

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.

RECEIVED

DEC - 2 2009

NMOCD ARTESIA

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

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

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

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

1.  
Operator: J.C. Williamson OGRID #: 11158  
Address: P.O. Box 16, Midland, TX 79702  
Facility or well name: Ross Draw #28  
API Number: 30-015-35865 OCD Permit Number: \_\_\_\_\_  
U/L or Qtr/Qtr N Section 26 Township 26S Range 30E County: Eddy  
Center of Proposed Design: Latitude N 32.00475° Longitude W 103.51252° NAD: ☒ 1927 ☐ 1983  
Surface Owner: ☐ Federal ☒ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.  
☒ **Pit:** Subsection F or G of 19.15.17.11 NMAC  
Temporary: ☒ Drilling ☐ Workover  
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A  
☒ Lined ☐ Unlined Liner type: Thickness 20 mil ☒ LLDPE ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_  
☒ String-Reinforced  
Liner Seams: ☒ Welded ☐ Factory ☐ Other \_\_\_\_\_ Volume: 2,000 bbl Dimensions: L 100 x W 100 x D 5

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

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



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

6.

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

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

7.

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

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

11.

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

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

12.

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

- ☐ Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 NMAC  
☐ Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC  
☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  
☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC  
☐ Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_  
☐ Previously Approved Operating and Maintenance Plan API Number: \_\_\_\_\_ (Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

13.

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

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

14.

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

- Type: ☒ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☐ Below-grade Tank ☐ Closed-loop System  
☐ Alternative  
 Proposed Closure Method: ☒ Waste Excavation and Removal  
☐ Waste Removal (Closed-loop systems only)  
☐ On-site Closure Method (Only for temporary pits and closed-loop systems)  
☐ In-place Burial ☐ On-site Trench Burial  
☐ 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.   | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells  | <input type="checkbox"/> NA                              |
| Ground water is between 50 and 100 feet below the bottom of the buried waste  | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells  | <input type="checkbox"/> NA                              |
| Ground water is more than 100 feet below the bottom of the buried waste.  | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells  | <input type="checkbox"/> NA                              |
| Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).   | <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 |
| - 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; Visual inspection (certification) of the proposed site  |  |
| 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 |
| - Written confirmation or verification from the municipality; Written approval obtained from the municipality   |  |
| Within 500 feet of a wetland.   | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site  |  |
| Within the area overlying a subsurface mine.  | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division   |  |
| Within an unstable area.  | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map   |  |
| Within a 100-year floodplain.   | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| - FEMA map  |  |

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): Joe Baccus Title: Production Foreman

Signature: \_\_\_\_\_ Date: January 1, 2009

e-mail address: mj-cmb@leaco.net Telephone: (575) 370-1551

20.

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

OCD Representative Signature: Mike Bratcher Approval Date: January 6, 2009

Title: \_\_\_\_\_ OCD Permit Number: N/A

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: 10/12/09

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 indentify 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): Matt Doffer Title: Manger of Drilling and Production

Signature: Math Doffer Date: 11-17-09

e-mail address: mdoffer@sinnaoil.com Telephone: (432) 687-6600

Accepted for record  
 NMOCD *AB*

DEC 04 2009

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	J.C. Williamson	Contact	Matt Doffer
Address	P.O. Box 16, Midland, TX 79702	Telephone No.	(432) 687-6600
Facility Name	Ross Draw #28	Facility Type	Well
Surface Owner:	State of NM	Mineral Owner:	State
		API No.	30-015-35865

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North-South Line	Feet from the	East/West Line	County
N	26	26S	30E	660	South	1980	West	Eddy

Latitude N 32.00475° Longitude W 103.51252°

**NATURE OF RELEASE**

Type of Release	Water	Volume of Release	Unknown	Volume Recovered	None
Source of Release	Well (Reserve Drilling Pit)	Date and Hour of Occurrence	Unknown	Date and Hour of Discovery	9/22/09 11:30 am
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Mike Bratcher, OCD, Artesia		
By Whom?	Cindy Crain, Ocotillo Environmental	Date and Hour	9/22/09	1445	
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.\*

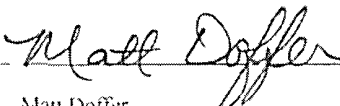
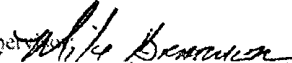
Describe Cause of Problem and Remedial Action Taken.\*

The contents of the reserve drilling pit were removed from the site and disposed at CRI Disposal facility, pursuant to an approved C144. On 9/16/09 a composite soil sample (SS-1) was collected from below the pit liner and analyzed for chloride, BTEX and TPH by Xenco Laboratories of Odessa, TX. The laboratory reported BTEX concentrations below the test method detection limit, a TPH concentration of 134 mg/kg, and a chloride concentration of 3,620 mg/kg. As per NM Rule 19.15.17, this C141 serves as notification of chloride exceeding the approved clean up concentration of 1,000 mg/kg. It is not believed that the existing chloride concentration poses any threat to groundwater, surface water or human consumption, as depth to groundwater at the site is approximately 190 feet. (Analytical Documentation is attached).

Describe Area Affected and Cleanup Action Taken \*

As the pit contents and pit liner have been disposed at CRI (Permit Number: NM-01-0006) and the soil sample from below the liner reported chloride concentrations in excess of the approved State clean up concentration, additional soil was removed from the bottom of the excavation in the SW 1/4 until laboratory samples reported chloride concentrations less than 1,000 mg/kg in all four quadrants of the bottom of the reserve pit. The pit excavation was backfilled according to the closure plan of the previously approved C144 (i.e.: to a depth of approximately one (1) foot below ground surface and compacted. One (1) foot of topsoil was placed above the compacted soil and contoured to surface grade. The entire area will be re-seeded with a native grass seed mixture.

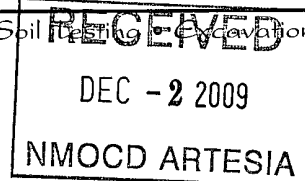
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger 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: 		<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Matt Doffer		Approved by District Supervisor Signed By 	
Title: Manager of Drilling and Production (agent for JC Williamson)		Approval Date: <b>DEC 04 2009</b>	Expiration Date: <b>N/A</b>
E-mail Address: <u>mdoffer@sianaoil.com</u>		Conditions of Approval: <b>N/A</b>	Attached <input type="checkbox"/>
Date: 12/3/09 Phone: (432) 687-6600			

\* Attach Additional Sheets If Necessary

# Ocotillo ENVIRONMENTAL

Dirt Work • On-Site Remediation • Soil Testing • Excavation



November 30, 2009

Mr. Mike Bratcher  
Oil Conservation Division  
New Mexico Energy, Minerals and Natural Resources Department  
1301 W. Grand Avenue  
Artesia, New Mexico 88210

**Re: Final C144 Closure Report,  
J.C. Williamson, Ross Draw #28  
UL-N, Sec. 26, T26S, R30E  
Eddy County, New Mexico**

Dear Mr. Bratcher:

Please find enclosed a copy of the above-referenced report. This report is submitted on behalf of J.C. Williamson, and presents the final results of pit closure activities conducted by Ocotillo Environmental, LLC. Please call Mr. Matt Doffer at (432) 687-6600 or myself at (575) 441-7244 if you have any questions or need additional information.

Sincerely,  
***Ocotillo Environmental, LLC***

A handwritten signature in cursive script that reads "Cindy K. Crain".

Cindy K. Crain, P.G.  
Environmental Manager

J.C. WILLIAMSON

ROSS DRAW #28

CLOSURE DOCUMENTATION – WASTE EXCAVATION AND REMOVAL

**Protocols and Procedures, Sampling, Disposal, Soil Backfill and Site Reclamation**

The reserve drilling pit at the J.C. Williamson, Ross Draw #28 site, was closed by waste excavation and removal methods. The bottom of the pit was at a depth of approximately seven (7) feet below ground surface. Depth to groundwater at the site is approximately 190 feet, and the surface is owned by the State of New Mexico.

The contents of the drilling pit and the pit liner were removed from the site and taken to disposal at Controlled Recovery, Inc. (CRI), Permit Number: NM-01-0006.

On September 16, 2009, a five-point composite sample (SS-1) was collected from the bottom of the pit, below the liner, and submitted to Xenco Laboratories (Xenco) in Odessa, Texas for analysis of BTEX, TPH and chlorides. Laboratory results reported a TPH concentration of 134 mg/kg, a BTEX concentration below the test method detection limits, and a chloride concentration of 3,620 mg/kg.

On September 24, 2009, the bottom of the excavation was visually divided into quadrants and soil samples were collected from each quadrant for chloride analysis in order to determine areas of high chloride concentrations. The samples were submitted to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico. Laboratory results reported chloride concentrations as follows:

SE/4	1,520 mg/kg
SW/4	4,040 mg/kg
NE/4	864 mg/kg
NW/4	1,150 mg/kg

Additional soil was excavated from the bottom of the southwest quarter (SW/4) until a hard rock surface was encountered at a depth of approximately 8 feet below ground surface. A soil sample (SW Corner) was collected from the rock surface of the SW/4 on October 1, 2009, and submitted to Cardinal for chloride analyses. The laboratory reported a chloride concentration of 784 mg/kg. Additional excavated soil was hauled to CRI for disposal. All analytical documentation from soil samples is attached to this report.

The reserve pit was backfilled to a depth of approximately one (1) foot below ground surface and compacted. One (1) foot of topsoil was placed above the compacted soil and contoured to surface grade. The entire area will be re-seeded with a native grass seed mixture (per OCD specifications).



# Analytical Report 345027

for

## Ocotillo Environmental, LLC

**Project Manager: Cindy Crain**

**J.C. Williamson Ross Draw #28**

**1007-033R**

**22-SEP-09**



**12600 West I-20 East Odessa, Texas 79765**

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)  
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)  
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)  
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87428), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)  
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),

South Carolina(96031001), Louisiana(04154), Georgia(917)



22-SEP-09

Project Manager: **Cindy Crain**  
**Ocotillo Environmental, LLC**  
P.O. Box 1816  
Hobbs, NM 88241

Reference: XENCO Report No: **345027**  
**J.C. Williamson Ross Draw #28**  
Project Address: Eddy Co., NM

**Cindy Crain:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 345027. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 345027 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

---

**Brent Barron, II**  
Odessa Laboratory Manager

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## Sample Cross Reference 345027



**Ocotillo Environmental, LLC, Hobbs, NM**

J.C. Williamson Ross Draw #28

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SS-1	S	Sep-16-09 10:15	7 - 7 ft	345027-001



## CASE NARRATIVE

**Client Name:** *Ocotillo Environmental, LLC*

**Project Name:** *J.C. Williamson Ross Draw #28*

**Project ID:** 1007-033R

**Work Order Number:** 345027

**Report Date:** 22-SEP-09

**Date Received:** 09/17/2009

---

**Sample receipt non conformances and Comments:**

None

---

**Sample receipt Non Conformances and Comments per Sample:**

None

**Analytical Non Conformances and Comments:**

Batch: LBA-772936 Inorganic Anions by EPA 300

E300

Batch 772936, Chloride RPD is outside the QC limit. This is most likely due to sample non-homogeneity.

Samples affected are: 345027-001.

Batch: LBA-772943 Percent Moisture

None

Batch: LBA-773187 TPH by SW8015 Mod

None

Batch: LBA-773228 BTEX-MTBE EPA 8021B

SW8021BM

Batch 773228, Ethylbenzene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 345027-001.

The Laboratory Control Sample for m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits

SW8021BM

Batch 773228, 4-Bromofluorobenzene recovered below QC limits Data confirmed by re-analysis.

Samples affected are: 538250-1-BLK, 345027-001.



# Certificate of Analysis Summary 345027

Ocotillo Environmental, LLC, Hobbs, NM

Project Name: J.C. Williamson Ross Draw #28



Project Id: 1007-033R

Contact: Cindy Crain

Project Location: Eddy Co., NM

Date Received in Lab: Thu Sep-17-09 02:16 pm


Report Date: 22-SEP-09

Project Manager: Brent Barron, II

<b>Analysis Requested</b>	<b>Lab Id:</b> 345027-001					
	<b>Field Id:</b> SS-1					
	<b>Depth:</b> 7-7 ft					
	<b>Matrix:</b> SOIL					
	<b>Sampled:</b> Sep-16-09 10:15					
<b>Anions by EPA 300</b>	<b>Extracted:</b>					
	<b>Analyzed:</b> Sep-17-09 17:51					
	<b>Units/RL:</b> mg/kg RL					
Chloride	3620 103					
<b>BTEX by EPA 8021B</b>	<b>Extracted:</b> Sep-18-09 15:00					
	<b>Analyzed:</b> Sep-18-09 22:44					
	<b>Units/RL:</b> mg/kg RL					
Benzene	ND 0.0010					
Toluene	ND 0.0021					
Ethylbenzene	ND 0.0010					
m,p-Xylenes	ND 0.0021					
o-Xylene	ND 0.0010					
Total Xylenes	ND 0.0010					
Total BTEX	ND 0.0010					
<b>Percent Moisture</b>	<b>Extracted:</b>					
	<b>Analyzed:</b> Sep-18-09 09:20					
	<b>Units/RL:</b> % RL					
Percent Moisture	3.14 1.00					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron, II  
Odessa Laboratory Manager



# Certificate of Analysis Summary 345027

Ocotillo Environmental, LLC, Hobbs, NM

Project Name: J.C. Williamson Ross Draw #28



Project Id: 1007-033R

Contact: Cindy Crain

Project Location: Eddy Co., NM

Date Received in Lab: Thu Sep-17-09 02:16 pm


Report Date: 22-SEP-09

Project Manager: Brent Barron, II

<b>Analysis Requested</b>	<b>Lab Id:</b>	345027-001					
	<b>Field Id:</b>	SS-1					
	<b>Depth:</b>	7-7 ft					
	<b>Matrix:</b>	WATER					
	<b>Sampled:</b>	Sep-16-09 10:15					
<b>TPH By SW8015 Mod</b>	<b>Extracted:</b>	Sep-20-09 11:09					
	<b>Analyzed:</b>	Sep-20-09 13:20					
	<b>Units/RL:</b>	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		ND 15.5					
C12-C28 Diesel Range Hydrocarbons		134 15.5					
C28-C35 Oil Range Hydrocarbons		ND 15.5					
Total TPH		134 15.5					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron, II  
Odessa Laboratory Manager



## Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- \* Outside XENCO's scope of NELAC Accreditation.

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(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



## Form 2 - Surrogate Recoveries

Project Name: J.C. Williamson Ross Draw #28

Work Orders : 345027,

Project ID: 1007-033R

Lab Batch #: 773228

Sample: 538250-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/18/09 21:30

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0319	0.0300	106	80-120	

Lab Batch #: 773228

Sample: 538250-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/18/09 21:48

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0314	0.0300	105	80-120	

Lab Batch #: 773228

Sample: 538250-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/18/09 22:26

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0280	0.0300	93	80-120	
4-Bromofluorobenzene	0.0102	0.0300	34	80-120	**

Lab Batch #: 773228

Sample: 345027-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/18/09 22:44

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0263	0.0300	88	80-120	
4-Bromofluorobenzene	0.0195	0.0300	65	80-120	**

Lab Batch #: 773228

Sample: 345027-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/19/09 05:28

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0312	0.0300	104	80-120	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.





## Form 2 - Surrogate Recoveries

Project Name: J.C. Williamson Ross Draw #28

Work Orders : 345027,

Project ID: 1007-033R

Lab Batch #: 773228

Sample: 345027-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 09/19/09 05:47

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0293	0.0300	98	80-120	
4-Bromofluorobenzene		0.0320	0.0300	107	80-120	

Lab Batch #: 773187

Sample: 538207-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/20/09 12:05

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1-Chlorooctane		91.3	100	91	70-135	
o-Terphenyl		37.2	50.0	74	70-135	

Lab Batch #: 773187

Sample: 538207-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/20/09 12:30

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1-Chlorooctane		95.2	100	95	70-135	
o-Terphenyl		39.5	50.0	79	70-135	

Lab Batch #: 773187

Sample: 538207-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 09/20/09 12:55

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1-Chlorooctane		81.3	100	81	70-135	
o-Terphenyl		42.1	50.0	84	70-135	

Lab Batch #: 773187

Sample: 345027-001 / SMP

Batch: 1 Matrix: Water

Units: mg/kg

Date Analyzed: 09/20/09 13:20

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1-Chlorooctane		85.0	99.8	85	70-135	
o-Terphenyl		43.7	49.9	88	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: J.C. Williamson Ross Draw #28

Work Orders : 345027,

Project ID: 1007-033R

Lab Batch #: 773187

Sample: 345027-001 S / MS

Batch: 1 Matrix: Water

Units: mg/kg

Date Analyzed: 09/20/09 22:01

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	44.2	50.0	88	70-135	

Lab Batch #: 773187

Sample: 345027-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/kg

Date Analyzed: 09/20/09 22:26

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.0	99.9	95	70-135	
o-Terphenyl	38.7	50.0	77	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



## Blank Spike Recovery



**Project Name: J.C. Williamson Ross Draw #28**

**Work Order #:** 345027

**Project ID:**

1007-033R

**Lab Batch #:** 772936

**Sample:** 772936-1-BKS

**Matrix:** Solid

**Date Analyzed:** 09/17/2009

**Date Prepared:** 09/17/2009

**Analyst:** LATCOR

**Reporting Units:** mg/kg

**Batch #:** 1

### BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	10.7	107	80-120	

Blank Spike Recovery [D] =  $100 * [C] / [B]$

All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit



## BS / BSD Recoveries



Project Name: J.C. Williamson Ross Draw #28

Work Order #: 345027

Analyst: ASA

Date Prepared: 09/18/2009

Project ID: 1007-033R

Date Analyzed: 09/18/2009

Lab Batch ID: 773228

Sample: 538250-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	ND	0.1000	0.0931	93	0.1	0.0898	90	4	70-130	35	
Toluene	ND	0.1000	0.0885	89	0.1	0.0850	85	4	70-130	35	
Ethylbenzene	ND	0.1000	0.0971	97	0.1	0.0914	91	6	71-129	35	
m,p-Xylenes	ND	0.2000	0.1984	99	0.2	0.1886	94	5	70-135	35	
o-Xylene	ND	0.1000	0.0945	95	0.1	0.0897	90	5	71-133	35	

Analyst: BHW

Date Prepared: 09/20/2009

Date Analyzed: 09/20/2009

Lab Batch ID: 773187

Sample: 538207-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	829	83	1000	843	84	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	944	94	1000	1010	101	7	70-135	35	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] =  $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



## Form 3 - MS Recoveries

Project Name: J.C. Williamson Ross Draw #28



Work Order #: 345027

Lab Batch #: 772936

Date Analyzed: 09/17/2009

QC- Sample ID: 345053-001 S

Reporting Units: mg/kg

Date Prepared: 09/17/2009

Batch #: 1

Project ID: 1007-033R

Analyst: LATCOR

Matrix: Soil

### MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	23.6	106	133	103	80-120	

Matrix Spike Percent Recovery [D] =  $100 \cdot (C-A)/B$

Relative Percent Difference [E] =  $200 \cdot (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



## Form 3 - MS / MSD Recoveries



Project Name: J.C. Williamson Ross Draw #28

Work Order #: 345027

Project ID: 1007-033R

Lab Batch ID: 773228

QC- Sample ID: 345027-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 09/19/2009

Date Prepared: 09/18/2009

Analyst: ASA

Reporting Units: mg/kg

### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1032	0.0865	84	0.1032	0.0835	81	4	70-130	35	
Toluene	ND	0.1032	0.0746	72	0.1032	0.0738	72	1	70-130	35	
Ethylbenzene	ND	0.1032	0.0641	62	0.1032	0.0658	64	3	71-129	35	X
m,p-Xylenes	ND	0.2065	0.1266	61	0.2065	0.1291	63	2	70-135	35	X
o-Xylene	ND	0.1032	0.0594	58	0.1032	0.0615	60	3	71-133	35	X

Lab Batch ID: 773187

QC- Sample ID: 345027-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 09/20/2009

Date Prepared: 09/20/2009

Analyst: BHW

Reporting Units: mg/kg

### MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1030	941	91	1030	869	84	8	70-135	35	
C12-C28 Diesel Range Hydrocarbons	134	1030	1210	104	1030	1130	97	7	70-135	35	

Matrix Spike Percent Recovery  $[D] = 100 * (C - A) / B$   
Relative Percent Difference  $RPD = 200 * |(C - F) / (C + F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 * (F - A) / E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
N = See Narrative, EQL = Estimated Quantitation Limit



## Sample Duplicate Recovery



**Project Name: J.C. Williamson Ross Draw #28**

**Work Order #: 345027**

**Lab Batch #: 772936**

**Date Analyzed: 09/17/2009**

**QC- Sample ID: 345053-001 D**

**Reporting Units: mg/kg**

**Date Prepared: 09/17/2009**

**Batch #: 1**

**Project ID: 1007-033R**

**Analyst: LATCOR**

**Matrix: Soil**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	23.6	13.0	58	20	F

**Lab Batch #: 772943**

**Date Analyzed: 09/18/2009**

**QC- Sample ID: 344903-003 D**

**Reporting Units: %**

**Date Prepared: 09/18/2009**

**Batch #: 1**

**Analyst: BEV**

**Matrix: Soil**

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	10.1	9.82	3	20	

Spike Relative Difference RPD  $200 * |(B-A)/(B+A)|$

All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

## Environmental Lab of Texas

### CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East  
Odessa, Texas 79765

Phone: 432-563-1800  
Fax: 432-563-1713

Project Manager. Cindy Crain

Project Name: J.C. Williamson Ross Draw #28

Company Name Ocotillo Environmental, LLC

Project #: 1007-033R

Company Address. PO Box 1818

Project Loc: Eddy Co., NM

City/State/Zip. Hobbs, NM 88241

PO #: \_\_\_\_\_

Telephone No: (575) 441-7244 Fax No: (432) 272-0304

Report Format. ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature.  e-mail: [cindy.crain@gmail.com](mailto:cindy.crain@gmail.com)

e-mail: [cindy.crain@gmail.com](mailto:cindy.crain@gmail.com)

[illegible]



Environmental Lab of Texas  
Variance/ Corrective Action Report- Sample Log-In

Client Ocotillo Env.  
Date/ Time 09/17/09 14:16  
Lab ID # 34502-7  
Initials QMA

Sample Receipt Checklist

	Yes	No	Client Initials
#1 Temperature of container/ cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	- .9 °C
#2 Shipping container in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#3 Custody Seals intact on shipping container/ cooler?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Present
#4 Custody Seals intact on sample bottles/ container?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Present
#5 Chain of Custody present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#6 Sample instructions complete of Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#7 Chain of Custody signed when relinquished/ received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#8 Chain of Custody agrees with sample label(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID written on Cont (Lid)
#9 Container label(s) legible and intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Applicable
#10 Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#11 Containers supplied by ELOT?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#12 Samples in proper container/ bottle?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#13 Samples properly preserved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#14 Sample bottles intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#15 Preservations documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#16 Containers documented on Chain of Custody?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
#17 Sufficient sample amount for indicated test(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#18 All samples received within sufficient hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Below
#19 Subcontract of sample(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Applicable
#20 VOC samples have zero headspace?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Applicable

Variance Documentation

Contact. \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken.

- Check all that Apply.
- ☐ See attached e-mail/ fax
  - ☐ Client understands and would like to proceed with analysis
  - ☐ Cooling process had begun shortly after sampling event



September 28, 2009

Cindy Crain  
Ocotillo Environmental, LLC  
P.O. Box 1816  
Hobbs, NM 88241

Re: JC Williamson Ross Draw #28

Enclosed are the results of analyses for sample number H18318, received by the laboratory on 09/24/09 at 2:17 pm.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.2	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 3 (includes Chain of Custody)

Sincerely,

Celey D. Keene  
Laboratory Director



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

ANALYTICAL RESULTS FOR  
OCOTILLO ENVIRONMENTAL  
ATTN: CINDY CRAIN  
P.O. BOX 1816  
HOBBS, NM 88241  
FAX TO: (432) 272-0304

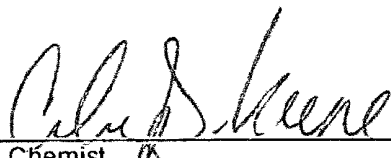
Receiving Date: 09/24/09  
Reporting Date: 09/24/09  
Project Number: NOT GIVEN  
Project Name: JC WILLIAMSON ROSS DRAW #28  
Project Location: NOT GIVEN

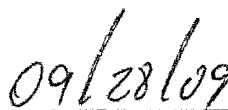
Analysis Date: 09/24/09  
Sampling Date: 09/24/09  
Sample Type: SOIL  
Sample Condition: INTACT @ 24.5°C  
Sample Received By: ML  
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl <sup>-</sup> (mg/kg)
H18318-1	S-E 1/4	1,520
H18318-2	S-W 1/4	4,040
H18318-3	N-E 1/4	864
H18318-4	N-W 1/4	1,150
Quality Control		490
True Value QC		500
% Recovery		98.0
Relative Percent Difference		2.0

METHOD: Standard Methods	4500-Cl/B
--------------------------	-----------

Note: Analyses performed on 1:4 w:v aqueous extracts.

  
Chemist

  
Date

H18318 OCO

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



**(575) 393-2326 Fax (575) 393-2476**

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Sampler Relinquished: Date: _____ Time: _____		Received By: _____ Date: _____ Time: _____		Phone Result: <input type="checkbox"/> No Fax Result: <input type="checkbox"/> No Add'l Phone #: _____ Add'l Fax #: _____ REMARKS: _____	
Relinquished By: <i>[Signature]</i> Date: <i>9/24/09</i> Time: <i>2:17</i>		Received By: <i>[Signature]</i> Date: _____ Time: _____			
Delivered By: (Circle One) Sampler - UPS - Bus - Other: _____		Temp. <i>24.5°C</i>	Sample Condition Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CHECKED BY: (Initials) <i>UCB</i>	

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.

#2C



# ARDINAL LABORATORIES

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

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October 5, 2009

Cindy Crain  
Ocotillo Environmental, LLC  
P.O. Box 1816  
Hobbs, NM 88241

Re: JC Williamson Ross Draw #28

Enclosed are the results of analyses for sample number H18372, received by the laboratory on 09/30/09 at 3:51 pm.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.2	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 3 (includes Chain of Custody)

Sincerely,

Celey D. Keene  
Laboratory Director

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This report conforms with NELAP requirements.



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

ANALYTICAL RESULTS FOR  
OCOTILLO ENVIRONMENTAL  
ATTN: CINDY CRAIN  
P.O. BOX 1816  
HOBBS, NM 88241  
FAX TO: (432) 272-0304

Receiving Date: 09/30/09  
Reporting Date: 10/01/09  
Project Number: NOT GIVEN  
Project Name: JC WILLAIMSON ROSS DRAW #28  
Project Location: NOT GIVEN

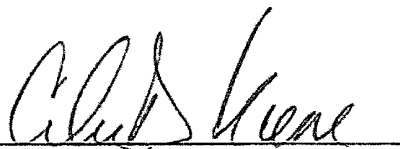
Analysis Date: 10/01/09  
Sampling Date: 09/30/09  
Sample Type: SOIL  
Sample Condition: INTACT @ 28.5°C  
Sample Received By: ML  
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl <sup>-</sup> (mg/kg)
H18372-1	SW CORNER	784
Quality Control		490
True Value QC		500
% Recovery		98.0
Relative Percent Difference		2.0

METHOD: Standard Methods

4500-Cl<sup>-</sup>B

Note: Analysis performed on a 1:4 w:v aqueous extract.

  
Chemist

  
Date

H18372 OCO

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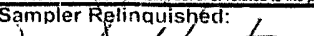

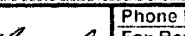


101 East Marland, Hobbs, NM 88240

**(575) 393-2326 Fax (575) 393-2476**

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Sampler Relinquished By: 		Date: <u>9/30/09</u>		Received By: 		Phone Result: <input type="checkbox"/> No Add'l Phone #: _____	
Relinquished By: _____		Time: <u>3:51</u>		Received By: _____		Fax Result: <input type="checkbox"/> No Add'l Fax #: _____	
Relinquished By: _____		Date: _____		Received By: _____		REMARKS: <u>email Cindy results</u>	
Delivered By: (Circle One) Sampler - UPS - Bus - Other: _____		Temp.: <u>28.5°C</u>		Sample Condition: Cool <input type="checkbox"/> Intact <input type="checkbox"/> <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> No		CHECKED BY: (Initials) 	

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.

#26