

# R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

August 26, 2010

Mr. Mike Bratcher  
NMOCD District 2  
1301 West Grande  
Artesia, New Mexico 88210  
Via E-mail

Mr. Brad Jones  
NMOCD Environmental Bureau  
1220 St. Francis Drive  
Santa Fe, New Mexico  
Via E-Mail

RECEIVED OCD  
2010 AUG 27 P 1:27

RE: Bandit State #8, API 30-015-37434  
Withdraw Request Exception to NMOCD Rules and Notification of Closure

Dear Brad and Mike:

The meeting of August 19 to discuss our applications for exceptions to NMOCD Rules (Bandit and Lusk pits) and other topics was very useful and we appreciate the three hours of time devoted to helping make our submissions to NMOCD better. Below are a series of actions and statements that resulted from our meeting relating to the Bandit State #8 pit:

1. Read and Stevens hereby withdraws the request for exceptions to NMOCD Rules to facilitate closure of the drilling pit.
2. Sampling results suggest that the brine drainage system combined with fresh water rinsing of cuttings and mud (via rainfall and addition of fresh water) have effectively reduced concentrations of constituents of concern such that the mud and cuttings probably meet the criteria for in-place closure.
3. Re-sampling of the drilling pit for the specific requirements of in-place closure (including the paint filter test) is necessary and we plan to move forward with such sampling within the next two weeks.
4. Provided that sample results demonstrate compliance with in-place burial standards, our exception request is not necessary.
5. This letter provides notice to the SLO (Certified RRR) that closure of the pit will occur before the end of September.
6. Next week, we will submit information to the District Office regarding the approved C-144 for the Bandit pit in order to address other issues brought forth during our meeting.

Sincerely,  
R.T. Hicks Consultants, Ltd.

  
Randall T. Hicks  
President

Copy: David Luna, Read and Stevens  
Jeff Albers, State Land Office - Return Receipt Request

# R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

August 18, 2010

Mr. Mike Bratcher  
NMOCD District 2  
1301 West Grande  
Artesia, New Mexico 88210  
Via E-mail

Mr. Brad Jones  
NMOCD Environmental Bureau  
1220 St. Francis Drive  
Santa Fe, New Mexico  
Via E-Mail

RE: Bandit State #8, API 30-015-37434  
Request Exception to NMOCD Rules

Dear Brad and Mike:

Enclosed are the laboratory results associated with the sampling program for the above-referenced matter.

Sincerely,  
R.T. Hicks Consultants, Ltd.



Randall T. Hicks  
President

Copy: David Luna, Read and Stevens



## COVER LETTER

Tuesday, July 06, 2010

Randall Hicks  
R.T. Hicks Consultants, LTD  
901 Rio Grande Blvd. NW  
Suite F-142  
Albuquerque, NM 87104

TEL: (505) 266-5004

FAX (505) 266-0745

RE: R & S Bandit #8

Order No.: 1005426

Dear Randall Hicks:

Hall Environmental Analysis Laboratory, Inc. received 4 sample(s) on 5/15/2010 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites.

Reporting limits are determined by EPA methodology.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901  
AZ license # AZ0682  
ORELAP Lab # NM100001  
Texas Lab# T104704424-08-TX



**Hall Environmental Analysis Laboratory, Inc.**

Date: 06-Jul-10

CLIENT:	R.T. Hicks Consultants, LTD	Client Sample ID:	Bandit 8 Fresh
Lab Order:	1005426	Tag Number:	
Project:	R & S Bandit #8	Collection Date:	5/6/2010 10:32:00 AM
Lab ID:	1005426-01A	Date Received:	5/15/2010
		Matrix:	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: JB
Diesel Range Organics (DRO)	850	50		mg/Kg	5	5/19/2010 9:54:23 AM
Surr: DNOP	106	61.7-135		%REC	5	5/19/2010 9:54:23 AM
<b>EPA METHOD 8021B: VOLATILES</b>						Analyst: NSB
Benzene	ND	0.050		mg/Kg	1	5/19/2010 3:27:20 PM
Toluene	ND	0.050		mg/Kg	1	5/19/2010 3:27:20 PM
Ethylbenzene	ND	0.050		mg/Kg	1	5/19/2010 3:27:20 PM
Xylenes, Total	ND	0.10		mg/Kg	1	5/19/2010 3:27:20 PM
Surr: 4-Bromofluorobenzene	100	64.7-120		%REC	1	5/19/2010 3:27:20 PM
<b>EPA METHOD 418.1: TPH</b>						Analyst: JB
Petroleum Hydrocarbons, TR	310	20		mg/Kg	1	5/18/2010

Qualifiers:	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Estimated value	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
	NC	Non-Chlorinated	ND	Not Detected at the Reporting Limit
	PQL	Practical Quantitation Limit	S	Spike recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

Date: 06-Jul-10

<b>CLIENT:</b>	R.T. Hicks Consultants, LTD	<b>Client Sample ID:</b>	Bandit 8 Fresh
<b>Lab Order:</b>	1005426	<b>Tag Number:</b>	
<b>Project:</b>	R & S Bandit #8	<b>Collection Date:</b>	5/6/2010 10:32:00 AM
<b>Lab ID:</b>	1005426-01B	<b>Date Received:</b>	5/15/2010
		<b>Matrix:</b>	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 300.0: ANIONS</b>						Analyst: LJB
Chloride	ND	7.5	H	mg/Kg	5	6/25/2010 12:04:40 PM

<b>Qualifiers:</b>	<b>*</b>	Value exceeds Maximum Contaminant Level	<b>B</b>	Analyte detected in the associated Method Blank
	<b>E</b>	Estimated value	<b>H</b>	Holding times for preparation or analysis exceeded
	<b>J</b>	Analyte detected below quantitation limits	<b>MCL</b>	Maximum Contaminant Level
	<b>NC</b>	Non-Chlorinated	<b>ND</b>	Not Detected at the Reporting Limit
	<b>PQL</b>	Practical Quantitation Limit	<b>S</b>	Spike recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

Date: 06-Jul-10

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<b>CLIENT:</b>	R.T. Hicks Consultants, LTD	<b>Client Sample ID:</b>	Bandit 8 Brine
<b>Lab Order:</b>	1005426	<b>Tag Number:</b>	
<b>Project:</b>	R & S Bandit #8	<b>Collection Date:</b>	5/6/2010 11:00:00 AM
<b>Lab ID:</b>	1005426-02A	<b>Date Received:</b>	5/15/2010
		<b>Matrix:</b>	SOIL

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Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 418.1: TPH</b>						Analyst: JB
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	5/18/2010

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<b>Qualifiers:</b>	<b>*</b>	Value exceeds Maximum Contaminant Level
	<b>E</b>	Estimated value
	<b>J</b>	Analyte detected below quantitation limits
	<b>NC</b>	Non-Chlorinated
	<b>PQL</b>	Practical Quantitation Limit

---

<b>B</b>	Analyte detected in the associated Method Blank
<b>H</b>	Holding times for preparation or analysis exceeded
<b>MCL</b>	Maximum Contaminant Level
<b>ND</b>	Not Detected at the Reporting Limit
<b>S</b>	Spike recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

Date: 07-Jul-10

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<b>CLIENT:</b>	R.T. Hicks Consultants, LTD	<b>Client Sample ID:</b>	Bandit 8 Brine
<b>Lab Order:</b>	1005426	<b>Tag Number:</b>	
<b>Project:</b>	R & S Bandit #8	<b>Collection Date:</b>	5/18/2010
<b>Lab ID:</b>	1005426-02D	<b>Date Received:</b>	5/15/2010
		<b>Matrix:</b>	SOIL

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Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<hr/>						
EPA METHOD 300.0: ANIONS						Analyst: LJB
Chloride	41	1.5	H	mg/Kg	1	6/25/2010 12:56:53 PM

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<b>Qualifiers:</b>	<b>*</b>	Value exceeds Maximum Contaminant Level	<b>B</b>	Analyte detected in the associated Method Blank
	<b>E</b>	Estimated value	<b>H</b>	Holding times for preparation or analysis exceeded
	<b>J</b>	Analyte detected below quantitation limits	<b>MCL</b>	Maximum Contaminant Level
	<b>NC</b>	Non-Chlorinated	<b>ND</b>	Not Detected at the Reporting Limit
	<b>PQL</b>	Practical Quantitation Limit	<b>S</b>	Spike recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

Date: 06-Jul-10

**CLIENT:** R.T. Hicks Consultants, LTD**Client Sample ID:** Bandit 8 Brine**Lab Order:** 1005426**Tag Number:****Project:** R & S Bandit #8**Collection Date:** 5/18/2010**Lab ID:** 1005426-02C**Date Received:** 5/15/2010**Matrix:** EXTRACT

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 504.1: EDB BY SPLP</b>						Analyst: MAW
1,2-Dibromoethane	ND	0.010		µg/L	1	5/21/2010 2:53:58 PM
Surr: 1,2,3-Trichloropropane	110	60-131		%REC	1	5/21/2010 2:53:58 PM
<b>EPA METHOD 8082: PCB'S BY SPLP</b>						Analyst: SCC
Aroclor 1016	ND	1.0		µg/L	1	5/26/2010 2:08:30 PM
Aroclor 1221	ND	1.0		µg/L	1	5/26/2010 2:08:30 PM
Aroclor 1232	ND	1.0		µg/L	1	5/26/2010 2:08:30 PM
Aroclor 1242	ND	1.0		µg/L	1	5/26/2010 2:08:30 PM
Aroclor 1248	ND	1.0		µg/L	1	5/26/2010 2:08:30 PM
Aroclor 1254	ND	1.0		µg/L	1	5/26/2010 2:08:30 PM
Aroclor 1260	ND	1.0		µg/L	1	5/26/2010 2:08:30 PM
Surr: Decachlorobiphenyl	85.2	23.9-124		%REC	1	5/26/2010 2:08:30 PM
Surr: Tetrachloro-m-xylene	80.0	28.1-139		%REC	1	5/26/2010 2:08:30 PM
<b>EPA METHOD 8310: PAHS BY SPLP</b>						Analyst: SCC
Naphthalene	ND	2.0		µg/L	1	5/28/2010 11:08:07 AM
1-Methylnaphthalene	ND	2.0		µg/L	1	5/28/2010 11:08:07 AM
2-Methylnaphthalene	ND	2.0		µg/L	1	5/28/2010 11:08:07 AM
Acenaphthylene	ND	2.5		µg/L	1	5/28/2010 11:08:07 AM
Acenaphthene	ND	5.0		µg/L	1	5/28/2010 11:08:07 AM
Fluorene	ND	0.80		µg/L	1	5/28/2010 11:08:07 AM
Phenanthrene	ND	0.60		µg/L	1	5/28/2010 11:08:07 AM
Anthracene	ND	0.60		µg/L	1	5/28/2010 11:08:07 AM
Fluoranthene	ND	0.30		µg/L	1	5/28/2010 11:08:07 AM
Pyrene	ND	0.30		µg/L	1	5/28/2010 11:08:07 AM
Benz(a)anthracene	ND	0.070		µg/L	1	5/28/2010 11:08:07 AM
Chrysene	ND	0.20		µg/L	1	5/28/2010 11:08:07 AM
Benzo(b)fluoranthene	ND	0.10		µg/L	1	5/28/2010 11:08:07 AM
Benzo(k)fluoranthene	ND	0.070		µg/L	1	5/28/2010 11:08:07 AM
Benzo(a)pyrene	ND	0.070		µg/L	1	5/28/2010 11:08:07 AM
Dibenz(a,h)anthracene	ND	0.070		µg/L	1	5/28/2010 11:08:07 AM
Benzo(g,h,i)perylene	ND	0.080		µg/L	1	5/28/2010 11:08:07 AM
Indeno(1,2,3-cd)pyrene	ND	0.080		µg/L	1	5/28/2010 11:08:07 AM
Surr: Benzo(e)pyrene	80.0	28.3-111		%REC	1	5/28/2010 11:08:07 AM
<b>EPA METHOD 300.0: ANIONS BY SPLP</b>						Analyst: LJB
Fluoride	0.81	0.10		mg/L	1	5/19/2010 10:37:23 AM
Chloride	2.4	0.50		mg/L	1	5/19/2010 10:37:23 AM
Nitrogen, Nitrate (As N)	0.41	0.10		mg/L	1	5/19/2010 10:37:23 AM

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits



**Hall Environmental Analysis Laboratory, Inc.**

Date: 06-Jul-10

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<b>CLIENT:</b>	R.T. Hicks Consultants, LTD	<b>Client Sample ID:</b>	Bandit 8 Brine
<b>Lab Order:</b>	1005426	<b>Tag Number:</b>	
<b>Project:</b>	R & S Bandit #8	<b>Collection Date:</b>	5/18/2010
<b>Lab ID:</b>	1005426-02C	<b>Date Received:</b>	5/15/2010
		<b>Matrix:</b>	EXTRACT

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Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**EPA METHOD 6010B: SPLP METALS** Analyst: RAGS

Arsenic	ND	5.0		mg/L	1	5/28/2010 4:49:27 PM
Barium	ND	100		mg/L	1	5/28/2010 4:49:27 PM
Cadmium	ND	1.0		mg/L	1	5/28/2010 4:49:27 PM
Chromium	ND	5.0		mg/L	1	5/28/2010 4:49:27 PM
Lead	ND	5.0		mg/L	1	5/28/2010 4:49:27 PM
Selenium	ND	1.0		mg/L	1	5/28/2010 4:49:27 PM
Silver	ND	5.0		mg/L	1	5/28/2010 4:49:27 PM

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<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level	B Analyte detected in the associated Method Blank
	E Estimated value	H Holding times for preparation or analysis exceeded
	J Analyte detected below quantitation limits	MCL Maximum Contaminant Level
	NC Non-Chlorinated	ND Not Detected at the Reporting Limit
	PQL Practical Quantitation Limit	S Spike recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

Date: 07-Jul-10

CLIENT: R.T. Hicks Consultants, LTD

Client Sample ID: Bandit 8 Brine

Lab Order: 1005426

Collection Date: 5/18/2010

Project: R &amp; S Bandit #8

Date Received: 5/15/2010

Lab ID: 1005426-02

Matrix: EXTRACT

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
VOLATILES BY 8260B/1312						Analyst: BDH
Ethylbenzene	0.045	0.020		mg/L	1	5/21/2010 8:56:48 PM
Total Xylenes	0.26	0.040		mg/L	1	5/21/2010 8:56:48 PM
Toluene	ND	0.020		mg/L	1	5/21/2010 8:56:48 PM
Benzene	ND	0.020		mg/L	1	5/21/2010 8:56:48 PM
Surr: 1,2-Dichloroethane-d4	93.8	69.9-130		%REC	1	5/21/2010 8:56:48 PM
Surr: 4-Bromofluorobenzene	103	71.2-123		%REC	1	5/21/2010 8:56:48 PM
Surr: Dibromofluoromethane	97.7	73.9-134		%REC	1	5/21/2010 8:56:48 PM
Surr: Toluene-d8	102	81.9-122		%REC	1	5/21/2010 8:56:48 PM

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

NC Non-Chlorinated

PQL Practical Quantitation Limit

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

Date: 06-Jul-10

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<b>CLIENT:</b>	R.T. Hicks Consultants, LTD	<b>Client Sample ID:</b>	Bandit 8 Dewater
<b>Lab Order:</b>	1005426	<b>Tag Number:</b>	
<b>Project:</b>	R & S Bandit #8	<b>Collection Date:</b>	5/6/2010 11:45:00 AM
<b>Lab ID:</b>	1005426-03A	<b>Date Received:</b>	5/15/2010
		<b>Matrix:</b>	AQUEOUS

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Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<hr/>						
EPA METHOD 300.0: ANIONS BY SPLP						Analyst: LJB
Chloride	210000	10000		mg/L	20000	5/20/2010 11:55:38 PM

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**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

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- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

**Hall Environmental Analysis Laboratory, Inc.**

Date: 06-Jul-10

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<b>CLIENT:</b>	R.T. Hicks Consultants, LTD	<b>Client Sample ID:</b>	1 Brine / 3 Excavated soil
<b>Lab Order:</b>	1005426	<b>Tag Number:</b>	
<b>Project:</b>	R & S Bandit #8	<b>Collection Date:</b>	5/18/2010
<b>Lab ID:</b>	1005426-04B	<b>Date Received:</b>	5/15/2010
		<b>Matrix:</b>	EXTRACT

---

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
						Analyst: MMS
EPA METHOD 300.0: ANIONS BY SPLP						
Chloride	420	50		mg/L	100	5/18/2010 8:44:08 PM

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<b>Qualifiers:</b>	<b>*</b>	Value exceeds Maximum Contaminant Level
	<b>E</b>	Estimated value
	<b>J</b>	Analyte detected below quantitation limits
	<b>NC</b>	Non-Chlorinated
	<b>PQL</b>	Practical Quantitation Limit

<b>B</b>	Analyte detected in the associated Method Blank
<b>H</b>	Holding times for preparation or analysis exceeded
<b>MCL</b>	Maximum Contaminant Level
<b>ND</b>	Not Detected at the Reporting Limit
<b>S</b>	Spike recovery outside accepted recovery limits

# Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2639 • Fax (208) 882-9246 • email [moscow@anateklabs.com](mailto:moscow@anateklabs.com)  
504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email [spokane@anateklabs.com](mailto:spokane@anateklabs.com)

**Client:** HALL ENVIRONMENTAL ANALYSIS LAB  
**Address:** 4901 HAWKINS NE SUITE D  
ALBUQUERQUE, NM 87109  
**Attn:** ANDY FREEMAN

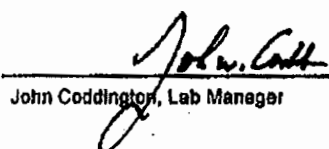
**Batch #:** 100521006  
**Project Name:** 1005426

## Analytical Results Report

<b>Sample Number</b>	100521006-001	<b>Sampling Date</b>	5/18/2010	<b>Date/Time Received</b>	5/20/2010 11:11 AM
<b>Client Sample ID</b>	1005426-02G / BANDIT 8 BRINE	<b>Sampling Time</b>			
<b>Matrix</b>	Extract	<b>Sample Location</b>			
<b>Comments</b>					

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide	ND	mg/L	0.01	5/24/2010	MAS	EPA 335.4	SPLP
Uranium	ND	mg/L	0.001	5/24/2010	JTT	EPA 8020A	SPLP

Authorized Signature

  
John Coddington, Lab Manager

MCL EPA's Maximum Contaminant Level  
ND Not Detected  
PQL Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory.  
The results reported relate only to the samples indicated.  
Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA-ID00013; AZ:0701; CO-ID00013; FL(NELAP):E87893; ID-ID00013; IN:C-ID-01; KY:80142; MT:CERT0028; NM: ID00013; OR-ID200001-002; WA:C895  
Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C885; MT:Cert0065

Friday, June 04, 2010

## QA/QC SUMMARY REPORT

Client: R.T. Hicks Consultants, LTD  
 Project: R & S Bandit #8

Work Order: 1005426

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<b>Method: EPA Method 300.0: Anions</b>											
<b>Sample ID: MB</b>		<b>MBLK</b>									
Chloride	ND	mg/L	0.50								
<b>Sample ID: MB</b>		<b>MBLK</b>									
Chloride	ND	mg/L	0.50								
<b>Sample ID: MB</b>		<b>MBLK</b>									
Chloride	ND	mg/L	0.50								
<b>Sample ID: MB</b>		<b>MBLK</b>									
Fluoride	ND	mg/L	0.10								
Chloride	ND	mg/L	0.50								
Nitrogen, Nitrate (As N)	ND	mg/L	0.10								
<b>Sample ID: MB</b>		<b>MBLK</b>									
Fluoride	ND	mg/L	0.10								
Chloride	ND	mg/L	0.50								
Nitrogen, Nitrate (As N)	ND	mg/L	0.10								
<b>Sample ID: MB</b>		<b>MBLK</b>									
Fluoride	ND	mg/L	0.10								
Chloride	ND	mg/L	0.50								
Nitrogen, Nitrate (As N)	ND	mg/L	0.10								
<b>Sample ID: LCS</b>		<b>LCS</b>									
Chloride	4.818	mg/L	0.50	5	0	98.4	90	110			
<b>Sample ID: LCS</b>		<b>LCS</b>									
Chloride	4.886	mg/L	0.50	5	0	97.7	90	110			
<b>Sample ID: LCS</b>		<b>LCS</b>									
Chloride	4.632	mg/L	0.50	5	0	92.6	90	110			
<b>Sample ID: LCS</b>		<b>LCS</b>									
Fluoride	0.5194	mg/L	0.10	0.5	0	104	90	110			
Chloride	4.958	mg/L	0.50	5	0	99.2	90	110			
Nitrogen, Nitrate (As N)	2.532	mg/L	0.10	2.5	0	101	90	110			
<b>Sample ID: LCS</b>		<b>LCS</b>									
Fluoride	0.5051	mg/L	0.10	0.5	0	101	90	110			
Chloride	4.789	mg/L	0.50	5	0	95.8	90	110			
Nitrogen, Nitrate (As N)	2.476	mg/L	0.10	2.5	0	99.1	90	110			
<b>Sample ID: LCS</b>		<b>LCS</b>									
Fluoride	0.5319	mg/L	0.10	0.5	0	106	90	110			
Chloride	4.692	mg/L	0.50	5	0	93.8	90	110			
Nitrogen, Nitrate (As N)	2.429	mg/L	0.10	2.5	0	97.2	90	110			

## Qualifiers:

E Estimated value  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 NC Non-Chlorinated  
 R RPD outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: R.T. Hicks Consultants, LTD

Project: R &amp; S Bandit #8

Work Order: 1005426

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<b>Method: EPA Method 418.1: TPH</b>											
Sample ID: MB-22314		MBLK									
Petroleum Hydrocarbons, TR	ND	mg/Kg	20								
Sample ID: LCS-22314		LCS									
Petroleum Hydrocarbons, TR	97.76	mg/Kg	20	100	0	97.8	82	114			
Sample ID: LCSD-22314		LCSD									
Petroleum Hydrocarbons, TR	100.4	mg/Kg	20	100	0	100	82	114	2.82	20	
<b>Method: EPA Method 504.1: EDB</b>											
Sample ID: MB-22368		MBLK									
1,2-Dibromoethane	ND	µg/L	0.010								
Sample ID: LCS-22368		LCS									
1,2-Dibromoethane	0.09500	µg/L	0.010	0.1	0	95.0	70	130			
Sample ID: LCSD-22368		LCSD									
1,2-Dibromoethane	0.09000	µg/L	0.010	0.1	0	90.0	70	130	6.41	20	
<b>Method: EPA Method 8015B: Diesel Range Organics</b>											
Sample ID: MB-22296		MBLK									
Diesel Range Organics (DRO)	ND	mg/Kg	10								
Sample ID: LCS-22296		LCS									
Diesel Range Organics (DRO)	48.25	mg/Kg	10	50	0	96.5	64.6	116			
Sample ID: LCSD-22296		LCSD									
Diesel Range Organics (DRO)	44.36	mg/Kg	10	50	0	88.7	64.6	116	8.41	17.4	
<b>Method: EPA Method 8015B: Gasoline Range</b>											
Sample ID: MB-22293		MBLK									
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0								
Sample ID: LCS-22293		LCS									
Gasoline Range Organics (GRO)	26.55	mg/Kg	5.0	25	0	106	77.7	135			
<b>Method: EPA Method 8021B: Volatiles</b>											
Sample ID: MB-22293		MBLK									
Benzene	ND	mg/Kg	0.050								
Toluene	ND	mg/Kg	0.050								
Ethylbenzene	ND	mg/Kg	0.050								
Xylenes, Total	ND	mg/Kg	0.10								

## Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: R.T. Hicks Consultants, LTD

Project: R &amp; S Bandit #8

Work Order: 1005426

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
<b>Method: EPA Method 8082: PCB's</b>											
<b>Sample ID: MB-22384</b>		<b>MBLK</b>			<b>Batch ID: 22384</b>		<b>Analysis Date: 5/26/2010 11:52:16 AM</b>				
Aroclor 1016	ND	µg/L	1.0								
Aroclor 1221	ND	µg/L	1.0								
Aroclor 1232	ND	µg/L	1.0								
Aroclor 1242	ND	µg/L	1.0								
Aroclor 1248	ND	µg/L	1.0								
Aroclor 1254	ND	µg/L	1.0								
Aroclor 1260	ND	µg/L	1.0								
<b>Sample ID: LCS-22384</b>		<b>LCS</b>			<b>Batch ID: 22384</b>		<b>Analysis Date: 5/26/2010 12:37:29 PM</b>				
Aroclor 1016	4.364	µg/L	1.0	5	0	87.1	30.5	109			
Aroclor 1260	4.460	µg/L	1.0	5	0	89.2	42.8	119			
<b>Sample ID: LCSD-22384</b>		<b>LCSD</b>			<b>Batch ID: 22384</b>		<b>Analysis Date: 5/26/2010 1:22:46 PM</b>				
Aroclor 1016	4.462	µg/L	1.0	5	0	89.2	30.5	109	2.46	45.7	
Aroclor 1260	4.614	µg/L	1.0	5	0	92.3	42.8	119	3.39	30	

Method: Volatiles by 8260B/1311

<b>Sample ID: mb-22303</b>		<b>MBLK</b>			<b>Batch ID: 22303</b>		<b>Analysis Date: 5/21/2010 3:45:59 PM</b>				
Benzene	ND	mg/L	0.50								
2-Butanone	ND	mg/L	10								
Carbon Tetrachloride	ND	mg/L	0.50								
Chlorobenzene	ND	mg/L	100								
Chloroform	ND	mg/L	6.0								
1,4-Dichlorobenzene	ND	mg/L	7.5								
1,2-Dichloroethane (EDC)	ND	mg/L	0.50								
1,1-Dichloroethene	ND	mg/L	0.70								
Hexachlorobutadiene	ND	mg/L	0.50								
Tetrachloroethene (PCE)	ND	mg/L	0.70								
Trichloroethene (TCE)	ND	mg/L	0.50								
Vinyl chloride	ND	mg/L	0.20								
<b>Sample ID: lcs-22303</b>		<b>LCS</b>			<b>Batch ID: 22303</b>		<b>Analysis Date: 5/21/2010 4:42:29 PM</b>				
Benzene	0.3391	mg/L	0.010	0.4	0	84.8	51.1	171			
Chlorobenzene	0.3717	mg/L	0.010	0.4	0	92.9	36.1	191			
1,1-Dichloroethene	0.4001	mg/L	0.010	0.4	0	100	48.1	162			
Trichloroethene (TCE)	0.3342	mg/L	0.010	0.4	0	83.6	41.2	166			

## Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits



## QA/QC SUMMARY REPORT

Client: R.T. Hicks Consultants, LTD  
 Project: R & S Bandit #8

Work Order: 1005426

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: EPA Method 8310: PAHs

Sample ID: MB-22401

MBLK

Batch ID: 22401 Analysis Date: 5/28/2010 10:04:17 AM

Naphthalene	ND	µg/L	2.0								
1-Methylnaphthalene	ND	µg/L	2.0								
2-Methylnaphthalene	ND	µg/L	2.0								
Acenaphthylene	ND	µg/L	2.5								
Acenaphthene	ND	µg/L	5.0								
Fluorene	ND	µg/L	0.80								
Phenanthrene	ND	µg/L	0.60								
Anthracene	ND	µg/L	0.60								
Fluoranthene	ND	µg/L	0.30								
Pyrene	ND	µg/L	0.30								
Benz(a)anthracene	ND	µg/L	0.070								
Chrysene	ND	µg/L	0.20								
Benzo(b)fluoranthene	ND	µg/L	0.10								
Benzo(k)fluoranthene	ND	µg/L	0.070								
Benzo(a)pyrene	ND	µg/L	0.070								
Dibenz(a,h)anthracene	ND	µg/L	0.070								
Benzo(g,h,i)perylene	ND	µg/L	0.080								
Indeno(1,2,3-cd)pyrene	ND	µg/L	0.080								

Sample ID: LCS-22401

LCS

Batch ID: 22401 Analysis Date: 5/28/2010 10:25:34 AM

Naphthalene	55.42	µg/L	2.0	80	0	69.3	20.5	109			
1-Methylnaphthalene	53.40	µg/L	2.0	80.2	0	66.6	23.1	116			
2-Methylnaphthalene	54.75	µg/L	2.0	80	0	68.4	19.5	112			
Acenaphthylene	57.05	µg/L	2.5	80.2	0	71.1	27.5	119			
Acenaphthene	57.04	µg/L	5.0	80	0	71.3	31	117			
Fluorene	5.660	µg/L	0.80	8.02	0	70.6	17.1	109			
Phenanthrene	2.880	µg/L	0.60	4.02	0	71.6	25.5	112			
Anthracene	2.950	µg/L	0.60	4.02	0	73.4	25.8	119			
Fluoranthene	5.920	µg/L	0.30	8.02	0	73.8	27.2	122			
Pyrene	5.180	µg/L	0.30	8.02	0	84.6	24.1	118			
Benz(a)anthracene	0.5100	µg/L	0.070	0.802	0	63.6	31.1	125			
Chrysene	2.820	µg/L	0.20	4.02	0	70.1	32.8	119			
Benzo(b)fluoranthene	1.100	µg/L	0.10	1.002	0	110	24.4	117			
Benzo(k)fluoranthene	0.3400	µg/L	0.070	0.5	0	68.0	28.4	132			
Benzo(a)pyrene	0.3500	µg/L	0.070	0.602	0	69.7	32.4	119			
Dibenz(a,h)anthracene	0.7900	µg/L	0.070	1.002	0	78.8	33.9	120			
Benzo(g,h,i)perylene	0.7300	µg/L	0.080	1	0	73.0	35.2	113			
Indeno(1,2,3-cd)pyrene	1.750	µg/L	0.080	2.004	0	87.3	33.6	115			

Sample ID: LCSD-22401

LCSD

Batch ID: 22401 Analysis Date: 5/28/2010 12:54:55 PM

Naphthalene	53.71	µg/L	2.0	80	0	67.1	20.5	109	3.13	32.1	
1-Methylnaphthalene	52.57	µg/L	2.0	80.2	0	65.5	23.1	116	1.57	32.7	
2-Methylnaphthalene	54.23	µg/L	2.0	80	0	67.8	19.5	112	0.954	34	
Acenaphthylene	55.79	µg/L	2.5	80.2	0	69.6	27.5	119	2.23	38.8	
Acenaphthene	57.07	µg/L	5.0	80	0	71.3	31	117	0.0526	38.6	
Fluorene	5.710	µg/L	0.80	8.02	0	71.2	17.1	109	0.880	29.3	

## Qualifiers:

E	Estimated value	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	NC	Non-Chlorinated
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: R.T. Hicks Consultants, LTD

Project: R &amp; S Bandit #8

Work Order: 1005426

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8310: PAHs											
Sample ID: LCSD-22401											
Batch ID: 22401											
Analysis Date: 5/28/2010 12:54:55 PM											
Phenanthrene	2.820	µg/L	0.60	4.02	0	70.1	25.5	112	2.11	25	
Anthracene	2.910	µg/L	0.60	4.02	0	72.4	25.8	119	1.37	23.9	
Fluoranthene	6.030	µg/L	0.30	8.02	0	75.2	27.2	122	1.84	16.7	
Pyrene	3.600	µg/L	0.30	8.02	0	44.9	24.1	118	36.0	15.3	R
Benz(a)anthracene	0.4800	µg/L	0.070	0.802	0	59.9	31.1	125	6.06	19	
Chrysene	2.760	µg/L	0.20	4.02	0	68.7	32.8	119	2.15	16.6	
Benzo(b)fluoranthene	0.9500	µg/L	0.10	1.002	0	94.8	24.4	117	14.6	21.7	
Benzo(k)fluoranthene	0.3100	µg/L	0.070	0.5	0	62.0	28.4	132	9.23	19.4	
Benzo(a)pyrene	0.3400	µg/L	0.070	0.502	0	67.7	32.4	119	2.90	16.7	
Dibenz(a,h)anthracene	0.7800	µg/L	0.070	1.002	0	77.8	33.9	120	1.27	17.3	
Benzo(g,h,i)perylene	0.7200	µg/L	0.080	1	0	72.0	35.2	113	1.38	18	
Indeno(1,2,3-cd)pyrene	1.720	µg/L	0.080	2.004	0	85.8	33.6	115	1.73	17.7	

## Qualifiers:

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

NC Non-Chlorinated

R RPD outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: R.T. Hicks Consultants, LTD  
 Project: R & S Bandit #8

Work Order: 1005426

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8010B: SPLP Metals											
Sample ID: 1005426-02CMSD		MSD		Batch ID: 22399		Analysis Date: 5/28/2010 4:54:37 PM					
Arsenic	ND	mg/L	5.0	0.5	0	105	75	125	0	20	
Barium	ND	mg/L	100	0.5	0.0146	103	75	125	0	20	
Cadmium	ND	mg/L	1.0	0.5	0	103	75	125	0	20	
Chromium	ND	mg/L	5.0	0.5	0	104	75	125	0	20	
Lead	ND	mg/L	5.0	0.5	0	102	75	125	0	20	
Selenium	ND	mg/L	1.0	0.5	0	104	75	125	0	20	
Silver	ND	mg/L	5.0	0.5	0	103	75	125	0	20	
Sample ID: MB-22399		MBLK		Batch ID: 22399		Analysis Date: 5/28/2010 4:34:18 PM					
Arsenic	ND	mg/L	5.0								
Barium	ND	mg/L	100								
Cadmium	ND	mg/L	1.0								
Chromium	ND	mg/L	5.0								
Lead	ND	mg/L	5.0								
Selenium	ND	mg/L	1.0								
Silver	ND	mg/L	5.0								
Sample ID: MB-22399		MBLK		Batch ID: 22399		Analysis Date: 6/3/2010 10:24:35 AM					
Arsenic	ND	mg/L	5.0								
Barium	ND	mg/L	100								
Cadmium	ND	mg/L	1.0								
Chromium	ND	mg/L	5.0								
Lead	ND	mg/L	5.0								
Selenium	ND	mg/L	1.0								
Silver	ND	mg/L	5.0								
Sample ID: LCS-22399		LCS		Batch ID: 22399		Analysis Date: 5/28/2010 4:37:26 PM					
Arsenic	ND	mg/L	5.0	0.5	0	101	80	120			
Barium	ND	mg/L	100	0.5	0	102	80	120			
Cadmium	ND	mg/L	1.0	0.5	0	100	80	120			
Chromium	ND	mg/L	5.0	0.5	0	101	80	120			
Lead	ND	mg/L	5.0	0.5	0	101	80	120			
Selenium	ND	mg/L	1.0	0.5	0	102	80	120			
Silver	ND	mg/L	5.0	0.5	0	102	80	120			
Sample ID: LCS-22399		LCS		Batch ID: 22399		Analysis Date: 6/3/2010 10:27:45 AM					
Arsenic	ND	mg/L	5.0	0.5	0	100	80	120			
Barium	ND	mg/L	100	0.5	0.0008	101	80	120			
Cadmium	ND	mg/L	1.0	0.5	0	100	80	120			
Chromium	ND	mg/L	5.0	0.5	0	101	80	120			
Lead	ND	mg/L	5.0	0.5	0	101	80	120			
Selenium	ND	mg/L	1.0	0.5	0.0267	96.8	80	120			
Silver	ND	mg/L	5.0	0.5	0	100	80	120			
Sample ID: 1005426-02CMS		MS		Batch ID: 22399		Analysis Date: 5/28/2010 4:52:00 PM					
Arsenic	ND	mg/L	5.0	0.5	0	99.8	75	125			
Barium	ND	mg/L	100	0.5	0.0146	99.7	75	125			
Cadmium	ND	mg/L	1.0	0.5	0	98.3	75	125			

## Qualifiers:

E Estimated value  
 J Analyte detected below quantitation limits  
 ND Not Detected at the Reporting Limit  
 H Holding times for preparation or analysis exceeded  
 NC Non-Chlorinated  
 R RPD outside accepted recovery limits

## QA/QC SUMMARY REPORT

Client: R.T. Hicks Consultants, LTD

Project: R &amp; S Bandit #8

Work Order: 1005426

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Method: EPA Method 8010B: SPLP Metals

Sample ID: 1005426-02CMS

MS

Batch ID:

22399

Analysis Date:

5/28/2010 4:52:00 PM

Chromium	ND	mg/L	5.0	0.5	0	99.2	75	125			
Lead	ND	mg/L	5.0	0.5	0	98.0	75	125			
Selenium	ND	mg/L	1.0	0.5	0	101	75	125			
Silver	ND	mg/L	5.0	0.5	0	99.8	75	125			

## Qualifiers:

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

NC Non-Chlorinated

R RPD outside accepted recovery limits





# R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

July 28, 2010

Mr. Mike Bratcher  
NMOCD District 2  
1301 West Grande  
Artesia, New Mexico 88210  
Via E-mail

Mr. Brad Jones  
NMOCD Environmental Bureau  
1220 St. Francis Drive  
Santa Fe, New Mexico  
Via E-Mail

RE: Bandit State #8, API 30-015-37434  
Request Exception to NMOCD Rules

Dear Brad and Mike:

This submission includes:

1. This transmittal letter
2. Modified C-144 Form signed by Randall Hicks with Power of Attorney
3. Modified C-144 Supplemental Documentation which includes
  - a. Figures 1-12
  - b. Appendix A, photo-documentation of the site conditions prior to pit construction
  - c. Appendix B, images of the pit construction
  - d. Appendix C, Sampling Results
4. Application for Exceptions
  - a. Appendix D compares NMOCD criteria for pits v. burial trench
  - b. Draft public notice

Please note that the Application for Exceptions and the Modified C-144 Supplemental Documentation both refer to Appendix B. Appendix D is unique to the Application for Exceptions and is labeled Appendix D to avoid confusion with Appendices associated with the modified C-144.

Below we list the provisions of NMOCD Rules from which we request an exception. Read and Stevens will comply with all other provisions of NMOCD Rules.

## **Exception Request to NMOCD Rule 19.15.17.F.3 (e)**

The text of the Rule states:

(e) The operator shall close each drying pad associated with a closed-loop system or temporary pit by excavating and transferring all contents and synthetic pit liners or liner material associated with a closed-loop system or temporary pit to a lined trench. The excavated materials shall pass the paint filter liquids test (EPA SW-846, method 9095) and the closure standards specified in Subparagraph (c) of Paragraph (3) of Subsection F of 19.15.17.13 NMAC.

We request an exception to the requirement to excavate and transfer all contents and pit liners to a lined trench. As described in the attachments, we propose to re-use the drilling pit as the burial trench, which would obviate the need for excavation and transfer of materials.

**Exception Request to NMOCD Rule 19.15.17.F.3 (f)(ii)**

The text of the Rule states:

- (f) The operator shall test the soils beneath the temporary pit after excavation to determine whether a release has occurred.
- (i) Where ground water is between 50 and 100...
- (ii) Where ground water is more than 100 feet below the bottom of the temporary pit, the operator shall collect at a minimum, a five point, composite sample; collect individual grab samples from any area that is wet, discolored or showing other evidence of a release; and analyze for BTEX, TPH, benzene, GRO and DRO combined fraction and chlorides to demonstrate that benzene, as determined by EPA SW-846 method 8021B or 8260B, does not exceed 0.2 mg/kg; total BTEX, as determined by EPA SW-846 method 8021B or 8260B, does not exceed 50 mg/kg; the GRO and DRO combined fraction, as determined by EPA SW-846 method 8015M, does not exceed 500 mg/kg; TPH, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 2500 mg/kg; and chlorides, as determined by EPA method 300.1, do not exceed 1000 mg/kg or the background concentration, whichever is greater. The operator shall notify the division of its results on form C-141. The division may require additional delineation upon review of the results.

We request an exception to the requirement to test the soils beneath the temporary pit after excavation to determine whether a release has occurred. As described in the attachment, we propose to employ a leak detection system in lieu of soil sampling. If the leak detection system gives evidence of a leak in the pit, we propose to remove the cuttings from the pit and bury them in a trench per standard rules and regulations.

**Summary**

As described in the attachment, Read and Stevens:

- Proposes to re-use the drilling pit as the burial trench (if monitoring shows that the primary liner of the pit retained integrity),
- Has removed brine (and any entrained constituents of concern) from the pit, thereby reducing the mass of buried salt,
- Use fluid removal (via under-drain pumping) and drying of the solids as the primary stabilization method rather than increasing the volume of waste by adding clean soil.

We do not believe the application requests an alternative closure method as trench burial is the proposed method of closure for the cut brine pit cell- therefore we did not check that box on the C-144 Modification form. For the fresh water cell of the pit (used to drill the surface casing), we propose in-place burial. Therefore, item 14 of the C-144 checks in-place burial and on-site trench burial.



July 28, 2010

Page 3

We have interpreted the Rule to allow the addition of 1 part excavated (clean) soil to the drilling waste in the fresh water pit then in-place burial of this stabilized material in the cut brine cell of the drilling pit with a 4-foot cover over the stabilized fresh water drilling waste.

Finally, time is of the essence. Dewatering the pit of brine required via the drainage system required more time than expected and laboratory analysis of samples required a full two months. NMOCD has granted an extension of time to close this pit to November, and we appreciate that action. Please do not hesitate to contact me if you have any suggests or comments relating to this submittal that we might implement in order to create a better product that provides equal or better protection of fresh water, public health or the environment than moving forward with standard trench burial at this location.

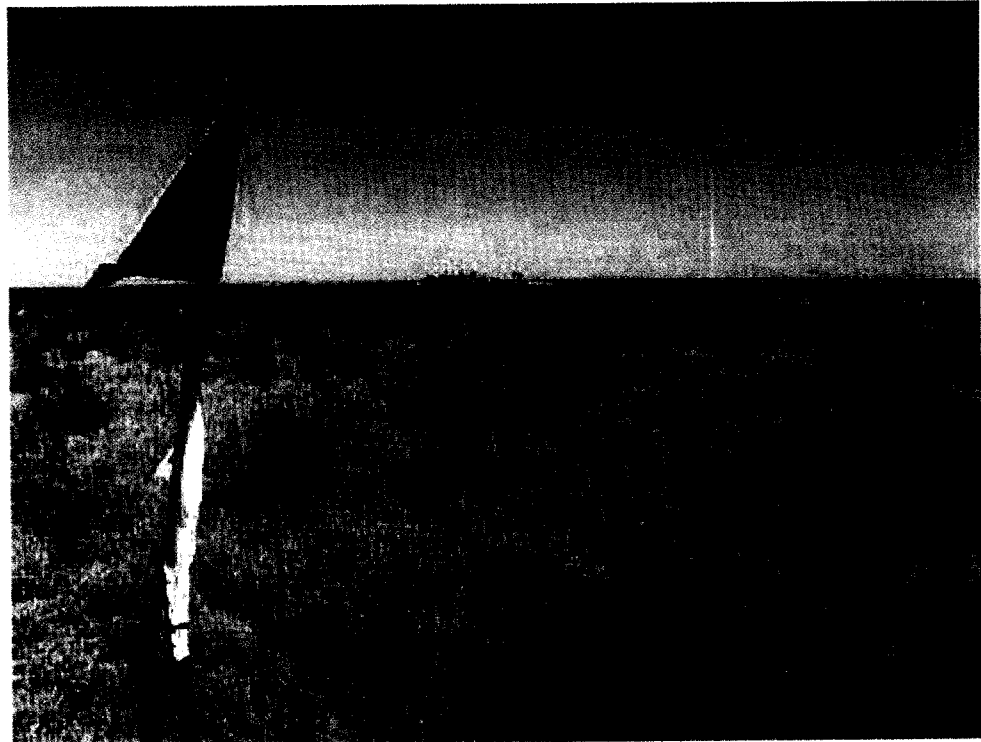
Sincerely,  
R.T. Hicks Consultants, Ltd.

A handwritten signature in black ink, appearing to read "Randall T. Hicks". The signature is stylized with a large, looped "R" and a cursive "H".

Randall T. Hicks  
President

Copy: David Luna, Read and Stevens  
State Land Office

July 28, 2010



**Bandit State #8  
Modified C-144 & Exception Request**

**API # 30-015-37434**

**R.T. Hicks Consultants, Ltd.**

901 Rio Grande Blvd. NW, Suite F-142  
Albuquerque, NM 87104

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Modified C-144 form & Power of Attorney

C-144 Modification Supplemental Documentation

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Figure 3	Aerial Photograph
Figure 4	Topographic Map – nearby fresh water wells or springs
Figure 5	Nearby incorporated areas
Figure 6	Nearby Wetlands
Figure 7	Nearby Surface Mines
Figure 8	Nearby Karst
Figure 9	FEMA Flood Insurance Map
Figure 10	Nearby Geology and Topography
Figure 11	Design Plan
Figure 12	Bring Pit Liner Schematics
Figure 13	Final Closure Design

Appendix A      Photos of the Site

Appendix B      Photos of Pit Construction

Appendix C      Sampling Results

Exception Request

Appendix D      Design of drilling pit vs. Trench Burial

Public Notice (draft)

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, 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  
Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-144  
July 21, 2008

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.  
For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

**Pit, Closed-Loop System, Below-Grade Tank, or  
Proposed Alternative Method Permit or Closure Plan Application**

Type of action: ☐ Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method  
☐ Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method  
☒ Modification to an existing permit  
☐ Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method

**Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request**

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.  
Operator: Rcad and Stevens, Inc OGRID #: \_\_\_\_\_  
Address: PO Box 1518, Roswell, NM 88201  
Facility or well name: Bandit State #8  
API Number: 30-015-37434 OCD Permit Number: \_\_\_\_\_  
U/L or Qtr/Qtr L Section 10 Township 23S Range 26E County: Eddy  
Center of Proposed Design: Latitude 32.321932 Longitude -104.284425 NAD: ☐ 1927 ☒ 1983  
Surface Owner: ☐ Federal ☒ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.  
☒ **Pit:** Subsection F or G of 19.15.17.11 NMAC  
Temporary: ☒ Drilling ☐ Workover  
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A  
☒ Lined ☐ Unlined Liner type: Thickness 20 mil ☒ LLDPE ☐ HDPE ☐ PVC ☐ Other Plus 12 mil secondary liner  
☒ String-Reinforced  
Liner Seams: ☒ Welded ☒ Factory ☐ Other \_\_\_\_\_ Volume: 10000 bbl Dimensions: L 100 x W 84 x D 11

3.  
☐ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC  
Type of Operation: ☐ P&A ☐ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)  
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other \_\_\_\_\_  
☐ Lined ☐ Unlined Liner type: Thickness \_\_\_\_\_ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_  
Liner Seams: ☐ Welded ☐ Factory ☐ Other \_\_\_\_\_

4.  
☐ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC  
Volume: \_\_\_\_\_ bbl Type of fluid: \_\_\_\_\_  
Tank Construction material: \_\_\_\_\_  
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off  
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other \_\_\_\_\_  
Liner type: Thickness \_\_\_\_\_ mil ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_

5.  
☐ **Alternative Method:**  
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

6.  
**Fencing:** Subsection D of 19.15.17.11 NMAC (*Applies to permanent pits, temporary pits, and below-grade tanks*)

- ☐ Chain link, six feet in height, two strands of barbed wire at top (*Required if located within 1000 feet of a permanent residence, school, hospital, institution or church*)
- ☒ Four foot height, four strands of barbed wire evenly spaced between one and four feet
- ☐ Alternate. Please specify \_\_\_\_\_

7.  
**Netting:** Subsection E of 19.15.17.11 NMAC (*Applies to permanent pits and permanent open top tanks*)

- ☐ Screen ☐ Netting ☐ Other \_\_\_\_\_ Not Applicable \_\_\_\_\_
- ☐ Monthly inspections (If netting or screening is not physically feasible)

8.  
**Signs:** Subsection C of 19.15.17.11 NMAC

- ☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers
- ☒ Signed in compliance with 19.15.3.103 NMAC

9.  
**Administrative Approvals and Exceptions:**

Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.

**Please check a box if one or more of the following is requested, if not leave blank:**

- ☒ Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval. NOTE – DISTRICT OFFICE PROVIDED APPROVAL FOR 1.5H:1V SLOPES FOR PIT
- ☒ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

10.  
**Siting Criteria (regarding permitting):** 19.15.17.10 NMAC

**Instructions:** The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.

Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells SEE FIGURES	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site SEE FIGURES	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image SEE FIGURES	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) Visual inspection (certification) of the proposed site; Aerial photo; Satellite image SEE FIGURES	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site SEE FIGURES	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. SEE FIGURES - Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division SEE FIGURES	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map SEE FIGURES EXPLANATION	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within a 100-year floodplain. - FEMA map SEE FIGURES	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

11.

**Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC  
☒ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC  
☒ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC  
☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  
☒ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  
☒ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_ or Permit Number: \_\_\_\_\_

12.

**Closed-loop Systems Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 NMAC  
☐ Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC  
☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  
☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_

☐ Previously Approved Operating and Maintenance Plan API Number: \_\_\_\_\_ (Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

13.

**Permanent Pits Permit Application Checklist:** Subsection B of 19.15.17.9 NMAC**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC  
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC  
☐ Climatological Factors Assessment  
☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Quality Control/Quality Assurance Construction and Installation Plan  
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  
☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Nuisance or Hazardous Odors, including H<sub>2</sub>S, Prevention Plan  
☐ Emergency Response Plan  
☐ Oil Field Waste Stream Characterization  
☐ Monitoring and Inspection Plan  
☐ Erosion Control Plan  
☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

14.

**Proposed Closure:** 19.15.17.13 NMAC**Instructions:** Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

Type: ☒ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☐ Below-grade Tank ☐ Closed-loop System  
☐ Alternative

Proposed Closure Method: ☐ Waste Excavation and Removal  
☐ Waste Removal (Closed-loop systems only)  
☒ On-site Closure Method (Only for temporary pits and closed-loop systems)  
☒ In-place Burial ☒ On-site Trench Burial SEE EXPLANATION  
☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

15.

**Waste Excavation and Removal Closure Plan Checklist:** (19.15.17.13 NMAC) **Instructions:** Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC  
☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC  
☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)  
☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC  
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

16.  
**Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:** (19.15.17.13.D NMAC)

**Instructions:** Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please provide the information below) ☐ No

*Required for impacted areas which will not be used for future service and operations:*

☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC

☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

17.  
**Siting Criteria (regarding on-site closure methods only):** 19.15.17.10 NMAC

**Instructions:** Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.

Ground water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

18.  
**On-Site Closure Plan Checklist:** (19.15.17.13 NMAC) **Instructions:** Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.

- ☒ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☒ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- ☒ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC
- ☒ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☒ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☒ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- ☒ Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- ☒ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)
- ☒ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- ☒ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
- ☒ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

19.

**Operator Application Certification:**

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): Randall T. Hicks Title: agent for Read and Stevens, Inc.

Signature:  Date: July 28, 2010

e-mail address: R@rthicksconsult.com Telephone: 505-238-9515

20.

**OCD Approval:** ☐ Permit Application (including closure plan) ☐ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: \_\_\_\_\_ Approval Date: \_\_\_\_\_

Title: \_\_\_\_\_ OCD Permit Number: \_\_\_\_\_

21.

**Closure Report (required within 60 days of closure completion):** Subsection K of 19.15.17.13 NMAC

*Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.*

☐ Closure Completion Date: \_\_\_\_\_

22.

**Closure Method:**

☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)  
☐ If different from approved plan, please explain.

23.

**Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:**

*Instructions: Please identify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.*

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

*Required for impacted areas which will not be used for future service and operations:*

- ☐ Site Reclamation (Photo Documentation)  
☐ Soil Backfilling and Cover Installation  
☐ Re-vegetation Application Rates and Seeding Technique

24.

**Closure Report Attachment Checklist:** *Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Proof of Closure Notice (surface owner and division)  
☐ Proof of Deed Notice (required for on-site closure)  
☐ Plot Plan (for on-site closures and temporary pits)  
☐ Confirmation Sampling Analytical Results (if applicable)  
☐ Waste Material Sampling Analytical Results (required for on-site closure)  
☐ Disposal Facility Name and Permit Number  
☐ Soil Backfilling and Cover Installation  
☐ Re-vegetation Application Rates and Seeding Technique  
☐ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude \_\_\_\_\_ Longitude \_\_\_\_\_ NAD: ☐ 1927 ☐ 1983

25.

**Operator Closure Certification:**

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

e-mail address: \_\_\_\_\_ Telephone: \_\_\_\_\_



**LIMITED POWER OF ATTORNEY**

State (situs of land): New Mexico

County (situs of land): Chaves, Eddy and Lea Counties

Principal: Read & Stevens, Inc.

Principal's Address: 400 N. Pennsylvania Ave, Suite 1000, Roswell, NM 88201

Agent/Attorney in Fact: Randall Hicks (owner of R T Hicks Consulting)

Agent/Attorney in Fact's Address: 901 Rio Grande NW F-142, Albuquerque, NM 87104

Date Executed: 06/08/2010

Effective Date: 05/08/2010

Principal, identified above, makes, constitutes and appoints Agent, identified above, Principal's true and lawful Agent and Attorney in Fact for Principal and in Principal's name, place and stead, for the sole purposes of transacting any business dealings with the New Mexico Oil Conservation Division (NMOCD) Form C-144 on behalf of Principal.

Principal gives and grants Agent full and complete power and authority to do and perform all acts and things required or necessary to be done in transacting Principal's dealing with the NMOCD, Form C-144, as fully to all intents and purposes as if Principal might or could do if personally present and acting on Principal's own behalf.

Principal ratifies and affirms all that the Agent may lawfully do or cause to be done by virtue of this Limited Power of Attorney.

Principal

*David Luna*

**CORPORATE ACKNOWLEDGEMENT**

STATE OF NEW MEXICO

COUNTY OF

The foregoing instrument was acknowledged before me this 2<sup>nd</sup> day of June, 2010 by David Luna, of Read & Stevens, Inc, a New Mexico corporation on behalf of said corporation.

My Commission Expires:

11-4-13

*Mary L. Page*  
Notary Public

# **C-144 Modification Supplemental Documentation**

**R.T. Hicks Consultants, Ltd.**

901 Rio Grande Blvd. NW, Suite F-142  
Albuquerque, NM 87104

## **C-144 Modification Supplemental Documentation Bandit State 8, API #30-015-37434**

### **Introduction**

This document clarifies information in the C-144 Supplemental Documentation, signed by the operator on January 14, 2010 and approved by NMOCD on January 27, 2010. In addition this submission presents proposed modifications of the approved C-144 to permit conformance with the Application for Exceptions to NMOCD Rules. All statements in the approved C-144 are true and correct, to the best of our knowledge. This document presents some clarification and revision of the approved C-144. If the text is shown in *italic*, the action is complete and is consistent with NMOCD Rules and this submission. Further, Read and Stevens, Inc. (R&S) requests exceptions to NMOCD Rules as detailed in the attached Application for Exceptions. R&S will adhere to all other prescriptive mandates of NMOCD Rules.

### **Siting Criteria**

Data sources for Section 10 are listed on the Petroleum Recovery Research Center's (PRRC) Pit Rule Mapping Home Page available at <http://pitrule.source3.com>.

References are included with submission for your convenience. Figures were generated from:

1. PRRC's pit rule mapping portal or
2. Directly from the associated agency.

The legend for the figures is attached.

The photographs presented in Appendix A, along with signatures on this letter, confirm that a representative has personally visited the site and can confirm the Siting Criteria as listed in Section 10.

- Figure 1 shows the depth to water at nearby wells from the Office of the State Engineer and the USGS. Depth to water is more than 100-feet below ground surface at the proposed drilling site.
- Figure 2 shows the nearest water course, an intermittent stream, is more than 300-feet from the proposed drilling site.
- Figure 3 shows an aerial photograph indicating no dwellings exist with 300-feet of the proposed drilling site.
- Figure 4 shows that the proposed drilling site is not within 500-feet of a fresh water well.
- Figure 5 shows that the proposed drilling site is not within an incorporated municipal boundary or within a municipal fresh water well field.
- Figure 6 shows that the proposed drilling site is not within a designated wetland.
- Figure 7 shows that the proposed drilling site is not overlying a subsurface mine.
- Figure 8 shows that the proposed drilling site is not within a known karst area. While numerous large-scale collapse features are present throughout southeast New Mexico due to salt flow in deep Permian marine sediments (e.g. the Salado Formation) our site inspection and our evaluation of the geology and topographic features (Figure 10) confirms that the proposed drilling site is not within an unstable area. As shown in Figure 10, the proposed drilling pit is underlain by

## **C-144 Modification Supplemental Documentation Bandit State 8, API #30-015-37434**

Quaternary Pediment Deposits (Qp) which is in turn underlain by Permian Rustler Formation (Pr in the western portion of the Figure 10).

- Figure 9 shows that the proposed drilling site is in FEMA zone "Other Zone X", which FEMA determined to be outside the 500-year floodplain

### **Hydrogeologic Data**

Surface topography at the proposed site gently slopes northeast, toward the Pecos River valley. As shown in Figure 10, Quaternary Pediment Deposits (Qp) underlie the proposed drilling site. The Permian Rustler Formation (Pr) underlies the pediment deposits. The nearest surface water drainage, Dark Canyon Draw, is approximately 1-mile west of the proposed drilling site (Figure 2).

According to Hendrickson & Jones<sup>1</sup>, ground water flows east-southeast toward the Pecos River. Ground water in Eddy County occurs in limestone, sandstone, siltstone, and gypsum of Permian and Triassic age, and in sand, silt, gravel, and conglomerate of Tertiary and Quaternary age. Near Carlsbad, ground water occurs in the Carlsbad limestone, in the gypsiferous Castile and Rustler Formations, and in the alluvium. The water in the Castile and Rustler formations and in the alluvium is impotable in most places.

### **Design Plan**

Figures 11-12 of the approved C-144 present the design plan for the proposed drilling pit. *R&S followed the following steps in the construction of the temporary pit:*

- I. Prior to constructing the pit the operator stripped and stockpiled the topsoil for use as the final cover or fill at the time of closure.*
- II. The operator posted an upright sign not less than 12 inches by 24 inches with lettering not less than two inches in height in a conspicuous place on the fence surrounding the pit. The operator posted the sign in a manner and location such that a person can easily read the legend. The sign provides the following information: the operator's name; the location of the site by quarter-quarter or unit letter, section, township and range; and emergency telephone numbers.*
- III. The operator fenced the pit in a manner that prevents unauthorized access and maintains the fences in good repair.*
- IV. The operator fenced the pit to exclude livestock with a four foot fence that has at least four strands of barbed wire evenly spaced in the interval between one foot and four feet above ground level.*

With respect to the design and construction of the temporary pit:

- A. The operator designed and constructed a temporary pit to ensure the confinement of liquids to prevent unauthorized releases.*

---

<sup>1</sup> Hendrickson, G.E., Jones, R.S., 1985. Geology and Ground-Water Resources of Eddy County, New Mexico. Ground-water report 3. New Mexico Institute of Mining and Technology.

**C-144 Modification Supplemental Documentation**  
**Bandit State 8, API #30-015-37434**

- B. The temporary pit has a properly constructed foundation and interior slopes consisting of a firm, unyielding base, smooth and free of rocks, debris, sharp edges or irregularities to prevent the liner's rupture or tear.*
- C. The operator has constructed a temporary pit so that the slopes are no steeper than 1.5 horizontal feet to one vertical foot (1.5H:1V) – as approved by NMOCD.*
- D. The temporary pit uses a geomembrane liner consisting of 20-mil string reinforced LLDPE that the appropriate division district office has approved in the past. The geomembrane liner is composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. The liner material is resistant to ultraviolet light. Liner compatibility complies with EPA SW-846 method 9090A.*
- E. The operator minimized liner seams and oriented them up and down, not across a slope. The operator used factory welded seams where possible. Prior to field seaming, the operator overlapped liners four to six inches and orient seams parallel to the line of maximum slope, i.e., oriented along, not across, the slope. The operator minimized the number of field seams in corners and irregularly shaped areas.*
- F. Qualified personnel performed field seaming. The contractor for R&S welded field liner seams.*
- G. Construction avoided excessive stress-strain on the liner.*
- H. Geotextile was placed under the liner where needed to reduce localized stress-strain or protuberances that may otherwise compromise the liner's integrity.*
- I. The operator anchored the edges of all liners in the bottom of a compacted earth-filled trench. The anchor trench was set at least 18 inches deep.*
- J. The operator ensured that the liner is protected from any fluid force or mechanical damage at any point of discharge into or suction from the lined temporary pit through the placement of a layer of protective felt over the liner and the placement of pipes at these locations as shown in the design drawings.*
- K. The operator designed and constructed a temporary pit to prevent run-on of surface water. A berm, ditch, proper sloping or other diversion surround a temporary pit to prevent run-on of surface water as shown on the design drawings.*
- L. The volume of a temporary pit did not exceed 10 acre-feet, including freeboard.*

**Additionally:**

- As much as possible, the contractor separated coarser material from finer-grained material excavated from the pit for use in constructing the soil cover over the buried waste when operations of the drilling pit cease.*
- Below the liner, the contractor installed the leak detection system described in the design drawings.*

## **C-144 Modification Supplemental Documentation**

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- *Above the liner, a drain system composed of perforated pipe will allow removal of brine and associated constituents of concern from the residual solid materials.*

Appendix B of this submittal presents photographic documentation of the construction of the pit.

### **Operations and Maintenance Plan**

As stated earlier, the operator will operate and maintain the temporary pit to contain liquids and solids and maintain the integrity of the liner, liner system or secondary containment system, prevent contamination of fresh water and protect public health and the environment. Specifically:

1. *The operator disposed of all drilling fluids in a manner, approved by division rules, that prevents the contamination of fresh water and protects public health and the environment.*
2. *The operator did not discharge into or store any hazardous waste in the temporary pit.*
3. *If the pit liner's integrity was compromised, or if any penetration of the liner occurs above the liquid's surface, the operator would notify the appropriate division district office within 48 hours of the discovery and repair the damage or replace the liner. This did not occur.*
4. *If the pit develops a leak, or if any penetration of the pit liner occurs below the liquid's surface, then the operator would remove all liquid above the damage or leak line within 48 hours, notify the appropriate division district office within 48 hours of the discovery and repair the damage or replace the pit liner. This did not occur.*
5. *The injection or withdrawal of liquids from the pit was accomplished through a header, diverter or other hardware that prevents damage to the liner by erosion, fluid jets or impact from installation and removal of hoses or pipes.*
6. *The operator operated and installed the pit to prevent the collection of surface water run-on.*
7. *The operator maintained on site, an oil absorbent boom or other device to contain and remove oil from the pit's surface.*

*The operator maintained and operated the temporary pit in accordance with the following additional protocols.*

- a. *Only fluids used or generated during the drilling process were discharged into a temporary pit.*
- b. *The operator maintained the temporary pit free of miscellaneous solid waste or debris.*
- c. *The operator would have used a tank made of steel or other material, which the appropriate division district office approves, to contain hydrocarbon-based drilling fluids. This did not occur as the operator did not use hydrocarbon-based drilling fluids.*
- d. *Immediately after cessation of a drilling operation, the operator removed any visible or measurable layer of oil from the surface of the drilling pit.*
- e. *The operator maintained at least two feet of freeboard for the temporary pit.*

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- f. The operator inspected the temporary pit containing drilling fluids on a routine basis while the drilling rig was on-site.*
- g. Thereafter, the operator inspected the temporary pit weekly so long as liquids remain in the temporary pit.*
- h. The operator maintained a log of such inspections and will make the log available for the appropriate division district office's review upon request. The operator will file a copy of the log with the appropriate division district office when the operator closes the temporary pit.*
- i. The operator removed all free brine from the temporary pit within 30 days from the date that the operator releases the drilling rig. The operator will note the date of the drilling or workover rig's release on form C-105 or C-103 upon well completion.*

With respect to the above reference to a "steel pit" in the original C-144 – this is not intended to indicate the planned use of a closed-loop system. The steel pit referenced is the standard steel above-grade mud "pit" used for drilling most oil and gas wells. Mud circulates from the reserve pit to the steel pit where the fluid undergoes final conditioning prior to circulation down the boring.

In addition to the specifications outlined above, Read & Stevens followed the steps presented below. These steps are slightly modified from those presented in the approved C-144.

- 1. Used steel pits to drill with fresh water mud and at TD of surface casing, discharged mud and cuttings to fresh water pit – which was essentially a drying pad*
- 2. Use a lined pit to drill with brine/cut brine (brine pit).*
- 3. The drilling pit and fresh water pit/drying pad contain horizontal perforated pipe(s) and a vertical standpipe. After fresh water drilling was complete, fresh water remained in the pit for re-use.*
- 4. As described below, the fresh water was reclaimed from the drilling pit/drying pad for use in the treatment of the brine/cut brine cuttings. This action meets the criteria of reclamation and re-use as required for NMOCD approval of an exception to the pit rule.*
- 5. The brine/cut brine pit is double-lined with leak detection/pump-back pipes between the liners. The upper primary liner is 20-mil reinforced plastic with factory welded seams. The lower liner is also 20-mil reinforced plastic with factory welded seams. Note that the lower liner is designed to detect and capture any seepage from the primary liner. One foot of permeable material, such as sand or gravel, and horizontal perforated pipe (connected to a standpipe) separates the two liners.*
- 6. The pit also contains horizontal perforated pipe(s) and a standpipe laid over the primary liner to recover brine/cut brine from the cuttings and residual drilling mud as described below.*
- 7. During drilling the inter-liner leak detection system of the brine/cut brine pit was checked routinely.*

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8. *After drilling was complete, brine was vacuumed from the pit and dewatering from the standpipe began (at 1 gpm). This recovered cut brine was sent to deep well disposal.*
9. *While the brine/cut brine cuttings were still fully saturated but there is no free water on top of the cuttings, water reclaimed from the fresh water drilling operation added to the wet brine/cut brine cuttings/mud. The added fresh water plus significant rainfall rinsed some entrained brine from the cuttings and mud.*

## **Closure Plan**

### **Construction/Design of Burial Trench**

R&S proposes to close the pit using the pit itself as an on-site trench (please see the attached Application for Exceptions to NMOC Rules for justification of need and sufficiency of alternatives to protect fresh water, public health and the environment.). The operator has designed the pit to conform with the same protocols applicable to an on-site trench for closure as specified in 19.15.17.13B.(2) NMAC. Specifically:

1. R&S has excavated the pit to an appropriate depth that allows for the installation of the geomembrane bottom liner, geomembrane liner cover and the division-prescribed soil cover required pursuant to 19.15.17.13.H NMAC.
2. The pit (to be used as an on-site trench) has been properly constructed with the foundation and side walls consisting of a firm, unyielding base, smooth and free of rocks, debris, sharp edges or irregularities to prevent the liner's rupture or tear.
3. Geotextile was placed under the liner where needed to reduce localized stress-strain or protuberances that may otherwise compromise the liner's integrity.
4. The pit was constructed with a geomembrane liner that consists of a 20-mil string reinforced LLDPE liner
5. The geomembrane liner is composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. The liner material will be resistant to ultraviolet light. Liner compatibility will comply with EPA SW-846 method 9090A.
6. The contractor for the operator minimized liner seams and oriented them up and down, not across a slope and the operator will use factory welded seams where possible. Prior to field seaming, the operator overlapped liners four to six inches and orient liner seams parallel to the line of maximum slope, *i.e.*, oriented along, not across, the slope. The operator minimized the number of field seams in corners and irregularly shaped areas.
7. Qualified personnel performed field seaming. The contractor welded field liner seams.
8. The contractor for the operator installed sufficient liner material to reduce stress-strain on the liner.
9. The operator ensured that the outer edges of all liners are secured for the placement of the excavated waste material into the drilling pit (on-site trench).
10. The contractor for the operator will fold the outer edges of the drilling pit (trench liner to overlap the waste material in the trench) prior to the installation of the geomembrane cover.



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11. The contractor for the operator will install a geomembrane cover over the waste material in the lined trench (former drilling pit). The operator will install the geomembrane cover in a manner that prevents the collection of infiltration water in the lined trench and on the geomembrane cover after the soil cover is in place.
12. The geomembrane cover will consist of a 20-mil string reinforced LLDPE liner. The geomembrane cover will be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. Cover compatibility will comply with EPA SW-846 method 9090A.

### **Protocols and Procedures**

Pursuant to 19.15.17.13.A-B NMAC, the operator will:

- Close the pit within six months from the date that the operator releases the drilling workover rig or a later date as approved by the District Office.
- Remove all liquids from the temporary pit prior to closure and dispose of the liquids in a division-approved facility or recycle, reuse or reclaim the liquids in a manner that the appropriate division district office approves. The operator shall close the temporary pit by on-site burial.

The operator has demonstrated and complied with the siting requirements in 19.15.17.10.C NMAC and the closure requirements and standards of 19.15.17.13.F NMAC as the closure method of the temporary pit involves on site burial pursuant to 19.15.17.13B(2) NMAC.

The operator will comply with 19.15.17.13.G-K NMAC as discussed in the Site Reclamation Plan section of this document.

R&S has requested two exceptions that we believe will be as effective (and in some cases, could be more effective) as what is specified in the Pit Rule for the protection of fresh water, public health and the environment.

As stated above, the operator will remove any liquids (i.e. recent precipitation) from the temporary pit prior to closure and dispose of the liquids in a division-approved facility or recycle, reuse or reclaim the liquids in a manner that the appropriate division district office approves.

Prior to closing the temporary pit as an on-site burial trench, the operator will stabilize or solidify the contents to a bearing capacity sufficient to support the final cover of the trench burial. The operator will not mix the contents with soil or other material at a mixing ratio of greater than 3:1, soil or other material to contents.

The operator will place a steel marker at the center of an on-site burial. The steel marker will be not less than four inches in diameter and will be cemented in a three-foot deep hole at a minimum. The steel marker will extend at least four feet above mean ground

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level and at least three feet below ground level. The operator name, lease name and well number and location, including unit letter, section, township and range, and that the marker designates an on-site burial location will be welded, stamped or otherwise permanently engraved into the metal of the steel marker.

The operator will report the exact location of the on-site burial on form C-105 filed with the division.

The operator will file a notice with the New Mexico State Land Office identifying the exact location of the on-site burial as there is no deed associated with this location.

### **Confirmation Sampling Plan**

In the attached Request for an Exception, we request an exception to the requirement to test the soils beneath the temporary pit to determine whether a release has occurred. We propose to employ a leak detection system in lieu of soil sampling to determine whether a release has occurred.

If these exception requests are approved, this will allow some exception to the requirements of 19.15.17.13.F(3)(a)-(f) NMAC – specifically that for a separate on-site trench, for excavating and transferring all contents and synthetic pit liners or liner material associated with a temporary pit to a separate, distinct lined trench, and the operator shall test soils beneath the temporary pit after excavation.

As specified in 19.15.17.13.F(3)(b) NMAC, the operator still plans to stabilize or solidify the contents of the temporary pit to a bearing capacity sufficient to support the final cover of the trench burial. The operator will not mix the contents with soil or other material at a mixing ration of greater than 3:1, soil or other material to contents.

Sampling and analysis of the contents of the pit, pursuant to 19.15.17.13.F(3)(c) NMAC is discussed in the Waste Material Sampling Plan section of this report.

As specified in 19.15.17.13F(3)(e) NMAC, materials to be buried on-site shall pass the paint filter liquids test (EPA SW-846, method 9095) and the closure standard specified in 19.15.17.13.F(3)(c) NMAC.

As specified in 19.15.17.13F(3)(f) NMAC, the operator will determine whether a release has occurred, albeit using a leak detection system.

Because ground water is more than 100 feet below the bottom of the temporary pit, pursuant to 19.15.17.13.F.(3)(f)(ii) NMAC the operator will inspect the earth below the primary liner that is not adequately monitored by the leak detection system (slopes of the pit above the level of the solids in the pit) for moisture and discoloration and sample soil according to the specified protocols described in NMOCD Rules. Specifically, R&S will remove transfer to the burial trench (i.e. drilling pit) any material that is wet, discolored or showing other evidence of a release. R&S will then collect a composite sample from beneath these excavated areas and analyze for benzene, total BTEX, TPH, the GRO and

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DRO combined fraction and chlorides to demonstrate that benzene, as determined by EPA SW-846 method 8021B or 8260B or other EPA method that the division approves, does not exceed 0.2 mg/kg; total BTEX, as determined by EPA SW-846 method 8021B or 8260B or other method that the division approves, does not exceed 50 mg/kg; the GRO and DRO combined fraction, as determined by EPA SW-846 method 8015M, does not exceed 500 mg/kg; the TPH, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 2500 mg/kg; and chlorides, as determined by EPA method 300.1, do not exceed 1000 mg/kg or the background concentration, whichever is greater. The operator will notify the division of its results on form C-141.

As specified in 19.15.17.13.F(3)(g) NMAC, if it is demonstrated that a release has not occurred, the operator shall, if possible after using the temporary pit for an on-site trench, backfill any portion of the non-used temporary pit with compacted, non-waste containing earthen material; construct a division-prescribed soil cover; recontour and re-vegetate the site. The division-prescribed soil cover, recontouring and re-vegetation shall comply with 19.15.17.13G, H, and I, NMAC.

In the attached Request for an Exception, we request an exception to the requirement to test the soils beneath the temporary pit to determine whether a release has occurred. We propose to employ a leak detection system in lieu of soil sampling to determine whether a release has occurred.

For the Bandit Pit, as described in the exception request, determining if a release has occurred relies on the secondary liner system described in the approved C-144 and illustrated in Appendix B

If the operator or the division measures saline fluid (not fresh water condensation) in the sump of the leak detection system, this will confirm that a release has occurred from the primary liner. If a release is confirmed, the operator will comply with 19.15.29 NMAC and 19.15.30 NMAC, as appropriate. If monitoring of the leak detection system shows no saline fluid, we will consider this sufficient evidence that the primary pit liner has maintained integrity.

Please note that we propose to use the fresh water cuttings and residual mud (mixed with one part excavated soil) as part of the soil cover for the burial trench. As we understand NMOCD Rules, this re-use should qualify as "in place burial" as the fresh water pit is effectively one chamber of the entire drilling pit. NMOCD concurrence or clarification of this issue is appreciated.

### **Waste Material Sampling Plan**

The attached Application for Exceptions explains our request for an exception regarding the waste material sampling plan.

*The contents of the pit was sampled after drainage and drying and prior to any addition of clean fill according to the protocol outlined in NMOCD Rules for trench burial (see Appendix C, Sampling Results). As outlined in the NMOCD-approved C-144 and the*

## **C-144 Modification Supplemental Documentation Bandit State 8, API #30-015-37434**

*attached Sampling Results Report, we obtained a five-point (minimum) composite sample of the residual solids for laboratory analysis of:*

- *GRO and DRO using EPA Method 8015B rather than TPH concentration, as determined by EPA method 418.1*
- *Chloride, using EPA SW-846 method 1312 (SPLP) and determined by EPA method 300.1*
- *The concentrations of the inorganic water contaminants specified in 20.6.2.3103(A) NMAC EPA SW-846 method 1312 (SPLP) as determined by appropriate EPA methods, and*
- *The concentrations of the organic water contaminants specified in 20.6.2.3103(A) NMAC EPA SW-846 method 1312 (SPLP) as determined by appropriate EPA methods.*

### **Soil Cover Design**

After the operator has secured the pit contents in the burial trench, the soil cover will consist of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.

The soil cover for trench burial will consist of a minimum of four feet of compacted, non-waste containing, earthen material plus the fine-grained fresh water cuttings and residual mud mixed with one part excavated soil – if approved by NMOCD. We propose to place coarse-grained material over the top liner, then the fine-grained fresh water cuttings/mud plus clean soil mixture, then the coarser-grained material excavated from the drilling pit and finally the topsoil. The topsoil cover will include either the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.

The operator will construct the soil cover to the site's existing grade and prevent ponding of water and erosion of the cover material.

### **Re-vegetation Plan**

The first growing season after the operator closes the pit and trench, the operator will seed or plant the disturbed areas.

R&S will accomplish seeding at the site by drilling on the contour whenever practical or by other division-approved methods, as required by 19.15.17.131(2) NMAC. The operator will notify the NMOCD District Office of the proposed protocol at least 30-days prior to implementing the re-vegetation plan.

The operator will obtain vegetative cover that equals 70% of the native perennial vegetative cover (un-impacted by overgrazing, fire or other intrusion damaging to native vegetation) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons.

## **C-144 Modification Supplemental Documentation Bandit State 8, API #30-015-37434**

During the two growing seasons that prove viability, there will be no artificial irrigation of the vegetation.

The operator will repeat seeding or planting until it successfully achieves the required vegetative cover.

When conditions are not favorable for the establishment of vegetation, such as periods of drought, the operator may request to delay seeding or planting until soil moisture conditions become favorable or may require the operator to use additional techniques such as mulching, fertilizing, irrigating, fencing or other practices.

The operator will notify the division when it has seeded or planted and when it successfully achieves re-vegetation.

### **Site Reclamation Plan**

After closure of the pit and trench, the operator will reclaim the pit location and trench location and all areas associated with the pit and trench including associated access roads to a safe and stable condition that blends with the surrounding undisturbed area. The operator will substantially restore the impacted surface area to the condition that existed prior to oil and gas operations by placement of the soil cover as provided in Subsection H of 19.15.17.13 NMAC (described in this submittal), recontour the location and associated areas to a contour that approximates the original contour and blends with the surrounding topography and re-vegetate according to Subsection I of 19.15.17.13 NMAC (as described herein).

### **Alternative Closure Plan**

In the event that the proposed closure method does not satisfy the on-site closure standards specified in Subsection F of 19.15.17.13 NMAC or, if applicable, other on-site closure standards that the environmental bureau in the division's Santa Fe office approves, the operator will close the temporary pit by excavating all contents and, if applicable, synthetic pit liners and transferring those materials to a division-approved facility.

#### Disposal Facility Names and Permit Numbers

Lea Land, LLC	NM-01-0035
Controlled Recovery, Inc.	NM-01-0006

### **Notification of Surface Owner**

The attached letter to the State Land Office provides notification to the surface owner of the intent to employ an on-site burial of cuttings and residual drilling mud.

Pursuant to 19.15.17.13J(1) NMAC, R&S will provide notice to the surface owner, specifically to the State Land Office, that it plans to close the temporary pit via certified mail, return receipt requested.

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**Closure Notice and Reporting to NMOCD**

The operator will notify the appropriate division district office verbally or by other means at least 72 hours, but not more than one week, prior to any closure operation. The notice will include the operator's name and the location to be closed by unit letter, section, township and range. well's name, number and API number.

Within 60 days of closure completion, the operator will submit a closure report on form C-144, with necessary attachments to document all closure activities including sampling results; information required by 19.15.17 NMAC; a plot plan; and details on back-filling, capping and covering, where applicable.

In the closure report, the operator will certify that all information in the report and attachments is correct and that the operator has complied with all applicable closure requirements and conditions specified in the approved closure plan. If the operator used a temporary pit, the operator shall provide a plat of the pit location on form C-105 within 60 days of closing the temporary pit.

# Figures

**R.T. Hicks Consultants, Ltd.**

901 Rio Grande Blvd. NW, Suite F-142  
Albuquerque, NM 87104





0 2000 4000ft



Petroleum Recovery  
Research Center

Dept To Water (NM OSE, USGS)

Figure: 1

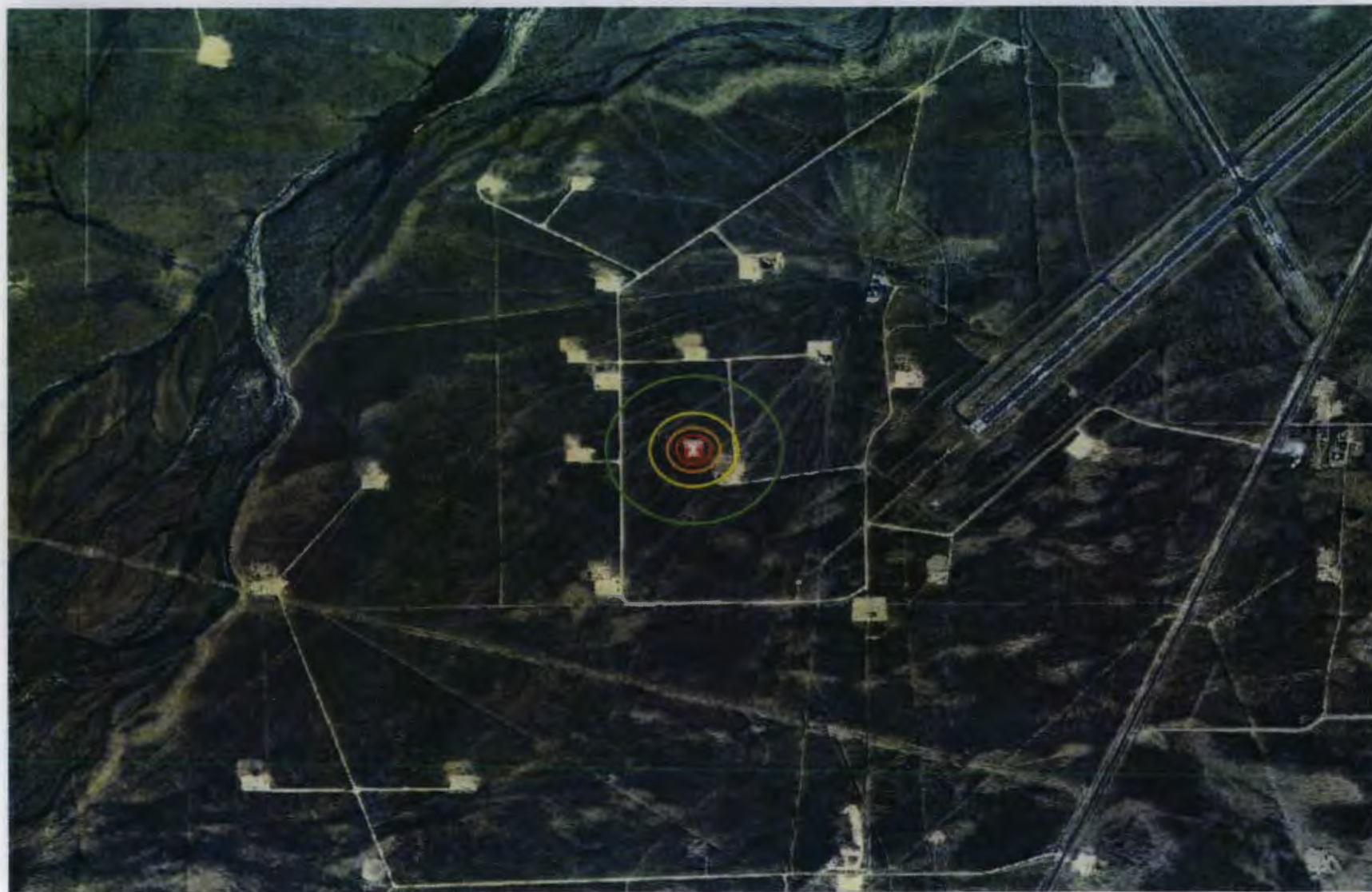
Read & Stevens, Inc: Bandit State #8

Jan 05, 2010









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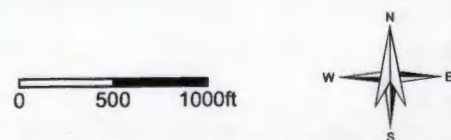
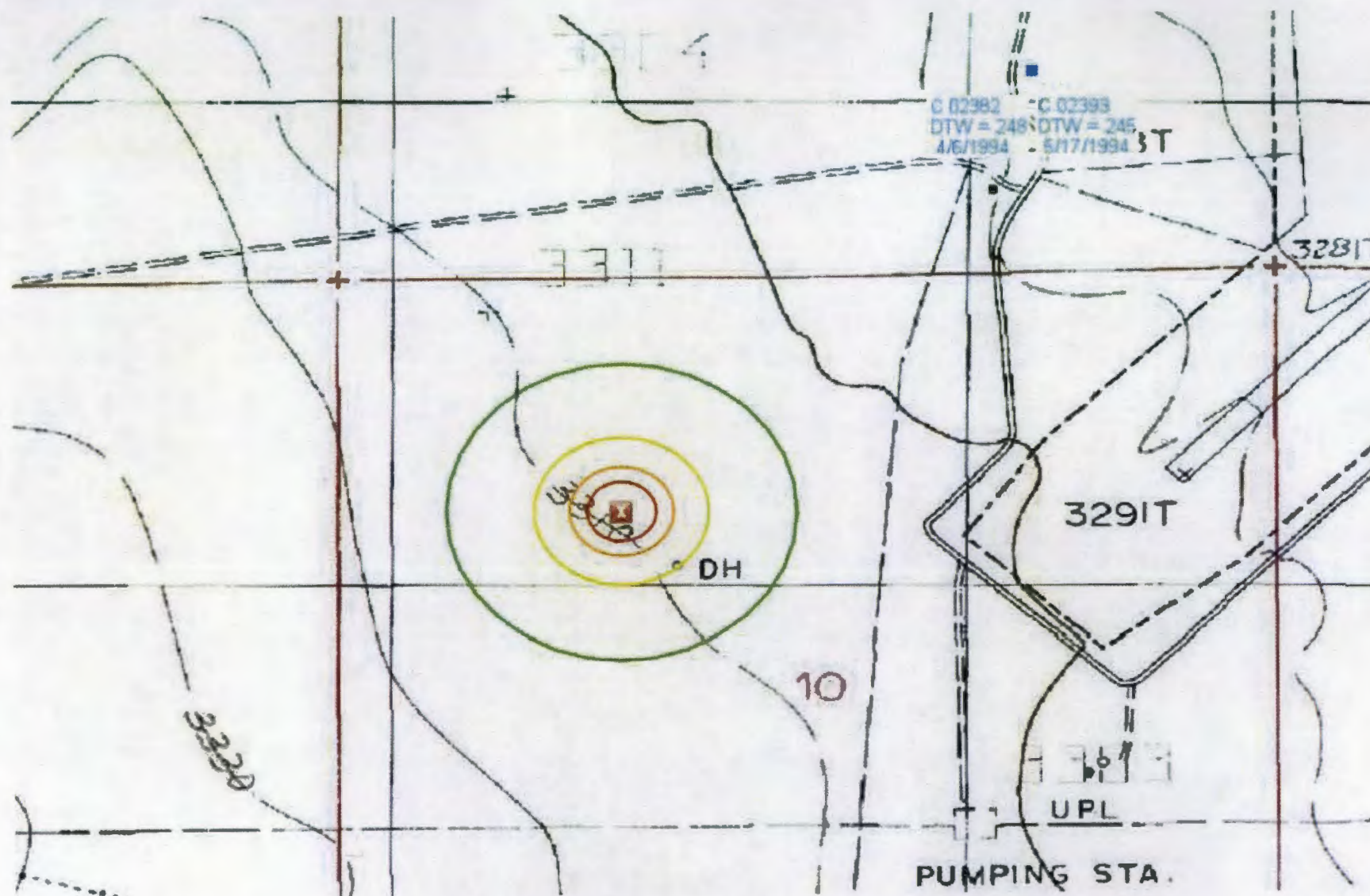
Nearby permanent residences, schools, hospitals, etc.

Figure: 3

Read & Stevens, Inc: Bandit State #8

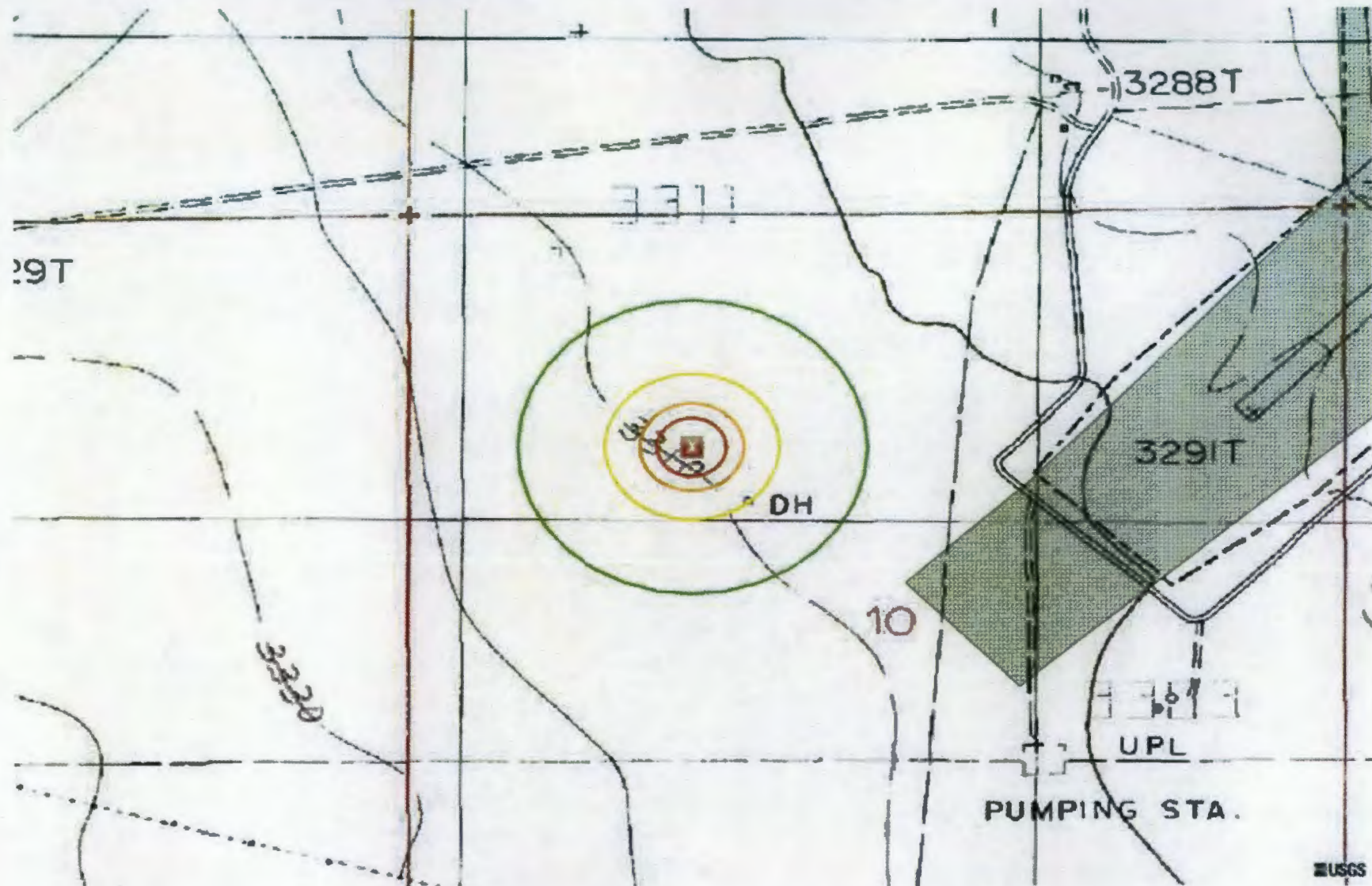
Jan 05, 2010





Petroleum Recovery Research Center	Nearby fresh water wells or springs	Figure: 4
	Read & Stevens, Inc: Bandit State #8	Jan 05, 2010





NOTE: Carlsbad Municipal Well Field is 4 miles west of site

0 500 1000ft



R.T. Hicks Consultants, Ltd

Nearby incorporated areas

Figure: 5

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Jan 05, 2010



## Nearby Wetland at Bandit State #8



### Legend

- Interstate
- Major Roads
- Other Road
- Interstate
- State highway
- US highway
- Roads
- Cities
- USGS Quad Index 24K
- Lower 48 Wetland Polygons
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- PDF\_scans\_100k
- Lower 48 Available Wetland Data
- Non-Digital
- Digital
- No Data
- Scan
- NHD Streams
- Counties 100K
- States 100K
- South America
- North America

Map center: 32° 19' 19" N, 104° 17' 4" W



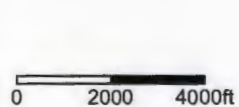
Scale: 1:69,015

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Notes: Read & Stevens

Figure 6





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Nearby Surface Mines

Figure: 7

Read & Stevens, Inc: Bandit State #8

Jan 05, 2010





0 2000 4000ft



Petroleum Recovery  
Research Center

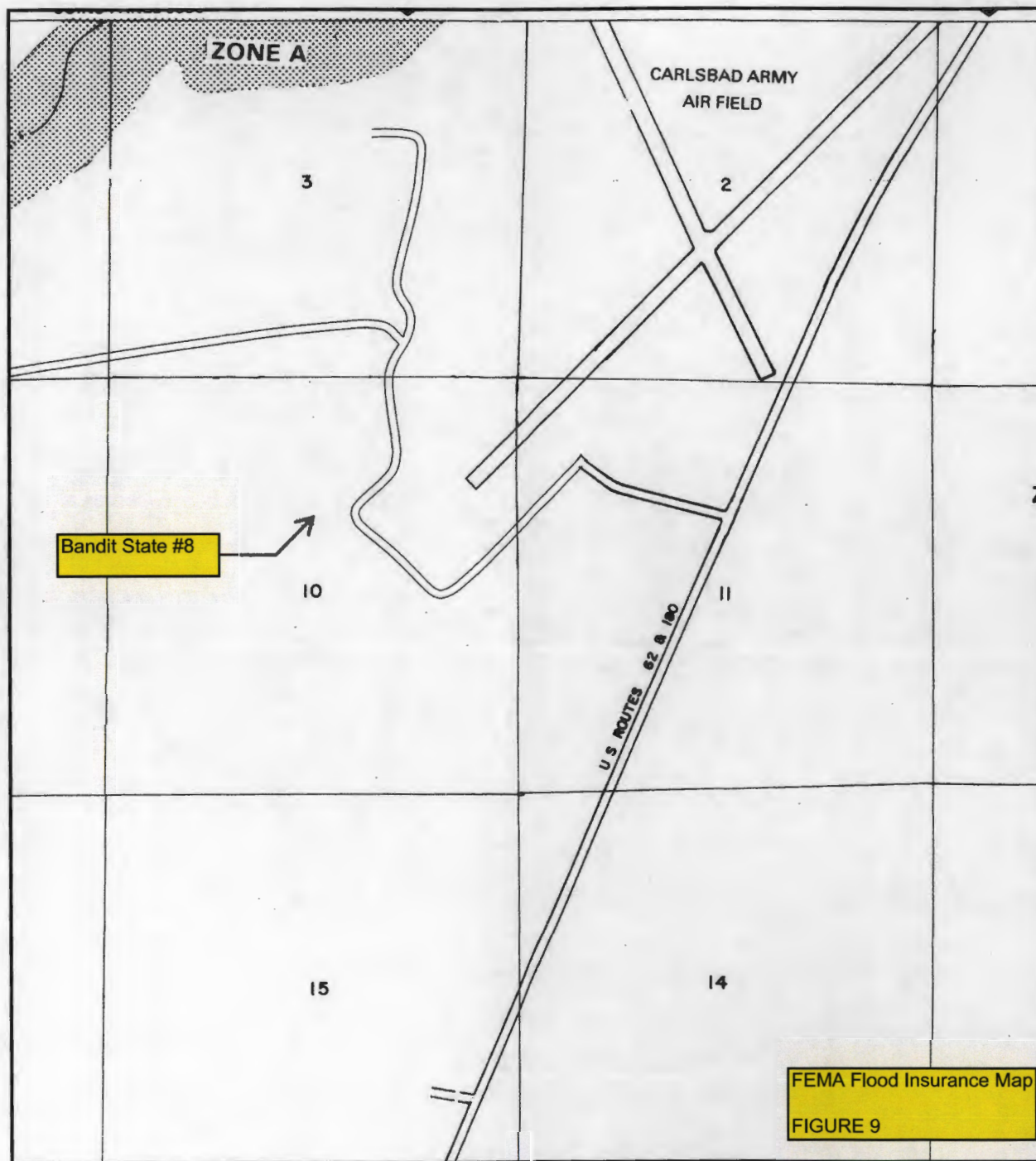
Nearby Karst (source: USGS)

Figure: 8

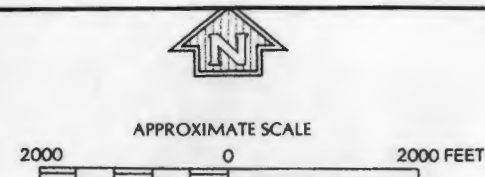
Read & Stevens, Inc: Bandit State #8

Jan 05, 2010





FEMA Flood Insurance Map  
FIGURE 9



## LEGEND

- SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD**
- ZONE A** No base flood elevations determined.
  - ZONE AE** Base flood elevations determined.
  - ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
  - ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding; velocities also determined.
  - ZONE A99** To be protected from 100-year flood by Federal flood protection system under construction; no base flood elevations determined.
  - ZONE V** Coastal flood with velocity hazard (wave action); no base flood elevations determined.
  - ZONE VE** Coastal flood with velocity hazard (wave action); base flood elevations determined.
- OTHER FLOOD AREAS**
- ZONE X** Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.
- OTHER AREAS**
- ZONE X** Areas determined to be outside 500-year floodplain.
  - ZONE D** Areas in which flood hazards are undetermined.
- Floodplain Boundary
- Floodway Boundary
- Zone D Boundary
- Boundary Dividing Special Flood Hazard Zones.
- 513 Base Flood Elevation Line; Elevation in Feet\*
- D D Cross Section Line
- (EL 987) Base Flood Elevation in Feet Where Uniform Within Zone\*
- RM 7<sub>x</sub> Elevation Reference Mark
- M1.5 River Mile

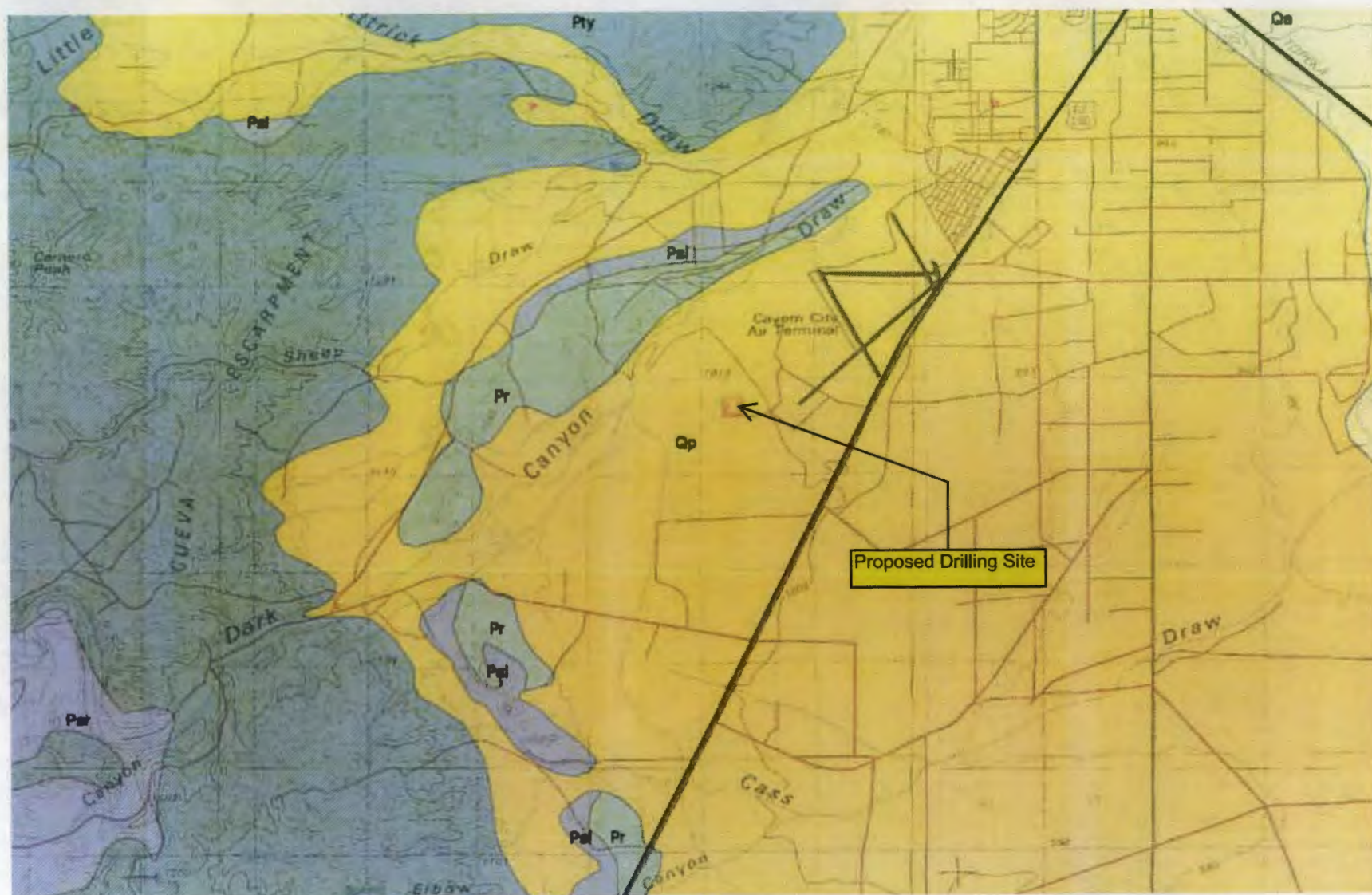
\*Referenced to the National Geodetic Vertical Datum of 1929

## NOTES

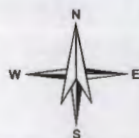
This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas. The community map repository should be consulted for possible updated flood hazard information prior to use of this map for property purchase or construction purposes.

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.mec.fema.gov](http://www.mec.fema.gov)





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Petroleum Recovery  
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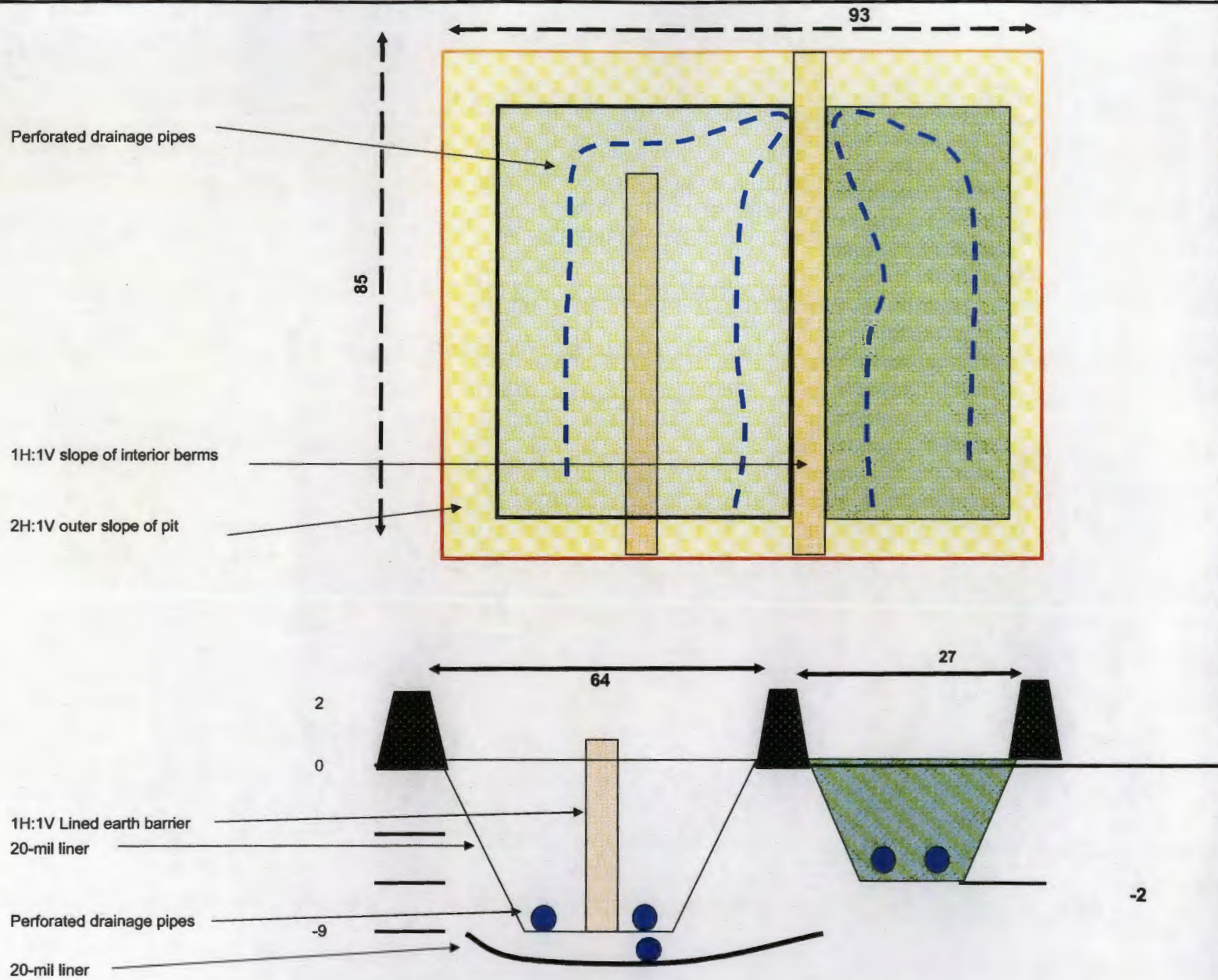
Nearby Geology and Topography

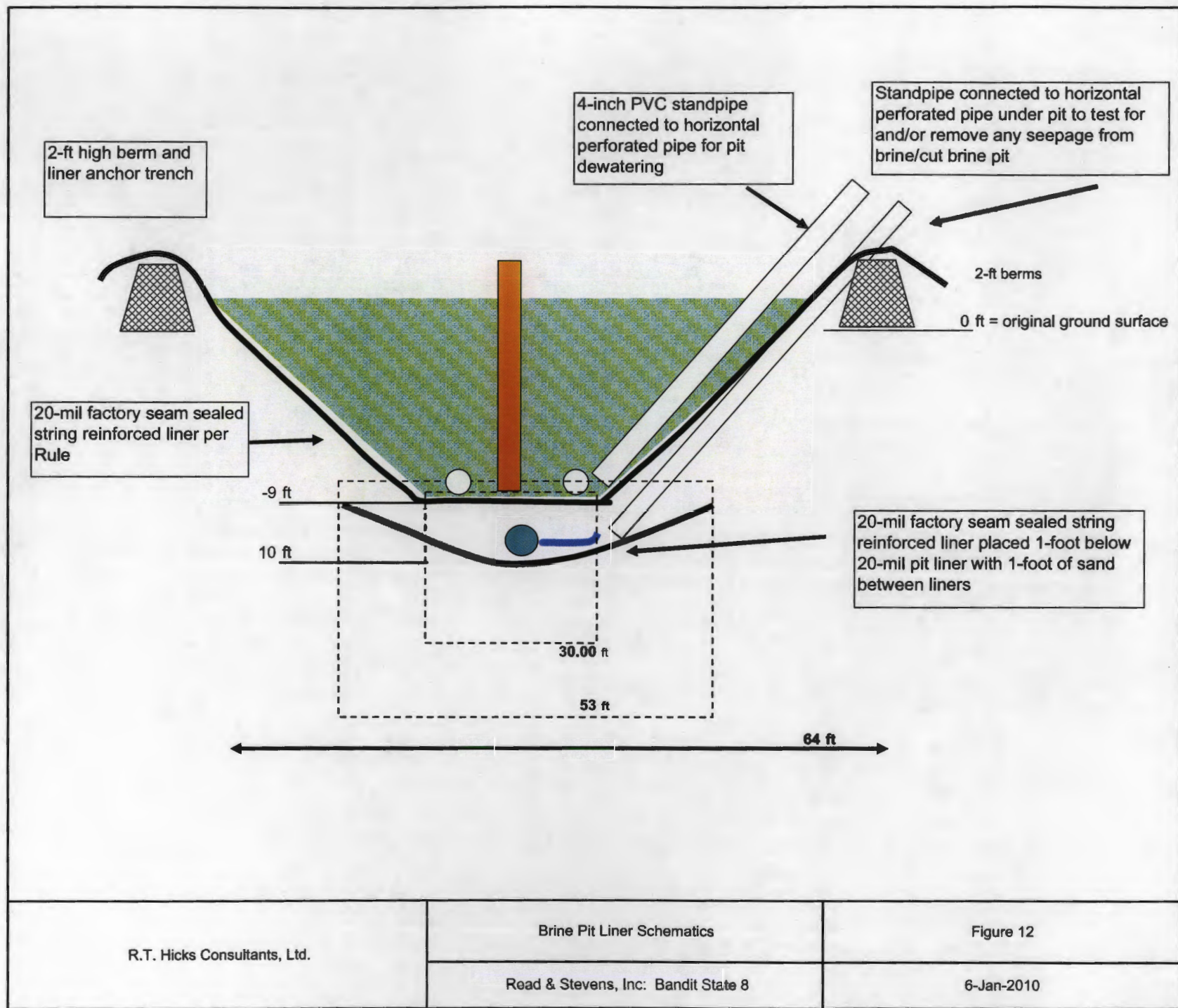
Figure: 10

Read & Stevens, Inc: Bandit State #8


Jan 06, 2010











# **Appendix A**

## **Photos of Site**

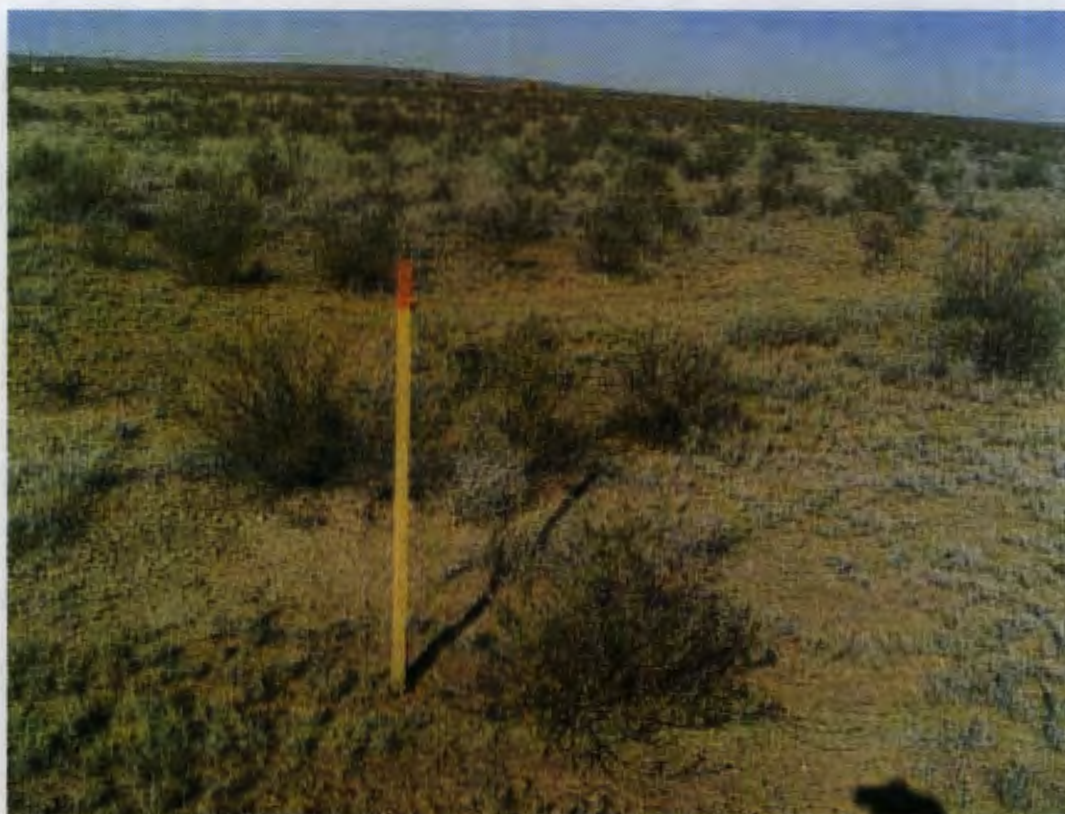
**R.T. Hicks Consultants, Ltd.**

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**Figure 1: Photo of proposed drilling site viewing northeast. The closest dwelling is visible in the background.**




R.T. HICKS

**Figure 2: Photo of proposed drilling site viewing northwest.**





**Figure 3: Photo of proposed drilling site view southwest. The adjacent tank battery is visible in the background.**



# **Appendix B**

## **Pit Construction**

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Figure B-1 – Installation of secondary liner and leak detection system



Figure B-2: Placement of permeable layer over secondary liner

No soil detection





Figure B-3: Condition of pit excavation after installation of permeable layer above secondary liner. Leak detection riser pipe in background.



Figure B-4: installation of primary liner over cut brine and fresh water pit chambers.



Figure B-5: Cut brine drilling pit chamber with drainage pipes and riser on near side of image. Protective felt (black) on far side of pit.

# **Appendix C**

## **Sampling Results**

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## **Waste Material Sampling Plan Results Bandit State 8, API #: 30-015-37434**

### **Introduction**

Per the C-144 form approved for this site on January 27, 2010, we are submitting results of sampling the contents of the fresh water portion of the pit (proposed for on-site burial) and the cut brine portion of the pit, proposed for on-site trench burial. Read and Stevens plans to close this pit following the prescriptive mandates of NMOCD Rules or through an approved exception request (forthcoming).

### **Description of Sampling Methods**

On May 5, 2010 Hicks Consultants obtained samples of residual drilling mud and cuttings from the Bandit State 8 drilling pit. We followed industry protocols for the sampling and the prescribed mandates codified in NMOCD Rules. The pertinent portion of NMOCD Rules governing sampling of waste in the Bandit drilling pit that was derived from drilling with fresh water are presented in the Closure Requirements section of the rule, specifically for on-site closure (19.15.17.13.F(2)(d)). This calls for, at a minimum, a five-point composite sample of the contents of a temporary pit. The standards presented in this section of the rule are summarized along-side sample results for the contents of the fresh water portion of the temporary pit in Table 1.

Sampling of the fresh water pit followed the protocols outlined below. We:

1. Used a pipe and dipper tool to collect the samples
2. Pushed the pipe/dipper into the waste material until refusal – which was about 2-3 feet depending upon the location in the pit and the thickness of the cuttings
3. Wore a latex glove and removed the sample adhering to and within the pipe/dipper to a clean/decontaminated 5-gallon bucket
4. Collected seven samples in this manner and placed the material in the bucket – the total volume of the composite sample was about 1/5 of the bucket
5. Wore the latex glove and homogenized the sample in the 5-gallon bucket
6. Obtained 4-5 sub-samples from various locations in the bucket and placed the material in appropriate glass containers supplied by the laboratory.
7. Placed the sample on ice, used proper chain of custody procedures and delivered the samples to the laboratory

For the cut brine chamber of the pit, we used the same protocol outlined above however we obtained 10 sub-samples to form the composite creating a volume of about ½ of the 5-gallon bucket. The prescriptive mandates of NMOCD rules governing this sampling event are given in 19.15.17.13.F(3)(d) regarding on-site trench burial. This calls for, at a minimum, a five-point composite sample of the contents of a temporary pit. The standards presented in this section of the rule are summarized along-side sample results for the contents of the brine/cut brine portion of the temporary pit in Table 2.



## **Waste Material Sampling Plan Results**

### **Bandit State 8, API #: 30-015-37434**

In addition to the two composite samples described above, we collected a third sample from the cut brine waste material and placed the sample, which was nearly ½ gallon in size, in Ziploc plastic bags and placed on ice. We collected a composite sample of the material excavated from the pit (also about ½ gallon and placed in a Ziploc bags). Finally, we collected a sample of fluid recently pumped from the pit drainage system.

We asked the laboratory to analyze the samples in the glass containers to meet all criteria of NMOCD Rules, as stated above. As an experiment, we asked the laboratory to mix the composite sample from the cut brine in the Ziploc bag with three parts of the clean soil sample from the excavated pile. The mixture by mass was 1 part drilling waste to 3 parts excavated soil. We asked the laboratory to evaluate this sample for chloride using the SPLP method. We also asked the laboratory to analyze the fluid from the dewatering system for chloride. After we received the results of the brine/cut brine pit composite sample and the 1/3 mixture sample, we asked the laboratory to re-analyze the composite sample (glass container) using standard (total analysis) protocols for chloride.

#### **Results**

Table 1 and the attached laboratory report presents the results of sampling the fresh water drilling waste, which we propose to bury in-place. The laboratory report is Attachment A.

**Table 1: Laboratory Results from Fresh Water Pit Sample**

Analysis	Rule Concentration Limit - In-Place Burial	Bandit 8 Fresh mg/kg Lab ID 1005426-01A
	(mg/kg)	
<b>Benzene</b>	0.2	-1
<b>Total BTEX</b>	50	-1
<b>GRO + DRO</b>	500	<b>850</b>
<b>TPH</b>	2500	310
<b>Chloride</b>	1000	-1

-1 = ND

Table 2 presents the results of the composite sample analysis of the cut brine pit, which we propose to bury in an on-site burial trench, either through the exception process or following Pit Rule specifications.

**Waste Material Sampling Plan Results**  
**Bandit State 8, API #: 30-015-37434**

**Table 2: Laboratory Results from Brine/Cut Brine Pit Sample**

Analysis	Rule Concentration Limit - On-Site Trench Burial	Bandit 8 Brine Lab Id 105426-02A	Units
TPH (total)	2500	ND	mg/kg
Cl (total)	na	41	
Inorganic 3103 (SPLP)	WQCC Standards	-1	
FI (SPLP)	1.6	0.081	mg/L
Cl (SPLP)	3000	2.4	
NO3 as N (SPLP)	10	0.41	
Organic 3103 (SPLP)	WQCC Standards	-1	
Benzene (SPLP)	0.01	-1	
Ethylbenzene (SPLP)	0.75	0.045	
Total Xylenes (SPLP)	0.62	0.26	
Toluene (SPLP)	0.75	-1	

-1 = ND

The chloride concentrations of the additional samples are:

Bandit 8 Dewater Fluid	210,000	mg/L
1Brine/3 Excavated Soil	420	mg/L (SPLP)

#### Discussion

The laboratory results from the fresh water drilling solids show DRO+GRO exceed the NMOCD standard for in-place burial. This sample has not been stabilized with any clean soil, as is permitted by NMOCD Rules. Mixing one part fresh water drilling waste with one part excavated soil will reduce the DRO+GRO fraction by about 50% and this stabilized material will meet the criteria in NMOCD Rules for in-place burial. This protocol will be employed as presented in the C-144 Modification. Per NMOCD requirements, the contents of the fresh water portion of the pit will be re-sampled after they are stabilized with additional clean soil to demonstrate that they meet standards.

The results from the brine/cut brine solids meet the NMOCD standards for trench burial.

We found the relatively low chloride concentration of the brine/cut brine solids (2.4 mg/L SPLP) somewhat surprising. Although we were confident that the rinsing/drainage process described in the C-144 combined with abundant rainfall on the pit removed a large mass of chloride (and other constituents) from the solids, the result was lower than expected. The analysis of 210,000 mg/L chloride in the sample of dewatering fluid suggests that the denser brine originally in these cuttings was

- displaced by the added fresh water and rain from the upper portion of the cuttings/mud

## **Waste Material Sampling Plan Results Bandit State 8, API #: 30-015-37434**

- settled to the bottom of the pit and
- was removed by the drainage pumping system installed as described in the C-144 (see Attachment A).

Nevertheless, the value of 2.4 mg/L for SPLP chloride seemed low. While we know soil samples are variable, the difference between this sample and the chloride analysis of the 3/1 soil/waste sample (420 mg/L using SPLP methods) is dramatic. Therefore, we requested the laboratory to do the following:

1. Double check the samples from the fresh water solids and brine/cut brine solids to be sure there was no mix-up in the laboratory
2. Obtain a second sample from the composite and analyze for total chloride

The result of this exercise was verification that there was no sample mix up and a chloride concentration of 41 mg/kg using standard methods. If we apply the 20:1 rule of thumb dilution factor to “convert” total analysis to SPLP, the result is 2 mg/L for this 41 mg/kg result. If we use simple arithmetic to estimate the SPLP chloride concentration in the cuttings from the 3:1 mixture result (420 mg/L), the result is a value of about 1700 mg/L if we assume the SPLP chloride in the excavated “clean” soil is about 5 mg/L.

### **Conclusions**

- The composite sample obtained using industry protocols and following the prescriptive mandates of NMOCD Rules shows that the brine/cut brine solids meet the criteria for on-site trench burial.
- The composite sample obtained using industry protocols and following the prescriptive mandates of NMOCD Rules shows that the fresh water drilling solids meet the criteria for in-place burial after stabilization of the solids by adding 1 part excavated “clean” soil.
- Rinsing of cuttings and residual mud combined with drainage/removal of entrained brine creates a measurable environmental benefit by reducing chloride mass and requiring less addition of clean soil for stabilization .
- As we all know, analytical results of soil samples obtained less than one inch apart (i.e. inches apart within a 5-gallon bucket) can vary

# **Exception Request**

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## **Requested Exception to NMOCD Rule 19.15.17.13.F.3.e**

### ***Description of the Exception***

We request an exception to the requirement to excavate and transfer all contents and pit liners to a lined trench. As described below, we propose to re-use the drilling pit as the burial trench, which would obviate the need for excavation and transfer of materials.

### ***Scientific Rationale***

The design of the drilling pit is consistent with the design of a trench for burial (see Appendix D). Provided that leak detection monitoring demonstrates that the drilling pit liner has maintained integrity and the design features mandated by NMOCD Rules for trench burial (e.g. four feet separation between the top of the waste and ground surface as described in the approved C-144) are implemented during closure of the pit, we conclude that burial of waste in a drilling pit is as effective as what is specified in the Pit Rule, specifically, burial of waste in a separate trench at this location.

This submittal does not propose any exceptions to the prescriptive mandates for trench burial. This proposal requests that NMOCD approve re-use of the drilling pit that has maintained its integrity (no leakage) as a burial trench.

### **Revised Construction/Design of Burial Trench**

Read and Stevens proposes to close the pit by re-using the drilling pit as an on-site trench. The operator has designed and constructed the drilling pit to comply with or exceed design and construction mandates for an on-site trench for closure as specified in 19.15.17.13.B(2) NMAC – with the exception of the mandate to construct a separate trench. The construction and design of the drilling pit/burial trench will include the following elements:

1. The operator has constructed the pit with a geomembrane bottom liner required pursuant to 19.15.17.13.H NMAC.
2. The drilling pit (on-site trench) has a properly constructed foundation and side walls consisting of a firm, unyielding base, smooth and free of rocks, debris, sharp edges or irregularities to prevent the liner's rupture or tear.
3. Geotextile was placed under the liner where needed to reduce localized stress-strain or protuberances that may otherwise compromise the liner's integrity.
4. The drilling pit (on-site trench) was constructed with a geomembrane liner that consists of a 20-mil string reinforced LLDPE liner.
5. The geomembrane liner is composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. The liner material will be resistant to ultraviolet

## **Application for Exceptions to NMOCD Rules**

**Bandit State #8, API # 30-015-37434**

light. Liner compatibility will comply with EPA SW-846 method 9090A.

6. The operator minimized liner seams and oriented them up and down, not across a slope and the operator used factory welded seams where possible. Prior to field seaming, the operator overlapped liners four to six inches and oriented liner seams parallel to the line of maximum slope, *i.e.*, oriented along, not across, the slope. The operator minimized the number of field seams in corners and irregularly shaped areas.
7. Qualified personnel performed field seaming. The operator welded field liner seams.
8. The operator installed sufficient liner material to reduce stress-strain on the liner.
9. The operator ensured that the outer edges of all liners are secured for the placement of waste material into the drilling pit (on-site trench).
10. The operator will fold the outer edges of the drilling pit (trench) liner and add liner if necessary to overlap the waste material in the trench prior to the installation of the geomembrane cover.
11. The operator will install a geomembrane cover over the waste material in the lined trench (former drilling pit). The operator will install the geomembrane cover in a manner that prevents the collection of infiltration water in the lined trench and on the geomembrane cover after the soil cover is in place.
12. The geomembrane cover will consist of a 20-mil string reinforced LLDPE liner. The geomembrane cover will be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. Cover compatibility will comply with EPA SW-846 method 9090A.
13. A secondary liner exists below the primary liner described above.

### ***Demonstration that the Proposed Exception Provides Equal or Better Protection of Fresh Water, Public Health and the Environment.***

We believe that Appendix D clearly shows that a drilling pit constructed in accordance with the mandates of NMOCD Rules (as described in the approved C-144) provides equal protection of fresh water, public health and the environment than constructing a separate lined trench and transferring the contents of the pit into the trench – as the criteria for a burial trench is equal to the criteria employed by the Bandit drilling pit.

Re-use of the drilling pit as a burial trench is consistent with the re-use requirement in NMOCD Rules for consideration of exceptions to the Rule. Additionally, not constructing a separate trench for burial of waste results in fewer emissions during construction and a smaller disturbed footprint on the land.

## **Exception Request to NMOCD Rule 19.15.17.F.3 (f)(ii)**

### ***Description of the Exception***

We request an exception to the requirement to test the soils beneath the temporary pit after excavation to determine whether a release has occurred. As described below, we propose to employ a leak detection system in lieu of soil sampling to determine whether a release has occurred.

### ***Scientific Rational***

NMOCD Rules state “The operator shall test the soils beneath the temporary pit to determine whether a release has occurred.” The Rule then provides a protocol for this testing. However, several methods exist to “determine whether a release has occurred”. The method described below is nearly identical to a leak detection systems approved by various agencies for permanent pits and lagoons. This method detects liner leakage by monitoring moisture in a permeable layer above a secondary liner. Should a release occur, fluid will collect in the permeable layer between these two liners and flow to the observation port.

### ***Revised Confirmation Sampling Plan***

As described below, we will inspect the earth below the primary liner that is not monitored by the leak detection system (slopes of the pit above the level of the solids in the pit) for moisture and discoloration and sample soil according to specified protocols as necessary (see attached C-144 Modification).

For the Bandit Pit, a secondary liner lies beneath the primary liner (see Appendix B of the C-144 Modification). The observation port was monitored during drilling and during drainage pumping and drying. To date, no evidence suggests that the primary liner has lost integrity.

### ***Demonstration that the Proposed Exception Provides Equal or Better Protection of Fresh Water, Public Health and the Environment.***

We conclude that this method of leak detection is as effective as what is specified in the Pit Rule, and in some cases, could provides better protection of the environment because monitoring the integrity of the pit occurs during and after operation of the pit. Real-time leak detection will allow the operator to take action to mitigate impact to the environment whereas inspection during closure does not.

### **Summary**

1. This submission does not propose to replace or change any protocols or commitments presented in the approved C-144 or the July 2010 modification/clarification of the C-144 except the two requests described above.

## **Application for Exceptions to NMOCD Rules**

**Bandit State #8, API # 30-015-37434**

2. We believe the information presented herein demonstrates that the proposed methods are as effective as what is specified in the Pit Rule and provide better protection of fresh water, and the environment.
3. The proposed protocols outlined herein and in the approved C-144 implement one or more of the following practices:
  - a. Waste minimization – the protocols do not call for mixing clean earth with waste
  - b. Reclamation – using the existing drilling pit for the burial trench reduces the size of disturbance of habitat
  - c. Reuse; recycling – the protocols call for re-using the pit and pit liners for the burial trench;
  - d. Reduction in available contaminant concentration – removal of cut brine and entrained constituents of concern from the residual solids via drainage system pumping will reduce the mass/concentration in the buried waste (see approved C-144).

# **Appendix D**

## **Drilling Pit Design vs. Trench Burial**

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## Appendix D –Design and Specifications of Drilling Pit v. Burial Trench

**F. Temporary pits.** The operator shall design and construct a temporary pit in accordance with the following requirements.

(1) The operator shall design and construct a temporary pit to ensure the confinement of liquids to prevent unauthorized releases.

(2) A temporary pit shall have a properly constructed foundation and interior slopes consisting of a firm, unyielding base, smooth and free of rocks, debris, sharp edges or irregularities to prevent the liner's rupture or tear. The operator shall construct a temporary pit so that the slopes are no steeper than two horizontal feet to one vertical foot (2H:1V). The appropriate division district office may approve an alternative to the slope requirement if the operator demonstrates that it can construct and operate the temporary pit in a safe manner to prevent contamination of fresh water and protect public health and the environment.

(3) The operator shall design and construct a temporary pit with a geomembrane liner. The geomembrane liner shall consist of 20-mil string reinforced LLDPE or equivalent liner material that the appropriate division district office approves. The geomembrane liner shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. The liner material shall be resistant to ultraviolet light. Liner compatibility shall comply with EPA SW-846 method 9090A.

(4) The operator shall minimize liner seams and orient them up and down, not across a slope. The operator shall use factory welded seams where possible. Prior to field seaming, the operator shall overlap liners four to six inches and orient seams parallel to the line of maximum slope, i.e., oriented along, not across, the slope. The operator shall minimize the number of field seams in corners and irregularly shaped areas. Qualified personnel shall perform field seaming. The operator shall weld field liner seams.

(5) Construction shall avoid excessive stress-strain on the liner.

(6) *Geotextile is required under the liner where needed to reduce localized stress-strain or protuberances that may otherwise compromise the liner's integrity.*

(7) The operator shall anchor the edges of all liners in the bottom of a compacted earth-filled trench. The anchor trench shall be at least 18 inches deep.

**J. On-site trenches for closure.** The operator shall design and construct an on-site trench for closure, specified in Paragraph (2) of Subsection B of 19.15.17.13 NMAC or Paragraph (2) of Subsection D of 19.15.17.13 NMAC, in accordance with the following requirements.

(1) The operator shall locate the trench to satisfy the siting criteria specified in Subsection C of 19.15.17.10 NMAC and Subparagraph (d) of Paragraph (3) of Subsection F of 19.15.17.13 NMAC and excavate to an appropriate depth that allows for the installation of the geomembrane bottom liner, geomembrane liner cover and the division-prescribed soil cover required pursuant to Subsection H of 19.15.17.13 NMAC.

(2) An on-site trench shall have a properly constructed foundation and side walls consisting of a firm, unyielding base, smooth and free of rocks, debris, sharp edges or irregularities to prevent the liner's rupture or tear.

(3) *See below in italics*

(4) An on-site trench shall be constructed with a geomembrane liner. The geomembrane shall consist of a 20-mil string reinforced LLDPE liner or equivalent liner that the appropriate division district office approves. The geomembrane liner shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. The liner material shall be resistant to ultraviolet light. Liner compatibility shall comply with EPA SW-846 method 9090A.

(5) The operator shall minimize liner seams and orient them up and down, not across a slope. The operator shall use factory welded seams where possible. Prior to field seaming, the operator shall overlap liners four to six inches and orient liner seams parallel to the line of maximum slope, i.e., oriented along, not across, the slope. The operator shall minimize the number of field seams in corners and irregularly shaped areas. Qualified personnel shall perform field seaming. The operator shall weld field liner seams.

(6) The operator shall install sufficient liner material to reduce stress-strain on the liner.

(3) *Geotextile is required under the liner where needed to reduce localized stress-strain or protuberances that may otherwise compromise the liner's integrity.*

(7) The operator shall ensure that the outer edges of all liners are secured for the placement of the excavated waste material into the trench.



# **Public Notice**

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## **DRAFT NOTICE OF PUBLICATION**

**State of New Mexico  
Energy, Minerals and Natural Resources Department  
Oil Conservation Division**

Notice is hereby given that pursuant to Oil Conservation Division Regulations, the following Proposed Exceptions to NMOCD Rules have been submitted to the Director of the Oil Conservation Division, 1220 S. St. Francis Dr., Santa Fe, New Mexico 87505, Telephone (505) 476-3440:

John Maxey, President of Read and Stevens, Inc., which is a New Mexico corporation, Telephone (575) 622-3770, 400 North Pennsylvania, Suite 1000, Roswell, New Mexico 88202, has submitted an application for exceptions to NMOCD Rules for the Bandit State #8 Drilling Pit site, located in Section 10, Township 23 South, Range 36 East, Eddy County, New Mexico, approximately 1 mile west of the Carlsbad, New Mexico Municipal Airport. Read and Stevens, Inc. is the operator of an oil and gas well at the site.

With the exception of the proposals described below, the operator will adhere to all other mandates of NMOCD Rules. Proposal #1: In lieu of collecting soil samples beneath the liner to determine if a release occurred, the operator proposes to monitor a leak detection system. Proposal #2: Because the drilling pit meets the construction specifications for a burial trench, the operator proposes to use the drilling pit as a burial trench.

The division has determined that the application satisfies the requirements of OCD Rules and is therefore, administratively complete. The division will accept written comments on the proposed exceptions if the director receives them within 30 days after the date of publication of the public notice. Persons who are interested in obtaining further information, submitting comments, or wish to be placed on a facility-specific mailing list for future notices may contact the Environmental Bureau Chief of the Oil Conservation Division at the address given above. The application and administrative completeness determination may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday, or may also be viewed at the OCD web site (<http://www.emnrd.state.nm.us/ocd>). Persons who are interested in obtaining a copy of the application and administrative completeness determination may contact XXXXX at the address given above, or by telephone at 505-476-3484, or by email at XXXXXX.

The Director shall allow a period of at least thirty (30) days after the date of publication of this notice, during which interested persons may submit comments or request that NMOCD hold a public hearing. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines that there is significant public interest.

If the Director determines that a hearing is required, the operator has agreed to hold a public meeting at 6 pm on June (this date will be after the public notice period) at the Hotel Artesia in Artesia, New Mexico to address questions or concerns.

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