· · · ·				
District I 1625 N. French Dr., Hobbs, 1 <u>District II</u> 811 S. First St., Artesia, NM <u>District III</u> 1000 Rio Brazos Road, Azter <u>District IV</u> 1220 S. St. Francis Dr., Santa	NM 88240 88210 c, NM 87410 a Fe, NM 87505	State of New Mexic Energy Minerals and Natural Department Oil Conservation Divi 1220 South St. Francis Santa Fe, NM 8750	co Resources sion s Dr. 15	Form C-144 Revised June 6, 2013 For temporary pits, below-grade tanks, and multi-well fluid management pits, submit to the appropriate NMOCD District Office. For permanent pits submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.
		Pit Below-Grade Ta	nk or	
12(158	Proposed Alter	native Method Permit or	Closure P	lan Application RECEIVED
Type of 45 - 104	of action: ☐ Below ☐ Permit ☐ Closure ☐ Modifie ☐ Closure	grade tank registration of a pit or proposed alternative meth of a pit, below-grade tank, or prop cation to an existing permit/or regis plan only submitted for an existing	hod osed alternati tration g permitted or	ve method FEB 0 9 2015 non-permitted pit, below-grade tank,
or proj	posed alternative meth	bd		DISTRICT
Instruc	tions: Please submit on	e application (Form C-144) per individ	lual pit, below-	grade tank or alternative request
Please be advised that approvention of the second s	val of this request does not oval relieve the operator o	relieve the operator of liability should op f its responsibility to comply with any oth	erations result in er applicable go	n pollution of surface water, ground water or the vernmental authority's rules, regulations or ordinances.
1.		, , , , , , , , , , , , , , , , , , ,		
Operator: Williams Fou	r Corners LLC	NIL 07 ( / 0	OGRID #:	
Address: 188 County R	oad 4900, Bloomfield	NM 87413		
Facility or well name: Cr	andell SRC #2			
API Number: 30045104	+72	OCD Permit N	umber:	
U/L or Qtr/Qtr	Section 19	Township <u>31N</u> Range	e_10W	_County: San Juan
Center of Proposed Desig	n: Latitude 36.879276	Longitude1	07.928997	NAD: 1927 🔲 1983
Surface Owner: 🔳 Feder	al 🗌 State 🗌 Private 🗌	Tribal Trust or Indian Allotment		
2. Definition of the set of the	or J of 19.15.17.11 NM Workover ency Cavitation F Liner type: Thickness Factory Other	AC &A [] Multi-Well Fluid Management mil [] LLDPE [] HDPE [ Volume:	t Lo PVC Ot	ow Chloride Drilling Fluid 🗌 yes 🗌 no her Dimensions: L x W x D
3. Below-grade tank: Volume: 45 BBL Tank Construction materi Secondary containme Visible sidewalls and Liner type: Thickness	Subsection I of 19.15.17 bbl Type of fl al: Steel ent with leak detection [ l liner ] Visible sidew mil	11 NMAC         uid:       Produced Water         Visible sidewalls, liner, 6-inch lift ar         alls only       Other         visible sidewalls         HDPE       PVC         PVC       Other	nd automatic ov and double-	verflow shut-off bottom
4.				
Submittal of an exception	request is required. Ex	ceptions must be submitted to the Santa	Fe Environme	ntal Bureau office for consideration of approval.
<ul> <li>5.</li> <li>Fencing: Subsection D of Chain link, six feet in <i>institution or church</i>)</li> <li>Four foot height, four</li> <li>Alternate. Please spece</li> </ul>	of 19.15.17.11 NMAC (A) height, two strands of ba strands of barbed wire ev cify	pplies to permanent pits, temporary pits rbed wire at top (Required if located wi renly spaced between one and four feet	s, and below-gr thin 1000 feet c	rade tanks) of a permanent residence, school, hospital,

1		
	<ul> <li>6.</li> <li><u>Netting</u>: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)</li> <li>Screen Netting Other</li> <li>Monthly inspections (If netting or screening is not physically feasible)</li> </ul>	
	<ul> <li>7.</li> <li>Signs: Subsection C of 19.15.17.11 NMAC</li> <li>12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers</li> <li>Signed in compliance with 19.15.16.8 NMAC</li> </ul>	
	<ul> <li>8.</li> <li><u>Variances and Exceptions:</u> Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.</li> <li><i>Please check a box if one or more of the following is requested, if not leave blank:</i> <ul> <li>Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.</li> <li>Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.</li> </ul> </li> </ul>	
	9. <u>Siting Criteria (regarding permitting)</u> : 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of accept material are provided below. Siting criteria does not apply to drying pads or above-grade tanks.	ptable source
	General siting	
	Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No
	Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit. NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No
	<ul> <li>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. (Does not apply to below grade tanks)</li> <li>Written confirmation or verification from the municipality; Written approval obtained from the municipality</li> </ul>	🗌 Yes 🗌 No
	<ul> <li>Within the area overlying a subsurface mine. (Does not apply to below grade tanks)</li> <li>Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division</li> </ul>	Yes No
	<ul> <li>Within an unstable area. (Does not apply to below grade tanks)</li> <li>Engineering measures incorporated into the design; NM Bureau of Geology &amp; Mineral Resources; USGS; NM Geological Society; Topographic map</li> </ul>	🗌 Yes 🗌 No
	<ul> <li>Within a 100-year floodplain. (Does not apply to below grade tanks)</li> <li>FEMA map</li> </ul>	🗌 Yes 🗌 No
	Below Grade Tanks	
	<ul> <li>Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark).</li> <li>Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	🗌 Yes 🗌 No
	<ul> <li>Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;.</li> <li>NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site</li> </ul>	🗌 Yes 🗌 No
	Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)	
	Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.)	🗌 Yes 🗌 No

Topographic map; Visual inspection (certification) of the proposed site

Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial Yes No application.

Visual inspection (certification) of the proposed site; Aerial photo; Satellite image -

Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

Yes No

i i i i i i i i i i i i i i i i i i i	
Within 100 feet of a wetland.         -       US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	Yes No
Temporary Pit Non-low chloride drilling fluid	
<ul> <li>Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).</li> <li>Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	□ Yes □ No
<ul> <li>Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</li> <li>Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>	Yes No
<ul> <li>Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application;</li> <li>NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site</li> </ul>	🗌 Yes 🗌 No
<ul> <li>Within 300 feet of a wetland.</li> <li>US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	Yes No
Permanent Pit or Multi-Well Fluid Management Pit	
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa	
<ul> <li>- Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	🗌 Yes 🗌 No
<ul> <li>Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</li> <li>Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>	Yes No
Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application	
- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	Yes No
<ul> <li>Within 500 feet of a wetland.</li> <li>US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	🗌 Yes 🗌 No
<ul> <li>10.</li> <li><u>Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist</u>: Subsection B of 19.15.17.9 N <i>Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do attached.</i></li> <li><u>Hydrogeologic Report (Below-grade Tanks)</u> - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC</li> </ul>	NMAC cuments are
<ul> <li>Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9</li> <li>Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC</li> <li>Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC</li> <li>Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC</li> <li>Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19</li> </ul>	9 NMAC .15.17.9 NMAC
and 19.15.17.13 NMAC  Previously Approved Design (attach copy of design) API Number: or Permit Number:	
II.       Multi-Well Fluid Management Pit 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 do attached.         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         A List of wells with approved application for permit to drill associated with the pit.         Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19 and 19.15.17.13 NMAC         Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.10 NMAC         Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC	ocuments are 9.15.17.9 NMAC
Previously Approved Design (attach copy of design) API Number: or Permit Number:	

12. <u>Permanent Pits Permit Application Checklist:</u> <i>Instructions: Each of the following items must</i>	Subsection B of 19.15.17.9 NMAC be attached to the application. Please indicate, by a check mark in the	e box, that the docur	nents are
Hydrogeologic Report - based upon the rec     Siting Criteria Compliance Demonstration     Climatelogical Factors Assessment	quirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC s - based upon the appropriate requirements of 19.15.17.10 NMAC		
<ul> <li>Certified Engineering Design Plans - based</li> <li>Dike Protection and Structural Integrity Do</li> <li>Look Detection Design - based upon the gradering based upon the grader</li></ul>	d upon the appropriate requirements of 19.15.17.11 NMAC esign - based upon the appropriate requirements of 19.15.17.11 NMAC		
Leak Detection Design - based upon the ap     Liner Specifications and Compatibility As     Quality Control/Quality Assurance Constr	sessment - based upon the appropriate requirements of 19.15.17.11 NMAC uction and Installation Plan	AC	
Operating and Maintenance Plan - based u     Freeboard and Overtopping Prevention Pla     Nuisance or Hazardous Odors, including F	pon the appropriate requirements of 19.15.17.12 NMAC in - based upon the appropriate requirements of 19.15.17.11 NMAC $I_2S$ , Prevention Plan		
<ul> <li>Emergency Response Plan</li> <li>Oil Field Waste Stream Characterization</li> <li>Monitoring and Inspection Plan</li> </ul>			
<ul> <li>Erosion Control Plan</li> <li>Closure Plan - based upon the appropriate</li> </ul>	requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 N	MAC	
13. <u>Proposed Closure</u> : 19.15.17.13 NMAC Instructions: Please complete the applicable bo	xes, Boxes 14 through 18, in regards to the proposed closure plan.		
Type: Drilling Workover Emergency	Cavitation P&A Permanent Pit Below-grade Tank	] Multi-well Fluid M	lanagement Pit
Proposed Closure Method: Waste Excavatio Waste Removal	n and Removal (Closed-loop systems only)		
On-site Closure I	Method (Only for temporary pits and closed-loop systems) ace Burial  On-site Trench Burial		
Alternative Close	ure Method		
waste Excavation and Removal Closure Plan.         closure plan.       Please indicate, by a check mark if         Protocols and Procedures - based upon the         Confirmation Sampling Plan (if applicable         Disposal Facility Name and Permit Numbe         Soil Backfill and Cover Design Specificati         Re-vegetation Plan - based upon the appro         Site Reclamation Plan - based upon the appro	<b>Checkins:</b> (19.15.17.13 NMAC) <i>Instructions: Each of the following</i> in the box, that the documents are attached. appropriate requirements of 19.15.17.13 NMAC ) - based upon the appropriate requirements of Subsection C of 19.15.1 er (for liquids, drilling fluids and drill cuttings) ions - based upon the appropriate requirements of Subsection H of 19.15 priate requirements of Subsection H of 19.15.17.13 NMAC propriate requirements of Subsection H of 19.15.17.13 NMAC	7.13 NMAC 5.17.13 NMAC	
<sup>15.</sup> <u>Siting Criteria (regarding on-site closure meth</u> <i>Instructions: Each siting criteria requires a den</i> <i>provided below. Requests regarding changes to</i> 19.15.17.10 NMAC for guidance.	nods only): 19.15.17.10 NMAC monstration of compliance in the closure plan. Recommendations of certain siting criteria require justifications and/or demonstrations of	acceptable source ma equivalency. Please	aterial are refer to
Ground water is less than 25 feet below the botto - NM Office of the State Engineer - iWAT	m of the buried waste. ERS database search; USGS; Data obtained from nearby wells		Yes 🗌 No NA
Ground water is between 25-50 feet below the be - NM Office of the State Engineer - iWAT	ottom of the buried waste ERS database search; USGS; Data obtained from nearby wells		Yes 🗌 No NA
Ground water is more than 100 feet below the bo - NM Office of the State Engineer - iWAT	ttom of the buried waste. ERS database search; USGS; Data obtained from nearby wells		Yes 🗌 No NA
Within 100 feet of a continuously flowing water lake (measured from the ordinary high-water man - Topographic map; Visual inspection (cer	course, or 200 feet of any other significant watercourse, lakebed, sinkho rk). tification) of the proposed site	le, or playa	Yes 🗌 No
Within 300 feet from a permanent residence, scho - Visual inspection (certification) of the pr	ool, hospital, institution, or church in existence at the time of initial app oposed site; Aerial photo; Satellite image	lication.	Yes 🗌 No
Within 300 horizontal feet of a private, domestic at the time of initial application. - NM Office of the State Engineer - iWAT	fresh water well or spring used for domestic or stock watering purposes ERS database; Visual inspection (certification) of the proposed site	s, in existence	Yes 🗌 No
Written confirmation or verification from the mu	nicipality; Written approval obtained from the municipality		Yes 🗌 No
Within 300 feet of a wetland. US Fish and Wildlife Wetland Identification map	o; Topographic map; Visual inspection (certification) of the proposed sit	te 🗌	Yes 🗌 No
Within incorporated municipal boundaries or wit	hin a defined municipal fresh water well field covered under a municipa	al ordinance	
Form C-144	Oil Conservation Division	Page 4 of 6	

* x *	
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
<ul> <li>Within the area overlying a subsurface mine.</li> <li>Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division</li> </ul>	Yes No
<ul> <li>Within an unstable area.</li> <li>Engineering measures incorporated into the design; NM Bureau of Geology &amp; Mineral Resources; USGS; NM Geological Society: Topographic map</li> </ul>	
Within a 100-year floodplain.	Yes No
- FEMA map	
On-Site Closure Plan Checklist:       (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure p 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 E of 19.15.17.13 NMAC         Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K of 19.15.17         Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.13 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 19.15.17.13 NMAC         Usate Material Sampling Plan - based upon the appropriate requirements 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 canter 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 H of 19.15.17.13 NMAC         Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC	Ian. Please indicate, 2.11 NMAC 2.15.17.11 NMAC not be achieved)
17.     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 be     Name (Print):     Title:	lief.
Signature: Date:	
e-mail address:	
18.       OCD Approval:       Permit Application (including closure plan)       Image: Closure Plan (only)       OCD Conditions (see attachment)         OCD Representative Signature:	2/15
<ul> <li>19.</li> <li><u>Closure Report (required within 60 days of closure completion)</u>: 19.15.17.13 NMAC</li> <li>Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not section of the form until an approved closure plan has been obtained and the closure activities have been completed.</li> <li>Closure Completion Date: 12/22/2014</li> </ul>	g the closure report. t complete this
<ul> <li>20.</li> <li>Closure Method:</li> <li>Waste Excavation and Removal On-Site Closure Method Alternative Closure Method Waste Removal (Closed- If different from approved plan, please explain.</li> </ul>	loop systems only)
<ul> <li>21. <u>Closure Report Attachment Checklist</u>: <i>Instructions: Each of the following items must be attached to the closure report. Please i</i> <i>mark in the box, that the documents are attached.</i> <ul> <li>Proof of Closure Notice (surface owner and division)</li> <li>Proof of Deed Notice (required for on-site closure for private land only)</li> <li>Plot Plan (for on-site closures and temporary pits)</li> <li>Confirmation Sampling Analytical Results (if applicable)</li> <li>Waste Material Sampling Analytical Results (required for on-site closure)</li> <li>Disposal Facility Name and Permit Number</li> <li>Soil Backfilling and Cover Installation</li> <li>Re-vegetation Application Rates and Seeding Technique</li> <li>Site Reclamation (Photo Documentation)</li> </ul> </li> </ul>	ndicate, by a check
On-site Closure Location: Latitude Longitude NAD: 192	7 🗌 1983

### 22. Operator Closure Certification:

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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): Kelsey Christiansen	Title: Environmental Specialist
Signature: Lelan Muna	Date: 2/5/15
e-mail address: kelsey.christiansen@williams.com	Telephone: 505-632-4606



Williams Four Corners, LLC Below Grade Tank Closure Report Location Name: Crandell SRC #2 API Number: 3004510472

The following provides information related to the retirement and closure of the below grate tank (BGT) at the named location. All work was performed in accordance with Rule 19.15.17.13 NMAC and was consistent with the Williams BGT Closure Plan approved by NMOCD.

Requirement: Provide notices to NMOCD and landowner prior to closure actions.

<u>Action:</u> Notification made to landowner by mail and to NMOCD Aztec District Office by either mail (included with C-144) or by email.

**Requirement:** Eliminate discharge to BGT and remove free-standing liquids from BGT and or containment.

<u>Action</u>: Discharge to the BGT was eliminated and liquids, when present, were removed by a licensed hauler and taken to a NMOCD-permitted facility listed in the aforementioned closure plan.

Requirement: Remove ancillary equipment including piping, liner material, and fencing.

Action: Not required since one new BGT was installed to replace the BGT.

Requirement: Sample and test soils beneath the BGT to determine if there was hydrocarbon impact.

<u>Action:</u> Soils were sampled and analyzed for TPH, BTEX and chlorides. Results are attached to the C-144 Closure Form and are part of the closure documentation.

**Requirement:** Address contamination consistent with the Closure Plan or Remedial Action Plan/Protocol.

Action: Limited contaminated soil was encountered during the BGT, therefore removal was not required.

**Requirement:** Backfill containment/excavation with acceptably clean materials and return area to grade such that ponding and erosion are mitigated.

<u>Action:</u> Clean soil (as defined) was used to return the BGT area to grade and was contoured/leveled consistent with the Pit Rule criteria.

Requirement: Reclaim and re-seed the area consistent with the Pit Rule and Closure Plan criteria.

<u>Action</u>: This requirement was not completed as the BGT was located on an active right-of-way (ROW). As stated in the approved plan, this requirement is deferred pending further well production and/or subsequent actions of the leaseholder and will be addressed when the well site is reclaimed.

Any additional work performed and not described herein was completed consistent with the BGT Closure Plan and/or applicable NMOCD requirements. Further information is provided in the C-144 Closure Form as specified in the Pit Rule.

From:	Christiansen, Kelsey
To:	"Smith, Cory, EMNRD"; Ketcham, Shari
Cc:	Jackson, Barbara L; "morgankillion@yahoo.com"; Ruybalid, Tristen; Webre, Matt
Subject:	Notice of BGT Removal - Crandell SRC #2
Date:	Wednesday, December 17, 2014 3:29:00 PM
Attachments:	image001.png

Hello Shari and Cory,

Pursuant to the requirements of the New Mexico Oil Conservation District (OCD), Williams hereby provides notice of the intent to remove a 45 bbl Produced Water Below Grade Tank (BGT) at the following location:

Crandell SRC #2 API No. 30-045-10472 Unit M, Section 19, Township 31N, Range 10W

The closure plan was approved by OCD on December 10, 2014 and will be utilizing the most stringent standards as indicated by the <50 feet ROW, of Table 1 in 19.15.17.13 NMAC.

BGT removal is schedule to begin on Monday, December 22, 2014.

Please contact me if you have any questions regarding the proposed BGT removal and/or schedule.



Kelsey Christiansen | Environmental Specialist, Environmental Services - FCA | Operational Excellence | Williams O: 505-632-4606 | C: 505-215-7433 kelsey.christiansen@williams.com

"Achieving environmental excellence through stewardship, common sense, and innovation for our company, customers and communities."



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: <u>www.hallenvironmental.com</u>

December 29, 2014

Kelsey Christiansen Williams Field Services 188 Co. Rd 4900 Bloomfield, NM 87413 TEL: (505) 632-4442 FAX

RE: Crandle SRC #2 Pit Closure

OrderNo.: 1412A64

Dear Kelsey Christiansen:

Hall Environmental Analysis Laboratory received 1 sample(s) on 12/23/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

ander

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

### **Analytical Report** Lab Order 1412A64 Date Reported: 12/29/2014

### Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Williams Field Services

Project: Crandle SRC #2 Pit Closure

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Client Sample ID: Crandle SRC 2 Pit Closure Collection Date: 12/22/2014 9:50:00 AM Received Date: 12/23/2014 7:15:00 AM

Lab ID: 1412A64-001	Matrix: SOIL			<b>Received Date:</b> 12/23/2014 7:15:00 AM				
Analyses	Result	RL	Qual U	J <b>nits</b>	DF	Date Analyzed	Batch	
EPA METHOD 8015D: DIESEL RANGE OF	RGANICS					Analys	BCN	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/24/2014 11:13:39 A	M 16977	
Surr: DNOP	75.6	63.5-128		%REC	1	12/24/2014 11:13:39 A	M 16977	
EPA METHOD 8015D: GASOLINE RANGE	E					Analys	NSB	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/24/2014 3:33:03 PM	16984	
Surr: BFB	93.6	80-120		%REC	1	12/24/2014 3:33:03 PM	16984	
EPA METHOD 8021B: VOLATILES						Analys	NSB	
Benzene	ND	0.050		mg/Kg	1	12/24/2014 3:33:03 PM	16984	
Toluene	ND	0.050		mg/Kg	1	12/24/2014 3:33:03 PM	16984	
Ethylbenzene	ND	0.050		mg/Kg	1	12/24/2014 3:33:03 PM	16984	
Xylenes, Total	ND	0.099		mg/Kg	1	12/24/2014 3:33:03 PM	16984	
Surr: 4-Bromofluorobenzene	98.8	80-120		%REC	1	12/24/2014 3:33:03 PM	16984	
EPA METHOD 300.0: ANIONS						Analys	: Igp	
Chloride	ND	30	i i	mg/Kg	20	12/24/2014 11:09:53 A	M 16997	
EPA METHOD 418.1: TPH						Analysi	WL	
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	12/24/2014 12:00:00 P	M 16976	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Metho	od Blank
	E Value above quantitation range		Н	Holding times for preparation or analysis	s exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit	Page 1 of 8
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2.	rage 1 01 6
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
	S	Spike Recovery outside accepted recovery limits			

## QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

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Client: Williams Field Services

chent.	Williams I feld Services				
Project:	Crandle SRC #2 Pit Closure				

Sample ID MB-16997	SampType: MB	LK	Test	Code: EF	PA Method	300.0: Anion	S		
Client ID: PBS	Batch ID: 169	97	R	unNo: 23	3387				
Prep Date: 12/24/2014	Analysis Date: 12	/24/2014	S	eqNo: 69	90942	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND 1.5								
Sample ID LCS-16997	SampType: LCS	S	Test	Code: EF	PA Method	300.0: Anion	s		
Sample ID LCS-16997 Client ID: LCSS	SampType: LCS Batch ID: 169	S 197	Test R	Code: EF	PA Method 3387	300.0: Anion	S		2
Sample ID LCS-16997 Client ID: LCSS Prep Date: 12/24/2014	SampType: LCS Batch ID: 169 Analysis Date: 12	S 997 /24/2014	Test R S	Code: EF unNo: 23	PA Method 3387 90943	300.0: Anion Units: mg/K	s		3
Sample ID LCS-16997 Client ID: LCSS Prep Date: 12/24/2014 Analyte	SampType: LCS Batch ID: 169 Analysis Date: 12 Result PQL	S 997 /24/2014 SPK value	Test R S SPK Ref Val	Code: EF unNo: 23 eqNo: 69 %REC	PA Method 3387 90943 LowLimit	300.0: Anion Units: mg/K HighLimit	s g %RPD	RPDLimit	Qual

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1412A64

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Client: Project:	Willia Crand	ms Field Services le SRC #2 Pit Closure	e						
Sample ID	MB-16976	SampType: MB	LK	Test	Code: EF	PA Method	418.1: TPH		
Client ID:	PBS Batch ID: 16976 RunNo:				unNo: 2	3342			
Prep Date:	12/23/2014	Analysis Date: 12	/24/2014	S	eqNo: 68	89793	Units: mg/M	٢g	
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit
Petroleum Hyd	rocarbons, TR	ND 20							
Sample ID	LCS-16976	SampType: LC	S	Test	Code: EF	PA Method	418.1: TPH		
Client ID:	LCSS	Batch ID: 169	976	R	unNo: 2	3342			
Prep Date:	12/23/2014	Analysis Date: 12	/24/2014	S	eqNo: 6	89952	Units: mg/k	٢g	
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit

Petroleum Hydrocarbons, TR	110	20	100.0	0	107	80	120			
Sample ID LCSD-16976	SampTy	pe: LC	SD	Tes	tCode: El					
Client ID: LCSS02	Batch	ID: 16	976	F	RunNo: 2	3342				
Prep Date: 12/23/2014	Analysis Date: 12/24/2014 SeqNo: 689953						Units: mg/l	۲g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	110	20	100.0	0	113	80	120	5.49	20	

### Qualifiers:

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- E Value above quantitation range
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- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

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# QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client:	William	s Field Serv	ices								
Project:	Crandle	SRC #2 Pit	Closur	e							
Sample ID	MB-16977	SampT	ype: ME	3LK	Test	tCode: El	PA Method	8015D: Diese	el Range C	Organics	
Client ID:	PBS	Batch	1D: 16	977	R	aunNo: 2	3339				
Prep Date:	12/23/2014	Analysis D	ate: 12	2/24/2014	S	eqNo: 6	89714	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Surr: DNOP	Organics (DRO)	ND 6.6	10	10.00		65.9	63.5	128			
Sample ID	LCS-16977	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015D: Diese	el Range C	Drganics	
Client ID:	LCSS	Batch	ID: 16	977	R	unNo: 2	3339				
Prep Date:	12/23/2014	Analysis D	ate: 12	2/24/2014	S	eqNo: 6	89827	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range	Organics (DRO)	39	10	50.00	0	78.2	67.8	130			
Surr: DNOP		3.6		5.000		72.6	63.5	128			
Sample ID	1412A64-001AM	S SampT	ype: <b>MS</b>	6	Tes	tCode: El	PA Method	8015D: Diese	el Range C	Organics	
Client ID:	Crandle SRC 2 F	rit C Batch	ID: 16	977	R	aunNo: 2	3339				
Prep Date:	12/23/2014	Analysis D	ate: 12	2/24/2014	S	eqNo: 6	90850	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range	Organics (DRO)	39	9.9	49.55	0	78.8	29.2	176			
Surr: DNOP		4.2		4.955		84.3	63.5	128			
Sample ID	1412A64-001AM	SD SampT	ype: MS	SD	Test	tCode: El	PA Method	8015D: Diese	el Range C	Organics	
Client ID:	Crandle SRC 2 F	it C Batch	ID: 16	977	R	anNo: 2	3339				
Prep Date:	12/23/2014	Analysis D	ate: 12	2/24/2014	S	eqNo: 6	90851	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range (	Organics (DRO)	43	10	50.15	0	86.1	29.2	176	10.0	23	
Surr: DNOP		4.5		5.015		89.4	63.5	128	0	0	

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
  - P Sample pH greater than 2.
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1412A64

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Client: Project:	Williams Crandle	SRC #2 Pit Close	ure							
Sample ID	MB-16984	SampType: I	IBLK	Tes	tCode: EF	PA Method	8015D: Gaso	line Rang	e	
Client ID:	PBS	Batch ID: 1	6984	R	unNo: 23	3357				
Prep Date:	12/23/2014	Analysis Date:	12/24/2014	S	eqNo: 69	90715	Units: mg/M	(g		
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang Surr: BFB	e Organics (GRO)	ND 5. 920	0 1000		92.0	80	120			
Sample ID	LCS-16984	SampType: L	CS	Tes	tCode: EF	A Method	8015D: Gaso	line Rang	e	
Client ID:	LCSS	Batch ID: 1	6984	F	RunNo: 23	3357				
Prep Date:	12/23/2014	Analysis Date:	12/24/2014	S	SeqNo: 69	90716	Units: mg/k	(g		
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	23 5.	0 25.00	0	90.8	65.8	139			
Surr: BFB		980	1000		98.0	80	120			
Sample ID	1412A64-001AMS	SampType: I	//S	Tes	tCode: EF	PA Method	8015D: Gaso	line Rang	e	
Client ID:	Crandle SRC 2 P	it C Batch ID: 1	6984	F	RunNo: 23	3357				
Prep Date:	12/23/2014	Analysis Date:	12/24/2014	5	SeqNo: 69	90722	Units: mg/k	(g		
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	25 5.	0 24.78	0	101	47.9	144			
Surr: BFB		1000	991.1		103	80	120			
Sample ID	1412A64-001AMS	D SampType: I	MSD	Tes	tCode: EF	PA Method	8015D: Gaso	oline Rang	e	
Client ID:	Crandle SRC 2 P	it C Batch ID:	6984	F	RunNo: 2	3357				
Prep Date:	12/23/2014	Analysis Date:	12/24/2014	S	SeqNo: 6	90723	Units: mg/k	٢g		
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	ge Organics (GRO)	21 5.	0 24.80	0	82.8	47.9	144	20.1	29.9	
Surr: BFB		1000	992.1		102	80	120	0	0	
Sample ID	MB-16944	SampType: I	MBLK	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID:	PBS	Batch ID:	6944	F	RunNo: 2	3357				
Prep Date:	12/22/2014	Analysis Date:	12/25/2014	5	SeqNo: 6	90724	Units: %RE	C		
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		940	1000	_	94.2	80	120			
Sample ID	LCS-16944	SampType: I	LCS	Tes	tCode: El	PA Method	8015D: Gase	oline Rang	e	
Client ID:	LCSS	Batch ID:	16944	F	RunNo: 2	3357				
Prep Date:	12/22/2014	Analysis Date:	12/24/2014		SeqNo: 6	90725	Units: %RE	C		
Analyte		Result PQI	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB		1000	1000		103	80	120			

### Qualifiers:

- Value exceeds Maximum Contaminant Level. \*
- Value above quantitation range Е
- Analyte detected below quantitation limits J
- RSD is greater than RSDlimit 0
- RPD outside accepted recovery limits R
- Spike Recovery outside accepted recovery limits S
- Analyte detected in the associated Method Blank В
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Р Sample pH greater than 2.

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- RL Reporting Detection Limit

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### Hall Environmental Analysis Laboratory, Inc.

Client: Williams Field Services

Project:	Crandle	SRC	#2	Pit	Closure	
			_			

Sample ID LCSD-16944	SampType: LCSD	TestCode: EPA Method	8015D: Gasoline Rang	e	
Client ID: LCSS02	Batch ID: 16944	RunNo: 23357			
Prep Date: 12/22/2014	Analysis Date: 12/24/201	SeqNo: 690726	Units: %REC		
Analyte	Result PQL SPK va	ue SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit	Qual
Surr: BFB	1000		0	0	

### Qualifiers:

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- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
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- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

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Hall	Environmental	Analysis	Laboratory,	Inc.
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Client: Williams Field Services

Project: Crandle SRC #2 Pit Closure

Sample ID	MB-16984	SampType: MBLK TestCode: EPA Method 8021B: Volatiles									
Client ID:	PBS	Batc	h ID: 16	984	F	RunNo: 2	3357				
Prep Date:	12/23/2014	Analysis [	Date: 12	2/24/2014	5	SeqNo: 6	90734	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		ND	0.050								
Toluene		ND	0.050								
Ethylbenzene		ND	0.050								
Xylenes, Total		ND	0.10								
Surr: 4-Bror	nofluorobenzene	0.97		1.000		96.9	80	120			
Sample ID	Sample ID LCS-16984 SampType: LCS					tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	LCSS	Batc	h ID: 16	984	F	RunNo: 2	3357				
Prep Date:	12/23/2014	Analysis [	Date: 12	2/24/2014	S	SeqNo: 6	90735	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		0.96	0.050	1.000	0	96.4	80	120			
Toluene		0.93	0.050	1.000	0	93.2	80	120			
Ethylbenzene		0.94	0.050	1.000	0	94.4	80	120			
Xylenes, Total		2.8	0.10	3.000	0	92.5	80	120			
Surr: 4-Bror	nofluorobenzene	1.0		1.000		105	80	120			
Sample ID	1412A64-001AMS	S Samp	Type: MS	3	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Sample ID Client ID:	1412A64-001AMS Crandle SRC 2 P	S Samp <sup>-</sup>	Type: <b>MS</b> h ID: <b>16</b>	984	Tes	tCode: El	PA Method 3357	8021B: Vola	tiles		
Sample ID Client ID: Prep Date:	1412A64-001AMS Crandle SRC 2 P 12/23/2014	S Samp <sup>-</sup> <b>it C</b> Batc Analysis [	Type: MS h ID: 16 Date: 12	3 984 2/24/2014	Tes F	stCode: El RunNo: 2 SeqNo: 6	PA Method 3357 90744	8021B: Vola Units: mg/ł	tiles <g< td=""><td></td><td></td></g<>		
Sample ID Client ID: Prep Date: Analyte	1412A64-001AMS Crandle SRC 2 P 12/23/2014	S Samp <sup>-</sup> Pit C Batc Analysis I Result	Type: MS h ID: 16 Date: 12 PQL	984 2/24/2014 SPK value	Tes F SPK Ref Val	tCode: El RunNo: 2 SeqNo: 6 %REC	PA Method 3357 90744 LowLimit	8021B: Vola Units: mg/ł HighLimit	tiles (g %RPD	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene	1412A64-001AMS Crandle SRC 2 P 12/23/2014	S Samp <sup>-</sup> Fit C Batc Analysis [ Result 0.98	Type: MS h ID: 16 Date: 12 PQL 0.050	984 2/24/2014 SPK value 0.9911	Tes F SPK Ref Val 0	stCode: El RunNo: 2 SeqNo: 6 %REC 99.0	PA Method 3357 90744 LowLimit 69.2	8021B: Vola Units: mg/k HighLimit 126	tiles (g %RPD	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene	1412A64-001AMS Crandle SRC 2 P 12/23/2014	S Samp Pit C Batc Analysis I Result 0.98 1.0	Type: MS h ID: 16 Date: 12 PQL 0.050 0.050	984 2/24/2014 SPK value 0.9911 0.9911	Tes F SPK Ref Val 0 0.007823	stCode: El RunNo: 2 SeqNo: 6 %REC 99.0 100	PA Method 3357 90744 LowLimit 69.2 65.6	8021B: Vola Units: mg/ł HighLimit 126 128	tiles (g %RPD	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene	1412A64-001AMS Crandle SRC 2 P 12/23/2014	S Samp it C Batc Analysis I Result 0.98 1.0 1.0	Type: MS h ID: 16 Date: 12 PQL 0.050 0.050 0.050	5 984 2/24/2014 SPK value 0.9911 0.9911 0.9911	Tes F SPK Ref Val 0 0.007823 0	tCode: El RunNo: 2 SeqNo: 6 %REC 99.0 100 104	PA Method 3357 90744 LowLimit 69.2 65.6 65.5	8021B: Vola Units: mg/k HighLimit 126 128 138	tiles (g %RPD	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total	1412A64-001AMS Crandle SRC 2 P 12/23/2014	5 Samp <sup>-</sup> it C Batc Analysis I Result 0.98 1.0 1.0 3.0	Type: MS h ID: 16 Date: 12 PQL 0.050 0.050 0.050 0.099	5 984 2/24/2014 SPK value 0.9911 0.9911 0.9911 2.973	Tes F SPK Ref Val 0 0.007823 0 0.01223	tCode: El RunNo: 2 SeqNo: 6 %REC 99.0 100 104 101	PA Method 3357 90744 LowLimit 69.2 65.6 65.5 63	8021B: Vola Units: mg/k HighLimit 126 128 138 139	tiles <g %RPD</g 	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bror	1412A64-001AMS Crandle SRC 2 P 12/23/2014	5 Samp it C Batc Analysis I Result 0.98 1.0 1.0 3.0 1.0	Type: MS h ID: 16 Date: 12 0.050 0.050 0.050 0.050 0.099	5 984 2/24/2014 0.9911 0.9911 0.9911 2.973 0.9911	Tes F SPK Ref Val 0 0.007823 0 0.01223	tCode: El RunNo: 2 SeqNo: 6 %REC 99.0 100 104 101 106	PA Method 3357 90744 LowLimit 69.2 65.6 65.5 63 80	8021B: Vola Units: mg/ł HighLimit 126 128 138 139 120	tiles (g %RPD	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bror Sample ID	1412A64-001AMS Crandle SRC 2 P 12/23/2014 nofluorobenzene 1412A64-001AMS	S Samp it C Batc Analysis I Result 0.98 1.0 1.0 3.0 1.0 SD Samp	Type: <b>MS</b> h ID: <b>16</b> Date: <b>12</b> 0.050 0.050 0.050 0.099	3 984 2/24/2014 0.9911 0.9911 0.9911 2.973 0.9911	Tes F SPK Ref Val 0 0.007823 0 0.01223 Tes	tCode: El RunNo: 2 SeqNo: 6 %REC 99.0 100 104 101 106 stCode: El	PA Method 3357 90744 LowLimit 69.2 65.6 65.5 63 80 PA Method	8021B: Vola Units: mg/ł HighLimit 126 128 138 139 120 8021B: Vola	tiles (g %RPD	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bror Sample ID Client ID:	1412A64-001AMS Crandle SRC 2 P 12/23/2014 nofluorobenzene 1412A64-001AMS Crandle SRC 2 P	S         Samp           it C         Batc           Analysis I         Result           0.98         1.0           1.0         3.0           1.0         SD	Type: <b>MS</b> h ID: <b>16</b> Date: <b>12</b> 0.050 0.050 0.050 0.099 Type: <b>MS</b> h ID: <b>16</b>	3 984 2/24/2014 0.9911 0.9911 0.9911 2.973 0.9911 5D 984	Tes F SPK Ref Val 0 0.007823 0 0.01223 Tes F	tCode: El RunNo: 2: SeqNo: 6 %REC 99.0 100 104 101 106 stCode: El RunNo: 2	PA Method 3357 90744 LowLimit 69.2 65.6 65.5 63 80 PA Method 3357	8021B: Vola Units: mg/ł HighLimit 126 128 138 139 120 8021B: Vola	tiles <g %RPD tiles</g 	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bror Sample ID Client ID: Prep Date:	1412A64-001AMS Crandle SRC 2 P 12/23/2014 nofluorobenzene 1412A64-001AMS Crandle SRC 2 P 12/23/2014	S Samp it C Batc Analysis I Result 0.98 1.0 1.0 3.0 1.0 SD Samp Pit C Batc Analysis I	Type: MS h ID: 16 Date: 12 0.050 0.050 0.050 0.050 0.099 Type: MS h ID: 16 Date: 12	3 984 2/24/2014 0.9911 0.9911 0.9911 2.973 0.9911 3D 984 2/24/2014	Tes F SPK Ref Val 0 0.007823 0 0.01223 Tes F S	tCode: El RunNo: 2 SeqNo: 6 %REC 99.0 100 104 101 106 stCode: El RunNo: 2 SeqNo: 6	PA Method 3357 90744 LowLimit 69.2 65.6 65.5 63 80 PA Method 3357 90746	8021B: Vola Units: mg/ł HighLimit 126 128 138 139 120 8021B: Vola Units: mg/ł	tiles <g %RPD tiles <g< td=""><td>RPDLimit</td><td>Qual</td></g<></g 	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bror Sample ID Client ID: Prep Date: Analyte	1412A64-001AMS Crandle SRC 2 P 12/23/2014 nofluorobenzene 1412A64-001AMS Crandle SRC 2 P 12/23/2014	<ul> <li>Samp</li> <li>it C Batc</li> <li>Analysis I</li> <li>0.98</li> <li>1.0</li> <li>1.0</li> <li>3.0</li> <li>1.0</li> <li>SD Samp</li> <li>Pit C Batc</li> <li>Analysis I</li> <li>Result</li> </ul>	Type: MS h ID: 16 Date: 12 0.050 0.050 0.050 0.050 0.099 Type: MS h ID: 16 Date: 12 PQL	3 984 2/24/2014 SPK value 0.9911 0.9911 2.973 0.9911 5D 984 2/24/2014 SPK value	Tes F SPK Ref Val 0 0.007823 0 0.01223 Tes F SPK Ref Val	tCode: El RunNo: 2 SeqNo: 6 %REC 99.0 100 104 101 106 stCode: El RunNo: 2 SeqNo: 6 %REC	PA Method 3357 90744 LowLimit 69.2 65.6 65.5 63 80 PA Method 3357 90746 LowLimit	8021B: Vola Units: mg/ł HighLimit 126 128 138 139 120 8021B: Vola Units: mg/ł HighLimit	tiles <g %RPD tiles <g %RPD</g </g 	RPDLimit	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bror Sample ID Client ID: Prep Date: Analyte Benzene	1412A64-001AMS Crandle SRC 2 P 12/23/2014 nofluorobenzene 1412A64-001AMS Crandle SRC 2 P 12/23/2014	S         Samp           it C         Batc           Analysis I         0.98           0.98         1.0           1.0         3.0           1.0         3.0           5D         Samp           Pit C         Batc           Result         1.0           1.0         1.0	Type: MS h ID: 16 Date: 12 0.050 0.050 0.050 0.099 Type: MS ch ID: 16 Date: 12 PQL 0.050	3 984 2/24/2014 SPK value 0.9911 0.9911 2.973 0.9911 30 984 2/24/2014 SPK value 0.9921	Tes F SPK Ref Val 0 0.007823 0 0.01223 Tes SPK Ref Val 0	stCode: El RunNo: 2 SeqNo: 6 %REC 99.0 100 104 101 106 stCode: El RunNo: 2 SeqNo: 6 %REC 105	PA Method 3357 90744 LowLimit 69.2 65.6 65.5 63 80 PA Method 3357 90746 LowLimit 69.2	8021B: Vola Units: mg/ł HighLimit 126 128 138 139 120 8021B: Vola Units: mg/ł HighLimit 126	tiles <g %RPD tiles <g %RPD 5.68</g </g 	RPDLimit RPDLimit 18.5	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bror Sample ID Client ID: Prep Date: Analyte Benzene Toluene	1412A64-001AMS Crandle SRC 2 P 12/23/2014 nofluorobenzene 1412A64-001AMS Crandle SRC 2 P 12/23/2014	S         Samp           it C         Batc           Analysis I         0.98           0.98         1.0           1.0         3.0           1.0         3.0           5D         Samp <sup>-</sup> SD         Samp <sup>-</sup> Analysis I         Analysis I           Result         1.0           1.0         3.0           1.0         1.0	Type: MS h ID: 16 Date: 12 PQL 0.050 0.050 0.050 0.099 Type: MS h ID: 16 Date: 12 PQL 0.050 0.050	3 984 2/24/2014 SPK value 0.9911 0.9911 2.973 0.9911 3D 984 2/24/2014 SPK value 0.9921 0.9921	Tes F SPK Ref Val 0 0.007823 0 0.01223 Tes F SPK Ref Val 0 0.007823	stCode: El RunNo: 2 SeqNo: 6 %REC 99.0 100 104 101 106 stCode: El RunNo: 2 SeqNo: 6 %REC 105 105	PA Method 3357 90744 LowLimit 69.2 65.6 65.5 63 80 PA Method 3357 90746 LowLimit 69.2 65.6	8021B: Vola Units: mg/k HighLimit 126 128 138 139 120 8021B: Vola Units: mg/k HighLimit 126 128	tiles (g %RPD tiles (g %RPD 5.68 4.44	RPDLimit RPDLimit 18.5 20.6	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bror Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene	1412A64-001AMS Crandle SRC 2 P 12/23/2014 nofluorobenzene 1412A64-001AMS Crandle SRC 2 P 12/23/2014	S         Samp           it C         Batc           Analysis I         0.98           0.98         1.0           1.0         3.0           1.0         3.0           1.0         1.0           SD         Samp'           Vit C         Batc           Analysis I         Result           1.0         1.0           1.1         1.0	Type: MS h ID: 16 Date: 12 PQL 0.050 0.050 0.050 0.099 Type: MS h ID: 16 Date: 12 PQL 0.050 0.050 0.050	3 984 2/24/2014 SPK value 0.9911 0.9911 2.973 0.9911 30 984 2/24/2014 SPK value 0.9921 0.9921 0.9921 0.9921	Tes F SPK Ref Val 0 0.007823 0 0.01223 Tes F SPK Ref Val 0 0.007823 0	tCode: El RunNo: 2 SeqNo: 6 %REC 99.0 100 104 101 106 stCode: El RunNo: 2 SeqNo: 6 %REC 105 105 105	PA Method 3357 90744 LowLimit 69.2 65.6 65.5 63 80 PA Method 3357 90746 LowLimit 69.2 65.6 65.5	8021B: Vola Units: mg/k HighLimit 126 128 138 139 120 8021B: Vola Units: mg/k HighLimit 126 128 138	tiles (g %RPD tiles (g %RPD 5.68 4.44 4.63	RPDLimit RPDLimit 18.5 20.6 20.1	Qual
Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bror Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total	1412A64-001AMS Crandle SRC 2 P 12/23/2014 1412A64-001AMS Crandle SRC 2 P 12/23/2014	S         Samp           it C         Batc           Analysis I         0.98           0.98         1.0           1.0         3.0           1.0         SD           SD         Samp           Vit C         Batc           Result         1.0           1.0         1.0           1.0         1.0           1.0         1.0           1.1         3.2	Type: MS h ID: 16 Date: 12 0.050 0.050 0.050 0.050 0.099 Type: MS h ID: 16 Date: 12 PQL 0.050 0.050 0.050 0.050 0.050 0.050	3 984 2/24/2014 SPK value 0.9911 0.9911 2.973 0.9911 3D 984 2/24/2014 SPK value 0.9921 0.9921 0.9921 2.976	Tes SPK Ref Val 0 0.007823 0 0.01223 Tes SPK Ref Val 0 0.007823 0 0.007823 0 0.007823 0 0.01223	tCode: El RunNo: 2 SeqNo: 6 %REC 99.0 100 104 101 106 stCode: El RunNo: 2 SeqNo: 6 %REC 105 105 109 106	PA Method 3357 90744 LowLimit 69.2 65.6 65.5 63 80 PA Method 3357 90746 LowLimit 69.2 65.6 65.5 63	8021B: Vola Units: mg/k HighLimit 126 128 138 139 120 8021B: Vola Units: mg/k HighLimit 126 128 138 138 139	tiles (g %RPD tiles (g %RPD 5.68 4.44 4.63 4.36	RPDLimit RPDLimit 18.5 20.6 20.1 21.1	Qual

### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

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Client: Project:	William Crandle	ms Field Services le SRC #2 Pit Closure														
Sample ID	MB-16944	SampTy	pe: MI	BLK	Test	tCode: El	PA Method	Method 8021B: Volatiles								
Client ID:	PBS	Batch ID: 16944			R	unNo: 2	3357									
Prep Date:	12/22/2014	Analysis Date: 12/25/2014 SeqNo: 690754					Units: %RE	C								
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual					
Surr: 4-Bron	nofluorobenzene	1.0		1.000		100	80	120								
Sample ID	LCS-16944	SampTy	pe: LC	S	Test	tCode: El	PA Method	8021B: Vola	tiles							
Sample ID Client ID:	LCS-16944 LCSS	SampTy Batch	pe: LC	S 944	Test R	tCode: El tunNo: 2	PA Method 3357	8021B: Vola	tiles							
Sample ID Client ID: Prep Date:	LCS-16944 LCSS 12/22/2014	SampTy Batch Analysis Da	rpe: LC ID: 16 te: 12	S 944 2/24/2014	Test R S	tCode: El tunNo: 2 SeqNo: 6	PA Method 3357 90755	8021B: Vola Units: %RE	tiles :C							
Sample ID Client ID: Prep Date: Analyte	LCS-16944 LCSS 12/22/2014	SampTy Batch Analysis Da Result	rpe: LC ID: 16 Ite: 12 PQL	<b>944</b> 2/24/2014 SPK value	Tesi R S SPK Ref Val	tCode: El RunNo: 2 SeqNo: 6 %REC	PA Method 3357 90755 LowLimit	8021B: Vola Units: %RE HighLimit	tiles C %RPD	RPDLimit	Qual					
Sample ID Client ID: Prep Date: Analyte Surr: 4-Bron	LCS-16944 LCSS 12/22/2014	SampTy Batch Analysis Da Result 1.1	rpe: LC ID: 16 Ite: 1: PQL	S 944 2/24/2014 SPK value 1.000	Tesi R SPK Ref Val	tCode: El RunNo: 2 SeqNo: 6 %REC 106	PA Method 3357 90755 LowLimit 80	8021B: Vola Units: %RE HighLimit 120	tiles C %RPD	RPDLimit	Qual					
Sample ID Client ID: Prep Date: Analyte Surr: 4-Bron Sample ID	LCS-16944 LCSS 12/22/2014 nofluorobenzene LCSD-16944	SampTy Batch Analysis Da Result 1.1 SampTy	pe: LC ID: 16 Ite: 1: PQL pe: LC	S 944 2/24/2014 SPK value 1.000 CSD	Test R SPK Ref Val Test	tCode: El RunNo: 2 BeqNo: 6 %REC 106 tCode: El	PA Method 3357 90755 LowLimit 80 PA Method	8021B: Vola Units: %RE HighLimit 120 8021B: Vola	tiles C %RPD tiles	RPDLimit	Qual					
Sample ID Client ID: Prep Date: Analyte Surr: 4-Bron Sample ID Client ID:	LCS-16944 LCSS 12/22/2014 nofluorobenzene LCSD-16944 LCSS02	SampTy Batch Analysis Da Result 1.1 SampTy Batch	pe: LC ID: 16 Ite: 1; PQL pe: LC ID: 16	S 944 2/24/2014 SPK value 1.000 CSD 944	Test R SPK Ref Val Test R	Code: El RunNo: 2 GeqNo: 6 %REC 106 Code: El RunNo: 2	PA Method 3357 90755 LowLimit 80 PA Method 3357	8021B: Vola Units: %RE HighLimit 120 8021B: Vola	tiles C %RPD tiles	RPDLimit	Qual					

%REC

106

LowLimit

80

HighLimit

120

%RPD

0

**RPDLimit** 

Qual

SPK value SPK Ref Val

1.000

Hall Environmental Analysis Laboratory, Inc.

Result

1.1

PQL

Qualifiers:

Analyte

Surr: 4-Bromofluorobenzene

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

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WO#: 1412A64

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Albi TEL: 505-345-3975 Website: www.ha	Analysis Laborato 4901 Hawkins I uquerque, NM 871 FAX: 505-345-41 illenvironmental.co	NE 09 <b>Samp</b> 07	ble Log-In Check List							
Client Name: WILLIAMS FIELD SERVI	Work Order Number	1412A64		RcptNo: 1							
Received by/date: AT 12/2 3	114										
Logged By: Anne Thorne	12/23/2014 7:15:00 AM	M	anne Ham	-							
Completed By: Anne Thorne	12/23/2014		ann Am								
Reviewed By:	12/23/14										
Chain of Custody											
1. Custody seals intact on sample bottles?		Yes	No 🗌	Not Present 🗹							
2. Is Chain of Custody complete?		Yes 🔽	No 🗔	Not Present							
3. How was the sample delivered?		Courier									
Log In											
4. Was an attempt made to cool the samples	?	Yes 🗹	No 🗌								
5. Were all samples received at a temperatur	e of >0° C to 6.0°C	Yes 🗹	No 🗌								
6. Sample(s) in proper container(s)?		Yes 🗹	No 🗌								
7. Sufficient sample volume for indicated test	(s)?	Yes 🖌	No 🗌								
8. Are samples (except VOA and ONG) prope	rly preserved?	Yes 🗹	No 🗌								
9. Was preservative added to bottles?		Yes	No 🗹	NA 🗀							
10.VOA vials have zero headspace?		Yes 🗌	No 🗌	No VOA Vials 🗹							
11. Were any sample containers received brok	ten?	Yes	No 🗹	# of preserved							
		Yes M		bottles checked							
(Note discrepancies on chain of custody)		res 💌		(<2 or >12 unless note	ed)						
13. Are matrices correctly identified on Chain of	f Custody?	Yes 🗹	No 🗌	Adjusted?							
14. Is it clear what analyses were requested?		Yes 🗹	No 🗌								
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No 🗌	Checked by:							
Special Handling (if applicable)											
16. Was client notified of all discrepancies with	this order?	Yes	No 🗌	NA 🗹							
Person Notified:	Date										
By Whom:	Via:	eMail 🗌 Pl	hone 🗌 Fax	In Person							
Regarding:											
Client Instructions:											
17. Additional remarks:											
18. <u>Cooler Information</u> Cooler No   Temp °C   Condition   3 1 1.8 Good Y	Seal Intact Seal No	Seal Date	Signed By								
Page 1 of 1	<u></u>			·· <u>···································</u>							

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C	hain	-of-Cu	istody Record	Turn-Around	Inne.						1.1				\/T		BI		BIT	A I	•
Client:	WFS			D Standard	□ Rush										IC I		BO	R	ATC	R)	e
				Project Name	9:								halle			tal c	om				1
Mailing	Address	: 188	CR 4900	1 YUNA	110 50	II 2	4/06		400	01 LJ	owki			Albur			MR	7100			
2100	- E'-		n 07413	Project #:	1 CANC	-2 11	1 9400		490		5-34	5_30	75	Fa		ue, N	_410	7 103			
Bhono	H. Sac	- 701	7/122	Kelsey christicnsent.				Analysis Request													
email	Fav# /	· 2/3	- 1935	Project Manager:					2	6											
	Dackage:	CBETTO	COM					121)	on	Æ			-	0	B's lo						
□ Stan	dard		Level 4 (Full Validation)					8(	Gas	0			IMS		D D						
Accredi	tation			Sampler: Mp	read Ki	lion		₩ I	H	DR	_	=	70 S		082						
	NELAP     Other      EDD (Type)			On Ice:	Yes	□ No		F +	F +	20 20	18.	64	82		3°1 8		A)				or N
	(Type)			Sample Temperature: 7.0			峀	BE	<u>(G</u>	od 4	od 5	0 or	etals	side:	A	1-10	Se			Z	
				Containen	Desservetive			T.	M	15B	leth	leth	831	N N	estic	2	em	5			ples
Date	Time	Matrix	Sample Request ID	Type and #	Type	HEA	L No.	×	×	1 80	N)	S S	H's (	RA		OB	0 (S	4			Bub
						1412	A1,4	BTE	BTE	TPH	TP	ED	PA	RC	808	826	827	V			Air
12/24/19	09:50	50:1	Crandle SRC 2 Pit closer	1-402	ICC		100	Х		×	×							X			
							nia, no b., . An manufactura									1					+
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																					T
Date:	Time:	Relinquish	ed by:	Received by:	. )	Date	Time	Ren	narks	s:											
422/19	1010	guorg	Killion	Moster	salte	1/22/1	¥ 1010	1													
Date:	Time:	Relinquish	ed by:	Received by:	7	Date	Time	1													
12/12/14 1815 Master Upoters >			hm -	212/2	1715																
1-1-1	f necessary,	samples sub	mitted to Hall Environmental may be subo	contracted to other a	ccredited laboratorie	es. This serves	as notice of this	possil	bility.	Any su	b-cont	racted	data w	ill be cl	early no	tated o	n the a	analytic	al report		
		$\cup$																			

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