District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

# 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 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 Fc Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

	Pit, Below-Grade Tank, or	RECEIVED By kcollins at 8:43 am, Apr 05, 2016
Proposed Alternat	ive Method Permit or Closure Plan Application	1
Type of action:  Below grade  Permit of a  Closure of a  Modification		
7 153 6ab - No Arros I - Arro II	olication (Form C-144) per individual pit, below-grade tank or alternativ	ve reauest
Please be advised that approval of this request does not relieve environment. Nor does approval relieve the operator of its re-	ve the operator of liability should operations result in pollution of surface wat esponsibility to comply with any other applicable governmental authority's ru	er, ground water or the
Operator:Burlington Resources Oil & Gas Company	v LP OGRID#: 14538	BGT CLOSED
Address: PO BOX 4289, Farmington, NM 87499	<u>,, br</u>	PRIOR TO
Facility or well name: HALE 351		CLOSURE PLAN
SAMPLE MANAGEMENT STATE OF THE SAMPLE	OCD Permit Number:	APPROVAL
	34 Township 31N Range 8W County: San Juan	
1	3 <u>N Longitude</u> -107.666474 <u>N NAD: 1927 № 1983</u>	
Surface Owner: X Federal State Private Tr	ibal Trust or Indian Allotment	
2.		
☐ Pit: Subsection F, G or J of 19.15.17.11 NMAC		
Temporary: Drilling Workover		
The state of the s	Multi-Well Fluid Management Low Chloride Drilling F	CONTROL IN PRODUCTION DE L'UNION
	nil LLDPE HDPE PVC Other	
String-Reinforced		
Liner Seams: Welded Factory Other	Volume:bbl Dimensions: Lx Wx	D
3,		
Below-grade tank: Subsection I of 19.15.17.11		
Volume: MAX 120 bbl Typ	e of fluid: Produced Water	
Tank Construction material: Metal		
1890年   1870年   18	Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	
☐ Visible sidewalls and liner ☐ Visible sidewalls		_
Liner type: Thicknessmil	HDPE ☐ PVC ☑ Other <u>UNSPECIFIED</u>	
4.  Alternative Method:		
Submittal of an exception request is required. Except	ions must be submitted to the Santa Fe Environmental Bureau office for o	onsideration of approval.
5.	900 N	
1	es to permanent pits, temporary pits, and below-grade tanks)	
Chain link, six feet in height, two strands of barbed institution or church)	I wire at top (Required if located within 1000 feet of a permanent residen	e, school, hospital,

Four foot height, four strands of barbed wire evenly spaced between one and four feet

Alternate. Please specify

6.  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)	
7.	
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 19.15.16.8 NMAC	
8. Variances 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:	
☐ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval. ☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	
Exception(s). Requests must be submitted to the burnarie Environmental Bureau office for consideration of approval.	
9.	
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 acce	ntable source
material are provided below. Siting criteria does not apply to drying pads or above-grade tanks.	
General siting	
General string	
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank.	☐ Yes ☐ No
- ☐ NM Office of the State Engineer - iWATERS database search; ☐ USGS; ☐ Data obtained from nearby wells	⊠ NA
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
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance	☐ Yes ☐ No
adopted pursuant to NMSA 1978, Section 3-27-3, as amended. (Does not apply to below grade tanks)	
<ul> <li>Written confirmation or verification from the municipality; Written approval obtained from the municipality</li> </ul>	
Within the area overlying a subsurface mine. (Does not apply to below grade tanks)	☐ Yes ☐ No
- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	
Within an unstable area. (Does not apply to below grade tanks)  - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological	☐ Yes ☐ No
Society; Topographic map	
Within a 100-year floodplain. (Does not apply to below grade tanks)	☐ Yes ☐ No
- FEMA map	
Below Grade Tanks	
Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured	☐ Yes ☑ No
from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site	
- Topographic map, visual hispection (certification) of the proposed site	
Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;.  - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ 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.)  - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
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

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	
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).  - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a 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;  - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ 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 lake (measured from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a 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
Within 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 N  Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the doc 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 19.15.17.12 NMAC   Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.13 NMAC   Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC	NMAC 15.17.9 NMAC
Previously Approved Design (attach copy of design) API Number: or Permit Number:	<u></u>
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 doc 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 19.15.17.9 NMAC  Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC	15.17.9 NMAC
Previously Approved Design (attach copy of design) API Number: or Permit Number:	

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 attached	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  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 Multi-well F Alternative	luid Management Pit
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	
14. 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 C 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 H of 19.15.17.13 NMAC ☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC	muched to the
15.	
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 sour provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. In 19.15.17.10 NMAC for guidance.	
Ground water is less than 25 feet below the bottom of the buried waste.  - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is between 25-50 feet below the bottom of the buried waste  NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Ground water is more than 100 feet below the bottom of the buried waste.  - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No
Within 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site	Yes No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence at the time of initial application.  - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within 300 feet of a wetland. US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance	

- JtJt NIMCA 1070 Costion 2 27 2 as amounted	
adopted pursuant to NMSA 1978, Section 3-27-3, as amended.  - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within the area overlying a subsurface mine Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area.	
<ul> <li>Engineering measures incorporated into the design; NM Bureau of Geology &amp; Mineral Resources; USGS; NM Geological Society; Topographic map</li> </ul>	☐ Yes ☐ No
Within a 100-year floodplain FEMA map	☐ Yes ☐ No
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan by a check mark in the box, that the documents are attached.  Stiting 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.  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  Waste 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 cannot 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	11 NMAC 15.17.11 NMAC
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 beli	ef.
Name (Print): Title:	
Signature: Date:	
e-mail address: Telephone:	
18.  OCD Approval: Permit Application (including closure plan) Closure Flan (only) OCD Conditions (see attachment)	
OCD Representative Signature: Approval Date: Approval Date: 7/12/2	2016
Title: Compliance Officer OCD Permit Number:	
19.  Closure Report (required within 60 days of closure completion): 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 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.    Closure Completion Date: 7/15/2011	complete this
section of the form until an approved closure plan has been obtained and the closure activities have been completed.	

Operator Closure Certification:	
I hereby certify that the information and attachments submitted with this clos belief. I also certify that the closure complies with all applicable closure requ	
Name (Print) <u>Crystal Walker</u> Title: <u>Re</u>	gulatory Coordinator
Signature: Stal Walker	Date: 4/1/1/e
e-mail address: <u>crystal.walker@cop.com</u> Telephone: (505) 32	6-9837

## Burlington Resources Oil & Gas Company San Juan Basin: New Mexico Assets

Below Grade Tank Closure Report

**Lease Name:** Hale 351 **API No.:** 30-045-27649

In accordance with Rule 19.15.17.13 NMAC, the following information describes the closure of the below-grade tank referenced above. All proper documentation regarding closure activities is being included with the C-144.

#### **General Plan Requirements:**

1. Prior to initiating any BGT closure, except in the case of an emergency, BR will notify the surface owner of the intent to close the BGT by certified mail no later than 72 hours or one week before closure and a copy of this notification will be included in the closure report. In the case of an emergency, the surface owner will be notified as soon as practical.

#### The surface owner notification was not found.

- 2. Notice of closure will be given to the District Division office between 72 hours and one week of the scheduled closure via email or phone. The notification of closure will include the following:
  - a. Operators Name
  - b. Well Name and API Number
  - c. Location

#### Notification was not found.

3. All liquids will be removed from the BGT following cessation of operation. Produced water will be disposed of at one of COP's approved Salt Water Disposal facilities or at a District Division approved facility.

All recovered liquids were disposed of at an approved SWD facility or an approved District Division facility within 60 days of cessation of operation.

4. Solids and sludge's will be shoveled and/or vacuumed out for disposal at one of the District Division approved facilities, depending on the proximity of the BGT site: Envirotech Land Farm (Permit #NM-01-011), JFJ Land Farm % Industrial Ecosystems Inc. (Permit #NM-01-0010B), and Basin Disposal (Permit #NM-01-005).

Any sludge or soil required to be removed to facilitate closure was transported to Envirotech Land Farm (Permit # NM-01-011) and/or JFJ Landfarm % IEI (Permit# NM-01-0010B).

5. BR will obtain prior approval from District Division to dispose, recycle, reuse, or reclaim the BGT and provide documentation of the disposition of the BGT in the closure report. Steel materials will be recycled or reused as approved by the District Division. Fiberglass tanks will be empty, cut up or shredded, and EPA cleaned for disposal as solid waste. Liner materials will be cleaned without soils or contaminated material for disposal as solid waste. Fiberglass tanks and liner materials will meet the conditions of 19.15.35 NMAC. Disposal

will be at a licensed disposal facility, presently San Juan County Landfill operated by Waste Management under NMED Permit SWM-052426.

The below-grade tank was disposed of in a division-approved manner. The liner was cleaned per 19.15.35.8.C(1)(m) NMAC and disposed of at the San Juan County Regional Landfill located on CR 3100.

6. Any equipment associated with the BGT that is no longer required for some other purpose, following the closure, will be removed.

All on-site equipment associated with the below-grade tank was removed.

- 7. Following removal of the tank and any liner material, BR will test the soils beneath the BGT as follows:
  - a. At a minimum, a five-point composite sample will be taken to include any obvious stained or wet soils or any other evidence of contamination.
  - b. The laboratory sample shall be analyzed for the constituents listed in Table I of 19.15.17.13.

A five point composite sample was taken of the below-grade tank using sampling tools and all samples tested per Table I of 19.15.17.13 and the results are attached.

8. If the District Division and/or BR determine there is a release, BR will comply with 19.15.17.13.C.3b.

A release was not determined for the above referenced well.

9. Upon completion of the tank removal, pursuant to 19.15.17.13.C.3c, if all contaminant concentrations are less than or equal to the parameters listed in Table I of 19.15.17.13 NMAC, the excavation will be backfilled with non-waste earthen material compacted and covered with a minimum of one foot top soil or background thickness whichever is greater and to existing grade. The surface will be re-contoured to match the native grade and to prevent ponding.

The tank removal area passed all requirements of Table I of 19.15.17.13 NMAC and was backfilled with compacted, non-waste containing, earthen material which included at least one foot of suitable material to establish vegetation at the site.

10. For those portions of the former BGT area no longer required for production activities, BR will seed the disturbed area the first favorable growing season after the BGT is covered. Seeding will be accomplished via drilling on the contour whenever practical, or by other District Division-approved methods. BR will notify the District Division when reclamation and re-vegetation is complete.

Reclamation of the BGT shall be considered complete when:

- Vegetative cover reflects a life form ratio of +/- 50% of pre disturbance levels.
- Total percent plant cover of at least 70% of pre-disturbance levels (Excluding noxious weeds) OR
- Pursuant to 19.15.17.13.H.5d BR will comply with obligations imposed by other applicable federal or tribal agencies in which there re-vegetation and reclamation

requirements provide equal or better protection of fresh water, human health and the environment.

Provision 10 will be accomplished pursuant to 19.15.17.H.5d and notification will be submitted upon completion.

11. For those portions of the former BGT area required for production activities, reseeding will be done at well abandonment, and following the procedure noted above.

The former BGT area is not required for production activities and reseeding was completed on 7/15/2013 per the procedure noted above.

#### **Closure Report:**

All closure activities will include proper documentation and will be submitted to OCD within 60 days of the BGT closure on a Closure Report using District Division Form C-144. The Report will include the following:

- Proof of Closure Notice (surface owner and District Division) (Not Attached)
- Backfilling & cover installation (See Report)
- Confirmation Sampling Analytical Results (Attached)
- Application Rate & Seeding techniques (See Report)
- Photo Documentation of Reclamation (Attached)

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

Submit 1 Copy to appropriate District Office to accordance with 19.15.29 NMAC.

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

Form C-141 Revised August 8, 2011

			Rele	ease Notific	atio	n and Co	orrective A	ction	1			
						OPERA'	TOTAL DESIGNATION OF		☐ Initi	al Report	$\boxtimes$	Final Repor
	1 4			il & Gas Compar	ıy	Contact Crystal Walker						
				No.(505) 326-98 be: <b>Gas Well</b>	337							
Surface Owner <b>Federal</b> Mineral Owner				wner	Federal (SF	-079037)		API No	0.30-045-2	7649		
				LOCA	TIO	N OF RE	LEASE					
Unit Letter K	Section 34	Township 31N	Range 8W	Feet from the 1840	North	/South Line South	Feet from the 1460		West Line <b>West</b>	County San Juan		
	54	JIII	011		85238		e <u>-107.666474</u>		TT CSC	Junoum		
						OF REL						
Type of Rele	ase			MAI	UKE	Volume of			Volume I	Recovered		
Source of Re				10000			Iour of Occurrence	ce		Hour of Dis	covery	
Was Immedi	ate Notice Giv	ven?				If YES, To	Whom?					
Was mined	ne routee Gr		Yes [	No 🛛 Not Re	quired		Trioni.					
By Whom?						Date and F						
Was a Water	course Reach		v			If YES, Vo	olume Impacting t	the Wat	ercourse.			
			Yes 🛛 1									
If a Watercou	ırse was Impa	cted, Descri	ibe Fully.	•								
N/A												
Describe Cau												
No release w	as encounter	ea auring t	me BG1	olosure.								
Dagariha Ara	a Affactad on	d Classus A	Action Tol	ron *								-
Describe Are	a Amecieu an	a Cleanup A	Action Tak	.en.™								
I hereby certi	fy that the inf	formation gi	ven above	is true and compl	ete to 1	the best of my	knowledge and u	ındersta	nd that purs	suant to NM	OCD r	ules and
regulations a	l operators ar	e required to	o report ar	nd/or file certain re	elease r	notifications a	nd perform correc	ctive act	ions for rel	eases which	may er	ndanger
public health	or the environ	nment. The	acceptano	e of a C-141 repo	rt by th	ne NMOCD m te contominati	arked as "Final R	eport" o	loes not rel	ieve the ope	rator of	f liability man health
				tance of a C-141 r								
federal, state,							9 <b>7</b> 0		1020	*:		
Cianotuna		W 021		. /			OIL CON	SERV	ATION	DIVISIO	N	
Signature:	6	Sal 1	( la)	Cker								
WORLD CO.	8	1004				Approved by	Environmental S	pecialis	t:			
Printed Name	e: Crystal Wa	ılker										
Title: Regul	atory Coordi	nator				Approval Dat	te:		Expiration	Date:		
E-mail Addre	ess: crvstal.	walker@coj	p.com			Conditions of	f Approval:			4.0.		
///	. /									Attached	Ш	
Date: 9		Phone: (505		7								_
ATTACH Addi	nonai Sneets	s II Necessa	al V									



August 16, 2011

Project Number 92115-1826

Ms. Kelsi Harrington ConocoPhillips 3401 East 30<sup>th</sup> Street Farmington, New Mexico 87401

Phone: (505) 599-3403

RE: BELOW-GRADE TANK CLOSURE DOCUMENTATION FOR THE HALE #351 (HBR) WELL SITE, SAN JUAN COUNTY, NEW MEXICO

Dear Ms. Harrington,

Enclosed please find the field notes and analytical results for below-grade tank (BGT) closure activities conducted at the Hale #351 (hBr) well site located in Section 34, Township 31 North, Range 8 West, San Juan County, New Mexico. Upon Envirotech personnel's arrival on July 15, 2011, one (1) five (5)-point composite sample was collected from directly beneath the former BGT; see attached *Field Notes*. The sample was analyzed in the field for total petroleum hydrocarbons (TPH) using USEPA Method 418.1, for organic vapors using a photoionization detector (PID) and for chlorides. Additionally, the sample was placed into a four (4)-ounce glass jar, capped headspace free, and transported on ice, under chain of custody, to Envirotech's Analytical Laboratory to be analyzed for benzene and BTEX using USEPA Method 8021 and for total chlorides using USEPA Method 4500. The sample returned results below the regulatory limits for all constituents analyzed, confirming a release did not occur; see attached *Analytical Results*. Envirotech, Inc. recommends no further action in regards to this incident.

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

Respectfully submitted,

ENVIROTECH, INC.

John Rollins

Environmental Field Technician irollins@envirotech-inc.com

Enclosures:

Field Notes

Analytical Results

Cc:

Client File 92115

		ENIXI	DOTE	TITING		IENVIRON	MENTAL SPECIALIST:
PAGE NO:OF	PARTIE			CH INC	veen a		
	ENVIR		L SCIENT U.S. HIGHV	ISTS & ENGIN	NEERS	90	N
DATE STARTED: 7/15/11	F			VA 1 04 MEXICO 8740:		LAT: 2	6.85235
DATE FINISHED: 7/15/1/	*		NE: (505) 6:		<del>5</del> 0		107.667
	EDODT:			SURE VE	DIEICAT	*	701,001
	EFORT.					AND ADD	
LOCATION: NAME: Hale  LEGAL ADD: UNIT: K	SEC: 3 9	WELL#:3		TEMP PIT:		IENT PIT:	BGT:X
LEGAL ADD: UNIT: K QTR/FOOTAGE: 1840 F56 + 146	And the second s	CNTY: 5	TWP: 3		RNG: PL		PM: PMNM
	078	1/0		71	51. A///		
EXCAVATION APPROX:	FT. X		FT. X	NA	FT. DEEP	CUBIC YA	ARDAGE:
DISPOSAL FACILITY:  LAND OWNER:			REMEDIA	TION METHO		101 111 10	10
CONSTRUCTION MATERIAL: Stee		API:	WALLED	WITH LEAK D			120 Avels
LOCATION APPROXIMATELY:				FROM WELL		Sink /-	Dilyte
DEPTH TO GROUNDWATER: 70/4	63	FT. $\checkmark$	õ	FROM WELL	HEAD		
TEMPORARY PIT - GROUNDWAT	ER 50-100 FE	ET DEEP			• • • • • • • • • • • • • • • • • • • •		
BENZENE ≤ 0.2 mg/kg, BTEX ≤ 50 mg/kg			N (8015) ≤ 50	00 mg/kg, TPH (	418.1) ≤ 2500	mg/kg, CHL	ORIDES ≤ 500 mg/kg
TEMPORARY PIT - GROUNDWAT					•	<i>U U</i> ,	
BENZENE ≤ 0.2 mg/kg, BTEX ≤ 50 mg/k			V (8015) < 50	0 mg/kg. TPH (4	118.1) < 2500	mo/ko. CHI (	ORIDES < 1000 mg/kg
PERMANENT PIT OR BGT	<b>6</b> ,		. (00.12) = 00	og.,(	, 2 2500		5.11.5.25 2 1.000 mg ng
BENZENE ≤ 0.2 mg/kg, BTEX ≤ 50 mg/l	- TDU (410 1)	< 100 mallea	CULODID	BC < 250 malles			
DENZENE 3 0.2 mg/kg, BTEA 3 30 mg/l	ig, 1 Fri (410.1)	12 100 mg/kg					
TIME	SAMPLE I.D.	LARNO	FIEL WEIGHT (g	D 418.1 ANAL mL FREON		DEADING	CALC. (mg/kg)
11:50	2∞ STD	LAB NO.	WEIGHT (g	IIIL PREUN	- DILUTION	2/0	CALC. (IIIg/kg)
12:29	1	1	5	30	41	16	64
		2					
		3					
		5					
		6					
PERIMETER		FIELD C	HLORIDE	S RESULTS		PRO	OFILE .
1		SAMPLE	READING	CALC.			
AST )	~		MADING	(mg/kg)			
1 / 1001	1	1	12				
IN 1					1	XXXX	X
A AMP	\						
	1	F	PID RESUI	TS		(x	X
FAR		SAMP		RESULTS		1 20	· ·
H H		SAME	LE ID	(mg/kg)	8	\ v	×
1		J.		1/2		1	
						y 2	9
1 /					X=	Simple to	ind
LAB SAMPLES	NOTES:		TAME S				
SAMPLE ID ANALYSIS RESULTS							
BENZENE							19
BTEX GRO & DRO							S
CHLORIDES							
	WORKORDER	R#		WHO ORDER	ED		



#### **EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS**

Client:

ConocoPhillips

Project #:

92115-1826

Sample No.:

Sample ID:

1

7/25/2011

Sample Matrix:

Soil

Date Sampled:

7/15/2011 7/15/2011

Preservative:

Cool

Date Analyzed: Analysis Needed:

Date Reported:

TPH-418.1

Condition:

Cool and Intact

	2 2 200	Det.
	Concentration	Limit
Parameter	(mg/kg)	(mg/kg)

**Total Petroleum Hydrocarbons** 

64

5.0

ND = Parameter not detected at the stated detection limit.

References:

Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis

of Water and Waste, USEPA Storet No. 4551, 1978.

Comments:

Hale #351 (hBr)

Instrument calibrated to 200 ppm standard. Zeroed before each sample

John Rollins

Printed

Robyn Heidbrier, EIT

Printed



# CONTINUOUS CALIBRATION EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Cal. Date:

15-Jul-11

Parameter	Standard Concentration mg/L	Concentration Reading mg/L	
TPH	100		
	200	210	
	500		
	1000		

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

	7/25/2011	
Analyst	Date	
John Rollins Print Name Review	7/25/2011 Date	
Robyn Heidbrier, EIT		

Print Name



#### **Field Chloride**

Client:

ConocoPhillips

Sample No.:

1

Sample ID: Sample Matrix: 1

Preservative:

Soil Cool

Condition:

Cool and Intact

Project #:

92115-1826

Date Reported:

8/12/2011

Date Sampled:

7/15/2011

Date Analyzed:

7/15/2011

Analysis Needed:

Chloride

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

Field Chloride

ND

33.0

ND = Parameter not detected at the stated detection limit.

References:

"Standard Methods for the Examination of Water and Wastewater", 18th ed., 1992

Hach Company Quantab Titrators for Chloride

Comments:

Hale #351

Analyst

John Rollins

Printed

Review

Robyn Heidbrier, EIT

Printed



### EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	ConocoPhillips	Project #:	92115-1826
Sample ID:	1	Date Reported:	07-18-11
Laboratory Number:	58964	Date Sampled:	07-15-11
Chain of Custody:	12191	Date Received:	07-15-11
Sample Matrix:	Soil	Date Analyzed:	07-18-11
Preservative:	Cool	Date Extracted:	07-15-11
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)	
Benzene	ND	0.9	
Toluene	1.4	1.0	
Ethylbenzene	ND	1.0	
p,m-Xylene	2.1	1.2	
o-Xylene	1.6	0.9	
Total BTEX	5.1		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
10.110	Fluorobenzene	86.0 %
	1,4-difluorobenzene	86.1 %
	Bromochlorobenzene	96.4 %

References:

Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA,

December 1996.

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

USEPA, December 1996.

Comments:

**Hale 351** 

Arralyst

Review



#### **EPA METHOD 8021** AROMATIC VOLATILE ORGANICS

Client:	N/A		Project #:		N/A
Sample ID:	0718BBLK QA/QC	;	Date Reported:		07-18-11
Laboratory Number:	58964		Date Sampled:		N/A
Sample Matrix:	Soll		Date Received:		N/A
Preservative:	N/A		Date Analyzed:		07-18-11
Condition:	N/A		Analysis:		BTEX
			Dilution:		10
Calibration and	I-Cal RF:	C-Cal RF:	%Diff.	Blank	Detect.
Detection Limits (ug/L)		Accept. Ra	nge 0 - 15%	Conc	Limit
Benzene	3.5647E+006	3.5719E+006	0.2%	ND	0.1
Toluene	3.6249E+006	3.6322E+006	0.2%	ND	0.1
Ethylbenzene	3.1897E+006	3.1961E+006	0.2%	ND	0.1
p,m-Xylene	8.9278E+006	8.9457E+006	0.2%	ND	0.1
o-Xylene	2.9578E+006	2.9637E+006	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample Di	uplicate	%Diff.	Accept Range	Detect. Limit
Benzene	ND	ND	0.0%	0 - 30%	0.9
Toluene	1.4	1.4	0.0%	0 - 30%	1.0
Ethylbenzene	ND	ND	0.0%	0 - 30%	1.0
p,m-Xylene	2.1	2.3	9.5%	0 - 30%	1.2
o-Xylene	1.6	1.6	0.0%	0 - 30%	0.9

Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range	
Benzene	ND	500	534	107%	39 - 150	
Toluene	1.4	500	539	108%	46 - 148	
Ethylbenzene	ND	500	524	105%	32 - 160	
p,m-Xylene	2.1	1000	1,060	106%	46 - 148	
o-Xylene	1.6	500	536	107%	46 - 148	

ND - Parameter not detected at the stated detection limit.

Dilution: Spike and spiked sample concentration represent a dilution proportional to sample dilution.

References:

Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA,

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using

Photolonization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments:

QA/QC for Samples 58957, 58960-58961, 58964-

Review



#### Chloride

Client:

ConocoPhillips

Project #:

92115-1826

Sample ID:

1

Date Reported:

07/18/11

Lab ID#:

58964

Date Sampled:

07/15/11

Sample Matrix:

Soil

Date Received:

07/15/11

Preservative:

Cool

Date Analyzed:

07/18/11

Condition:

Intact

Chain of Custody:

12191

**Parameter** 

Concentration (mg/Kg)

**Total Chloride** 

40

Reference:

U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.

Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments:

**Hale 351** 

- Trialysy

5796 US Highway 64, Farmington, NM 87401

Review

Ph (505)632-0615 Fr (800) 362-1879 Fx (505) 632-1865

lab@envirotech-inc.com envirotech-inc.com

ナイングナ

CHAIN OF CUSTODY RECORD [ ] & Smil

Sample Name:   Samp			Ą	Project Name / Location:	ocation	5			3			ANALYS	5	APL	SIS	ARAN		Š	3			
Sample Name:   Sample Name:   Sample Name:   Sample   Sample Name:   Sample   Samp					1-												*					
Sample   No. Notwine   Preserved by, (Signature)			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Impler Name:					8012)				ı		c		<u> </u>					3
12.31   549   6   149 No.   140   140 No.   140   14	1		0 0	ent No.:	24				hodieM				noinA \ r		I/H Hiw	(   0   1)		7001			looO əld	ole Intac
1973   1974   1975   1974   1975	1 5 00		mple ime	Lab No.		sample Matrix	No./Volume of Containers	Preserva Hga, Hd					Cation	ЮЯ				27110			Samp	Samp
Soil	1 1		122	5.8964		Sludge			7	7							7	_			2-	7-
Solid Adueous   Solid Studge   Solid Adueous   S					Soil	Sludge Aqueous			loss-seemen													
Solid Aqueous   Solid Aqueou					Soil	Sludge Aqueous													-			
Soil Sludge   Soil Aqueous   Soil Aqueou					Soil	Sludge Aqueous				ri												
Soil Sludge   Soil Aqueous   Soil Aqueous   Soil Aqueous   Soil Aqueous   Soil Aqueous   Soil Sludge   Soil Aqueous   Soil A					Soil	Sludge																
Soil Sludge   Soil Aqueous   Soil Aque					Soil	Sludge																
Solid Aqueous   Solid Aqueou					Soil	Sludge																
Solid Aqueous   Solid Aqueou					Soil	Sludge																
Solid Studge Solid Aqueous Time Received by: (Signature)  7//5/// (3:55) Received by: (Signature) Received by: (Signature)		3			Soil	Sludge Aqueous																
Date Time Received by: (Signature)  7//5/1/ (3:55  Received by: (Signature)  Received by: (Signature)					Soil	Sludge						,			-							
		Relinguished by: (Signature)	1.			Date 7/15/11	2	Rece	sived b	y: (Sig	nature X	Z {	\	M			K		7/	)ate	i∏ /	<sup>B</sup>
		Relinquished by: (Signature)			10			Rece	sive of b	1.7	page dre						$\neg$					
		<u> </u>					11 5941	Rece	sived b	y: (Sig	nature	<u> </u>										
						)				1			•	1000								

5796 US Highway 64 • Farmington, NM 87401 • 505-632-0615 • lab@envirotech-inc.com

ACCENT Printing • Form 28-0807



