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

HOBBS OCD
SEP 09 2013
RECEIVED

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 Apache Corporation	Contact Larry Bruce Baker
Address PO Box 1849, Eunice, NM 88231	Telephone No. (432) 631-6982
Facility Name Bunin #006	Facility Type Well Location

Surface Owner Bunin, N B Properties	Mineral Owner	API No. 30-025-39547

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	13	21S	37E	351	FNL	980	FEL	Lea

Latitude_____ **Longitude**_____

NATURE OF RELEASE

Type of Release Oil and Produced water	Volume of Release 20 bbls	Volume Recovered 10 bbls
Source of Release Stuffing box	Date and Hour of Occurrence unknown	Date and Hour of Discovery 7/2/13 9:45 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Geoff Leking – NMOCD Jeffery Robertson – BLM	
By Whom? RECS	Date and Hour 7/2/13 NMOCD 3:45 pm BLM 3:48 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

DTW=69'

Describe Cause of Problem and Remedial Action Taken.*
The stuffing box released 20 bbls of oil and produced water. A vacuum truck was called on site and retrieved 10 bbls of oil and produced water. The affected pad was covered over with caliche to protect wildlife until the one-call clears. The site will be delineated to determine further actions.

Describe Area Affected and Cleanup Action Taken.*
The release affected a total of 3,501 sq ft, of which 918 sq ft was in the pasture. On July 9th, 2013, BLM informed RECS that the site was not under BLM jurisdiction. On July 3rd, 2013, RECS personnel were on site to take initial samples. Samples were taken from the surface throughout the release area and sent to a commercial laboratory for analysis. Based on the sampling data, the site was excavated to 6 inches bgs in the pasture and to 2 ft bgs on the lease pad. Grab samples were taken from the walls and bottom of the excavations and field tested for chlorides and hydrocarbons. Representative samples were taken to a commercial laboratory for analysis. All samples returned laboratory chloride results below 250 mg/kg and GRO and DRO values of non-detect. On August 2nd, 2013, NMOCD gave Apache permission to backfill the site with clean, imported soil. On August 5th, the pasture was backfilled with clean, imported top soil and the lease pad was backfilled with clean, imported caliche. The pasture area was contoured to the surrounding location, and the lease pad was water packed to provide a solid driving surface.

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: Larry Bruce Baker	OIL CONSERVATION DIVISION	
Printed Name: Larry Bruce Baker	Approved by Environmental Specialist: Geoffrey Leking Environmental Specialist	
Title: Environmental Technician	Approval Date: 9/11/13	Expiration Date: —
E-mail Address: larry.baker@apachecorp.com	Conditions of Approval: —	Attached ☐ IRP-9-13-2946
Date: 8-30-13 Phone: (432) 631-6982		

* Attach Additional Sheets If Necessary

nSAD1416134935

R

Apache

EXPLORING WHAT'S POSSIBLE

HOBBS OCD

SEP 09 2013

RECEIVED

APACHE CORPORATION

P.O.Box 1849
Eunice, NM 88231
Phone 575.394.3159

approved
Jeffrey Lekins
Environmental Specialist
NMOCD - DIST I
9/11/13

Bunin #006

Termination Request

API 30-025-39547

Release Date: July 2nd, 2013

Unit Letter A, Section 13, Township 21S, Range 37E

Rice Environmental Consulting & Safety
P.O. Box 2948, Hobbs, NM 88241
Phone 575.393.2967

August 29th, 2013

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

RE: **Termination Request**
Apache Corporation
Bunin #006: API No. 30-025-39547
UL/A sec. 13 T-21-S R-37-E

Mr. Leking:

Apache Corporation (Apache) has retained Rice Environmental Consulting and Safety (RECS) to address potential environmental concerns at the above-referenced site.

Background and Previous Work

The site is located approximately 4 miles northeast of Eunice, New Mexico at UL/A sec. 13 T21S R37E. NM OSE and BLM records indicate that groundwater will likely be encountered at a depth of approximately 41 +/- feet.

A release of oil and produced water occurred from the stuffing box of the well on July 2nd, 2013. A total of 20 barrels of oil was produced water was released. A vacuum truck was called to the site and it retrieved a total of 10 barrels of oil and produced water. The affected pad was covered over with caliche to protect wildlife until the one-called cleared. NMOCD and BLM were notified of the release on July 2nd, 2013 and an initial C-141 was submitted to both agencies on July 3rd, 2013 (Appendix A). On July 9th, 2013, BLM informed RECS that the site was not under BLM jurisdiction.

On July 3rd, 2013, RECS personnel were on site to take initial samples (Figure 1). Samples were taken from the surface throughout the release area and sent to a commercial laboratory for analysis (Appendix B). Based on the sampling data, the site was excavated to 6 inches bgs in the pasture and to 2 ft bgs on the lease pad (Figure 2). Grab samples were taken from the walls and bottom of the excavations and field tested for chlorides and hydrocarbons. Representative samples were taken to a commercial laboratory for analysis (Appendix C). All samples returned laboratory chloride results below 250 mg/kg and GRO and DRO values of non-detect.

On August 2nd, 2013, NMOCD gave Apache permission to backfill the site with clean, imported soil. On August 5th, the pasture was backfilled with clean, imported top soil

and the lease pad was backfilled with clean, imported caliche. The pasture area was contoured to the surrounding location, and the lease pad was water packed to provide a solid driving surface.

Photo Documentation of these activities can be found in Appendix D.

Due to the removal of the impacted soil and that the site was backfilled with clean, imported soil, RECS on behalf of Apache submits the final C-141 (Appendix E) and respectfully requests the closure of the regulatory file.

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

Sincerely,

Lara Weinheimer
Project Scientist
RECS
(575) 441-0431

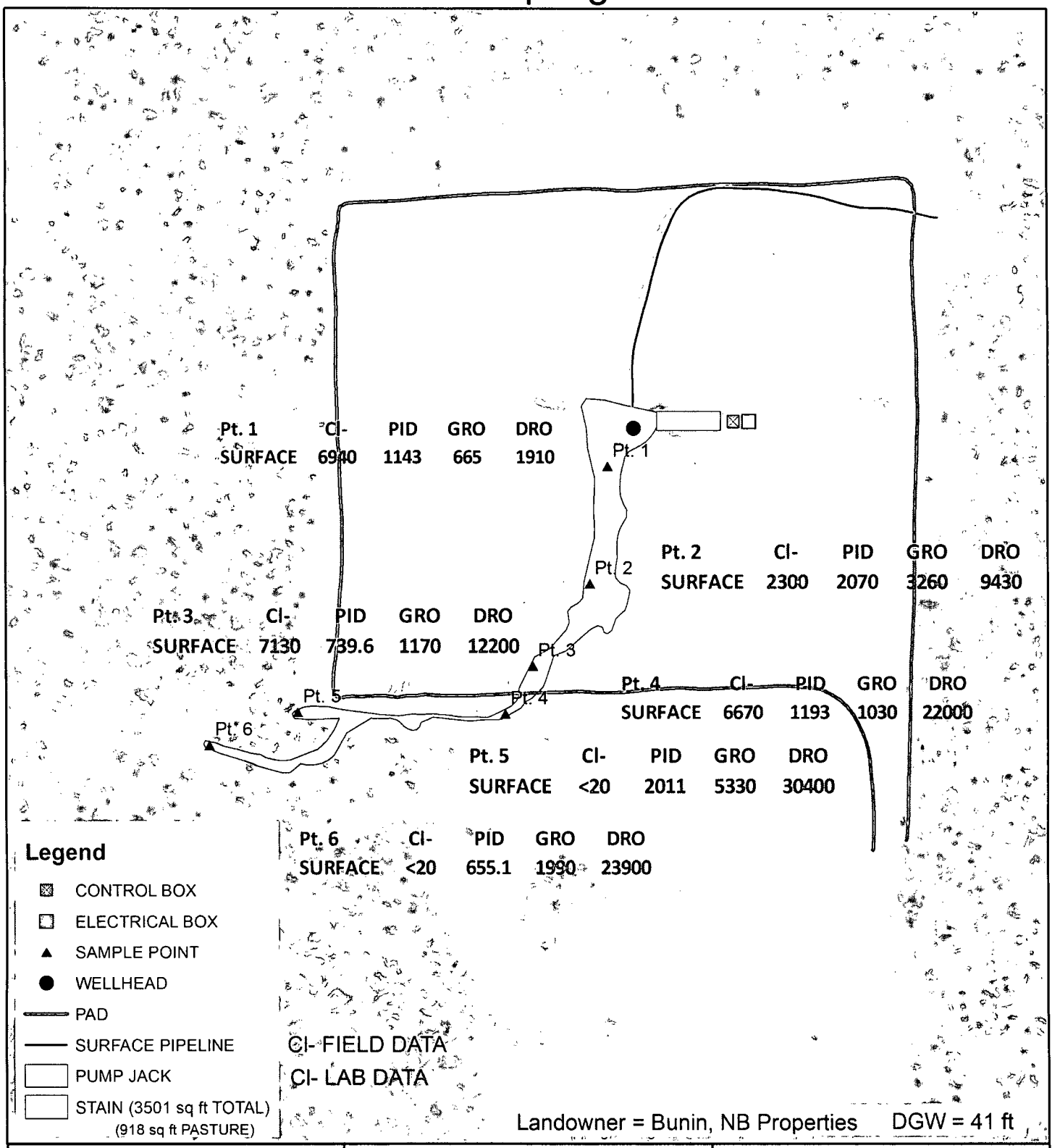
Attachments:

- Figure 1 – Initial Sampling Data
- Figure 2 – Excavation Map
- Appendix A – Initial C-141
- Appendix B – Initial Laboratory Analyses
- Appendix C – Final Laboratory Analyses
- Appendix D – Photo Documentation
- Appendix E – Final C-141

Figures

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948, Hobbs, NM 88241
Phone 575.393.2967

Initial Sampling Data



RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC

APACHE BUNIN #006

LEGALS: UL/A Sec. 13
T21S - R37E
LEA COUNTY, NM

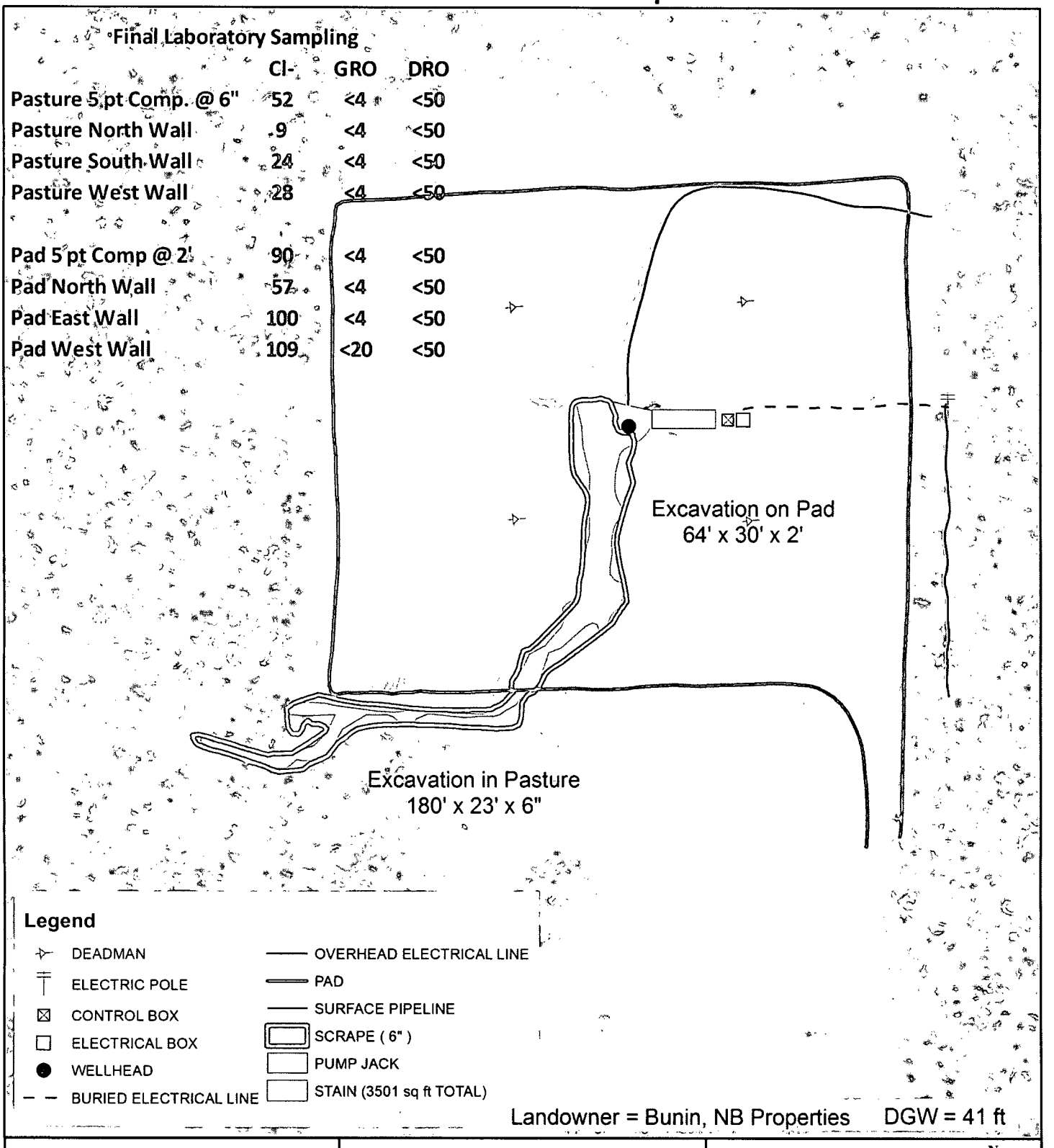
Figure 1

N W E S

0 50 100 Feet

GPS date: 7/3/2013 KS
Drawing date: 7/16/2013
Drafted by: L. Weinheimer

Excavation Map



RICE ENVIRONMENTAL CONSULTING & SAFETY, LLC

APACHE BUNIN #006

LEGALS: UL/A Sec. 13
T21S - R37E
LEA COUNTY, NM

Figure 2

N W E S

0 50 100 Feet

GPS date: 7/9/2013 EC
Drawing date: 8/1/13
Drafted by: L. Weinheimer

Appendix A

Initial C-141

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

District I
1625 N. French Dr., Hobbs, NM 88240
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State of New Mexico
Energy Minerals and Natural Resources

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1220 South St. Francis Dr.
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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 Apache Corporation	Contact Xavier Martinez
Address PO Box 1849, Eunice, NM 88231	Telephone No. (432) 208-3319
Facility Name Bunin #006	Facility Type Well Location

Surface Owner Bunin, N B Properties	Mineral Owner	API No. 30-025-39547

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
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Latitude_____ Longitude_____

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Source of Release Stuffing box	Date and Hour of Occurrence unknown	Date and Hour of Discovery 7/2/13 9:45 am
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By Whom? RECS	Date and Hour 7/2/13 NMOCD 3:45 pm BLM 3:48 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
The stuffing box released 20 bbls of oil and produced water. A vacuum truck was called on site and retrieved 10 bbls of oil and produced water. The affected pad was covered over with caliche to protect wildlife until the one-call clears. The site will be delineated to determine further actions.

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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: Xavier Martinez

Printed Name: Xavier Martinez

Title: EH&S Technician

E-mail Address: Xavier.martinez@apachecorp.com

Date: 7/3/2013 Phone: (432) 208-3319

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: Expiration Date:

Conditions of Approval: Attached ☐

* Attach Additional Sheets If Necessary

Appendix B

Initial Laboratory Analyses

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800-378-1296 806-794-1296 FAX 806-794-1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915-585-3443 FAX 915-585-4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432-689-6301 FAX 432-689-6313
(BioAquatic) 2501 Mayes Rd., Suite 100, Carrollton, Texas 75006 972-242-7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Steven Fleming
Apache Corp.-Midland
303 Veterans Airpark Lane
Suite #3000
Midland, TX, 79705

Report Date: July 15, 2013

Work Order: 13070802

Project Location: NM
Project Name: Apache Bunin #006
Project Number: Apache Bunin #006

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
334150	Point 1 @ Surface	soil	2013-07-03	11:00	2013-07-03
334151	Point 2 @ Surface	soil	2013-07-03	11:05	2013-07-03
334152	Point 3 @ Surface	soil	2013-07-03	11:10	2013-07-03
334153	Point 4 @ Surface	soil	2013-07-03	11:15	2013-07-03
334154	Point 5 @ Surface	soil	2013-07-03	11:20	2013-07-03
334155	Point 6 @ Surface	soil	2013-07-03	11:25	2013-07-03

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

Case Narrative

Samples for project Apache Bunin #006 were received by TraceAnalysis, Inc. on 2013-07-03 and assigned to work order 13070802. Samples for work order 13070802 were received intact at a temperature of 22.1 C. Samples were not on ice when received.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	87260	2013-07-12 at 11:06	103041	2013-07-15 at 10:57
TPH DRO - NEW	S 8015 D	87197	2013-07-09 at 14:00	102932	2013-07-10 at 10:34
TPH GRO	S 8015 D	87234	2013-07-11 at 08:00	102978	2013-07-11 at 10:30

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 13070802 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 334150 - Point 1 @ Surface

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	103041	Date Analyzed:	2013-07-15	Analyzed By:	AR
Prep Batch:	87260	Sample Preparation:	2013-07-12	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**6940**	mg/Kg	10	4.00

Sample: 334150 - Point 1 @ Surface

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	102932	Date Analyzed:	2013-07-10	Analyzed By:	CW
Prep Batch:	87197	Sample Preparation:	2013-07-09	Prepared By:	CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**1910**	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr	810	mg/Kg	1	100	810	55.1 - 135.7

Sample: 334150 - Point 1 @ Surface

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	102978	Date Analyzed:	2013-07-11	Analyzed By:	KC
Prep Batch:	87234	Sample Preparation:	2013-07-11	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**665**	mg/Kg	5	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			8.36	mg/Kg	5	10.0	84	70 - 130

continued ...

sample continued ...

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)			11.6	mg/Kg	5	10.0	116	70 - 130

Sample: 334151 - Point 2 @ Surface

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	103041	Date Analyzed:	2013-07-15	Analyzed By:	AR
Prep Batch:	87260	Sample Preparation:	2013-07-12	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**2300**	mg/Kg	10	4.00

Sample: 334151 - Point 2 @ Surface

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	102932	Date Analyzed:	2013-07-10	Analyzed By:	CW
Prep Batch:	87197	Sample Preparation:	2013-07-09	Prepared By:	CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**9430**	mg/Kg	5	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		3160	mg/Kg	5	100	3160	55.1 - 135.7

Sample: 334151 - Point 2 @ Surface

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	102978	Date Analyzed:	2013-07-11	Analyzed By:	KC
Prep Batch:	87234	Sample Preparation:	2013-07-11	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**3260**	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			91.9	mg/Kg	50	100	92	70 - 130
4-Bromofluorobenzene (4-BFB)			99.5	mg/Kg	50	100	100	70 - 130

Sample: 334152 - Point 3 @ Surface

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	103041	Date Analyzed:	2013-07-15	Analyzed By:	AR
Prep Batch:	87260	Sample Preparation:	2013-07-12	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**7130**	mg/Kg	10	4.00

Sample: 334152 - Point 3 @ Surface

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	102932	Date Analyzed:	2013-07-10	Analyzed By:	CW
Prep Batch:	87197	Sample Preparation:	2013-07-09	Prepared By:	CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**12200**	mg/Kg	10	50.0

Surrogate		Flag		Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr			4040	mg/Kg	10	100	4040	55.1 - 135.7

Sample: 334152 - Point 3 @ Surface

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	102978	Date Analyzed:	2013-07-11	Analyzed By:	KC
Prep Batch:	87234	Sample Preparation:	2013-07-11	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**1170**	mg/Kg	20	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			34.3	mg/Kg	20	40.0	86	70 - 130
4-Bromofluorobenzene (4-BFB)			42.4	mg/Kg	20	40.0	106	70 - 130

Sample: 334153 - Point 4 @ Surface

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	103041	Date Analyzed:	2013-07-15	Analyzed By:	AR
Prep Batch:	87260	Sample Preparation:	2013-07-12	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**6670**	mg/Kg	10	4.00

Sample: 334153 - Point 4 @ Surface

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	102932	Date Analyzed:	2013-07-10	Analyzed By:	CW
Prep Batch:	87197	Sample Preparation:	2013-07-09	Prepared By:	CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**22000**	mg/Kg	10	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		8580	mg/Kg	10	100	8580	55.1 - 135.7

Sample: 334153 - Point 4 @ Surface

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	102978	Date Analyzed:	2013-07-11	Analyzed By:	KC
Prep Batch:	87234	Sample Preparation:	2013-07-11	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**1030**	mg/Kg	20	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			33.9	mg/Kg	20	40.0	85	70 - 130
4-Bromofluorobenzene (4-BFB)			42.8	mg/Kg	20	40.0	107	70 - 130

Sample: 334154 - Point 5 @ Surface

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	103041	Date Analyzed:	2013-07-15	Analyzed By:	AR
Prep Batch:	87260	Sample Preparation:	2013-07-12	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 334154 - Point 5 @ Surface

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	102932	Date Analyzed:	2013-07-10	Analyzed By:	CW
Prep Batch:	87197	Sample Preparation:	2013-07-09	Prepared By:	CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**30400**	mg/Kg	20	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		9150	mg/Kg	20	100	9150	55.1 - 135.7

Sample: 334154 - Point 5 @ Surface

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	102978	Date Analyzed:	2013-07-11	Analyzed By:	KC
Prep Batch:	87234	Sample Preparation:	2013-07-11	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**5330**	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			86.4	mg/Kg	50	100	86	70 - 130
4-Bromofluorobenzene (4-BFB)			117	mg/Kg	50	100	117	70 - 130

Sample: 334155 - Point 6 @ Surface

Laboratory:	Midland				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	103041	Date Analyzed:	2013-07-15	Analyzed By:	AR
Prep Batch:	87260	Sample Preparation:	2013-07-12	Prepared By:	AR

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride	U		<20.0	mg/Kg	5	4.00

Sample: 334155 - Point 6 @ Surface

Laboratory:	Midland				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	102932	Date Analyzed:	2013-07-10	Analyzed By:	CW
Prep Batch:	87197	Sample Preparation:	2013-07-09	Prepared By:	CW

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO		1	**23900**	mg/Kg	10	50.0

Surrogate		Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane	Qsr	Qsr		8180	mg/Kg	10	100	8180	55.1 - 135.7

Sample: 334155 - Point 6 @ Surface

Laboratory:	Midland				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	102978	Date Analyzed:	2013-07-11	Analyzed By:	KC
Prep Batch:	87234	Sample Preparation:	2013-07-11	Prepared By:	KC

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO		1	**1990**	mg/Kg	50	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			90.6	mg/Kg	50	100	91	70 - 130
4-Bromofluorobenzene (4-BFB)			124	mg/Kg	50	100	124	70 - 130

Method Blanks

Method Blank (1) QC Batch: 102932

QC Batch: 102932 Date Analyzed: 2013-07-10 Analyzed By: CW
Prep Batch: 87197 QC Preparation: 2013-07-09 Prepared By: CW

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	11.2	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			84.4	mg/Kg	1	100	84	55.1 - 135.7

Method Blank (1) QC Batch: 102978

QC Batch: 102978 Date Analyzed: 2013-07-11 Analyzed By: KC
Prep Batch: 87234 QC Preparation: 2013-07-11 Prepared By: KC

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	3.66	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.88	mg/Kg	1	2.00	94	70 - 130
4-Bromofluorobenzene (4-BFB)			1.70	mg/Kg	1	2.00	85	70 - 130

Method Blank (1) QC Batch: 103041

QC Batch: 103041 Date Analyzed: 2013-07-15 Analyzed By: AR
Prep Batch: 87260 QC Preparation: 2013-07-12 Prepared By: AR

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.85	mg/Kg	4

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 102932 | Date Analyzed: 2013-07-10 | Analyzed By: CW
Prep Batch: 87197 | QC Preparation: 2013-07-09 | Prepared By: CW

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	194	mg/Kg	1	250	11.2	73	66.9 - 119.9

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	214	mg/Kg	1	250	11.2	81	66.9 - 119.9	10	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	96.5	100	mg/Kg	1	100	96	100	76.8 - 140.2

Laboratory Control Spike (LCS-1)

QC Batch: 102978 | Date Analyzed: 2013-07-11 | Analyzed By: KC
Prep Batch: 87234 | QC Preparation: 2013-07-11 | Prepared By: KC

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	21.0	mg/Kg	1	20.0	<2.32	105	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	20.2	mg/Kg	1	20.0	<2.32	101	70 - 130	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.74	1.85	mg/Kg	1	2.00	87	92	70 - 130
4-Bromofluorobenzene (4-BFB)	1.88	1.89	mg/Kg	1	2.00	94	94	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 103041 | Date Analyzed: 2013-07-15 | Analyzed By: AR
Prep Batch: 87260 | QC Preparation: 2013-07-12 | Prepared By: AR

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2490	mg/Kg	1	2500	<3.85	100	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2640	mg/Kg	1	2500	<3.85	106	85 - 115	6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 334133

QC Batch: 102932 | Date Analyzed: 2013-07-10 | Analyzed By: CW
Prep Batch: 87197 | QC Preparation: 2013-07-09 | Prepared By: CW

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	261	mg/Kg	1	250	33.5	91	36.1 - 147.2

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	261	mg/Kg	1	250	33.5	91	36.1 - 147.2	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	113	115	mg/Kg	1	100	113	115	78.3 - 131.6

Matrix Spike (MS-1) Spiked Sample: 334137

QC Batch: 102978 | Date Analyzed: 2013-07-11 | Analyzed By: KC
Prep Batch: 87234 | QC Preparation: 2013-07-11 | Prepared By: KC

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	16.1	mg/Kg	1	20.0	<2.32	80	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	17.5	mg/Kg	1	20.0	<2.32	88	70 - 130	8	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.80	1.77	mg/Kg	1	2	90	88	70 - 130
4-Bromofluorobenzene (4-BFB)	1.82	1.87	mg/Kg	1	2	91	94	70 - 130

Matrix Spike (MS-1) Spiked Sample: 334155

QC Batch: 103041 | Date Analyzed: 2013-07-15 | Analyzed By: AR
Prep Batch: 87260 | QC Preparation: 2013-07-12 | Prepared By: AR

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			2610	mg/Kg	5	2500	<19.2	104	78.9 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			2430	mg/Kg	5	2500	<19.2	97	78.9 - 121	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Calibration Standards

Standard (CCV-1)

QC Batch: 102932 Date Analyzed: 2013-07-10 Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	208	83	80 - 120	2013-07-10

Standard (CCV-2)

QC Batch: 102932 Date Analyzed: 2013-07-10 Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	275	110	80 - 120	2013-07-10

Standard (CCV-3)

QC Batch: 102932 Date Analyzed: 2013-07-10 Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	241	96	80 - 120	2013-07-10

Standard (CCV-4)

QC Batch: 102932 Date Analyzed: 2013-07-10 Analyzed By: CW

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	221	88	80 - 120	2013-07-10

Standard (CCV-1)

QC Batch: 102978 | Date Analyzed: 2013-07-11 | Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.10	110	80 - 120	2013-07-11

Standard (CCV-2)

QC Batch: 102978 | Date Analyzed: 2013-07-11 | Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.03	103	80 - 120	2013-07-11

Standard (CCV-3)

QC Batch: 102978 | Date Analyzed: 2013-07-11 | Analyzed By: KC

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.957	96	80 - 120	2013-07-11

Standard (CCV-1)

QC Batch: 103041 | Date Analyzed: 2013-07-15 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-07-15

Standard (CCV-2)

QC Batch: 103041 | Date Analyzed: 2013-07-15 | Analyzed By: AR

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	99.8	100	85 - 115	2013-07-15

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704392-12-4	Midland

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

LAB Order ID # 13070802

Page _____ of _____

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

5002 Basin Street, Suite A1
Midland, Texas 79703
Tel (432) 689-6301
Fax (432) 689-6313

200 East Sunset Rd., Suite E
El Paso, Texas 79922
Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

BioAquatic Testing
2501 Mayes Rd., Ste 100
Carrollton, Texas 75006
Tel (972) 242-7750

Company Name: Apache — Phone #:

Address: (Street, City, Zip) — Fax #:

Contact Person: Steve Fleming — E-mail: steve.fleming@apachecorp.com

Invoice to: (If different from above)

Project #: — Project Name:

Project Location (including state): Bunin #006 NM — Sampler Signature:

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
334150	Point 1 @ Surface	1	4 oz		X									7-3-13	11:00
151	Point 2 @ surface	1	4 oz		X									7-3-13	11:05
152	Point 3 @ surface	1	4 oz		X									7-3-13	11:10
153	Point 4 @ surface	1	4 oz		X									7-3-13	11:15
154	Point 5 @ surface	1	4 oz		X									7-3-13	11:20
155	Point 6 @ surface	1	4 oz		X									7-3-13	11:25

MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC						Turn Around Time if different from standard	Hold
			X													X	X	X						
			X													X	X	X						
			X													X	X	X						
			X													X	X	X						
			X													X	X	X						
			X													X	X	X						

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
Kyle Schmidt	RECS	7-3-13		RCS	BTC	7-3-13	3:30	INST ____ °C OBS ____ °C COR ____ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
					TA	7/8/13	8:00	INST IR-1 °C OBS 22.2 °C COR 22.1 °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
								INST ____ °C OBS ____ °C COR ____ °C

LAB USE ONLY

Intact Y / N

Headspace Y / N / NA

Log-In-Review ____

REMARKS: Matrix Ice when received

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check If Special Reporting Limits Are Needed

Carrier # LSZ9593568

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

ORIGINAL COPY

Appendix C

Final Laboratory Analyses

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

TRACEANALYSIS, INC.
6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800-378-1296 806-794-1296 FAX 806-794-1298
200 East Sunset Road, Suite E El Paso, Texas 79922 915-585-3443 FAX 915-585-4944
5002 Basin Street, Suite A1 Midland, Texas 79703 432-689-6301 FAX 432-689-6313
(BioAquatic) 2501 Mayes Rd., Suite 100, Carrollton, Texas 75006 972-242-7750
E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Steven Fleming
Apache Corp.-Midland
303 Veterans Airpark Lane
Suite #3000
Midland, TX, 79705

Report Date: July 31, 2013

Work Order: 13071723

Project Location: NM
Project Name: Apache Bunin #006
Project Number: Apache Bunin #006

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
335466	Pasture 5 pt. Comp. @ 6"	soil	2013-07-12	00:00	2013-07-15
335467	Pasture North Wall	soil	2013-07-12	00:00	2013-07-15
335468	Pasture South Wall	soil	2013-07-11	00:00	2013-07-15
335469	Pasture West Wall	soil	2013-07-11	00:00	2013-07-15
335470	Pad 5 pt. Comp. @ 2'	soil	2013-07-12	00:00	2013-07-15
335471	Pad North Wall	soil	2013-07-12	00:00	2013-07-15
335472	Pad East Wall	soil	2013-07-12	00:00	2013-07-15
335473	Pad West Wall	soil	2013-07-12	00:00	2013-07-15

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

Dr. Blair Leftwich, Director
Dr. Michael Abel, Project Manager

Report Contents

Case Narrative

Samples for project Apache Bunin #006 were received by TraceAnalysis, Inc. on 2013-07-15 and assigned to work order 13071723. Samples for work order 13071723 were received intact at a temperature of 8.0 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Chloride (Titration)	SM 4500-Cl B	87702	2013-07-29 at 10:00	103497	2013-07-29 at 13:00
Chloride (Titration)	SM 4500-Cl B	87763	2013-07-29 at 10:00	103583	2013-07-29 at 13:00
TPH DRO - NEW	S 8015 D	87442	2013-07-18 at 12:00	103202	2013-07-19 at 12:46
TPH GRO	S 8015 D	87471	2013-07-19 at 17:24	103234	2013-07-19 at 17:24

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 13071723 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 335466 - Pasture 5 pt. Comp. @ 6"

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	103497	Date Analyzed:	2013-07-29	Analyzed By:	GS
Prep Batch:	87702	Sample Preparation:	2013-07-29	Prepared By:	GS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**52.0**	mg/Kg	1	5.00

Sample: 335466 - Pasture 5 pt. Comp. @ 6"

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	103202	Date Analyzed:	2013-07-19	Analyzed By:	CM
Prep Batch:	87442	Sample Preparation:	2013-07-18	Prepared By:	CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			96.5	mg/Kg	1	100	96	70 - 130

Sample: 335466 - Pasture 5 pt. Comp. @ 6"

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	103234	Date Analyzed:	2013-07-19	Analyzed By:	MT
Prep Batch:	87471	Sample Preparation:	2013-07-19	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.05	mg/Kg	1	2.00	102	69.6 - 124

continued ...

sample continued ...

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)			1.94	mg/Kg	1	2.00	97	77.7 - 120

Sample: 335467 - Pasture North Wall

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	103497	Date Analyzed:	2013-07-29	Analyzed By:	GS
Prep Batch:	87702	Sample Preparation:	2013-07-29	Prepared By:	GS

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
Chloride			**9.00**	mg/Kg	1	5.00

Sample: 335467 - Pasture North Wall

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	103202	Date Analyzed:	2013-07-19	Analyzed By:	CM
Prep Batch:	87442	Sample Preparation:	2013-07-18	Prepared By:	CM

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
DRO	Qs,U	1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			98.6	mg/Kg	1	100	99	70 - 130

Sample: 335467 - Pasture North Wall

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	103234	Date Analyzed:	2013-07-19	Analyzed By:	MT
Prep Batch:	87471	Sample Preparation:	2013-07-19	Prepared By:	MT

Parameter	Flag	Cert	Result	RL Units	Dilution	RL
GRO	U	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.75	mg/Kg	1	2.00	88	69.6 - 124
4-Bromofluorobenzene (4-BFB)			1.88	mg/Kg	1	2.00	94	77.7 - 120

Sample: 335468 - Pasture South Wall

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	103497	Date Analyzed:	2013-07-29	Analyzed By:	GS
Prep Batch:	87702	Sample Preparation:	2013-07-29	Prepared By:	GS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**24.0**	mg/Kg	1	5.00

Sample: 335468 - Pasture South Wall

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	103202	Date Analyzed:	2013-07-19	Analyzed By:	CM
Prep Batch:	87442	Sample Preparation:	2013-07-18	Prepared By:	CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs,U	1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			103	mg/Kg	1	100	103	70 - 130

Sample: 335468 - Pasture South Wall

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	103234	Date Analyzed:	2013-07-19	Analyzed By:	MT
Prep Batch:	87471	Sample Preparation:	2013-07-19	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.82	mg/Kg	1	2.00	91	69.6 - 124
4-Bromofluorobenzene (4-BFB)			1.80	mg/Kg	1	2.00	90	77.7 - 120

Sample: 335469 - Pasture West Wall

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	103497	Date Analyzed:	2013-07-29	Analyzed By:	GS
Prep Batch:	87702	Sample Preparation:	2013-07-29	Prepared By:	GS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**28.0**	mg/Kg	1	5.00

Sample: 335469 - Pasture West Wall

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	103202	Date Analyzed:	2013-07-19	Analyzed By:	CM
Prep Batch:	87442	Sample Preparation:	2013-07-18	Prepared By:	CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs,U	1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			98.7	mg/Kg	1	100	99	70 - 130

Sample: 335469 - Pasture West Wall

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	103234	Date Analyzed:	2013-07-19	Analyzed By:	MT
Prep Batch:	87471	Sample Preparation:	2013-07-19	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.21	mg/Kg	1	2.00	110	69.6 - 124
4-Bromofluorobenzene (4-BFB)			2.10	mg/Kg	1	2.00	105	77.7 - 120

Sample: 335470 - Pad 5 pt. Comp. @ 2'

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	103497	Date Analyzed:	2013-07-29	Analyzed By:	GS
Prep Batch:	87702	Sample Preparation:	2013-07-29	Prepared By:	GS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**90.0**	mg/Kg	1	5.00

Sample: 335470 - Pad 5 pt. Comp. @ 2'

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	103202	Date Analyzed:	2013-07-19	Analyzed By:	CM
Prep Batch:	87442	Sample Preparation:	2013-07-18	Prepared By:	CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs,U	1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			96.0	mg/Kg	1	100	96	70 - 130

Sample: 335470 - Pad 5 pt. Comp. @ 2'

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	103234	Date Analyzed:	2013-07-19	Analyzed By:	MT
Prep Batch:	87471	Sample Preparation:	2013-07-19	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.00	mg/Kg	1	2.00	100	69.6 - 124
4-Bromofluorobenzene (4-BFB)			1.96	mg/Kg	1	2.00	98	77.7 - 120

Sample: 335471 - Pad North Wall

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	103497	Date Analyzed:	2013-07-29	Analyzed By:	GS
Prep Batch:	87702	Sample Preparation:	2013-07-29	Prepared By:	GS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**57.0**	mg/Kg	1	5.00

Sample: 335471 - Pad North Wall

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	103202	Date Analyzed:	2013-07-19	Analyzed By:	CM
Prep Batch:	87442	Sample Preparation:	2013-07-18	Prepared By:	CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs,U	1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			98.4	mg/Kg	1	100	98	70 - 130

Sample: 335471 - Pad North Wall

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	103234	Date Analyzed:	2013-07-19	Analyzed By:	MT
Prep Batch:	87471	Sample Preparation:	2013-07-19	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.91	mg/Kg	1	2.00	96	69.6 - 124
4-Bromofluorobenzene (4-BFB)			1.98	mg/Kg	1	2.00	99	77.7 - 120

Sample: 335472 - Pad East Wall

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	103583	Date Analyzed:	2013-07-29	Analyzed By:	GS
Prep Batch:	87763	Sample Preparation:	2013-07-29	Prepared By:	GS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**100**	mg/Kg	1	5.00

Sample: 335472 - Pad East Wall

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	103202	Date Analyzed:	2013-07-19	Analyzed By:	CM
Prep Batch:	87442	Sample Preparation:	2013-07-18	Prepared By:	CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			101	mg/Kg	1	100	101	70 - 130

Sample: 335472 - Pad East Wall

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	103234	Date Analyzed:	2013-07-19	Analyzed By:	MT
Prep Batch:	87471	Sample Preparation:	2013-07-19	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1	<4.00	mg/Kg	1	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.87	mg/Kg	1	2.00	94	69.6 - 124
4-Bromofluorobenzene (4-BFB)			1.80	mg/Kg	1	2.00	90	77.7 - 120

Sample: 335473 - Pad West Wall

Laboratory:	Lubbock				
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	103583	Date Analyzed:	2013-07-29	Analyzed By:	GS
Prep Batch:	87763	Sample Preparation:	2013-07-29	Prepared By:	GS

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
Chloride			**109**	mg/Kg	1	5.00

Sample: 335473 - Pad West Wall

Laboratory:	Lubbock				
Analysis:	TPH DRO - NEW	Analytical Method:	S 8015 D	Prep Method:	N/A
QC Batch:	103202	Date Analyzed:	2013-07-19	Analyzed By:	CM
Prep Batch:	87442	Sample Preparation:	2013-07-18	Prepared By:	CM

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
DRO	Qs	1	<50.0	mg/Kg	1	50.0

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			99.8	mg/Kg	1	100	100	70 - 130

Sample: 335473 - Pad West Wall

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015 D	Prep Method:	S 5035
QC Batch:	103234	Date Analyzed:	2013-07-19	Analyzed By:	MT
Prep Batch:	87471	Sample Preparation:	2013-07-19	Prepared By:	MT

Parameter	Flag	Cert	RL Result	Units	Dilution	RL
GRO	U	1	<20.0	mg/Kg	5	4.00

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			2.12	mg/Kg	5	2.00	106	69.6 - 124
4-Bromofluorobenzene (4-BFB)			2.22	mg/Kg	5	2.00	111	77.7 - 120

Method Blanks

Method Blank (1) QC Batch: 103202

QC Batch: 103202 | Date Analyzed: 2013-07-19 | Analyzed By: CM
Prep Batch: 87442 | QC Preparation: 2013-07-18 | Prepared By: CM

Parameter	Flag	Cert	MDL Result	Units	RL
DRO		1	<5.22	mg/Kg	50

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Tricosane			122	mg/Kg	1	100	122	70 - 130

Method Blank (1) QC Batch: 103234

QC Batch: 103234 | Date Analyzed: 2013-07-19 | Analyzed By: MT
Prep Batch: 87471 | QC Preparation: 2013-07-19 | Prepared By: MT

Parameter	Flag	Cert	MDL Result	Units	RL
GRO		1	<0.230	mg/Kg	4

Surrogate	Flag	Cert	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)			1.97	mg/Kg	1	2.00	98	69.6 - 124
4-Bromofluorobenzene (4-BFB)			1.90	mg/Kg	1	2.00	95	77.7 - 120

Method Blank (1) QC Batch: 103497

QC Batch: 103497 | Date Analyzed: 2013-07-29 | Analyzed By: GS
Prep Batch: 87702 | QC Preparation: 2013-07-29 | Prepared By: GS

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.05	mg/Kg	5

Method Blank (1) QC Batch: 103583

QC Batch:	103583	Date Analyzed:	2013-07-29	Analyzed By:	GS
Prep Batch:	87763	QC Preparation:	2013-07-29	Prepared By:	GS

Parameter	Flag	Cert	MDL Result	Units	RL
Chloride			<3.05	mg/Kg	5

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

QC Batch: 103202 | Date Analyzed: 2013-07-19 | Analyzed By: CM
Prep Batch: 87442 | QC Preparation: 2013-07-18 | Prepared By: CM

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO		1	227	mg/Kg	1	250	<5.22	91	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	236	mg/Kg	1	250	<5.22	94	70 - 130	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Tricosane	93.7	94.6	mg/Kg	1	100	94	95	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch: 103234 | Date Analyzed: 2013-07-19 | Analyzed By: MT
Prep Batch: 87471 | QC Preparation: 2013-07-19 | Prepared By: MT

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	17.0	mg/Kg	1	20.0	<0.230	85	66.9 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	17.3	mg/Kg	1	20.0	<0.230	86	66.9 - 120	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.04	1.93	mg/Kg	1	2.00	102	96	69.6 - 124
4-Bromofluorobenzene (4-BFB)	2.18	2.09	mg/Kg	1	2.00	109	104	77.7 - 120

Laboratory Control Spike (LCS-1)

QC Batch: 103497 | Date Analyzed: 2013-07-29 | Analyzed By: GS
Prep Batch: 87702 | QC Preparation: 2013-07-29 | Prepared By: GS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			98.0	mg/Kg	1	100	<3.05	98	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			99.0	mg/Kg	1	100	<3.05	99	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch: 103583 | Date Analyzed: 2013-07-29 | Analyzed By: GS
Prep Batch: 87763 | QC Preparation: 2013-07-29 | Prepared By: GS

Param	F	C	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			98.0	mg/Kg	1	100	<3.05	98	85 - 115

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			99.0	mg/Kg	1	100	<3.05	99	85 - 115	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 335473

QC Batch: 103202 | Date Analyzed: 2013-07-19 | Analyzed By: CM
Prep Batch: 87442 | QC Preparation: 2013-07-18 | Prepared By: CM

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	Qs	Qs	178	mg/Kg	1	250	5.6	69	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO		1	185	mg/Kg	1	250	5.6	72	70 - 130	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Tricosane	89.9	94.4	mg/Kg	1	100	90	94	70 - 130

Matrix Spike (MS-1) Spiked Sample: 335644

QC Batch: 103234 | Date Analyzed: 2013-07-19 | Analyzed By: MT
Prep Batch: 87471 | QC Preparation: 2013-07-19 | Prepared By: MT

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO		1	11.9	mg/Kg	5	20.0	<1.15	60	38.8 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO		1	10.8	mg/Kg	5	20.0	<1.15	54	38.8 - 120	10	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	2.08	1.84	mg/Kg	5	2	104	92	69.6 - 124
4-Bromofluorobenzene (4-BFB)	2.14	2.29	mg/Kg	5	2	107	114	77.7 - 120

Matrix Spike (MS-1) Spiked Sample: 335471

QC Batch: 103497 | Date Analyzed: 2013-07-29 | Analyzed By: GS
Prep Batch: 87702 | QC Preparation: 2013-07-29 | Prepared By: GS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			555	mg/Kg	1	500	57	100	80 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

continued ...

matrix spikes continued ...

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			559	mg/Kg	1	500	57	100	80 - 120	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 335974

QC Batch: 103583 | Date Analyzed: 2013-07-29 | Analyzed By: GS
Prep Batch: 87763 | QC Preparation: 2013-07-29 | Prepared By: GS

Param	F	C	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride			621	mg/Kg	1	500	123	100	80 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	F	C	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride			611	mg/Kg	1	500	123	98	80 - 120	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Calibration Standards

Standard (CCV-1)

QC Batch: 103202 Date Analyzed: 2013-07-19 Analyzed By: CM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	268	107	80 - 120	2013-07-19

Standard (CCV-2)

QC Batch: 103202 Date Analyzed: 2013-07-19 Analyzed By: CM

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		1	mg/Kg	250	230	92	80 - 120	2013-07-19

Standard (CCV-1)

QC Batch: 103234 Date Analyzed: 2013-07-19 Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	1.06	106	80 - 120	2013-07-19

Standard (CCV-2)

QC Batch: 103234 Date Analyzed: 2013-07-19 Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.876	88	80 - 120	2013-07-19

Standard (CCV-3)

QC Batch: 103234 Date Analyzed: 2013-07-19 Analyzed By: MT

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		1	mg/Kg	1.00	0.977	98	80 - 120	2013-07-19

Standard (ICV-1)

QC Batch: 103497 Date Analyzed: 2013-07-29 Analyzed By: GS

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-07-29

Standard (CCV-1)

QC Batch: 103497 Date Analyzed: 2013-07-29 Analyzed By: GS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-07-29

Standard (ICV-1)

QC Batch: 103583 Date Analyzed: 2013-07-29 Analyzed By: GS

Param	Flag	Cert	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-07-29

Standard (CCV-1)

QC Batch: 103583 Date Analyzed: 2013-07-29 Analyzed By: GS

Param	Flag	Cert	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride			mg/Kg	100	100	100	85 - 115	2013-07-29

Appendix

Report Definitions

Name	Definition
MDL	Method Detection Limit
MQL	Minimum Quantitation Limit
SDL	Sample Detection Limit

Laboratory Certifications

C	Certifying Authority	Certification Number	Laboratory Location
-	NCTRCA	WFWB384444Y0909	TraceAnalysis
-	DBE	VN 20657	TraceAnalysis
-	HUB	1752439743100-86536	TraceAnalysis
-	WBE	237019	TraceAnalysis
1	NELAP	T104704219-13-9	Lubbock

Standard Flags

F	Description
B	Analyte detected in the corresponding method blank above the method detection limit
H	Analyzed out of hold time
J	Estimated concentration
Jb	The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
Je	Estimated concentration exceeding calibration range.
MI1	Split peak or shoulder peak
MI2	Instrument software did not integrate
MI3	Instrument software misidentified the peak
MI4	Instrument software integrated improperly
MI5	Baseline correction
Qc	Calibration check outside of laboratory limits.
Qr	RPD outside of laboratory limits
Qs	Spike recovery outside of laboratory limits.
Qsr	Surrogate recovery outside of laboratory limits.
U	The analyte is not detected above the SDL

Result Comments

1 Dilution due to turbidity.

Attachments

The scanned attachments will follow this page.
Please note, each attachment may consist of more than one page.

LAB Order ID # 13071723 Page 1 of 1

13071723

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BioAquatic Testing
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Company Name: Apache
Phone #:
Address: (Street, City, Zip)
Fax #:
Contact Person: Steve Fleming
E-mail: Steve.fleming@apachecorp.com
Invoice to: (If different from above)
Project #:
Project Name:
Project Location (including state): Bunin #006 NM.
Sampler Signature: Karanja Lewis

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
33=466	Pasture 5pt. Comp @ 0"	1	4oz		✓							✓		7-12-13	0000
467	Pasture North Wall	1	4oz		✓							✓		7-12-13	
468	Pasture South Wall	1	4oz		✓							✓		7-11-13	
469	Pasture West Wall	1	4oz		✓							✓		7-11-13	
470	Pad 5pt. Composite @ 2'	1	4oz		✓							✓		7-12-13	
471	Pad North Wall	1	4oz		✓							✓		7-12-13	
472	Pad East Wall	1	4oz		✓							✓		7-12-13	
473	Pad West Wall	1	4oz		✓							✓		7-12-13	

	MTBE 8021 / 602 / 8260 / 624	BTEX 8021 / 602 / 8260 / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270 / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260 / 624	GC/MS Semi. Vol. 8270 / 625	PCB's 8082 / 608	Pesticides 8081 / 608	BOD, TSS, pH	Moisture Content	Cl, F, SO_4, NO_3-N, NO_2-N, PO_4-P, Alkalinity	Na, Ca, Mg, K, TDS, EC					Turn Around Time if different from standard	Hold
33=466				✓														✓						
467				✓														✓						
468				✓														✓						
469				✓														✓						
470				✓														✓						
471				✓														✓						
472				✓														✓						
473				✓														✓						

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
KARANJA LEWIS	RECS	7-15-13				7-15-13		INST ___ °C OBS ___ °C COR ___ °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
				Brandon Clerk		7-15-13	1324	INST ___ °C OBS 8 °C COR 11.3 °C
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	
						7/17	9:40	INST ___ °C OBS 5.4 °C COR 6.7 °C

LAB USE ONLY
Intact Y / N
Headspace Y / N / NA
Log-in-Review WM

REMARKS: email results to
hconder@riceswd.com
bbaker@rice-ecs.com
klewis@rice-ecs.com
Jkamylain@rice-ecs.com
lweinheimer@rice-ecs.com
lpena@riceswd.com

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Carrier # US 4712 7911

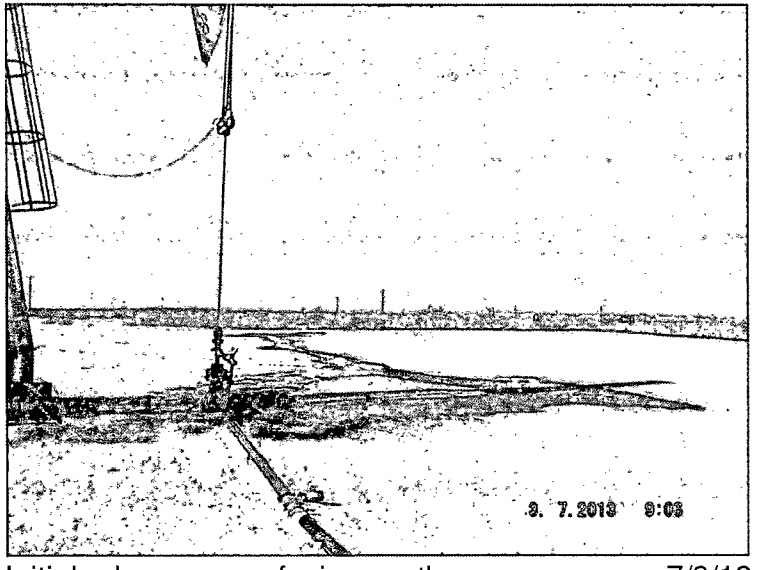
Appendix D

Photo Documentation

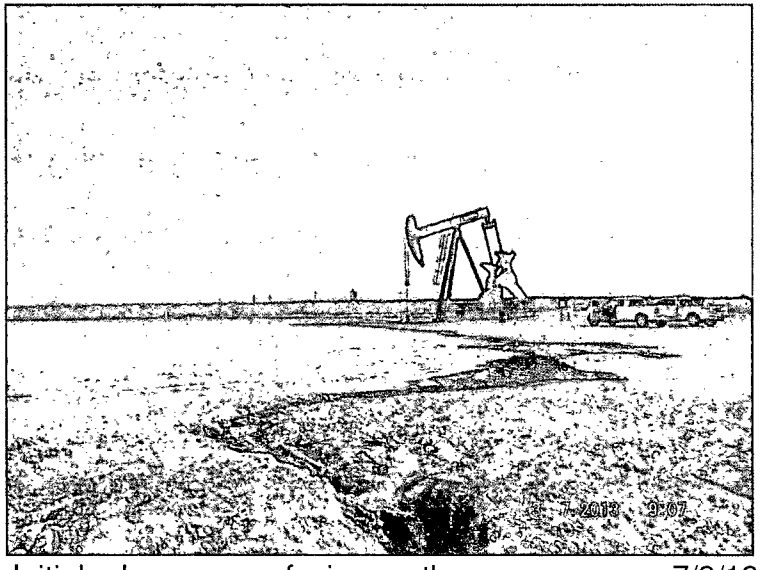
RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

Apache Bunin #006 AD

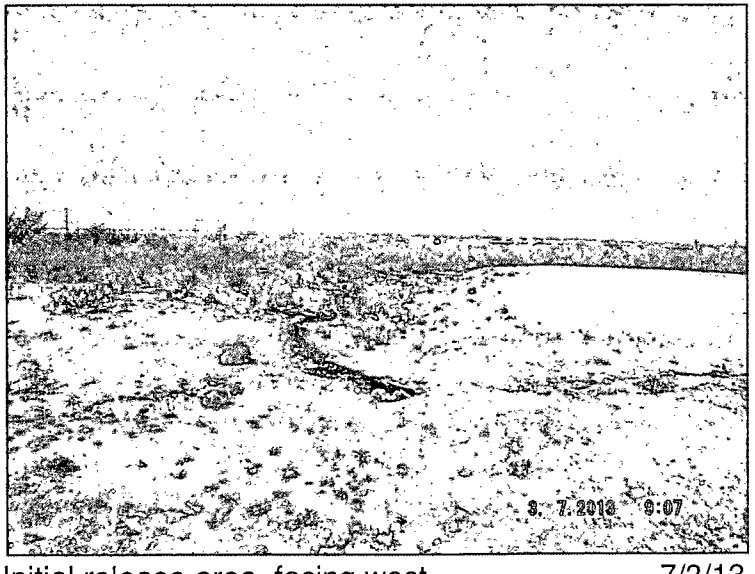
Unit Letter A, Section 13, T21S, R37E



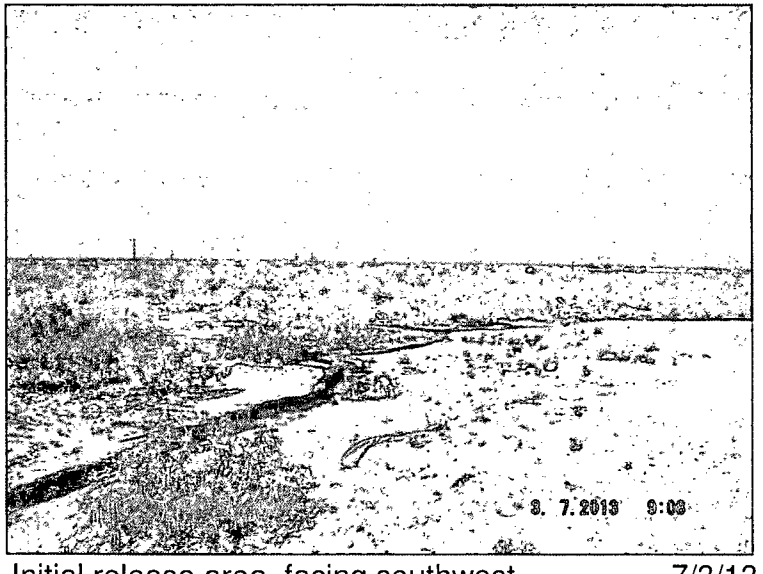
Initial release area, facing south 7/3/13



Initial release area, facing north 7/3/13

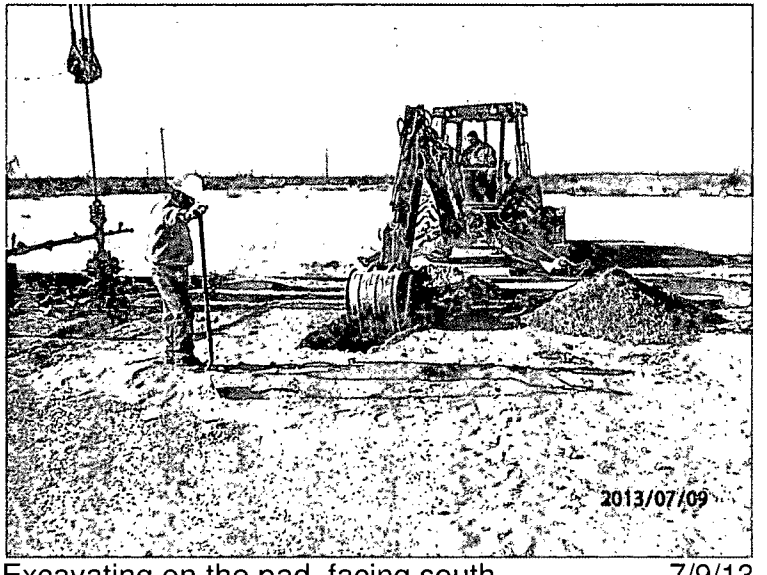


Initial release area, facing west 7/3/13

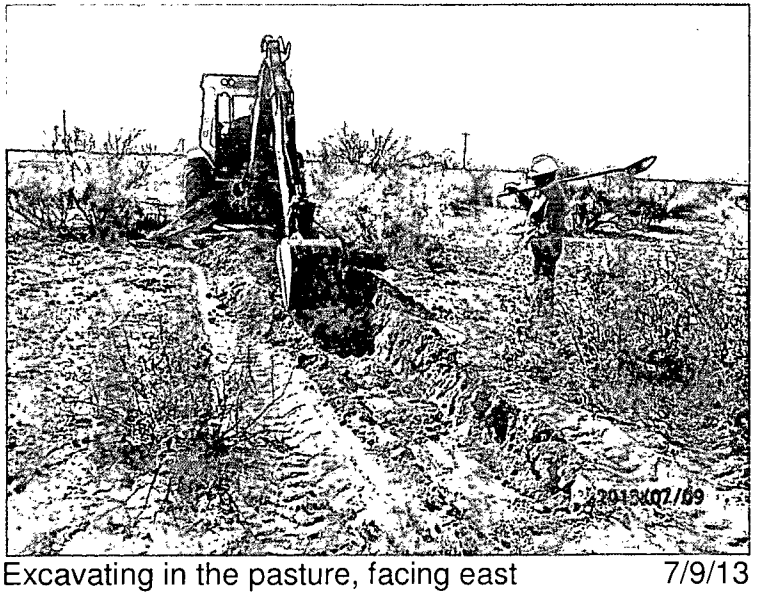


Initial release area, facing southwest 7/3/13

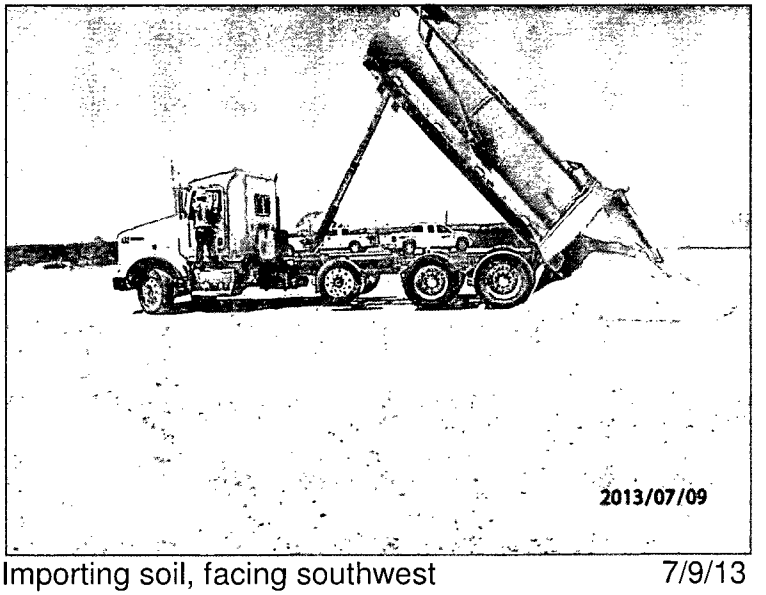
Collecting samples, facing north 7/3/13



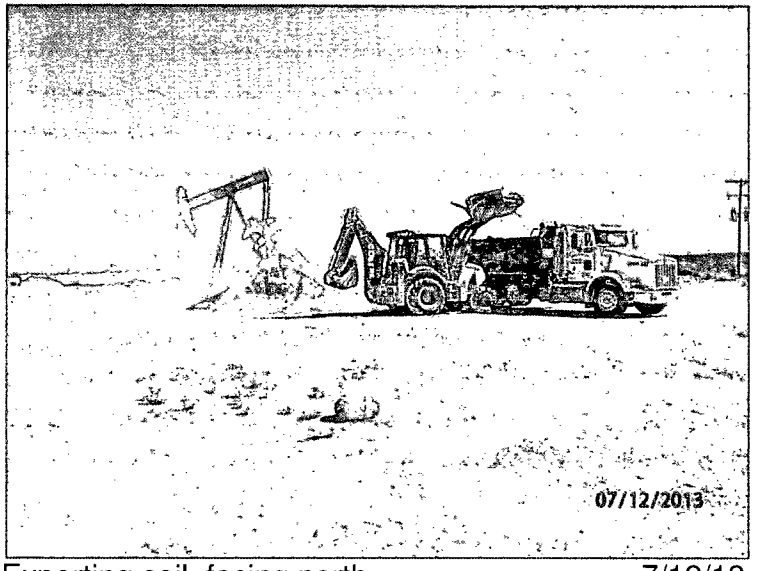
Excavating on the pad, facing south 7/9/13



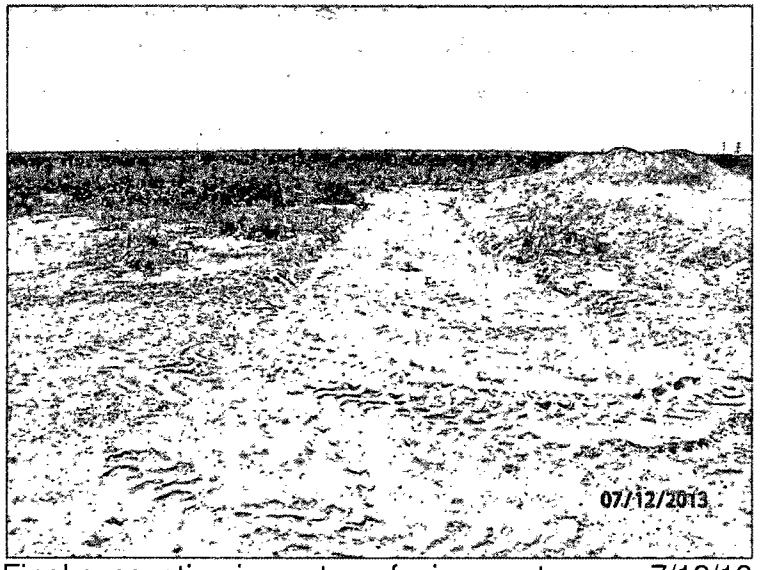
Excavating in the pasture, facing east 7/9/13



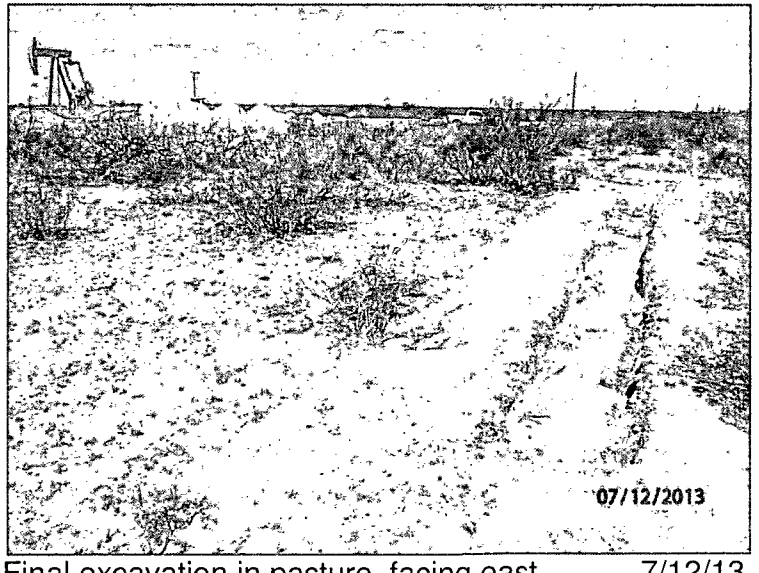
Importing soil, facing southwest 7/9/13



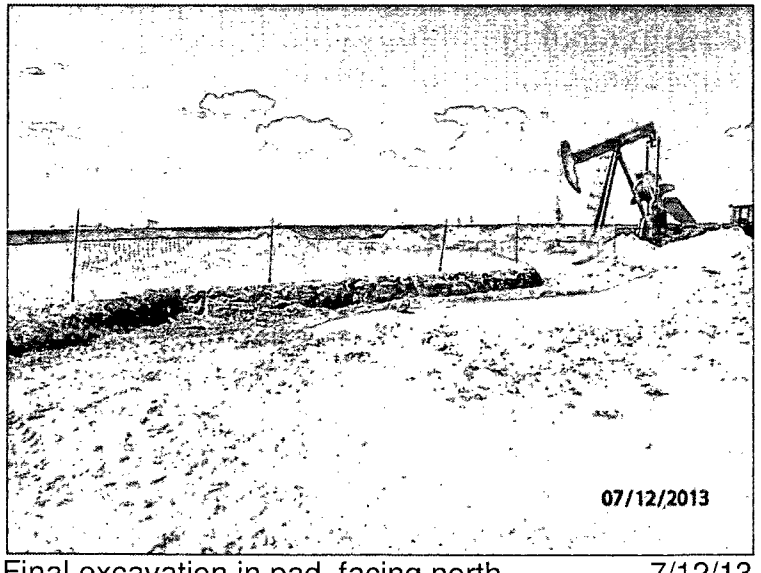
Exporting soil, facing north 7/12/13



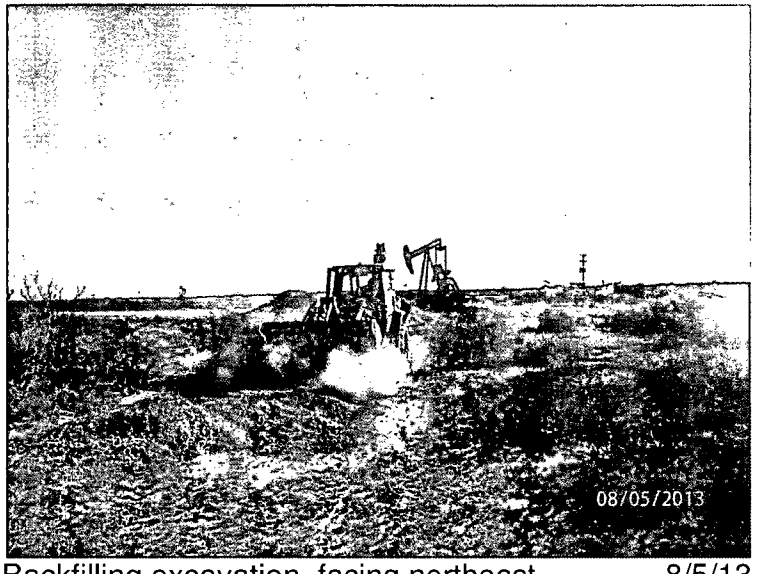
Final excavation in pasture, facing west 7/12/13



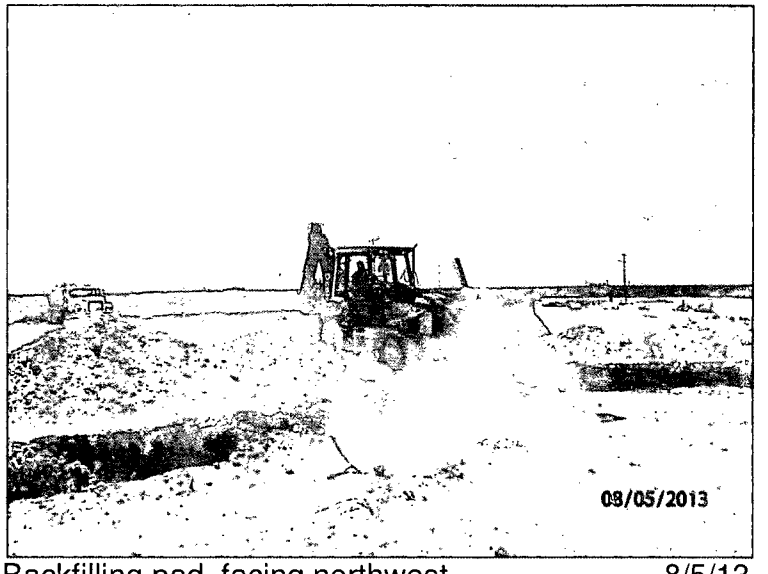
Final excavation in pasture, facing east 7/12/13



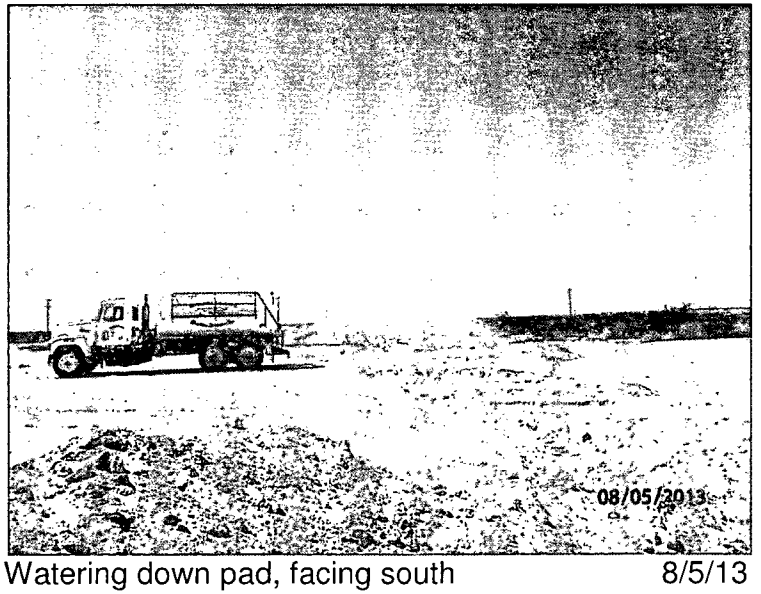
Final excavation in pad, facing north 7/12/13



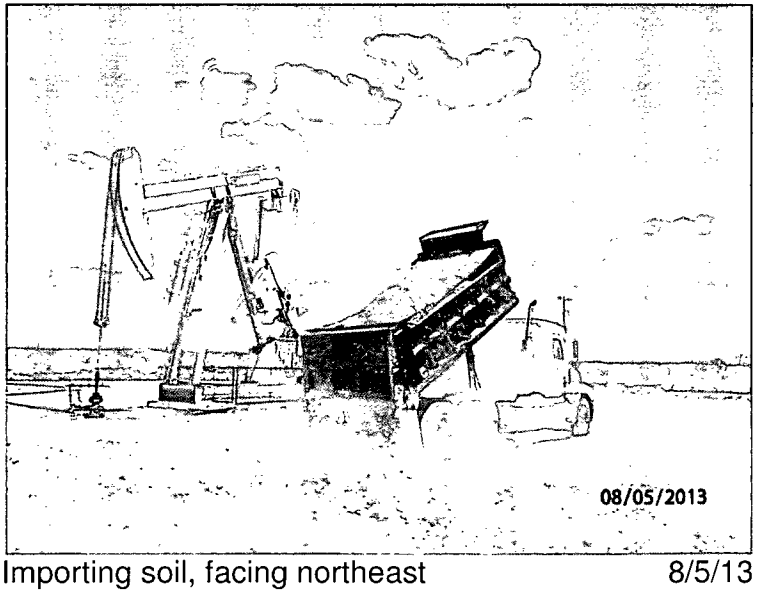
Backfilling excavation, facing northeast 8/5/13



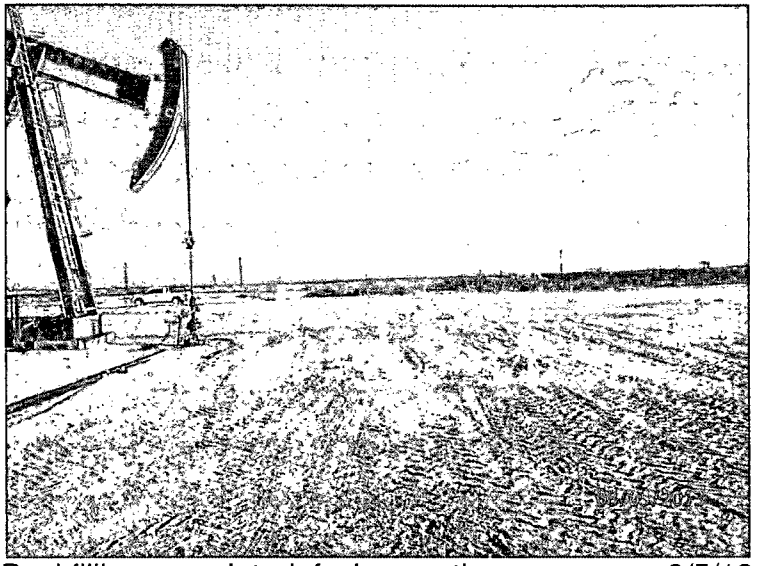
Backfilling pad, facing northwest 8/5/13



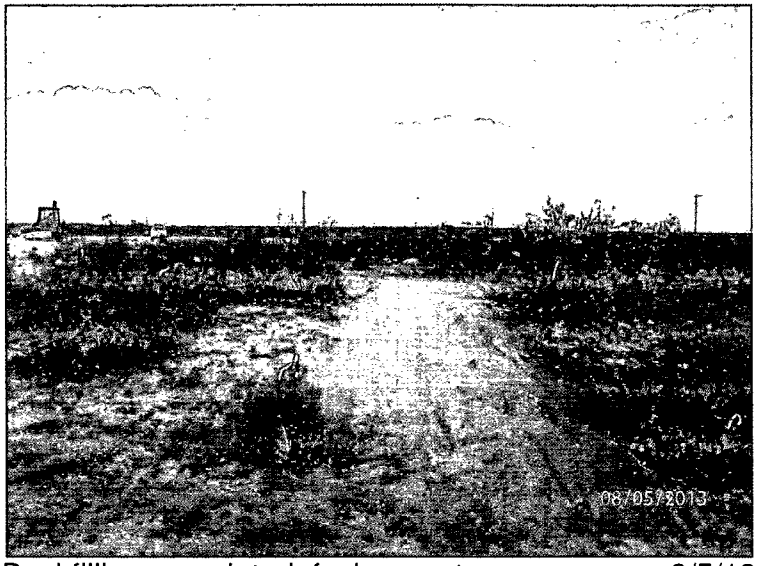
Watering down pad, facing south 8/5/13



Importing soil, facing northeast 8/5/13



Backfilling completed, facing south 8/5/13



Backfilling completed, facing east 8/5/13

Appendix E
Final C-141

RICE Environmental Consulting and Safety (RECS)
P.O. Box 2948 Hobbs, NM 88241
Phone 575.393.2967

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

HOBBS OCD
SEP 09 2013
RECEIVED

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 Apache Corporation	Contact Larry Bruce Baker
Address PO Box 1849, Eunice, NM 88231	Telephone No. (432) 631-6982
Facility Name Bunin #006	Facility Type Well Location

Surface Owner Bunin, N B Properties	Mineral Owner	API No. 30-025-39547

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	13	21S	37E	351	FNL	980	FEL	Lea

Latitude_____ **Longitude**_____

NATURE OF RELEASE

Type of Release Oil and Produced water	Volume of Release 20 bbls	Volume Recovered 10 bbls
Source of Release Stuffing box	Date and Hour of Occurrence unknown	Date and Hour of Discovery 7/2/13 9:45 am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Geoff Leking – NMOCD Jeffery Robertson – BLM	
By Whom? RECS	Date and Hour 7/2/13 NMOCD 3:45 pm BLM 3:48 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

DTW = 69'

Describe Cause of Problem and Remedial Action Taken.*
The stuffing box released 20 bbls of oil and produced water. A vacuum truck was called on site and retrieved 10 bbls of oil and produced water. The affected pad was covered over with caliche to protect wildlife until the one-call clears. The site will be delineated to determine further actions.

Describe Area Affected and Cleanup Action Taken.*
The release affected a total of 3,501 sq ft, of which 918 sq ft was in the pasture. On July 9th, 2013, BLM informed RECS that the site was not under BLM jurisdiction. On July 3rd, 2013, RECS personnel were on site to take initial samples. Samples were taken from the surface throughout the release area and sent to a commercial laboratory for analysis. Based on the sampling data, the site was excavated to 6 inches bgs in the pasture and to 2 ft bgs on the lease pad. Grab samples were taken from the walls and bottom of the excavations and field tested for chlorides and hydrocarbons. Representative samples were taken to a commercial laboratory for analysis. All samples returned laboratory chloride results below 250 mg/kg and GRO and DRO values of non-detect. On August 2nd, 2013, NMOCD gave Apache permission to backfill the site with clean, imported soil. On August 5th, the pasture was backfilled with clean, imported top soil and the lease pad was backfilled with clean, imported caliche. The pasture area was contoured to the surrounding location, and the lease pad was water packed to provide a solid driving surface.

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: Larry Bruce Baker	OIL CONSERVATION DIVISION	
Printed Name: Larry Bruce Baker	Approved by Environmental Specialist: Jeffrey Leking Environmental Specialist	
Title: Environmental Technician	Approval Date: 9/11/13	Expiration Date: —
E-mail Address: larry.baker@apachecorp.com	Conditions of Approval: —	Attached ☐ IRP-9-13-2946
Date: 8-30-13 Phone: (432) 631-6982		

* Attach Additional Sheets If Necessary