

30-04525494

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

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Elm Ridge Exploration	Contact: Amy Mackey
Address: PO Box 156, Bloomfield, NM 87413	Telephone No.: (505) 632-3476 Ext 201
Facility Name: Carson Unit 206	Facility Type: Gas Well

Surface Owner: Federal	Mineral Owner:	Lease No.: NM 070322
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LOCATION OF RELEASE

Unit Letter E	Section 11	Township 25N	Range 12W	Feet from the 1850	North/South Line FSL	Feet from the 790	East/West Line FWL	County San Juan
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Latitude 36.413521 Longitude -108.087250

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: Unknown	Volume Recovered: Unknown
Source of Release: Earth Pit	Date and Hour of Occurrence: Historical	Date and Hour of Discovery: NA
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*


Describe Cause of Problem and Remedial Action Taken.*

Produced Water from a gas well at the mentioned location formerly discharged into an earthen pit on location. The well has been altered to no longer drain into an earthen pit, but instead into an Above Ground Storage Tank (AST).

Describe Area Affected and Cleanup Action Taken.*

From August 31, 2009 through September 1, 2009, approximately 85 cubic yards of 'Production Sludge' was removed from the earthen pit to extents of approximately 12' x 12' x 8' deep. All sludge was taken to Envirotech's NMOCD permitted soil remediation facility, Landfarm #2. Sludge was removed to visual extents of contamination, where confirmation samples were collected; see attached **Analytical Results**. A sample was collected at the bottom at eight (8) feet below ground surface, and a composite was collected from the four (4) walls at 12' x 12' and analyzed in the field for TPH via USEPA Method 418.1, and in Envirotech's laboratory for benzene and BTEX via USEPA Method 8021 and for total chlorides via USEPA Method 4500B. Excavation could not continue beyond 12' x 12' due to well site equipment and the edge of the well pad. The wall composite returned chloride results of 335 mg/kg, confirming that a release has occurred at the above mentioned site; see **Analytical Results**. Excavation could not continue due to sandstone being encountered at 8' BGS. Chloride results from the bottom of the excavation at 8' BGS were 380 mg/kg. Elm Ridge Exploration will comply with Rule 29 from this point forward with the district office of the OCD.

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

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Ms. Amy Mackey	Approved by District Supervisor:	
Title: Administrative Manager	Approval Date:	Expiration Date:
E-mail Address: amackey1@elmridge.net	Conditions of Approval:	Attached <input type="checkbox"/>
Date: <u>6-15-10</u> Phone: 505-632-3476 Ext 201		

* Attach Additional Sheets If Necessary



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	Elm Ridge Exploration	Project #:	03056-0195
Sample No.:	1	Date Reported:	9/16/2009
Sample ID:	Bottom Composite @ 8'	Date Sampled:	9/1/2009
Sample Matrix:	Soil	Date Analyzed:	9/1/2009
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	8	5.0

ND = Parameter not detected at the stated detection limit.

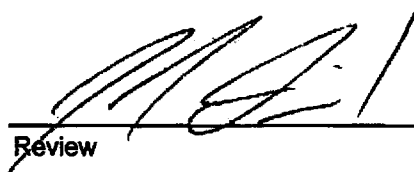
References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Carson Unit 206**

Instrument calibrated to 200 ppm standard. Zeroed before each sample


Analyst

Toni McKnight
Printed


Review

James McDaniel
Printed



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	Elm Ridge Exploration	Project #:	03056-0195
Sample No.:	2	Date Reported:	9/16/2009
Sample ID:	Wall Composite @ 12' x 12'	Date Sampled:	9/1/2009
Sample Matrix:	Soil	Date Analyzed:	9/1/2009
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

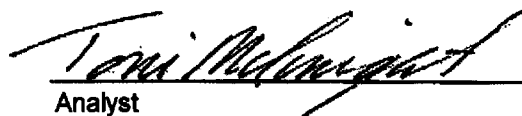
Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	16	5.0

ND = Parameter not detected at the stated detection limit.

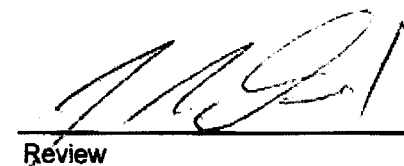
References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Carson Unit 206**

Instrument calibrated to 200 ppm standard. Zeroed before each sample


Analyst

Toni McKnight
Printed


Review

James McDaniel
Printed



CONTINUOUS CALIBRATION
EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Cal. Date: 1-Sep-09

Parameter	Standard Concentration mg/L	Concentration Reading mg/L
TPH	100	
	200	189
	500	
	1000	

The accepted percent relative deviation (%RSD) of the calibration factor is less than 20% over the working range.

Toni McKnight
Analyst

9/16/09
Date

Toni McKnight
Print Name

JMD
Review

9/16/09
Date

James McDaniel
Print Name



**EPA METHOD 8021
AROMATIC VOLATILE ORGANICS**

Client:	ElmRidge	Project #:	03056-0195
Sample ID:	N/E Wall Composite	Date Reported:	09-04-09
Laboratory Number:	51502	Date Sampled:	09-01-09
Chain of Custody:	7870	Date Received:	09-01-09
Sample Matrix:	Soil	Date Analyzed:	09-03-09
Preservative:	Cool	Date Extracted:	09-02-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	1.8	0.9
Toluene	4.4	1.0
Ethylbenzene	1.8	1.0
p,m-Xylene	4.0	1.2
o-Xylene	3.5	0.9
Total BTEX	15.5	

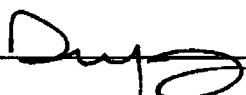
ND - Parameter not detected at the stated detection limit.

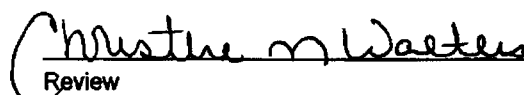
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	99.0 %
	1,4-difluorobenzene	99.0 %
	Bromochlorobenzene	99.0 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Earth Pit Closure / Carson Unit 206

Analyst 


Review



**EPA METHOD 8021
AROMATIC VOLATILE ORGANICS**

Client:	ElmRidge	Project #:	03056-0195
Sample ID:	Bottom	Date Reported:	09-04-09
Laboratory Number:	51503	Date Sampled:	09-01-09
Chain of Custody:	7870	Date Received:	09-01-09
Sample Matrix:	Soil	Date Analyzed:	09-03-09
Preservative:	Cool	Date Extracted:	09-02-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	1.7	0.9
Toluene	4.5	1.0
Ethylbenzene	1.0	1.0
p,m-Xylene	3.1	1.2
o-Xylene	2.4	0.9
Total BTEX	12.7	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	98.0 %
	1,4-difluorobenzene	98.0 %
	Bromochlorobenzene	98.0 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Earth Pit Closure / Carson Unit 206

Analyst

Review



EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	09-03-BT QA/QC	Date Reported:	09-04-09
Laboratory Number:	51484	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	09-03-09
Condition:	N/A	Analysis:	BTEX

Benzene	2.4113E+006	2.4161E+006	0.2%	ND	0.1
Toluene	2.2516E+006	2.2581E+006	0.2%	ND	0.1
Ethylbenzene	2.0113E+006	2.0153E+006	0.2%	ND	0.1
p,m-Xylene	5.2239E+006	5.2344E+006	0.2%	ND	0.1
o-Xylene	1.9453E+006	1.9492E+006	0.2%	ND	0.1

Benzene	16.0	15.9	0.6%	0 - 30%	0.9
Toluene	12.2	13.3	9.0%	0 - 30%	1.0
Ethylbenzene	13.1	12.7	3.1%	0 - 30%	1.0
p,m-Xylene	24.8	24.5	1.2%	0 - 30%	1.2
o-Xylene	15.7	15.4	1.9%	0 - 30%	0.9

Benzene	16.0	50.0	65.5	99.2%	39 - 150
Toluene	12.2	50.0	61.3	98.6%	46 - 148
Ethylbenzene	13.1	50.0	61.6	97.6%	32 - 160
p,m-Xylene	24.8	100	127	102%	46 - 148
o-Xylene	15.7	50.0	58.7	89.3%	46 - 148

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for Samples 51484, 51499, 51502 - 51504, and 51506 - 51507.

Analyst

Review



Chloride

Client:	Elm Ridge	Project #:	03056-0195
Sample ID:	Background	Date Reported:	09-04-09
Lab ID#:	51501	Date Sampled:	09-01-09
Sample Matrix:	Soil	Date Received:	09-01-09
Preservative:	Cool	Date Analyzed:	09-02-09
Condition:	Intact	Chain of Custody:	7870

Parameter	Concentration (mg/Kg)
Total Chloride	35

Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: Earth Pit Closure / Carson Unit 206.

Analyst

Review



Chloride

Client:	Elm Ridge	Project #:	03056-0195
Sample ID:	N/E Wall Composite	Date Reported:	09-04-09
Lab ID#:	51502	Date Sampled:	09-01-09
Sample Matrix:	Soil	Date Received:	09-01-09
Preservative:	Cool	Date Analyzed:	09-02-09
Condition:	Intact	Chain of Custody:	7870

Parameter	Concentration (mg/Kg)
Total Chloride	335

Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: Earth Pit Closure / Carson Unit 206.

Analyst

Review



Chloride

Client:	Elm Ridge	Project #:	03056-0195
Sample ID:	Bottom	Date Reported:	09-04-09
Lab ID#:	51503	Date Sampled:	09-01-09
Sample Matrix:	Soil	Date Received:	09-01-09
Preservative:	Cool	Date Analyzed:	09-02-09
Condition:	Intact	Chain of Custody:	7870

Parameter	Concentration (mg/Kg)
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Total Chloride

380

Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Earth Pit Closure / Carson Unit 206.**

Analyst

Review

7070

envirotech
Analytical Laboratory






Bill of Lading

34162

MANIFEST #

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

DATE 8-31-09 JOB# 03056-0195

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY			
	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLs	COMPANY	TRK#	TIME	DRIVER SIGNATURE
1	Embridge	LFA	CONC	F23	7	—	4-4	178	1146	
2	" "	" "	" "	F23	10	—	4-4	178	1353	
3	" "	" "	" "	F-23	10	—	4-4	178	16:00	
					27					
RESULTS:		NOTES: Exempt								
	CHLORIDE TEST	3								
	PAINT FILTER TEST	3								
ENTERED SEP 02 2009										

"I certify the material hauled from the above location has not been added to or mixed with, and is the same material received from the above mentioned Generator, and that no additional materials have been added."

NAME John Malone COMPANY Fast-Four SIGNATURE [Signature]

COMPANY CONTACT max PHONE 502-2211 DATE 8-31-09



Bill of Lading

69143

DATE 9-1-09 JOB# 05056-0195

[illegible]



Bill of Lading

MANIFEST #

88142

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

DATE 9-04-09 JOB#

DATE 9-04-09 JOB#

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY			
	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLs	COMPANY	TRK#	TIME	DRIVER SIGNATURE
1	Elmridge Carson 206	LFA	cont 50.2	F18	12	-	4-4	75	926	<i>[Signature]</i>
2	" "	"	"	F18	20	-	4-4	24	953	<i>[Signature]</i>
3	" "	"	"	F18	12	-	4-4	75	1045	<i>[Signature]</i>
4	" "	"	"	F18	12	-	4-4	24	1141	<i>[Signature]</i>
					12 50					
RESULTS: <i>206-0564</i>	LANDFARM	<i>Carson Robinson</i>				NOTES: ENTERED SEP 09 2009				
	CHLORIDE TEST									

"I certify the material hauled from the above location has not been added to or mixed with, and is the same material received from the above mentioned Generator and that no additional materials have been added."

NAME _____
COMPANY _____
SIGNATURE _____

COMPANY CONTACT *M & C*
PHONE
DATE *7-09-89*

**envirotech**

34189

DATE 9-04-09 JOB# 03050-0193

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT							TRANSPORTING COMPANY			
	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BLS	COMPANY	TRK#	TIME	DRIVER SIGNATURE	
1	Envirotech LF#	Cambridge Carson	Clean Fill	-	12	-	4-4	75	926	[Signature]	
2	" "	#206	50.2	-	20	-	4-4	24	933	[Signature]	
3	" "	" "	" "	-	12	-	4-4	75	1045	[Signature]	
	" "	" "	" "	-	20	-	4-4	14	1247	[Signature]	
					64						
RESULTS:		LANDFARM EMPLOYEE:		NOTES:							
	CHLORIDE TEST			ENTERED SEP 09 2009							
	PAINT FILTER TEST										

"I certify the material hauled from the above location has not been added to or mixed with, and is the same material received from the above mentioned Generator, and that no additional materials have been added."

NAME Scott W. Strand COMPANY Scott W. Strand Inc. SIGNATURE Scott W. Strand

COMPANY CONTACT
NAME Humphries
PHONE
327-2711
DATE 9-04-09



Bill of Lading

341630

DATE 8.31.09 JOB# 03056-0195

[illegible]

“I certify the material hauled from the above location has not been added to or mixed with, and is the same material received from the above mentioned Generator, and that no additional materials have been added.”

NAME Richard M. Kimmey COMPANY Four-Fort SIGNATURE [Signature]

COMPANY CONTACT Mark PHONE 3272711 DATE 8-31-09



August 24, 2009

Project No. 03056-0195

Mr. Mark Kelly
Bureau of Land Management
1235 La Plata Highway, Suite A
Farmington, New Mexico 87401

Phone: (505) 599-8900

RE: CARSON UNIT 206 EARTH PIT CLOSURE NOTIFICATION

Dear Mr. Kelly,

Please accept this letter and attached Sundry Notice as the necessary surface owner notification for earth pit closure activities at the Carson Unit 206 well site, owned and operated by Elm Ridge Exploration. The Carson Unit 206 well site is located in Unit E, Section 11, Township 25N, Range 12W, San Juan County, New Mexico. Closure activities are scheduled to begin on August 31, 2009 and continue through September 4, 2009.

We appreciate the opportunity to be of service. If you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully Submitted,
ENVIROTECH, INC.



James McDaniel
Project Scientist
jmcdaniel@envirotech-inc.com

Enclosure: Sundry Notice

Cc: Client File No. 03056

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
*Do not use this form for proposals to drill or to re-enter an
abandoned well. Use Form 3160-3 (APD) for such proposals.*

5. Lease Serial No.
NM-070322

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE – Other Instructions on page 2.

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

7. If Unit of CA/Agreement, Name and/or No.

8. Well Name and No.
Carson Unit 208

2. Name of Operator
Elm Ridge Exploration

9. API Well No.
30-045-25494

3a. Address
PO Box 156
Bloomfield, NM 87413

3b. Phone No. (include area code)
(505) 632-3476

10. Field and Pool or Exploratory Area

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1850 FSL 780 FWL, E-11-25N-12W, Lat. 36.413621 long. -108.087250

11. Country or Parish, State
San Juan County, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Closure of an Earth Pit
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Elm Ridge Exploration plans to begin closure activities for an earthen pit located at the above mentioned site. All formal notifications have been made. Closure activities are scheduled to being on Monday, August 31, 2009 and last through September 4, 2009.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)
Ms. Amy Mackey

Title Administrative Manager

Signature

Date 08/24/2009

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13 - Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment.

NOTICES

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240



March 10, 2010

Project No. 03056-0195

Mr. Brad Jones
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Phone (505) 476-3487

RE: C-141 RELEASE NOTIFICATION FORM FOR THE CARSON UNIT 206 WELL SITE

Dear Mr. Jones,

Please find enclosed a C-141 Release Notification Form and additional supporting closure documentation for the Carson Unit 206 well site owned and operated by Elm Ridge Exploration.

The previous additional 'Closure Plan' submitted by Envirotech, Inc. for Elm Ridge Exploration was a remediation plan, and not intended to be an alternative closure plan. All closure activities from this point forward will comply with Rule 29 with the district office of the OCD.

We appreciate the opportunity to be of service. If you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully Submitted,
ENVIROTECH, INC.


James McDaniel
Project Scientist
jmcdaniel@envirotech-inc.com

RECEIVED OCD
2010 JUN 18 A 11:16

Enclosure: C-141 Release Notification Form
Bills of Lading
Proof of Notification

Cc: Client File No. 03056

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Elm Ridge Exploration	Contact: Amy Mackey	
Address: PO Box 156, Bloomfield, NM 87413	Telephone No.: (505) 632-3476 Ext 201	
Facility Name: West Bisti Coal 10-2	Facility Type: Gas Well	
Surface Owner: Federal	Mineral Owner:	Lease No.: NM 31311

LOCATION OF RELEASE

Unit Letter K	Section 10	Township 25N	Range 13W	Feet from the 1850	North/South Line FSL	Feet from the 2475	East/West Line FWL	County San Juan
------------------	---------------	-----------------	--------------	-----------------------	-------------------------	-----------------------	-----------------------	--------------------

Latitude 36.413548 Longitude -108.207010

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: Unknown	Volume Recovered: Unknown
Source of Release: Earth Pit	Date and Hour of Occurrence: Historical	Date and Hour of Discovery: NA
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

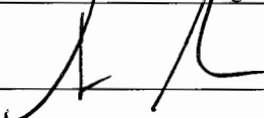
Describe Cause of Problem and Remedial Action Taken.*

Produced Water from gas well at the mentioned location formerly discharged into an earthen pit on location. The well has been altered to no longer drain into an earthen pit, but instead into an Above Ground Storage Tank (AST).

Describe Area Affected and Cleanup Action Taken.*

On September 15, 2009, approximately 30 cubic yards of 'Production Sludge' was removed from the earthen pit to extents of approximately 10' x 10' x 4.5' below the bottom of the pit, where a hard shale was encountered. Sludge was taken to Envirotech's NMOCD permitted soil remediation facility, Landfarm #2. Sludge was removed to visual extents of contamination, where confirmation samples were collected; see attached **Analytical Results**. A sample was collected at the bottom at five (5) feet below ground surface, and a composite sample was collected from each of the walls at 10' x 10' and analyzed in the field for TPH via USEPA Method 418.1, and in Envirotech's laboratory for benzene and BTEX via USEPA Method 8021 and for total chlorides via USEPA Method 4500B. Excavation could not continue beyond 10' x 10' due to well site equipment and the fence line for the Navajo Reservation. The samples collected from the bottom of the pit on shale and the wall composite both returned results below 100 mg/kg TPH, 0.2 mg/kg of benzene and 50 mg/kg of total BTEX. The samples from the bottom at shale and the wall composite returned results of 420 mg/kg and 395 mg/kg for chlorides respectively, confirming that a release occurred. Elm Ridge Exploration will comply with Rule 29 from this point forward with the district office of the OCD.

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

Signature: 		OIL CONSERVATION DIVISION	
Printed Name: Ms. Amy Mackey		Approved by District Supervisor:	
Title: Administrative Manager		Approval Date:	Expiration Date:
E-mail Address: amackey1@elmridge.net		Conditions of Approval:	
Date: <u>6-15-10</u> Phone: 505-632-3476 Ext 201		Attached <input type="checkbox"/>	

* Attach Additional Sheets If Necessary



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	Elm Ridge Exploration	Project #:	03056-0206
Sample No.:	1	Date Reported:	10/2/2009
Sample ID:	Bottom @ 5' (Shale)	Date Sampled:	9/15/2009
Sample Matrix:	Soil	Date Analyzed:	9/15/2009
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

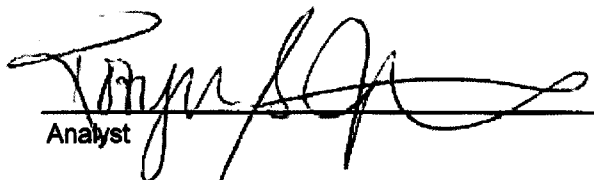
Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	60	20.0

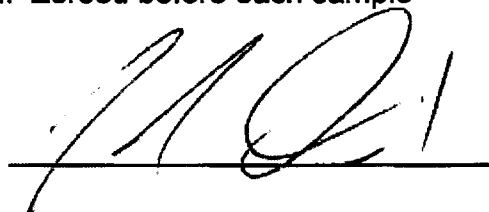
ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **West Bisti Coal 10-2**

Instrument calibrated to 200 ppm standard. Zeroed before each sample


Analyst
Robyn Jones
Printed


James McDaniel
Printed



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	Elm Ridge Exploration	Project #:	03056-0206
Sample No.:	2	Date Reported:	10/2/2009
Sample ID:	Wall Composite	Date Sampled:	9/15/2009
Sample Matrix:	Soil	Date Analyzed:	9/15/2009
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

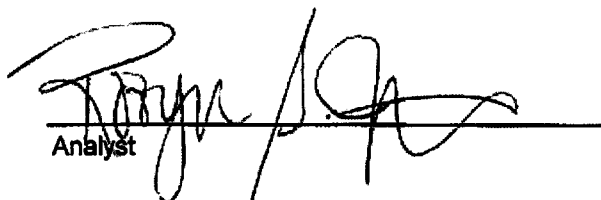
Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	40	20.0

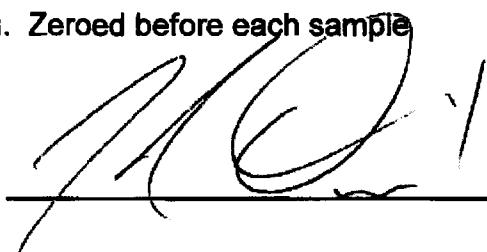
ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **West Bisti Coal 10-2**

Instrument calibrated to 200 ppm standard. Zeroed before each sample


Analyst
Robyn Jones
Printed


James McDaniel
Printed

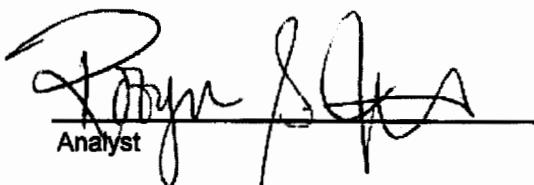


CONTINUOUS CALIBRATION
EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Cal. Date: 15-Sep-09

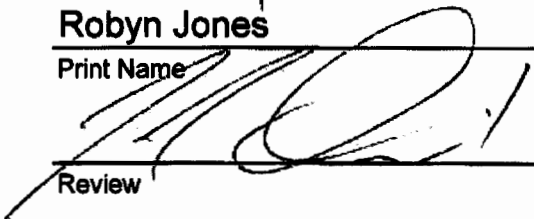
Parameter	Standard Concentration mg/L	Concentration Reading mg/L
TPH	100	206
	200	
	500	
	1000	

The accepted percent relative deviation (%RSD) of the calibration factor is less than 20% over the working range.


Analyst

Robyn Jones

Print Name


Review

James McDaniel

Print Name

10/5/07
Date

10/5/09
Date



**EPA METHOD 8021
AROMATIC VOLATILE ORGANICS**

Client:	ElmRidge	Project #:	03056-0206
Sample ID:	Wall Comp	Date Reported:	09-21-09
Laboratory Number:	51714	Date Sampled:	09-15-09
Chain of Custody:	7996	Date Received:	09-17-09
Sample Matrix:	Soil	Date Analyzed:	09-18-09
Preservative:	Cool	Date Extracted:	09-17-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	0.9
Toluene	ND	1.0
Ethylbenzene	ND	1.0
p,m-Xylene	ND	1.2
o-Xylene	ND	0.9
Total BTEX	ND	

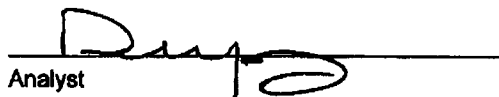
ND - Parameter not detected at the stated detection limit.

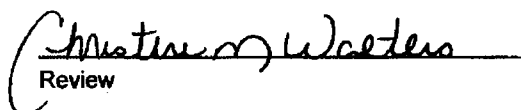
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	96.0 %
	1,4-difluorobenzene	96.0 %
	Bromochlorobenzene	96.0 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: West Bisti Coal 10-2


Analyst


Review



**EPA METHOD 8021
AROMATIC VOLATILE ORGANICS**

Client:	ElmRidge	Project #:	03056-0206
Sample ID:	Bottom 5' Below Pit	Date Reported:	09-21-09
Laboratory Number:	51715	Date Sampled:	09-15-09
Chain of Custody:	7996	Date Received:	09-17-09
Sample Matrix:	Soil	Date Analyzed:	09-18-09
Preservative:	Cool	Date Extracted:	09-17-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	0.9
Toluene	4.4	1.0
Ethylbenzene	1.4	1.0
p,m-Xylene	4.8	1.2
o-Xylene	2.6	0.9
Total BTEX	13.2	

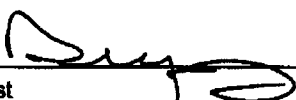
ND - Parameter not detected at the stated detection limit.

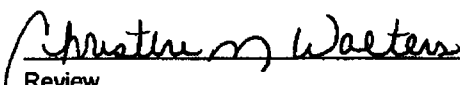
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	96.0 %
	1,4-difluorobenzene	96.0 %
	Bromochlorobenzene	96.0 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: West Bisti Coal 10-2


Analyst


Review



EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	09-18-BT QA/QC	Date Reported:	09-21-09
Laboratory Number:	51680	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	09-18-09
Condition:	N/A	Analysis:	BTEX

Benzene	1.1778E+006	1.1802E+006	0.2%	ND	0.1
Toluene	1.0723E+006	1.0744E+006	0.2%	ND	0.1
Ethylbenzene	9.5849E+005	9.5840E+005	0.2%	ND	0.1
p,m-Xylene	2.4071E+006	2.4119E+006	0.2%	ND	0.1
o-Xylene	9.0247E+005	9.0428E+005	0.2%	ND	0.1

Benzene	ND	ND	0.0%	0 - 30%	0.9
Toluene	ND	ND	0.0%	0 - 30%	1.0
Ethylbenzene	ND	ND	0.0%	0 - 30%	1.0
p,m-Xylene	ND	ND	0.0%	0 - 30%	1.2
o-Xylene	ND	ND	0.0%	0 - 30%	0.9

Benzene	ND	50.0	49.6	99.2%	39 - 150
Toluene	ND	50.0	48.0	96.0%	46 - 148
Ethylbenzene	ND	50.0	44.0	88.0%	32 - 160
p,m-Xylene	ND	100	96.0	96.0%	46 - 148
o-Xylene	ND	50.0	47.0	94.0%	46 - 148

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for Samples 51680 - 51684, 51699, 51714, 51715, 51717, and 51718.

Analyst

Review



envirotech
Analytical Laboratory

Chloride

Client:	Elm Ridge	Project #:	03056-0206
Sample ID:	Wall Comp	Date Reported:	09-21-09
Lab ID#:	51714	Date Sampled:	09-15-09
Sample Matrix:	Soil	Date Received:	09-17-09
Preservative:	Cool	Date Analyzed:	09-18-09
Condition:	Intact	Chain of Custody:	7996

Parameter

Concentration (mg/Kg)

Total Chloride

395

Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **West Bisti Coal 10-2.**

Analyst

Review




Chloride

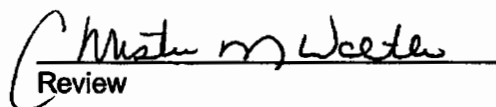
Client:	Elm Ridge	Project #:	03056-0206
Sample ID:	Bottom 5' Below Pit	Date Reported:	09-21-09
Lab ID#:	51715	Date Sampled:	09-15-09
Sample Matrix:	Soil	Date Received:	09-17-09
Preservative:	Cool	Date Analyzed:	09-18-09
Condition:	Intact	Chain of Custody:	7996

Parameter	Concentration (mg/Kg)
Total Chloride	420

Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **West Bisti Coal 10-2.**

Analyst 

Review 



Chloride

Client:	Elm Ridge	Project #:	03056-0206
Sample ID:	Background	Date Reported:	09-21-09
Lab ID#:	51716	Date Sampled:	09-15-09
Sample Matrix:	Soil	Date Received:	09-17-09
Preservative:	Cool	Date Analyzed:	09-18-09
Condition:	Intact	Chain of Custody:	7996

Parameter	Concentration (mg/Kg)
Total Chloride	10

Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: West Blstl Coal 10-2.

Analyst

Review

7096

[illegible]**envirotech**
Analytical Laboratory



September 8, 2009

Project No. 03056-0206

Mr. Mark Kelly
Bureau of Land Management
1235 La Plata Highway, Suite A
Farmington, New Mexico 87401

Phone: (505) 599-8900

RE: WEST BISTI COAL 10-2 EARTH PIT CLOSURE NOTIFICATION

Dear Mr. Kelly,

Please accept this letter and attached Sundry Notice as the necessary surface owner notification for earth pit closure activities at the West Bisti Coal 10-2 well site, owned and operated by Elm Ridge Exploration. The West Bisti Coal 10-2 well site is located in Unit K, Section 10, Township 25N, Range 13W, San Juan County, New Mexico. Closure activities are scheduled to begin on September 14, 2009 and continue through September 18, 2009.

We appreciate the opportunity to be of service. If you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully Submitted,
ENVIROTECH, INC.



James McDaniel
Project Scientist
jmcdaniel@envirotech-inc.com

Enclosure: Sundry Notice

Cc: Client File No. 03056

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
*Do not use this form for proposals to drill or to re-enter an
abandoned well. Use Form 3160-3 (APD) for such proposals.*

5. Lease Serial No.
NM-31311

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE – Other instructions on page 2.

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator
Elm Ridge Exploration

8. Well Name and No.
West Blasi Coal 10-2

9. API Well No.
30-045-28799

3a. Address
PO Box 156
Bloomfield, NM 87413

3b. Phone No. (include area code)
(505) 832-3476

10. Field and Pool or Exploratory Area

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1850 FSL 2475 FWL, K-10-25N-13W, Lat. 36.413348 long. -108.20701

11. Country or Parish, State
San Juan County, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Closure of an Earth Pit
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Elm Ridge Exploration plans to begin closure activities for an earthen pit located at the above mentioned site. All formal notifications have been made. Closure activities are scheduled to being on Monday, September 14, 2009 and last through September 18, 2009.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)
Ms. Amy Mackey

Title Administrative Manager

Signature

Date 09/08/2009

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13 - Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment.

NOTICES

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.


BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

Bill of Lading

$$\begin{aligned} \frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx &= \int_{\mathbb{R}^n} u \frac{du}{dt} dx \\ &= \int_{\mathbb{R}^n} u \left(-\Delta u + \nabla \cdot (u \nabla u) \right) dx \\ &= \int_{\mathbb{R}^n} -\frac{1}{2} \Delta |u|^2 dx + \int_{\mathbb{R}^n} \nabla \cdot (u \nabla u) u dx \\ &= \int_{\mathbb{R}^n} \nabla \cdot (u \nabla u) u dx \\ &= \int_{\mathbb{R}^n} \nabla \cdot (u \nabla u) u dx \\ &= \int_{\mathbb{R}^n} \nabla \cdot (u \nabla u) u dx \end{aligned}$$

DATE 9-15-09 JOB# 133621

TRANSPORTING COMPANY

CHLORIDE TEST	LANDFARM		NOTES:	ENTERED SEP 10 2009
---------------	----------	--	--------	---------------------

NOTES: ENTERED SEP 16 2005

CHLORIDE TEST

PAINT FILTER

Because the material hauled from the above location has not been added to or mixed with, and is the same material received from the above mentioned Generator, and because additional materials have been added."

SIGNATURE _____

DATE 9-15-09

Bill of Lading

MANIFEST #

204-613-632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

DATE 4-15-09 JOB#

COMPLETE DESCRIPTION OF SHIPMENT

TRANSPORTING COMPANY

[illegible]

NOTES:

RECEIVED
JUN 10 1964

LANDFARM
EMPLOYEE:

that the material hauled from the above location has not been added to or mixed with, and is the same material received from the above mentioned Generator, and is the same material as the above mentioned materials have been added."

COMPANY *Fair & Favor*

SIGNATURE 

PHONE 505.327-2961

DATE 9-13-01



March 10, 2010

Project No. 03056-0206

Mr. Brad Jones
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Phone (505) 476-3487

RE: C-141 RELEASE NOTIFICATION FORM FOR THE WEST BISTI COAL 10-2 WELL SITE

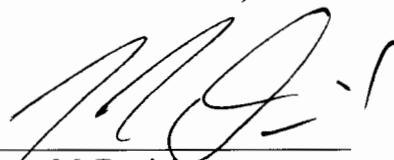
Dear Mr. Jones,

Please find enclosed a C-141 Release Notification Form and additional supporting closure documentation for the West Bisti Coal 10-2 well site owned and operated by Elm Ridge Exploration.

The previous additional 'Closure Plan' submitted by Envirotech, Inc. for Elm Ridge Exploration was a remediation plan, and not an alternative closure plan. All closure activities from this point forward will comply with Rule 29 with the district office of the OCD.

We appreciate the opportunity to be of service. If you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully Submitted,
ENVIROTECH, INC.


James McDaniel
Project Scientist
jmcdaniel@envirotech-inc.com

RECEIVED OCD
2010 JUN 18 A 11:16

Enclosure: C-141 Release Notification Form
Bills of Lading
Proof of Notification

Cc: Client File No. 03056

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.

Operator: Elm Ridge Exploration OGRID #: 149052
Address: P.O. Box 156; Bloomfield, NM 87413
Facility or well name: Carson Unit 206
API Number: 3004525494 OCD Permit Number: _____
U/L or Qtr/Qtr E Section 11 Township 25N Range 12W County: San Juan
Center of Proposed Design: Latitude 36.417889 Longitude -108.086894 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 **Ceased Emptying into in September 2008**
Temporary: ☐ Drilling ☐ Workover
☒ Permanent ☐ Emergency ☐ Cavitation ☐ P&A
☐ Lined ☒ Unlined Liner type: Thickness _____ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
☐ String-Reinforced
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____ Volume: _____ bbl Dimensions: L 10' x W 10' x D 2'

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 4' tall hogwire fencing with pipe railing

7.

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

- ☐ Screen ☐ Netting ☐ Other _____
- ☐ 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.
- ☐ 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.	<input type="checkbox"/> Yes <input type="checkbox"/> No
- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	
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).0.	<input type="checkbox"/> Yes <input type="checkbox"/> No
- Topographic map; Visual inspection (certification) of the proposed site	
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.	<input type="checkbox"/> Yes <input type="checkbox"/> No
- (<i>Applies to temporary, emergency, or cavitation pits and below-grade tanks</i>) (<input type="checkbox"/> NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (<i>Applies to permanent pits</i>)	
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	
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.	<input type="checkbox"/> Yes <input type="checkbox"/> No
- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	<input type="checkbox"/> NA
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.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 500 feet of a wetland.	
Within the area overlying a subsurface mine.	<input type="checkbox"/> Yes <input 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 type="checkbox"/> No
Within a 100-year floodplain.	
- FEMA map	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input 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
☐ 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 H₂S, 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
☐ 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

☐ Yes ☐ No
☐ 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

☐ Yes ☐ No
☐ 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

☐ Yes ☐ No
☐ 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

☐ Yes ☐ 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

☐ Yes ☐ 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

☐ Yes ☐ 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

☐ Yes ☐ No

Within 500 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within the area overlying a subsurface mine.

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☐ No

Within an unstable area.

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☐ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☐ 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): Ms. Amy Mackey Title: Administrative Manager

Signature: [Signature] Date: 2-4-09

E-mail address: amackey1@elmridge.net Telephone: _____

20.

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

OCD Representative Signature: [Signature] Approval Date: 2/18/2009

Title: Environmental Engineer 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.

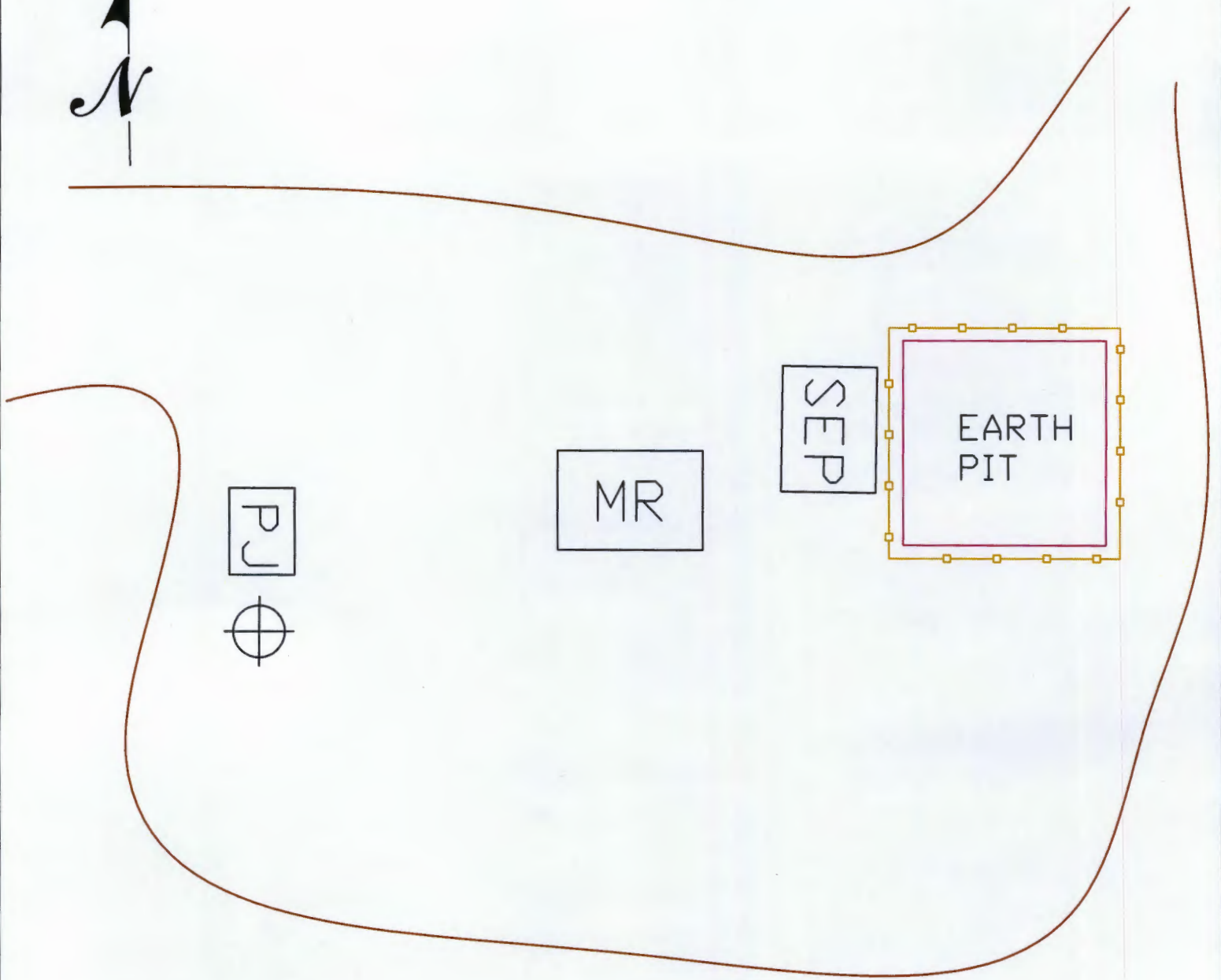
Operator Closure Certification:

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.

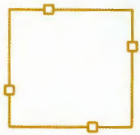
Name (Print): _____ Title: _____

Signature: _____ Date: _____

E-mail address: _____ Telephone: _____



LEGEND



4' Tall Hogwire
Fencing



Berm



Well Head

SITE MAP
ELM RIDGE EXPLORATION
CARSON UNIT 206
SEC 11 TWN 25N RGE 12W
SAN JUAN COUNTY, NEW MEXICO

SCALE: NTS

FIGURE NO. A

REV

PROJECT NOD3056-0136

REVISIONS

NO.	DATE	BY	DESCRIPTION

MAP DRWN	MDD	11/17/08	BASE DRWN		
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ENVIRONMENTAL SCIENTISTS & ENGINEERS
ENVIROTECH

5706 U.S. HIGHWAY 64, FARMINGTON, NEW MEXICO 87401

EARTHEN PIT CLOSURE PLAN

SITE NAME:

**CARSON UNIT 206
UNIT LETTER E, SECTION 11, TOWNSHIP 25N, RANGE 12W
SAN JUAN COUNTY, NEW MEXICO
LATITUDE 36.417889 LONGITUDE -108.086894**

SUBMITTED TO:

**MR. WAYNE PRICE
NEW MEXICO OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DRIVE
SANTA FE, NEW MEXICO 87505
(505) 476-3490**

SUBMITTED BY:

**MS. AMY MACKEY
ELM RIDGE EXPLORATION
P.O. BOX 156
BLOOMFIELD, NEW MEXICO 87413
(505) 632-3476 EXT. 201**

JANUARY 2009

**EARTHEN PIT CLOSURE PLAN
ELM RIDGE EXPLORATION
CARSON UNIT 206
SAN JUAN COUNTY, NEW MEXICO**

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INTRODUCTION

Elm Ridge Exploration would like to submit a closure plan for the earthen pit at the Carson Unit 206 well site located in the SW ¼ NW ¼ of Section 11, Township 25N, Range 12W, San Juan County, New Mexico. This closure plan has been prepared in conformance with the closure requirements of 19.15.17.13 NMAC.

SCOPE OF CLOSURE ACTIVITIES

The purpose of this closure plan is to provide the details of activities involved in the closure of the permanent unlined pit at the Carson Unit 206 well site. The following scope of closure activities has been designed to meet this objective:

- 1) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will close all former earthen pits prior to the closure date agreed upon by the New Mexico Oil Conservation Division of December 31, 2009.
- 2) In accordance with of Subsection A of 19.15.17.13 NMAC, Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will close any earthen pits at a date the division requires because of imminent danger to fresh water, public health, or the environment.
- 3) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will close earthen pits first which seem to pose a greater risk to fresh water, public health, or the environment. This will be determined by the locations proximity to surface water sources and distance to groundwater.
- 4) No less than 60 days prior to any earthen pit closure activities, Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will provide written notification to the Santa Fe NMOCD office as well as a schedule of on-site activities, as in accordance with 19.15.17.13 Subsection J Paragraph (3) NMAC.
- 5) No less than 24 hours and no greater than one (1) week prior to earthen pit removal Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will provide written notification to the appropriate surface owner as well as a schedule of on-site activities, as in accordance with 19.15.17.13 Subsection J Paragraph (1) NMAC. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will notify the surface owner by certified mail, return receipt requested, that the operator plans to close an earthen pit. The return receipt will be used to ensure that the surface owner has received written notification no less than 24 hours and no greater than one (1) week prior to the beginning of BGT closure activities. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records is sufficient to demonstrate compliance with this requirement. Closure activities that will take place on tribal land will have notifications sent by certified mail, return receipt requested, to the appropriate tribal office. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will notify the Bureau of Land Management (BLM) of closure activities for wells located on federal land per a Sundry Notice, as in accordance with 19.15.17.13 Subsection J Paragraph (1) NMAC. All notices will be sent in such a way that the surface owner received notice at least 24 hours prior to the beginning of

closure activities.

- 6) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will remove all liquids, and/or sludge, to visual extents, prior to closure sampling. Material will be disposed of at Envirotech's Landfarm #2, Permit # NM-01-0011, TNT Environmental Inc. Landfarm, Permit # NM-01-0008, Industrial Ecosystems Inc. (IEI) Landfarm, Permit # NM-01-0010B or Basin Disposal, Permit # NM-01-0005, depending on the consistence of the material removed, as in accordance with 19.15.17.13 Subsection C Paragraph (1) NMAC .
- 7) Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will remove all on-site equipment associated with this earthen pit unless it is required for some other purpose, as in accordance with 19.15.17.13 Subsection C Paragraph (2) NMAC. The equipment that meets the requirements of 19.15.9.712 Subsection A NMAC and 19.15.9.712 Subsection D Paragraph (1) will be disposed of at San Juan County Regional Landfill. Waste that is classified by 19.15.9.712 Subsection D Paragraph (2) will be sampled accordingly to determine acceptance of this material at the San Juan County Regional Landfill. Waste that is unable to be accepted at the San Juan County Regional Landfill will be submitted to the OCD on a case-by-case basis in accordance with Paragraph (3) of Subsection D of 19.15.9.712.
- 8) Once the earthen pit is removed to visual extents of contamination, a five (5)-point composite sample will be collected from directly below the liner(s) or at native soil. Additional discrete samples will be collected from any area that is wet, discolored, or show other evidence of a release. All samples being collected will be analyzed for benzene, and total BTEX via USEPA Method 8021B, TPH via USEPA Method 418.1, and chlorides via USEPA 300.1, as in accordance with 19.15.17.13 Subsection C Paragraph (3) NMAC.
- 9) Depending on soil sample results the area will be either backfilled or the area will be excavated.
 - a. If soil samples do not exceed the regulatory standards of 0.2 mg/kg benzene, 50 mg/kg BTEX, 100 mg/kg TPH, and 250 mg/kg or background concentration of chlorides, as in accordance with 19.15.17.13 Subsection C Paragraph (3) NMAC.
 - i. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, shall submit a Form C-141 with the laboratory results so that the division may review the results to determine if additional delineation is required in accordance with Paragraph (4) of Subsection C of 19.15.17.13 NMAC.
 - ii. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will backfill the excavation or impacted area with non-waste containing, earthen material, in accordance with 19.15.17.13 Subsection E Paragraph (6) NMAC. A soil cover shall be installed for all backfilled excavations consisting of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater in accordance with Subsections H of 19.15.17.13 NMAC. The operator shall construct the soil cover to the site's existing grade and prevent ponding of water and erosion of the cover material.
 - iii. All areas of the well site that are no longer utilized on a day to day basis for the production of oil and/or gas, Elm Ridge Exploration, or a

contractor acting on behalf of Elm Ridge Exploration, will substantially restore, re-contour and re-vegetate the areas, in accordance with 19.15.17.13 Subsections G and I NMAC. The operator shall notify the division when it has been re-seeded and when it has achieved successful re-vegetation. For re-vegetation methods, please see attached re-vegetation plan.

- b. If soil samples exceed the regulatory standards stated above.
 - i. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, shall submit a Form C-141 with the laboratory results so that the division may review the results to determine if additional delineation is required in accordance with Paragraph (4) of Subsection C of 19.15.17.13 NMAC.
 - ii. Activities beyond this point will be in accordance with 19.15.3.116 NMAC and 19.15.11.19 NMAC.

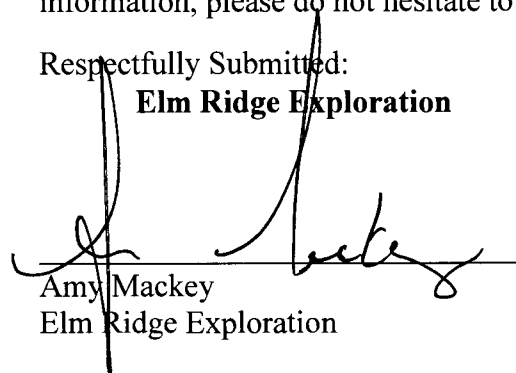
REPORTING

Elm Ridge Exploration will submit a closure report within 60 days following the earthen pit closure. The closure report will consist of a form C-144 with all supporting data and a form C-141 with all supporting data. The supporting data will include proof of closure notice to the surface owner and the OCD, confirmation sampling analytical results, a site diagram, soil backfilling and cover installation, re-vegetation rates, re-seeding techniques and site reclamation photo documentation if applicable, along with all other information related to the onsite activities.

We appreciate the opportunity to be of service. If you have any questions or require further information, please do not hesitate to contact our office at (505) 632-3476 Ext. 201.

Respectfully Submitted:

Elm Ridge Exploration



Amy Mackey
Elm Ridge Exploration

Elm Ridge Exploration

Re-Seeding Techniques and Seed Mixture Ratios

These applied practices by Elm Ridge Exploration will at a minimum comply with the New Mexico Oil Conservation Divisions rule 19.15.17.13, Subsection I NMAC Elm Ridge Exploration has adopted these re-seeding application techniques, ratios and mixtures as their standard operating procedures.

1. The first growing season after closure of a below grade tank or pit, all areas of the well site not utilized for the production of oil and/or gas on a daily basis will be re-seeded with the specified seed mixture.
2. The seed mixture used will be certified with no primary or secondary noxious weeds in seed mixtures. The seed labels from each bag shall be available for inspection while seed is being sown.
3. The operator shall accomplish seeding by drilling on the contour whenever practical or by other division-approved methods. The operator shall 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. During the two growing seasons that prove viability, there shall be no artificial irrigation of the vegetation.
4. Hand seeding with hydro-mulch, excelsior netting or mulch with netting is required on the cut/fill slopes. Mulch will be spread at a rate of 2,000-3,000 pounds per acre.
5. Compacted areas determined by visual inspection will be ripped to a depth of twelve (12) inches below ground surface and disked to a depth of six (6) inches before seeding. Seeding shall be done with a disk type drill with two (2) boxes for various seed sizes. The drill rows shall be eight (8) to ten (10) inches apart. Seed shall be planted at no less than one-half (1/2) inch deep or more than one (1) inch deep. The seeder shall be followed with a drag, packer, or roller to ensure uniform coverage of the seed and adequate compaction. Drilling shall be done on the contour where possible, but not up and down the slope.
6. Where slopes are too steep for contour drilling a hand seeder shall be used. Seed shall be covered to the depth stated above by whatever means is practical. If the seed is unable to be covered by the means listed above, the prescribed seed mixture amount will be doubled.

7. Elm Ridge Exploration shall repeat seeding or planting until it successfully achieves the required vegetative cover of 70% of the native perennial vegetation cover.
8. Upon abandonment of a well site, if the retention of the access road is not considered necessary for the management and multiple uses of the natural resources, or by the surface owner, it will be ripped a minimum of twelve (12) inches in depth. After ripping, water bars will be installed. All ripped surfaces are to be protected from vehicular travel by construction of a dead end ditch and earthen barricade at the entrance to these ripped areas. Re-seeding of areas affected by the ditch and barriers will be re-seeded if necessary.
9. Elm Ridge Exploration, or a contractor acting on behalf of Elm Ridge Exploration, will inform the division once successful re-vegetation has occurred.

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Elm Ridge Exploration	Contact: Amy Mackey
Address: PO Box 156, Bloomfield, NM 87413	Telephone No.: (505) 632-3476 Ext 201
Facility Name: Carson Unit 206	Facility Type: Gas Well

Surface Owner: Federal	Mineral Owner:	Lease No.: NM 070322
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LOCATION OF RELEASE

Unit Letter E	Section 11	Township 25N	Range 12W	Feet from the 1850	North/South Line FSL	Feet from the 790	East/West Line FWL	County San Juan
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Latitude 36.413521 Longitude -108.087250

NATURE OF RELEASE

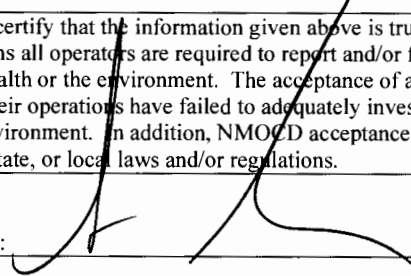
Type of Release: Produced Water	Volume of Release: Unknown	Volume Recovered: Unknown
Source of Release: Earth Pit	Date and Hour of Occurrence: Historical	Date and Hour of Discovery: NA
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Produced Water from a gas well at the mentioned location formerly discharged into an earthen pit on location. The well has been altered to no longer drain into an earthen pit, but instead into an Above Ground Storage Tank (AST).

Describe Area Affected and Cleanup Action Taken.*
From August 31, 2009 through September 1, 2009, 'Production Sludge' was removed from the earthen pit to extents of approximately 12' x 12' x 8' deep. Sludge was removed to visual extents of contamination, where confirmation samples were collected; see attached *Analytical Results*. A sample was collected at the bottom at eight (8) feet below ground surface, and a composite was collected from the four (4) walls at 12' x 12' and analyzed in the field for TPH via USEPA Method 418.1, and in Envirotech's laboratory for benzene and BTEX via USEPA Method 8021 and for total chlorides via USEPA Method 4500B. Excavation could not continue beyond 12' x 12' due to well site equipment and the edge of the well pad. The wall composite returned chloride results of 300 mg/kg above background, confirming that a release has occurred at the above mentioned site; see *Analytical Results*. Excavation could not continue due to sandstone being encountered at 8' BGS. Chloride results from the bottom of the excavation at 8' BGS was 345 mg/kg above background for this site. Please reference the attached Carson Unit 206 Closure Plan for Elm Ridge Exploration's proposed course of action concerning this release.

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

Signature: 	OIL CONSERVATION DIVISION		
Printed Name: Ms. Amy Mackey	Approved by District Supervisor:		
Title: Administrative Manager	Approval Date:	Expiration Date:	
E-mail Address: amackey1@elmridge.net	Conditions of Approval:		Attached <input type="checkbox"/>
Date: <u>10/22/09</u> Phone: 505-632-3476 Ext 201			

* Attach Additional Sheets If Necessary

RELEASE CLOSURE PLAN

SITE NAME:

**CARSON UNIT 206
UNIT LETTER E, SECTION 11, TOWNSHIP 25N, RANGE 12W
SAN JUAN COUNTY, NEW MEXICO
LATITUDE 36.413521 LONGITUDE -108.087250**

SUBMITTED TO:

**MR. BRAD JONES
NEW MEXICO OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DRIVE
SANTA FE, NEW MEXICO 87505
(505) 476-3490**

SUBMITTED BY:

**MS. AMY MACKEY
ELM RIDGE EXPLORATION
P.O. BOX 156
BLOOMFIELD, NEW MEXICO 87413
(505) 632-3476 EXT. 201**

SEPTEMBER 2009

INTRODUCTION

The purpose of this release closure plan is to provide the details of activities involved in the closure of the confirmed release from the former earthen pit located at the Carson Unit 206 well site located in Unit E, Section 11, Township 25N, Range 12W, San Juan County, New Mexico. From August 31, 2009 through September 1, 2009, 'production sludge' was removed from the former earthen pit located at the Carson Unit 206 well site. The 'production sludge' was removed to visual extents of approximately 12' x 12' x 8' below the ground surface, where sandstone was encountered. The walls of the earthen pit were excavated to extents of 12' x 12' where excavation could no longer continue due to stability issues from the onsite above ground storage tank and separator on one (1) side, and the edge of the well location on the other side. A wall composite sample was collected at these extents of excavation. Both earthen pit samples were analyzed in the field for TPH via USEPA Method 418.1 with each sample returning results below the 100 mg/kg standard required by the 'Pit Rule'. Both samples were then collected into four (4)-ounce glass jars, capped headspace free, and transported with ice under chain of custody to Envirotech's laboratory to be analyzed for benzene and BTEX via USEPA Method 8021 and for total chlorides via USEPA Method 4500B. Both samples were below the 100 mg/kg TPH standard, the 0.2 mg/kg benzene standard, the 50 mg/kg BTEX standard, but above the 250 mg/kg above background total chlorides standard. A background sample was collected at this location at approximately two (2) feet below ground surface and analyzed in Envirotech's laboratory for total chlorides via USEPA Method 4500B. The background sample returned results of 35 mg/kg total chlorides. The composite sample taken from the walls of the excavation is 345 mg/kg above the background level for chlorides for this site, and the sample collected from the sandstone bottom was 300 mg/kg above the background level for chloride for this site, confirming that a release has occurred at the Carson Unit 206 well site.

Closure Plan

Elm Ridge Exploration is proposing to close the remainder of the earthen pit in place citing precedence set forth in the New Mexico Oil and Conservation Division (NMOCD) 'Pit Rule'.

- The composite sample collected from the walls was dry, and did not contain groundwater.
- A permit submitted by Permit's West for a drill pit at the Carson Unit 10-332T well site, approved by the OCD in November of 2008, shows a groundwater elevation at this site of 6,071 feet. The Carson Unit 206 well site is located approximately 2,095 feet to the north-east of the Carson Unit 10-332T well site at an elevation of approximately 6,250 feet. These findings indicate that the depth to groundwater is over 100 feet at the Carson Unit 206 well site; see *Topographic Map*.
- The nearest surface water is approximately 480 feet to the south-west of the Carson Unit 206 well site; see *Topographic Map*.
- According to an iWATERS database search, a water wells exist within Section 11, Township 25N, Range 12W. The coordinates given for this well site place the well at Latitude 36.419222 and Longitude -105.624325, near Taos, New Mexico. Taos, New Mexico is located approximately 134 miles east from the well site. This indicates that a

clerical error occurred on the iWATERS database site when listing the range for this site. The range should read 11E. Envirotech reached this conclusion based on the fact that 22 grid section, the amount between Range 11W and 11E, measures approximately 132 miles, nearly the exact distance measured between the well site and the groundwater well as placed by its GPS coordinates. This data indicates that the groundwater well is located in Section 11, Township 25N, Range 11E, not within Section 11, Township 25N, Range 12W. This indicates that no wells exist within 1,000 feet of the Carson Unit 206 well site; see *iWATERS Database Search*.

- The Carson Unit 206 well site is not located within an area overlying a subsurface mine; see attached *Mine Map*.
- The Carson Unit 206 well site is not within 300 feet of a permanent residence, school, hospital, institution or church; see attached *Aerial Photograph*.
- The Carson Unit 206 well site is not within incorporated municipal boundaries; see attached *Topographic Map*.
- The Carson Unit 206 well site is not located within 500 feet of a wetland; see attached *Wetlands Map*.
- The Carson Unit 206 well site is not located within an unstable area. This data was obtained from frequent site visits during closure activities by Envirotech, Inc. personnel.
- The Carson Unit 206 well site is not within a 100 year flood plain; see attached *FEMA Map*.

Currently, the NMOCD allows on-site burial of drill pits that meet these criteria, outlined in 19.15.17.10 Subpart A NMAC. The chloride levels found in the earthen pit at the Carson Unit 206 well site are well below the 1,000 mg/kg chloride standard allowed for on-site burial at well sites with groundwater depths greater than 100 feet from the bottom of the drill pit based on rule 19.15.17.10 Subpart C. Elm Ridge Exploration is proposing to bury the remainder of the chlorides found at this site based on the analytical results found and the siting criteria determined for this site, which indicate that the chloride levels found at this site “do not pose a threat to present or foreseeable beneficial use of fresh waters, public health and the environment”.

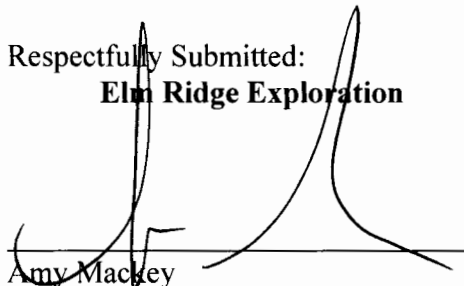
REPORTING

Elm Ridge Exploration will submit a closure report within 60 days following the earthen pit final closure. The closure report will consist of a form C-144 with all supporting data. The supporting data will include proof of closure notice to the surface owner and the OCD, confirmation sampling analytical results, a site diagram, soil backfilling and cover installation, re-vegetation rates, re-seeding techniques and site reclamation photo documentation if applicable, along with all other information related to the onsite activities.

We appreciate the opportunity to be of service. If you have any questions or require further information, please contact our office at (505) 632-3476 Ext. 201.

Respectfully Submitted:

Elm Ridge Exploration



Amy Mackey

Elm Ridge Exploration

03056-0195

PAGE NO: 1 OF 1

ENVIRONMENTAL SPECIALIST:

DATE STARTED: 8/31/09LAT: 36°25.0801

DATE FINISHED:

LONG: -108°5.2105

FIELD REPORT: BGT / PIT CLOSURE VERIFICATION

LOCATION: NAME: Carson Unit WELL #: 206 TEMP PIT: PERMANENT PIT: X BGT:LEGAL ADD: UNIT: E SEC: 11 TWP: 25N RNG: 12W PM: NMQTR/FOOTAGE: 1850' FBL to 790' FNL CNTY: San Juan ST: New MexicoEXCAVATION APPROX: 12' FT. X 12' FT. X 6' FT. DEEP CUBIC YARDAGE:DISPOSAL FACILITY: Envirotech REMEDIATION METHOD: landfarmLAND OWNER: Federal API: 30-045-25494 BGT / PIT VOLUME:CONSTRUCTION MATERIAL: Earth DOUBLE-WALLED, WITH LEAK DETECTION: N/ALOCATION APPROXIMATELY: 55' FT. 10° FROM WELLHEADDEPTH TO GROUNDWATER: 7100'

TEMPORARY PIT - GROUNDWATER 50-100 FEET DEEP

BENZENE \leq 0.2 mg/kg, BTEX \leq 50 mg/kg, GRO & DRO FRACTION (8015) \leq 500 mg/kg, TPH (418.1) \leq 2500 mg/kg, CHLORIDES \leq 500 mg/kgTEMPORARY PIT - GROUNDWATER \geq 100 FEET DEEPBENZENE \leq 0.2 mg/kg, BTEX \leq 50 mg/kg, GRO & DRO FRACTION (8015) \leq 500 mg/kg, TPH (418.1) \leq 2500 mg/kg, CHLORIDES \leq 1000 mg/kg☒ PERMANENT PIT OR BGTBENZENE \leq 0.2 mg/kg, BTEX \leq 50 mg/kg, TPH (418.1) \leq 100 mg/kg, CHLORIDES \leq 250 mg/kg

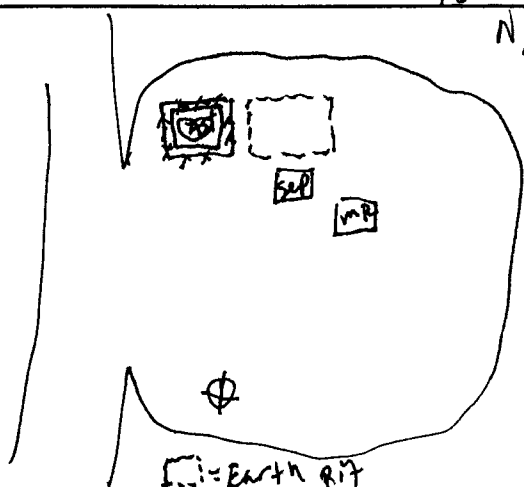
FIELD 418.1 ANALYSIS

TIME	SAMPLE I.D.	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. (mg/kg)
8:57	200 STD	-	-	-	-	-	183
10:33	Top of mud	1	5	20	4	133	532
10:55	Sludge \approx 2'	2	5	20	4	22	88
15:44	Sludge \approx 6'	3	5	20	4	02	08
		4					
		5					
		6					

PERIMETER

FIELD CHLORIDES RESULTS

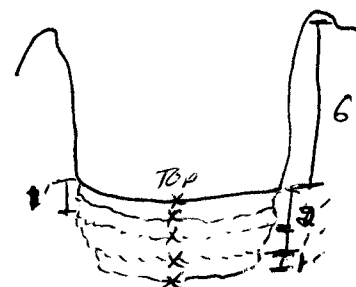
PROFILE



SAMPLE ID	READING	CALC. (mg/kg)
Sludge \approx 1'	5.8 (4)	2222
Sludge \approx 2'	7.4 (4)	595
Sludge \approx 3'	6.8	473
Sludge \approx 4'	6.6	439
Sludge \approx 6'	6.2	378

PID RESULTS

SAMPLE ID	RESULTS (ppm)
STD 100	107
Sludge \approx 6'	0.0



LAB SAMPLES

SAMPLE ID	ANALYSIS	RESULTS
	BENZENE	
	BTEX	
	GRO & DRO	
	CHLORIDES	

NOTES: Lease # NM-070322Black soil color starts at sludge \approx 2' sample. \approx 8' BGSLeaked at 15:45

WORKORDER #

WHO ORDERED

PAGE NO: 2 OF 

ENVIRONMENTAL SPECIALIST:

DATE STARTED: 9/1/09DATE FINISHED: LAT: 36° 25.0901
LONG: -108° 5.2105

FIELD REPORT: BGT / PIT CLOSURE VERIFICATION

LOCATION: NAME: Carson Unit WELL #: 206 TEMP PIT: PERMANENT PIT: X BGT:
LEGAL ADD: UNIT: E SEC: 11 TWP: 25N RNG: 12W PM: NM
QTR/FOOTAGE: 1850' FOL & 790' FUL CNTY: Santa Juan ST: New Mexico

EXCAVATION APPROX: 15 FT. X 12 FT. X 8 FT. DEEP CUBIC YARDAGE:DISPOSAL FACILITY: Envirotech REMEDIATION METHOD: LandformLAND OWNER: Federal API: 30-045-25494 BGT / PIT VOLUME:CONSTRUCTION MATERIAL: Earth DOUBLE-WALLED, WITH LEAK DETECTION: N/ALOCATION APPROXIMATELY: 55' FT. 10° FROM WELLHEADDEPTH TO GROUNDWATER: 7100'

TEMPORARY PIT - GROUNDWATER 50-100 FEET DEEP

BENZENE \leq 0.2 mg/kg, BTEX \leq 50 mg/kg, GRO & DRO FRACTION (8015) \leq 500 mg/kg, TPH (418.1) \leq 2500 mg/kg, CHLORIDES \leq 500 mg/kgTEMPORARY PIT - GROUNDWATER \geq 100 FEET DEEPBENZENE \leq 0.2 mg/kg, BTEX \leq 50 mg/kg, GRO & DRO FRACTION (8015) \leq 500 mg/kg, TPH (418.1) \leq 2500 mg/kg, CHLORIDES \leq 1000 mg/kg☒ PERMANENT PIT OR BGTBENZENE \leq 0.2 mg/kg, BTEX \leq 50 mg/kg, TPH (418.1) \leq 100 mg/kg, CHLORIDES \leq 250 mg/kg

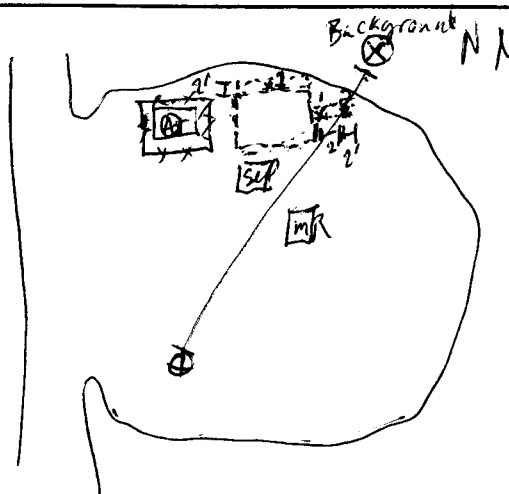
FIELD 418.1 ANALYSIS

TIME	SAMPLE ID.	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. (mg/kg)
<u>8:39</u>	<u>200 STD</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>109</u>	<u>109</u>
<u>10:30</u>	<u>Bottom</u>	<u>1</u>	<u>5</u>	<u>20</u>	<u>4</u>	<u>8</u>	<u>8</u>
<u>10:45</u>	<u>N/E Comp</u>	<u>2</u>	<u>5</u>	<u>20</u>	<u>4</u>	<u>4</u>	<u>16</u>
		<u>3</u>					
		<u>4</u>					
		<u>5</u>					
		<u>6</u>					

PERIMETER

FIELD CHLORIDES RESULTS

PROFILE

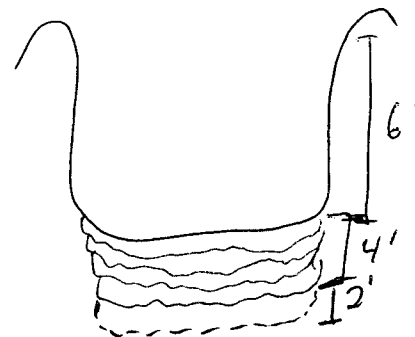


SAMPLE ID	READING	CALC. (mg/kg)
<u>walls</u>	<u>7.0 (L)</u>	<u>720</u>
<u>Background</u>	<u>1.4</u>	<u>40</u>
<u>Single 20</u>	<u>6.8</u>	<u>473</u>
<u>Wwall 1</u>	<u>7.9</u>	<u>595</u>
<u>Wwall 1</u>	<u>4.0 (H)</u>	<u>1047</u>
<u>Ewall 2</u>	<u>4.0 (H)</u>	<u>1047</u>

PID RESULTS

SAMPLE ID	RESULTS (ppm)
<u>3+ D (0)</u>	<u>104</u>
<u>Bottom</u>	<u>0.0</u>
<u>N/E Comp</u>	<u>0.0</u>

<u>Background 2</u>	<u>0.4</u>	<u>N/A</u>
<u>Wwall 2</u>	<u>7</u>	<u>510</u>



LAB SAMPLES

NOTES:

SAMPLE ID	ANALYSIS	RESULTS
	<u>BENZENE</u>	
	<u>BTEX</u>	
	<u>GRO & DRO</u>	
	<u>CHLORIDES</u>	

Abandoned for now to close later this week

WORKORDER #

WHO ORDERED



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	Elm Ridge Exploration	Project #:	03056-0195
Sample No.:	1	Date Reported:	9/16/2009
Sample ID:	Bottom Composite @ 8'	Date Sampled:	9/1/2009
Sample Matrix:	Soil	Date Analyzed:	9/1/2009
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----------	--------------------------	--------------------------

Total Petroleum Hydrocarbons	8	5.0
-------------------------------------	----------	------------

ND = Parameter not detected at the stated detection limit.


References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Carson Unit 206**

Instrument calibrated to 200 ppm standard. Zeroed before each sample


Analyst

Toni McKnight
Printed


Review

James McDaniel
Printed



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	Elm Ridge Exploration	Project #:	03056-0195
Sample No.:	2	Date Reported:	9/16/2009
Sample ID:	Wall Composite @ 12 ' x 12'	Date Sampled:	9/1/2009
Sample Matrix:	Soil	Date Analyzed:	9/1/2009
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	16	5.0

ND = Parameter not detected at the stated detection limit.

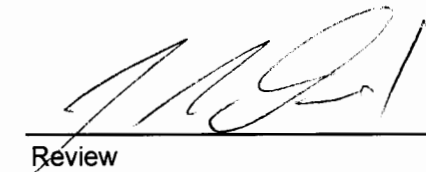
References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Carson Unit 206**

Instrument calibrated to 200 ppm standard. Zeroed before each sample


Analyst

Toni McKnight
Printed


Review

James McDaniel
Printed

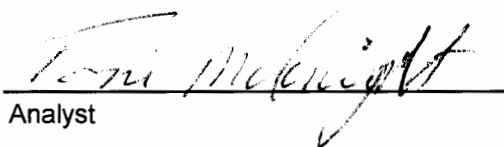


CONTINUOUS CALIBRATION
EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Cal. Date: 1-Sep-09

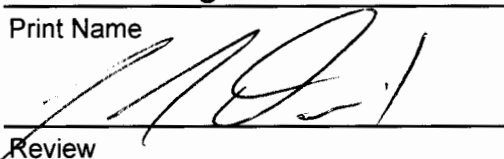
Parameter	Standard Concentration mg/L	Concentration Reading mg/L
TPH	100	189
	200	
	500	
	1000	

The accepted percent relative deviation (%RSD) of the calibration factor is less than 20% over the working range.


Analyst

9/16/09
Date

Toni McKnight
Print Name


Review

9/16/09
Date

James McDaniel
Print Name

**EPA METHOD 8021
 AROMATIC VOLATILE ORGANICS**

Client:	ElmRidge	Project #:	03056-0195
Sample ID:	N/E Wall Composite	Date Reported:	09-04-09
Laboratory Number:	51502	Date Sampled:	09-01-09
Chain of Custody:	7870	Date Received:	09-01-09
Sample Matrix:	Soil	Date Analyzed:	09-03-09
Preservative:	Cool	Date Extracted:	09-02-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	1.8	0.9
Toluene	4.4	1.0
Ethylbenzene	1.8	1.0
p,m-Xylene	4.0	1.2
o-Xylene	3.5	0.9
Total BTEX	15.5	

ND - Parameter not detected at the stated detection limit.

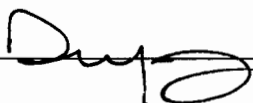
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	99.0 %
	1,4-difluorobenzene	99.0 %
	Bromochlorobenzene	99.0 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

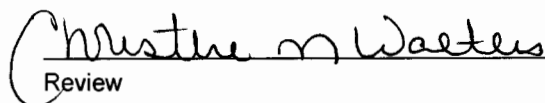
Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Earth Pit Closure / Carson Unit 206

Analyst



Review



**EPA METHOD 8021
 AROMATIC VOLATILE ORGANICS**

Client:	ElmRidge	Project #:	03056-0195
Sample ID:	Bottom	Date Reported:	09-04-09
Laboratory Number:	51503	Date Sampled:	09-01-09
Chain of Custody:	7870	Date Received:	09-01-09
Sample Matrix:	Soil	Date Analyzed:	09-03-09
Preservative:	Cool	Date Extracted:	09-02-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	1.7	0.9
Toluene	4.5	1.0
Ethylbenzene	1.0	1.0
p,m-Xylene	3.1	1.2
o-Xylene	2.4	0.9
Total BTEX	12.7	

ND - Parameter not detected at the stated detection limit.

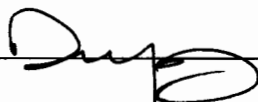
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	98.0 %
	1,4-difluorobenzene	98.0 %
	Bromochlorobenzene	98.0 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

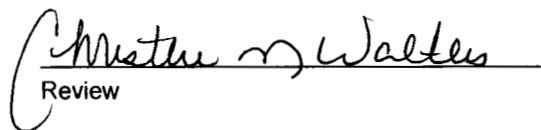
Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Earth Pit Closure / Carson Unit 206

Analyst



Review



Client:	N/A	Project #:	N/A
Sample ID:	09-03-BT QA/QC	Date Reported:	09-04-09
Laboratory Number:	51484	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	09-03-09
Condition:	N/A	Analysis:	BTEX

Compound	Conc	Range	Detect Limit
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Benzene	2.4113E+006	2.4161E+006	0.2%	ND	0.1
Toluene	2.2516E+006	2.2561E+006	0.2%	ND	0.1
Ethylbenzene	2.0113E+006	2.0153E+006	0.2%	ND	0.1
p,m-Xylene	5.2239E+006	5.2344E+006	0.2%	ND	0.1
o-Xylene	1.9453E+006	1.9492E+006	0.2%	ND	0.1

Compound	Duplicate	Sample	% Recovery	Accept Range	Detect Limit
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Benzene	16.0	15.9	0.6%	0 - 30%	0.9
Toluene	12.2	13.3	9.0%	0 - 30%	1.0
Ethylbenzene	13.1	12.7	3.1%	0 - 30%	1.0
p,m-Xylene	24.8	24.5	1.2%	0 - 30%	1.2
o-Xylene	15.7	15.4	1.9%	0 - 30%	0.9

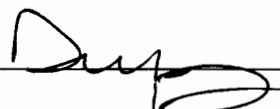
Compound	Duplicate	Sample	% Recovery	Accept Range
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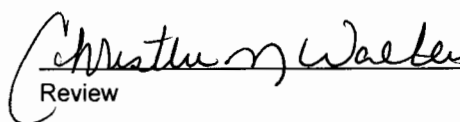
Benzene	16.0	50.0	65.5	99.2%	39 - 150
Toluene	12.2	50.0	61.3	98.6%	46 - 148
Ethylbenzene	13.1	50.0	61.6	97.6%	32 - 160
p,m-Xylene	24.8	100	127	102%	46 - 148
o-Xylene	15.7	50.0	58.7	89.3%	46 - 148

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
 Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for Samples 51484, 51499, 51502 - 51504, and 51506 - 51507.

Analyst 

Review 

Client:	Elm Ridge	Project #:	03056-0195
Sample ID:	Background	Date Reported:	09-04-09
Lab ID#:	51501	Date Sampled:	09-01-09
Sample Matrix:	Soil	Date Received:	09-01-09
Preservative:	Cool	Date Analyzed:	09-02-09
Condition:	Intact	Chain of Custody:	7870

Parameter**Concentration (mg/Kg)****Total Chloride****35**

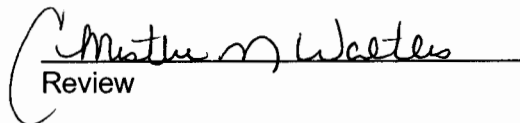
Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Earth Pit Closure / Carson Unit 206.**

Analyst



Review



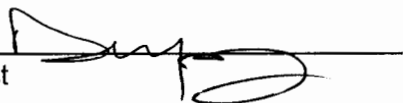
Client:	Elm Ridge	Project #:	03056-0195
Sample ID:	N/E Wall Composite	Date Reported:	09-04-09
Lab ID#:	51502	Date Sampled:	09-01-09
Sample Matrix:	Soil	Date Received:	09-01-09
Preservative:	Cool	Date Analyzed:	09-02-09
Condition:	Intact	Chain of Custody:	7870

Parameter**Concentration (mg/Kg)****Total Chloride****335**

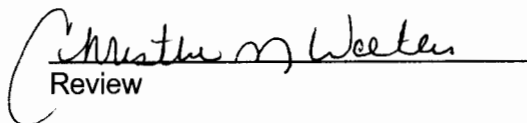
Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Earth Pit Closure / Carson Unit 206.**

Analyst



Review



Client:	Elm Ridge	Project #:	03056-0195
Sample ID:	Bottom	Date Reported:	09-04-09
Lab ID#:	51503	Date Sampled:	09-01-09
Sample Matrix:	Soil	Date Received:	09-01-09
Preservative:	Cool	Date Analyzed:	09-02-09
Condition:	Intact	Chain of Custody:	7870

Parameter**Concentration (mg/Kg)****Total Chloride****380**

Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Earth Pit Closure / Carson Unit 206.**

Analyst

Review

CHAIN OF CUSTODY RECORD

7970

Client Information				ANALYSIS / PARAMETERS																		
Client:	Project Name / Location:			Sample No./ Identification	Sample Date	Sample Time	Lab No.	Sample Matrix	No. Volume of Containers	Preservative	TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	PAH	TPH (418.1)	CHLORIDE	Date	Time
Client Address:	Sampler Name:	Client No.:																				
Elm Ridge	Earth Pit Closure / Carson Unit 206																					
	Toni Munknight																					
	03056-0195																					
Background	9/1/09	10:00	51501	Soil Solid	Sludge Aqueous	1/4oz															9/1/09	16:05
N/E Wall Composite	9/1/09	10:45	51502	Soil Solid	Sludge Aqueous	1/4oz																
Bottom	9/1/09	10:30	51503	Soil Solid	Sludge Aqueous	1/4oz																
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
Relinquished by: (Signature)	Toni Munknight																					
Relinquished by: (Signature)																						
Relinquished by: (Signature)																						



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): **BRIAN WOOD** Title: **CONSULTANT**

Signature: _____

Date: **10-12-08**

e-mail address: **brian@permitswest.com** Telephone: **(505) 466-8120**

20.

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

OCD Representative Signature: _____

Approval Date: **11-5-08**

Title: **EnviroSpec**

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: _____

Elm Ridge Exploration Company, LLC
Carson Unit 10 #332 T temporary pit
1380' FSL & 1245' FEL Sec. 10, T. 25 N., R. 12 W.
San Juan County, New Mexico
API #30-045-32994

PAGE 1

Siting Criteria

1. Ground water is >100' below the bottom of the pit. Closest reported water depth is the U. S. Department of Interior (USDI) well (Exhibit A) which is >2 miles northeast in 1-25n-12w (Exhibit B). Water depth is 210' in the 403' deep USDI well. The USDI well probably produces from the Ojo Alamo sandstone. Pit will be in the Nacimiento Formation.

6,206' graded ground
- 8' deep pit

6,281' USDI water well ground elevation
-210' depth to water

6,198' bottom of pit

6,071' water level elevation

6,198' bottom of pit
- 6,071' water level
≈127' depth to water

2. Pit is not within 300' of a continuously flowing watercourse. Pit is not within 200' of any other significant watercourse as defined by OCD. Closest first order tributary of the West Fork Gallegos Canyon is 260' north of pit (Exhibits B & C).

3. Pit is not within 300' of any building (none are within a mile) (Exhibit B).

4. Pit is not within 1,000' any fresh water well or spring (Exhibits A & B).

5. Pit is not within municipal boundaries or within a municipal fresh water well field (Exhibits A & B).

6. Pit is not within 500' of a wetland (Exhibit D).

7. Pit does not overly a mine (Exhibit E).

8. Pit is not in an unstable area. No evidence of earth movement was found



Source: Bloomfield, New Mexico 7.5 Minute U.S.G.S. Topographic Quadrangle Map
 Scale: 1:24,000 1" = 2000'

<p>Elm Ridge Exploration Carson Unit 206 Section 11, Township 25N, Range 11W San Juan County, New Mexico</p>	<p>ENVIROTECH INC. <hr/> ENVIRONMENTAL SCIENTISTS & ENGINEERS 5796 U.S. HIGHWAY 64 FARMINGTON, NEW MEXICO 87401 PHONE (505) 632-0615</p>	<p>Vicinity Map</p>	
<p>PROJECT No 03056-0195 Date Drawn: 10/15/09</p>		<p>Figure 1</p> <p>DRAWN BY: James McDaniel PROJECT MANAGER: Greg Crabtree</p>	



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

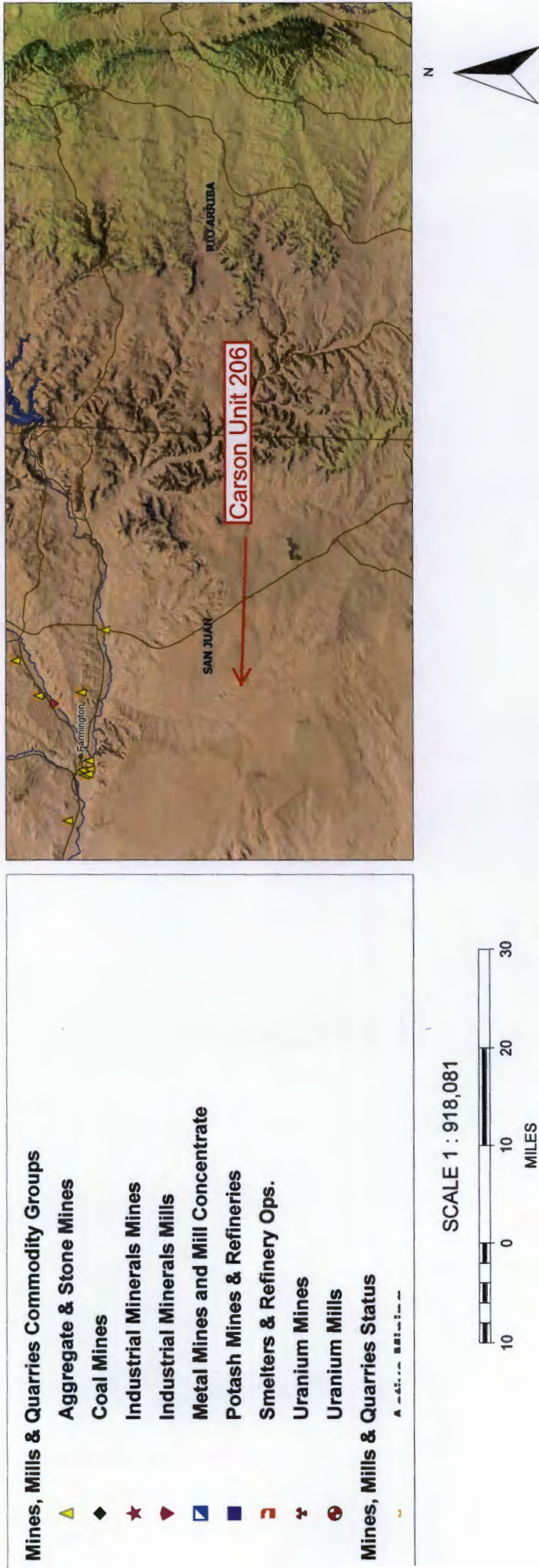
POD Number	Sub basin	Use	County	Q Q Q 64 16 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
RG 76392	DOM	TA			11	25N	12W	444030	4030629	102	19	83
											Average Depth to Water:	19 feet
											Minimum Depth:	19 feet
											Maximum Depth:	19 feet

Record Count: 1

PLSS Search:

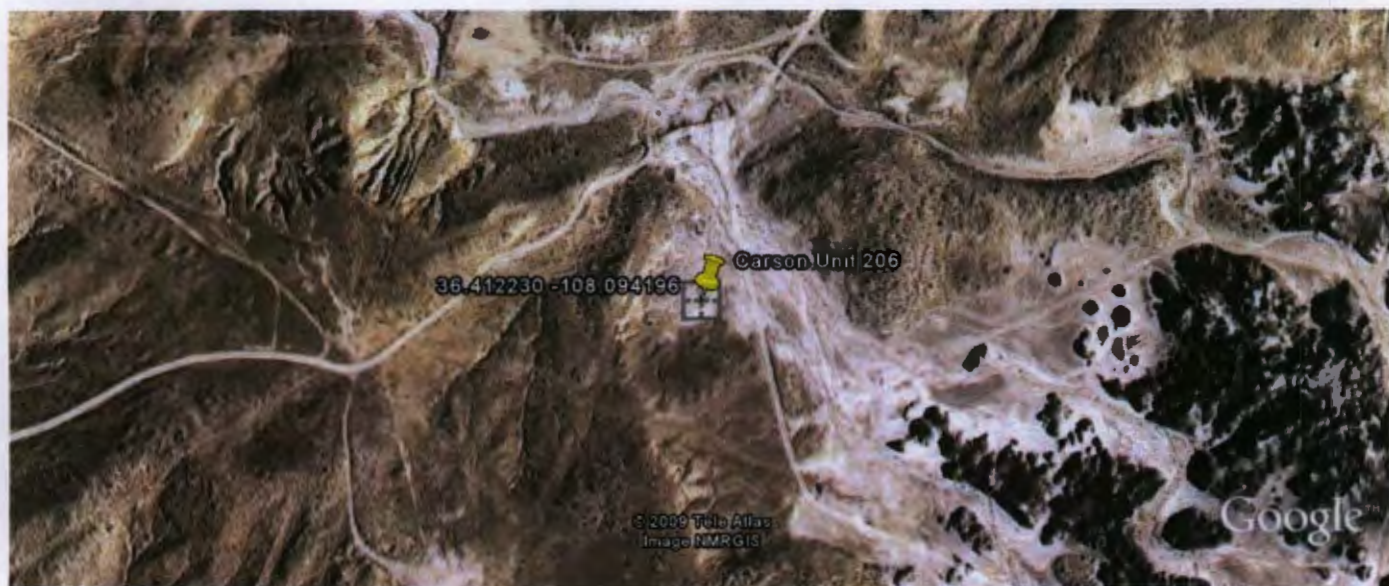
Section(s): 10, 11, 14, 15 **Township:** 25N **Range:** 12W

MMQonline Public Version





Aerial Photograph

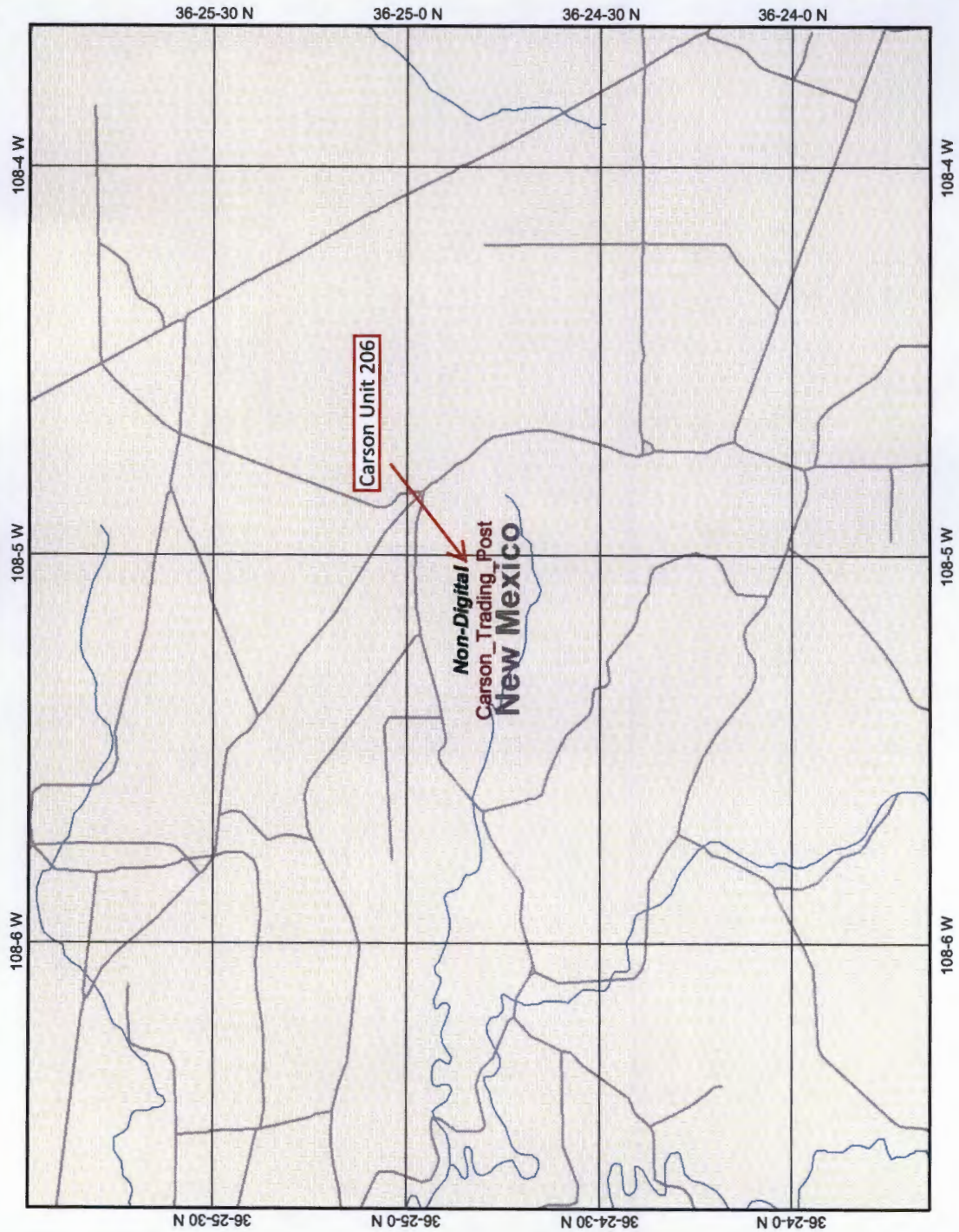


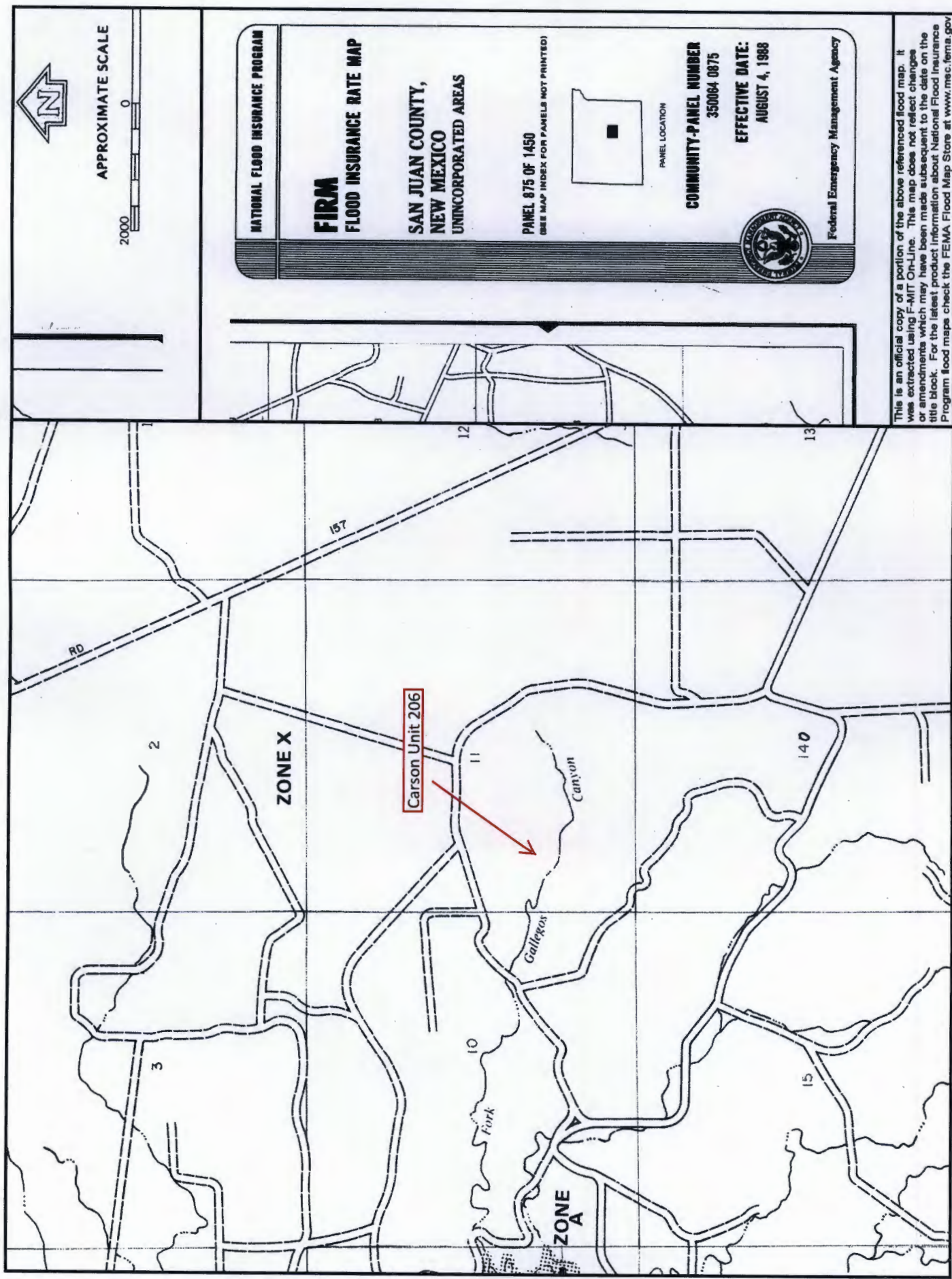
36.412230 -108.094196

Wetlands Map



- Interstate
- Major Road
- 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
- Lower 48 Available Wetland Data
- Non-Digital
- Digital
- No Data
- Scan
- NHD Streams
- Counties 100K
- States 100K
- South America
- North America





APPROXIMATE SCALE

2000
0

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

SAN JUAN COUNTY,
NEW MEXICO
UNINCORPORATED AREAS

PANEL 875 OF 1450
(SEE MAP INDEX FOR PANELS NOT PRINTED)



PANEL LOCATION

COMMUNITY-PANEL NUMBER
350064 0875

EFFECTIVE DATE:
AUGUST 4, 1988



Federal Emergency Management Agency

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.msc.fema.gov