14
Drafted by: C. Ursanic





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

January 29, 2014

Hack Conder
Rice Operating Company
112 W. Taylor
Hobbs, NM 88240

RE: BD JCT. N-31-1 AD

Enclosed are the results of analyses for samples received by the laboratory on 01/28/14 10:50.

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 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

Analytical Results For:

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

 Received: 01/28/2014
 Reported: 01/29/2014
 Project Name: BD JCT. N-31-1 AD
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 01/22/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: AREA 3 5 PT. COMP (H400265-01)

Chloride, SM4500CI-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	01/29/2014	ND	416	104	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	01/28/2014	ND	192	96.2	200	0.594	
DRO >C10-C28	<10.0	10.0	01/28/2014	ND	183	91.4	200	2.51	
Surrogate: 1-Chlorooctane	82.2 %	65.2-140							
Surrogate: 1-Chlorooctadecane	94.3 %	63.6-154							

Sample ID: AREA 2 PT. 2 @ 7.5' (H400265-02)

Chloride, SM4500CI-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	01/29/2014	ND	416	104	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	01/28/2014	ND	192	96.2	200	0.594	
DRO >C10-C28	<10.0	10.0	01/28/2014	ND	183	91.4	200	2.51	
Surrogate: 1-Chlorooctane	85.6 %	65.2-140							
Surrogate: 1-Chlorooctadecane	88.0 %	63.6-154							

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, Lab Director/Quality Manager

Analytical Results For:

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

 Received: 01/28/2014
 Reported: 01/29/2014
 Project Name: BD JCT. N-31-1 AD
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 01/22/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson


Sample ID: AREA 2 PT. 1 @4' (H400265-03)

Chloride, SM4500Cl-B			mg/kg							
			Analyzed By: AP							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	112	16.0	01/29/2014	ND	416	104	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	01/28/2014	ND	192	96.2	200	0.594		
DRO >C10-C28	<10.0	10.0	01/28/2014	ND	183	91.4	200	2.51		
<hr/>										
Surrogate: 1-Chlorooctane	97.1 %	65.2-140								
Surrogate: 1-Chlorooctadecane	95.7 %	63.6-154								

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, 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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

[illegible]

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Relinquished By: <u>KARLAWA LEWIS</u> Date: <u>1-28-14</u> Time: <u>10:50</u>		Received By: <u>Jodi Benson</u> Date: _____ Time: _____		Relinquished By: _____ Date: _____ Time: _____		Received By: _____ Date: _____ Time: _____		Checked By: _____ (Initials) <u>[Signature]</u>	
Relinquished By: _____ Date: _____ Time: _____		Received By: _____ Date: _____ Time: _____		Relinquished By: _____ Date: _____ Time: _____		Received By: _____ Date: _____ Time: _____		Checked By: _____ (Initials) _____	

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RICE ENVIRONMENTAL CONSULTING & SAFETY

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

CK.		MODEL: PGM 7300	SERIAL NO: 590-000508
MODEL		MODEL: PGM 7300	SERIAL NO: 590-000504
NO.		MODEL: PGM 7320	SERIAL NO: 592-903318
	X	MODEL: PGM 7300	SERIAL NO: 590-902431

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

LOT# IAM 248-100-6	EXP: 7/1/2015
METER READING:100 PPM	

ACCURACY : +/- 2%

COMPANY
RICE

SITE	UNIT	SECTION	TOWN SHIP	RANGE
BD Jct. N-31-1 AD	N	31	21	37

[illegible]

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

SIGNATURE: _____

DATE:1-22-14

RICE ENVIRONMENTAL CONSULTING & SAFETY

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

CK.	<input type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-000508
MODEL	<input type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-000504
NO.	<input type="checkbox"/>	MODEL: PGM 7320	SERIAL NO: 592-903318
	<input checked="" type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-902431

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

LOT# IAM 248-100-6	EXP: 7/1/2015
METER READING: 100 PPM	

ACCURACY : +/- 2%

COMPANY
RICE

SITE	UNIT	SECTION	TOWN SHIP	RANGE
BD Jct. N-31-1 AD	N	31	21	37

SAMPLE ID	PID	SAMPLE ID	PID
Point 2 @4'	0		
Point 2@4.5'	0.1		
Point 2 @ 5'	0		
Point 2@5.5'	0.1		
Point 2 @6'	0.1		
Point 2@ 6.5'	0.2		
Point 2@7'	0.2		
Point 2 @7.5'	0.3		

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

SIGNATURE:



DATE: 1-22-14

RICE ENVIRONMENTAL CONSULTING & SAFETY

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

CK.	<input type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-000508
MODEL	<input type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-000504
NO.	<input type="checkbox"/>	MODEL: PGM 7320	SERIAL NO: 592-903318
	<input checked="" type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-902431

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

LOT# IAM 248-100-6	EXP: 7/1/2015
METER READING: 100 PPM	

ACCURACY : +/- 2%

COMPANY
RICE

SITE	UNIT	SECTION	TOWN SHIP	RANGE
BD Jct. N-31-1 AD	N	31	21	37

SAMPLE ID	PID	SAMPLE ID	PID
Point 1 @2.5'	0		
Point 1 @3'	0.1		
Point 1 @ 3.5'	0.1		
Point 1 @4'	0		

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

SIGNATURE:



DATE: 1-22-14



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

February 05, 2014

KYLE NORMAN

Rice Operating Company

112 W. Taylor

Hobbs, NM 88240

RE: BD JCT. N-31-1 AD

Enclosed are the results of analyses for samples received by the laboratory on 02/04/14 12:00.

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 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

Analytical Results For:

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

 Received: 02/04/2014
 Reported: 02/05/2014
 Project Name: BD JCT. N-31-1 AD
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 01/29/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: AREA 2 E WALL PT. 1 (H400331-01)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	02/05/2014	ND	416	104	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	02/05/2014	ND	203	101	200	3.08	
DRO >C10-C28	<10.0	10.0	02/05/2014	ND	190	95.1	200	1.59	
Surrogate: 1-Chlorooctane			102 %	65.2-140					
Surrogate: 1-Chlorooctadecane			105 %	63.6-154					

Sample ID: AREA 2 E WALL PT. 2 (H400331-02)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/05/2014	ND	416	104	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	02/05/2014	ND	203	101	200	3.08	
DRO >C10-C28	<10.0	10.0	02/05/2014	ND	190	95.1	200	1.59	
Surrogate: 1-Chlorooctane			95.1 %	65.2-140					
Surrogate: 1-Chlorooctadecane			96.3 %	63.6-154					

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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: 02/04/2014
 Reported: 02/05/2014
 Project Name: BD JCT. N-31-1 AD
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 02/04/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: AREA 2 E WALL PT. 3 (H400331-03)

Chloride, SM4500CI-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/05/2014	ND	416	104	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	02/05/2014	ND	203	101	200	3.08	
DRO >C10-C28	<10.0	10.0	02/05/2014	ND	190	95.1	200	1.59	
Surrogate: 1-Chlorooctane	102 %	65.2-140							
Surrogate: 1-Chlorooctadecane	111 %	63.6-154							

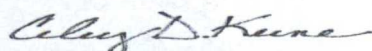
Sample ID: AREA 2 W WALL PT. 1 (H400331-04)

Chloride, SM4500CI-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/05/2014	ND	416	104	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	02/05/2014	ND	203	101	200	3.08	
DRO >C10-C28	<10.0	10.0	02/05/2014	ND	190	95.1	200	1.59	
Surrogate: 1-Chlorooctane	99.5 %	65.2-140							
Surrogate: 1-Chlorooctadecane	104 %	63.6-154							

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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: 02/04/2014
 Reported: 02/05/2014
 Project Name: BD JCT. N-31-1 AD
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 02/03/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: AREA 2 W WALL PT. 2 (H400331-05)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	02/05/2014	ND	416	104	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	02/05/2014	ND	203	101	200	3.08	
DRO >C10-C28	<10.0	10.0	02/05/2014	ND	190	95.1	200	1.59	
Surrogate: 1-Chlorooctane	100 %	65.2-140							
Surrogate: 1-Chlorooctadecane	101 %	63.6-154							

Sample ID: AREA 2 W WALL PT. 3 (H400331-06)

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AP				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/05/2014	ND	416	104	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	02/05/2014	ND	203	101	200	3.08	
DRO >C10-C28	<10.0	10.0	02/05/2014	ND	190	95.1	200	1.59	
Surrogate: 1-Chlorooctane	102 %	65.2-140							
Surrogate: 1-Chlorooctadecane	108 %	63.6-154							

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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: 02/04/2014
Reported: 02/05/2014
Project Name: BD JCT. N-31-1 AD
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 01/29/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: IMPORTED CALICHE (H400331-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	02/05/2014	ND	416	104	400	0.00	

Sample ID: IMPORTED TOPSOIL (H400331-08)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	02/05/2014	ND	416	104	400	0.00	

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Caley D. Keene, Lab Director/Quality Manager

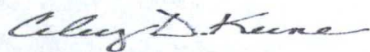
Notes and Definitions

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

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

BILL TO										ANALYSIS REQUEST													
Company Name: <u>Rice</u>										P.O. #:													
Project Manager: <u>Kyle Norman</u>										Company:													
Address:										Attn:													
City:										Address:													
Phone #:										City:													
Project #:										State:													
Project Name:										Phone #:													
Project Location: <u>BD Jet. N-31-1 AD</u>										Fax #:													
Sampler Name: <u>KARANTA LEWIS</u>																							
FOR LAB USE ONLY																							
Lab I.D.	Sample I.D.	(G) RAB OR (C) OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	PRESERV.	SAMPLING	DATE	TIME	Chlorides	TPH 8015 M	BTEX	Texas TPH	Complete Cations/Anions	TDS	
1	Area 2 East Wall pt. 1	G	1												1-29-14	9:27	✓						
2	Area 2 East Wall pt. 2	G	1												2-4-14	10:10	✓						
3	Area 2 East Wall pt. 3	G	1												2-4-14	10:15	✓						
4	Area 2 West Wall pt. 1	G	1												2-4-14	10:03	✓						
5	Area 2 West Wall pt. 2	G	1												2-3-14	1:38	✓						
6	Area 2 West Wall pt. 3	G	1												2-4-14	10:05	✓						
7	Imported Caliche	C	1												1-29-14	2:32	✓						
8	Imported Topsoil	C	1												2-4-14	10:51	✓						

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Relinquished By:	Date:	Received By:	Date:	Phone Result:	Yes	No	Add'l Phone #:
KARANTA LEWIS	2-4-14	Kodi Jensen	2-4-14	Fax Result:	Yes	No	Add'l Fax #:
Relinquished By:	Time:	Received By:	Time:	REMARKS:			
	12:00			email results to: klewis@rice-ecs.com			
Delivered By: (Circle One)		Sample Condition		kjones@rice-ecs.com			
Sampler - UPS - Bus - Other:		Cool - Intact		knorman@rice-ecs.com			
		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		hconder@rice-ecs.com lweinheimer@rice-ecs.com			

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#54

RICE ENVIRONMENTAL CONSULTING & SAFETY

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

CK.	<input type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-000508
MODEL	<input type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-000504
NO.	<input type="checkbox"/>	MODEL: PGM 7320	SERIAL NO: 592-903318
	<input checked="" type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-902431

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

LOT# IAM 248-100-6	EXP: 7/1/2015
METER READING: 100 PPM	

ACCURACY : +/- 2%

COMPANY
RICE

SITE	UNIT	SECTION	TOWN SHIP	RANGE
BD Jct. N-31-1 AD	N	31	21	37

SAMPLE ID	PID	SAMPLE ID	PID
Area 2 East Wall pt.1	0.5		

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

SIGNATURE:



DATE: 1-29-14

RICE ENVIRONMENTAL CONSULTING & SAFETY

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

CK.	<input type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-000508
MODEL	<input type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-000504
NO.	<input type="checkbox"/>	MODEL: PGM 7320	SERIAL NO: 592-903318
	<input checked="" type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-902431

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

LOT# IAM 248-100-6	EXP: 7/1/2015
METER READING: 100 PPM	

ACCURACY : +/- 2%

COMPANY				
RICE				

SITE	UNIT	SECTION	TOWN SHIP	RANGE
BD Jct. N-31-1 AD	N	31	21	31

SAMPLE ID	PID	SAMPLE ID	PID
Area 2 West Wall pt 2	0.4		

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

SIGNATURE:



DATE: 2-3-14

RICE ENVIRONMENTAL CONSULTING & SAFETY

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

CK.	<input type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-000508
MODEL	<input type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-000504
NO.	<input type="checkbox"/>	MODEL: PGM 7320	SERIAL NO: 592-903318
	<input checked="" type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-902431

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

LOT# IAM 248-100-6	EXP: 7/1/2015
METER READING: 100 PPM	

ACCURACY : +/- 2%

COMPANY
RICE

SITE	UNIT	SECTION	TOWN SHIP	RANGE
BD Jct.N-31-1 AD	N	31	21	37

SAMPLE ID	PID	SAMPLE ID	PID
Area 2 West Wall pt.1	0.4	Area 2 East Wall pt.2	0.1
Area 2 West Wall pt.3	0.1	Area 2 East Wall pt.3	0.6

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

SIGNATURE:



DATE: 2-4-14

RICE ENVIRONMENTAL CONSULTING & SAFETY

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

CK.	<input type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-000508
MODEL	<input type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-000504
NO.	<input type="checkbox"/>	MODEL: PGM 7320	SERIAL NO: 592-903318
	<input checked="" type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-902431

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

LOT# IAM 248-100-6	EXP: 7/1/2015
METER READING: 100 PPM	

ACCURACY : +/- 2%

COMPANY
RICE

SITE	UNIT	SECTION	TOWN SHIP	RANGE
BD Jct. N-3-1 AD	N	31	21	37

SAMPLE ID	PID	SAMPLE ID	PID
IMPORTED CALICHE	0.1		

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

SIGNATURE



DATE: 1-29-14

RICE ENVIRONMENTAL CONSULTING & SAFETY

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

CK.	<input type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-000508
MODEL	<input type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590-000504
NO.	<input type="checkbox"/>	MODEL: PGM 7320	SERIAL NO: 592-903318
	<input checked="" type="checkbox"/>	MODEL: PGM 7300	SERIAL NO: 590- 902431

GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE

LOT# IAM 248-100-6	EXP: 7/1/2015
METER READING:100 PPM	

ACCURACY : +/- 2%

COMPANY
RICE

SITE	UNIT	SECTION	TOWN SHIP	RANGE
BD Jct. N-31-1 AD	N	31	21	37

SAMPLE ID	PID	SAMPLE ID	PID
IMPORTED TOPSOIL	0.2		

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

SIGNATURE:



DATE:2-4-14

BD Jct. N-31-1 AD (1RP-01-14-3003)
API# 30-025-38528
Unit Letter N, Section 31, T21S, R37E



Leak area, facing northeast



Leak area, facing north



Leak area, facing south



Leak area, facing south



Excavating the leak area, facing north
1/16/2014



Excavating the leak area, facing southeast
1/16/2014



Exporting excavated soil, facing southeast
1/17/2014



Excavating in Area 2, facing south 1/20/2014



Collecting a soil sample from Area 2, Area 1 is
excavated in the background, facing northeast
1/22/2014



Excavating Area 2, facing south 1/29/2014



Excavating Area 2 with Area 3 and 4 in the
background, facing west 1/29/2014



Importing caliche, facing northeast 1/29/2014



Importing topsoil, facing east 2/4/2014



Backfilling Area 1 excavation with top soil, facing north 2/4/2014



Backfilling Area 4, facing east 2/5/2014



20-mil liner installed in Area 3, facing southwest 2/19/2014



Backfilling Area 2, facing northeast 2/24/2014



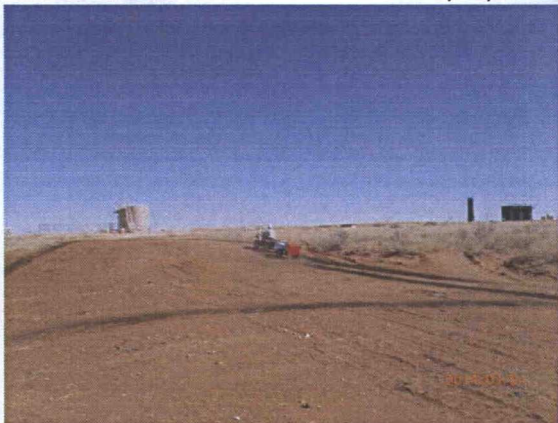
Backfilling above the liner with imported topsoil, facing southeast 2/24/2014



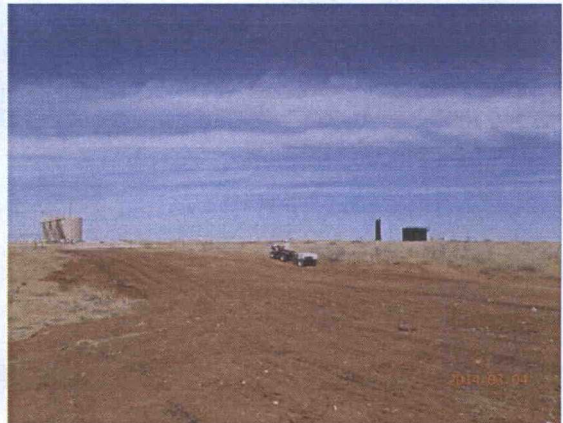
Backfilling and contouring the site, facing southeast 2/25/2014



Contouring the site, facing south 2/26/2014



Spreading amendments, facing northeast 3/4/2014



Seeding the site, facing northeast 3/4/2014



Site complete, facing north 3/6/2014



Site complete, facing west 3/6/2014



PO Box 2498
Hobbs, NM 88241
Phone: (575) 393-2967
Fax: (575) 393-0293

VEGETATION FORM

1. General Information

Site name: BD Jct. N-31-1 AD						
U/L N	Section 31	Township 21	Range 37	County LEA	Latitude 32.431016	Longitude 103.203183
Contact Name: Hack Conder						
Email: hconder@rice-ecs.com						
Site size: 100'x150' square feet: 15,000						

2. Soils

**Do not rip caliche subsoils; caliche rocks brought to the surface by ripping shall be removed.*

Salvaged from site	<input type="checkbox"/> Bioremediated	<input type="checkbox"/> Imported	<input checked="" type="checkbox"/> Blended	Depth (in)	
Texture:	Sandy		Describe soil & subsoil: Top Soil on top with Caliche Below		
Soil prep methods:	<input type="checkbox"/> Rip	Depth (in)	<input type="checkbox"/> Disc	Depth (in) 3 in.	<input type="checkbox"/> Rollerpack
Date completed:	2/26/2014				

3. Bioremediation

Fertilizer	<input type="checkbox"/> Hay	<input type="checkbox"/> Other	<input checked="" type="checkbox"/>
Type:			
Lbs/acre:	Describe: 15 Bags: Potting Soil, 15 Bags Bio Nhance, 2 Bags: Manure		

4. Seeding

**Attach seed bag tags to this form. Seed bag tags shall contain the site name and S-T-R.*

Custom Seed Mix	<input checked="" type="checkbox"/>	Prescribed Mix	<input type="checkbox"/>	Seed Mix Name:	15 lbs. Side Oates, 15 lbs. Winter Wheat, 15 lbs. Blue Grama	Date:	3/4/2014
Broadcast				Method:	Dew Drop Drill		
Soil conditions during seed:	Dry	<input checked="" type="checkbox"/> Damp	<input type="checkbox"/> Wet				
Observations:	The seed was tilled into the soil.						

5. Certification

I hereby certify that the information in this form and attachments is true and complete to the best of my knowledge and belief.

Name:	Kyle Humphrey	Title:	Environmental Tech	Date:	3/4/2014
Signature:					