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

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 Tank, or								
Proposed Alternative Method Permit or Closure Plan Application								
Type of action: Below grade tank registration Permit of a pit or proposed alternative method Closure of a pit, below-grade tank, or proposed alternative method Modification to an existing permit/or registration Closure plan only submitted for an existing permitted or non-permitted pit, below-grade tank, or proposed alternative method								
Instructions: Please submit one application (Form C-144) per individual pit, below-grade tank or alternative request								
Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.								
I.     Operator:     ConocoPhillips Company     OGRID # 217817       OIL CONS. DIV DIST. 3								
Address:       P.O. Box 4289, Farmington, New Mexico 87499         Facility or well name:       SAN JUAN 29-6 UNIT 37A								
API Number: OCD Permit Number:								
U/L or Qtr/Qtr       P       Section       16       Township       29N       Range       6W       County: Rio Arriba         Center of Proposed Design: Latitude       36.721358       °N       Longitude       - 107.462905       °W       NAD: 1927       1983       \vee								
Surface Owner:  Federal State  Private  Tribal Trust or Indian Allotment								
2. Pit: Subsection F, G or J of 19.15.17.11 NMAC K Cathodic report in well le								
Temporary: Drilling Workover								
Permanent      Emergency      Cavitation      P&A      Multi-Well Fluid Management     Low Chloride Drilling Fluid      yes      no     no     no     diffec     Lined      Unlined Liner type: Thickness mil      LLDPE      HDPE      PVC      Other								
String-Reinforced								
Liner Seams: Welded Factory Other Volume: bbl Dimensions: L x W x D								
3. Subsection I of 19.15.17.11 NMAC								
Volume: Max 120 bbl Type of fluid: Produced Water								
Tank Construction material: Metal								
Secondary containment with leak detection 🛛 Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off								
□ Visible sidewalls and liner □ Visible sidewalls only □ Other								
Liner type: Thickness 45mil HDPE PVC 🖾 OtherLLDPE								
4.								
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.								
5.								
Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks)								
Chain link, six feet in height, two strands of barbed wire at top ( <i>Required if located within 1000 feet of a permanent residence, school, hospital, institution or church</i> )								
Four foot height, four strands of barbed wire evenly spaced between one and four feet								
Alternate. Please specify <u>4' hog wire fence with a single strand of barbed wire on top</u>								

21

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

Screen 🗌 Netting 🗌 Other

6.

9.

Monthly inspections (If netting or screening is not physically feasible)

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

#### 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.

Siting Criteria (regarding permitting): 19.15.17.10 NMAC			
Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source			

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 □ NA								
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank.									
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         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         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)         -       Written confirmation or verification from the municipality: Written approval obtained from the municipality         Within the area overlying a subsurface mine. (Does not apply to below grade tanks)       -         -       Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map         Within a 100-year floodplain. (Does not apply to below grade tanks)       -         -       FEMA map         Below Grade Tanks       -         Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark).         -       Topographic map; Visual inspection (certification) of the proposed site         Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;.									
<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> <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</li> </ul>									
- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological	🗌 Yes 🗌 No								
Within a 100-year floodplain. (Does not apply to below grade tanks)									
Below Grade Tanks									
Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark).									
	🗌 Yes 🛛 No								
Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)									
<ul> <li>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.)</li> <li>Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	🗌 Yes 🗌 No								
<ul> <li>Within 300 feet from a occupied 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 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.	🗌 Yes 🗌 No								

Within 100 feet of a wetland.          -'       US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site       Image: Certification of the proposed site         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).       Image: Ves	No
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).	
or playa lake (measured from the ordinary high-water mark).	
	No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.       Image: Comparison of the proposed site; Aerial photo; Satellite image         -       Visual inspection (certification) of the proposed site; Aerial photo; Satellite image       Image: Comparison of the proposed site; Aerial photo; Satellite image	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	No
Within 300 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	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	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	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	No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	No
10.         Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist:       Subsection B of 19.15.17.9 NMAC         Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.         A Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC         A 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 19.15.17.10 NMAC         Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC         I Previously Approved Design (attach copy of design)       API Number: or Permit Number: or Permit Number:	
11. 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 documents are attached.	
Previously Approved Design (attach copy of design) API Number: or Permit Number:	

12.         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 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         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 19.15.17.9 NMAC and 19.15.17.13 NMAC	AC						
13.         Proposed Closure:       19.15.17.13 NMAC         Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.         Type:       Drilling         Workover       Emergency         Cavitation       P&A         Permanent Pit       Below-grade Tank         Alternative         Proposed Closure Method:       Waste Excavation and Removal         Waste Removal (Closed-loop systems only)         On-site Closure Method (Only for temporary pits and closed-loop systems)         In-place Burial       On-site Trench Burial         Alternative Closure Method	Multi-well Fluid Management Pit						
<ul> <li><u>Waste Excavation and Removal Closure Plan Checklist</u>: (19.15.17.13 NMAC) <i>Instructions: Each of the following is closure plan. Please indicate, by a check mark in the box, that the documents are attached.</i></li> <li>Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC</li> <li>Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC</li> <li>Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)</li> <li>Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC</li> <li>Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC</li> </ul>	.13 NMAC						
<sup>15.</sup> <u>Siting Criteria (regarding on-site closure methods only)</u> : 19.15.17.10 NMAC <i>Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of ac</i> <i>provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of et</i> 19.15.17.10 NMAC for guidance.							
<ul> <li>Ground water is less than 25 feet below the bottom of the buried waste.</li> <li>NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells</li> </ul>	Yes No						
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						
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							
<ul> <li>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).</li> <li>Topographic map; Visual inspection (certification) of the proposed site</li> </ul>							
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							
<ul> <li>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.</li> <li>NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site</li> </ul>							
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							
Within incorporated municipal boundaries or within a defined municipal factor with a start of the start of th							
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal							
Form C-144 Oil Conservation Division	Page 4 of 6						

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>	🗌 Yes 🗌 No
Within a 100-year floodplain. - FEMA map	Yes No
16.	
On-Site Closure Plan Checklist:       (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plane 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 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.         Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC         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         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 cannel 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         Stite Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC	11 NMAC 15.17.11 NMAC
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 beli	ef.
Name (Print):Crystal WalkerTitle:Title:Regulatory Coordinator	
Signature: Jotal Walker Date: 1/10/2017	
e-mail address: <u>crystal.walker@conocophillip.com</u> Telephone: <u>505-326-9837</u>	
OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment)	sofrant-
OCD Representative Signature:	
<sup>19,</sup> <u>Closure Report (required within 60 days of closure completion)</u> : 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:	
20. Closure Method: □ Waste Excavation and Removal □ On-Site Closure Method □ Alternative Closure Method □ Waste Removal (Closed-lo □ If different from approved plan, please explain.	op systems only)
<ul> <li>21.</li> <li><u>Closure Report Attachment Checklist</u>: Instructions: Each of the following items must be attached to the closure report. Please intermark in the box, that the documents are attached.</li> <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> </ul>	dicate, by a check

#### 22. Operator Closure Certification:

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.							
Name (Print):	Title:						
Signature:	Date:						
e-mail address:	Telephone:						

ConocoPhillips Company requests a variance for the items listed below. The requested variance, per 19.15.17.15.A, provides equal or better protection of fresh water, public health & the environment.

- 1. Fencing
  - Fencing as described in Section 5 under Alternate, COPC will construct all new fences around the below grade tank utilizing 48" steel mesh field-fence (hog-wire) on the bottom with a single strand of barbed wire on top. T-posts shall be installed every 12 feet and corners shall be anchored utilizing a secondary T-post. Below grade tanks will be fenced, regardless of location.

### 2. Geo-membrane Liner

- The geo-membrane liner consists of a 45-mil flexible LLDPE material manufactured by Brawler Industries, LLC as SuperScrim H45. SuperScrim H45 is manufactured with LLDPE and is 45 mil inch thickness and is reinforced with polyester scrim. The geomembrane liner has a hydraulic conductivity of less than 5 X 10-14 cm/s and is resistant to ultraviolet light, petroleum hydrocarbons, salts and acidic and alkaline solutions. The manufacturer specific sheet is attached.
- 3. COPC will notify Public Entity Surface Owners by email in lieu of certified mail. Private Entity Surface Owners will still be notified via certified mail.

# New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)	(R=POD replaced, O=orpha C=the fil closed)	ned,	(qu						E 3=SW argest)		3 UTM in meter	s)	(In feet)	
	,	POD							0 /					
		Sub-		Q	Q	Q							1	Vater
POD Number	Code	basin	County	64	16	4	Sec	Tws	Rng	Х	Y	DepthWellDe	pthWater C	olumn
<u>SJ 00038</u>			RA	3	4	4	06	29N	06W	276923	4069867*	813		
<u>SJ 00059</u>			RA	2	2	2	35	29N	06W	283371	4063065* 🌍	365	120	245
<u>SJ 00059 S</u>			RA	2	2	2	35	29N	06W	283371	4063065* 🌑	335	120	215
<u>SJ 00059 S-2</u>			RA	4	4	4	26	29N	06W	283381	4063267* 🌑	565	275	290
<u>SJ 00059 S-3</u>			RA	3	2	2	35	29N	06W	283171	4062865* 🕋	561	146	415
<u>SJ 02794</u>			RA	2	2	2	12	29N	06W			280	140	140
<u>SJ 03364</u>			RA	1	4	3	13	29N	06W	284070	4066662* 🌍	900	620	280
<u>SJ 03392</u>			RA	4	4	3	20	29N	06W	277798	4065022* 💕	210		
<u>SJ 03393</u>			RA	2	4	4	30	29N	06W	276951	4063634* 🌍	210		
<u>SJ 03406</u>			RA	4	3	3	05	29N	06W	277525	4069858* 🌍	900	380	520
<u>SJ 03481</u>			RA	4	4	3	20	29N	06W	277798	4065022* 🌍	250		
SJ 04014 POD1			RA	3	4	3	12	29N	06W	283530	4060940 💕	378		
SJ 04119 POD1			SJ	2	1	4	18	29N	06W	276660	4067201 🌍	480	340	140
											Average Depth t	o Water:	267 fee	et
											Minimu	m Depth:	120 fee	et
											Maximu	m Depth:	620 fee	et
Record Count: 13														

Record Count: 13

PLSS Search:

Township: 29N Range: 06W

#### \*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

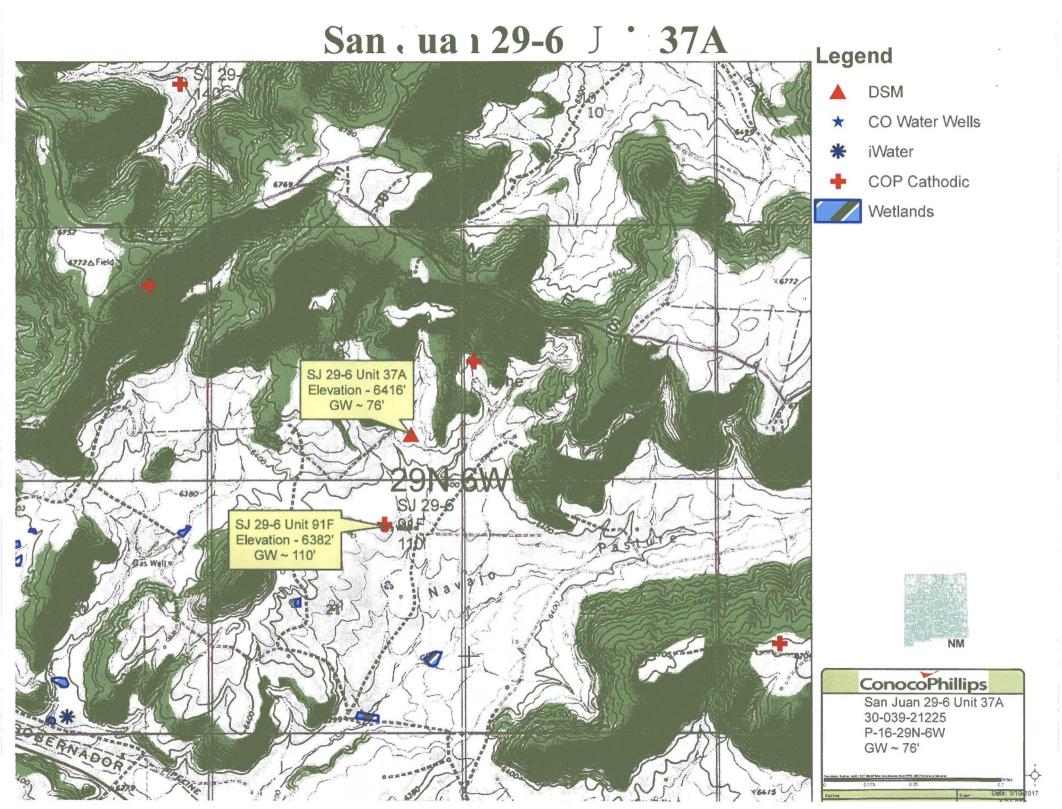
1/9/17 3:59 PM

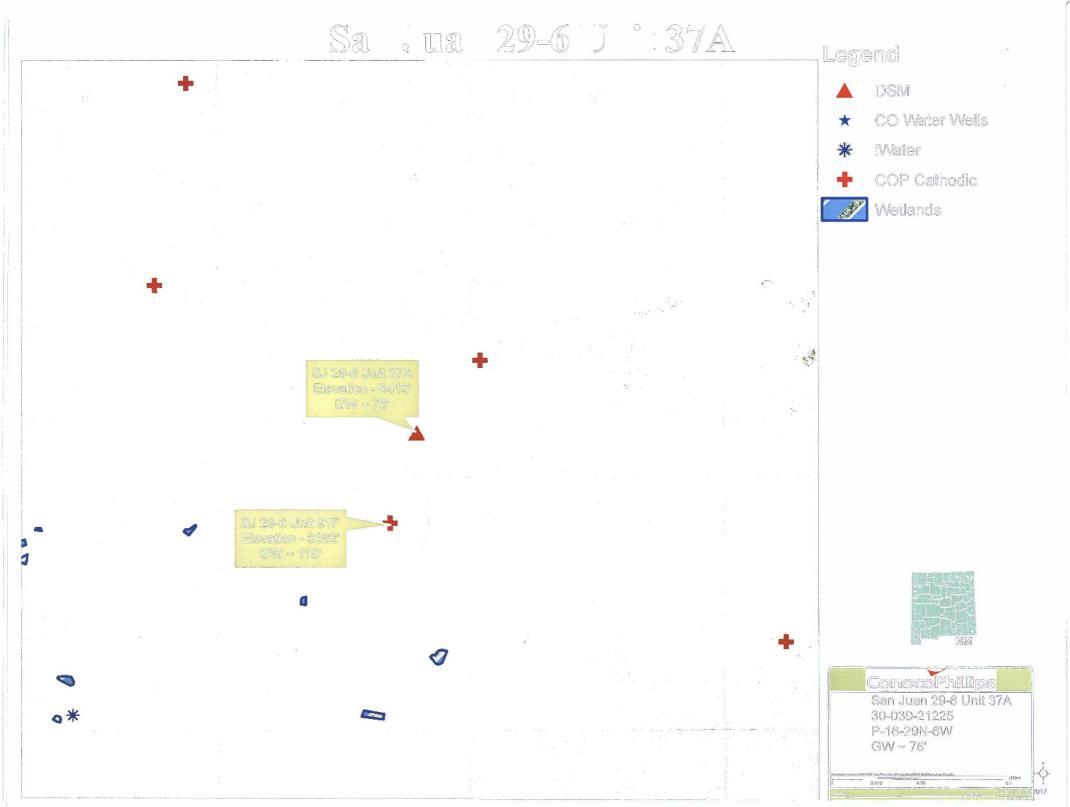
WATER COLUMN/ AVERAGE DEPTH TO WATER

### TIERRA CORROSION CONTROL, INC. DRILLING LOG

COMPANY: ConocoPhillips DATE: April 4, 2008 LEGALS: S21 T29N R6W LOCATION: San Juan 26-6 91F COUNTY: San Juan STATE: NM DRILLER: Eugene Silago DEPTH: 300' BIT SIZE: 7 7/8' CASING SIZE/TYPE: 8" X 20' PVC COKE TYPE: Asbury VENT PIPE: 300' PERF PIPE: 180' - 300' LBS COKE BACKFILL: 2,600# ANODE TYPE: 2" X 60" Duriron ANODE AMOUNT: 10 **BOULDER DRILLING: None** 

DEPTH	DRILLER'S LOG	AMPS	DEPTH	DRILLER'S LOG	AMPS	ANODE #	DEPTH	NO COKE	COKE
20	Sand Stone		310			1	290	2.9	4.8
25	Janu Otorie		315			2	280	2.9	5.6
30			320			3	270	3.1	5.6
35			325			4	260	2.6	5.5
40			330			5	250	3.2	5.9
45			335						
50		.8	340			6	240	2.6	5.6
55		.0	345			7	230	2.4	5.5
			345			8	220	2.3	5.3
60		1.0				9	210	2.2	4.8
65		.9	355			10	200	2.2	5.0
70		.8	360			11			
75		.7	365			12			
80		.6	370						
85		.4	375			13			
90		.3	380			14			
95		.2	385			15			
100		.3	390			16			
105		.3	395			17			
110	*	.5	400			18			
115	Shale	2.1	405						
120		2.2	410			19			
125		2.3	415			20			
130		2.4	420			21			
135		2.5	425			22			
140		2.4	430			23			
145		2.6	435			24			
150		2.3	440						
155		2.4	445			25			
160		2.5	450			26			
165		2.7	455			27			
170		2.2	460			28			
175		2.1	465			29			
180		2.0	470			30			
185		2.0	475						
190		2.0	475			-			
190			480						
		2.1			_				
200		2.2	490			WATER DI		0'	
205		2.2	495						
210		2.2	500			ISOLATIO			
215		2.3				LOGING V			
220		2.3				VOLT SOL	JRCE: AU	TO BATTER	Y
225		2.4				TOTAL AM			
230		2.4				TOTAL GB			
235		2.5						INCL13	
240		2.6				REMARKS	);		
245		2.8							
250		3.2							
255		2.6							
260		2.6							
265		3.0							
270		3.1							
275		3.0							
280		2.9							
285		2.9							
290		2.9							
290		2.9							
300	L								
300	•	2.0							
305									





# Below Grade Tank (BGT) Siting Criteria and Compliance Demonstrations

# Well Name: \_\_\_San Juan 29-6 Unit 37A\_

- <u>Depth to groundwater (should not be less than 25 feet</u>): The nearest recorded well with available water-depth information is the San Juan 29-6 Unit 91F with groundwater @ 110' as indicated in the Cathodic Data Sheet attached. The subject well is 34' more in elevation making depth to groundwater at 76'.
- 2. <u>Distance to watercourse (should not be within 100 feet of a continuously flowing</u> watercourse, other significant watercourse, lakebed, sinkhole, wetland or playa lake [measured from the ordinary high-water mark]):

Aerial map attached indicates that there are **no** lakebeds, sinkholes, playa lakes, or watercourses within 100 feet of the proposed Below Grade Tank.

3. <u>Distance to springs or wells (should not be within 200 feet of a spring or a fresh water</u> well used for public or livestock consumption):

Aerial map attached indicates that the Below Grade Tank will **not** be within 200 feet of any recorded well or spring.

# Hydrogeological report for San Juan 29-6 Unit 37A

## **Regional Hydrogeological context:**

The San Jose Formation of Eocene age occurs in New Mexico and Colorado, and its outcrop forms the land surface over much of the eastern half of the central basin. It overlies the Nacimiento Formation in the area generally south of the Colorado-New Mexico State line and overlies the Animas Formation in the area generally north of the State line.

The San Jose Formation was deposited in various fluvial-type environments. In general, the unit consists of an interbedded sequence of sandstone, siltstone, and variegated shale. Thickness of the San Jose Formation generally increases from west to east (200 feet in the west and south to almost 2,700 feet in the center of the structural basin). Ground water is associated with alluvial and fluvial sandstone aquifers. Thus, the occurrence of ground water is mainly controlled by the distribution of sandstone in the formation. The distribution of such sandstone is the result of original depositional extent plus any post-depositional modifications, namely erosion and structural deformation. Transmissivity data for San Jose Formation are minimal. Values of 40 and 120 feet squared per day were determined from two aquifer tests (Stone et al, 1983, table 5). The reported or measured discharge from 46 water wells completed in San Jose Formation ranges from 0.15 to 61 gallons per minute and the median is 5 gallons per minute. Most of the wells provide water for livestock and domestic use.

The San Jose Formation is a very suitable unit for recharge from precipitation because soils that form on the unit are sandy and highly permeable and therefore readily adsorb precipitation. However, low annual precipitation, relatively high transpiration and evaporation rates, and deep dissection of the San Jose Formation by the San Juan River and its tributaries all tend to reduce the effective recharge to the unit.

Stone et al., 1983, Hydrogeology and Water Resources of the San Juan Basin, New Mexico: Socorro, New Mexico Bureau of Mines and Mineral Resources Hydrologic Report 6, 70 p.

### **Below Grade Tank Design and Construction**

In accordance with NMAC 19.15.17 the following information describes the design and construction of below-grade tanks on ConocoPhillips Company, hereinafter known as COPC, locations. This is COPC's standard procedure for all below grade tanks (BGT). A separate plan will be submitted for any BGT which does not conform to this plan.

### General Plan:

- 1. COPC will design and construct a properly sized and approved BGT which will contain liquids and should prevent contamination of fresh water to protect the public health and environment.
- 2. COPC signage will comply with 19.15.17.11.C NMAC.
- COPC is requesting approval of an alternative fencing to be used on BGT tank locations. COPC requests to utilize 48" steel mesh field-fence (hog-wire) on the bottom with a single strand of barbed wire on top. T-posts shall be installed every 12 feet and corners shall be anchored utilizing a secondary T-post. BGTs will be fenced, regardless of location.
  - a. If the BGT is located within 1000' of an occupied permanent residence, school, hospital, institution or church, COPC will construct A 6' chain link fence with two strands of barbed wire on top. The operator shall ensure that all gates associated with the fence are closed and locked when responsible personnel are not onsite.
- 4. COPC will construct a screened, expanded metal covering, on the top of the BGT.
- COPC will ensure that a BGT is constructed of materials resistant to the BGT's particular contents and resistant to damage from sunlight as shown on design drawing and specification sheet.
- 6. The COPC BGT system will have a properly constructed foundation consisting of a level base free of rocks, debris, sharp edges or irregularities to prevent punctures, cracks or indentations of the liner or tank bottom as shown on design drawing.
- 7. COPC shall operate and install the BGT to prevent the collection of surface water run-on. COPC has built in shut off devices that do not allow a BGT to overflow. COPC constructs berms and corrugated retaining walls at least 6" above ground to keep from surface water run-on entering the BGT as shown on the design plan.
- 8. If COPC needs to modify/retrofit the existing BGT it will meet the below specifications.
- 9. COPC will construct and use a BGT that does not have double walls. The BGT's side walls will be open for visual inspection for leaks, the BGT's bottom is elevated a minimum of six inches above the underlying ground surface and the BGT is underlain with a geomembrane liner to divert leaked liquid to a location that can be visually inspected.
- 10. COPC will equip below grade tanks with a properly functioning, automatic high-level shut off control device, as well as manual controls, to prevent overflows.
- 11. COPC will utilize a geomembrane liner manufactured by Brawler Industries, LLC as SuperScrim H45. SuperScrim H45 is manufactured with LLDPE and is 45 mil inch thickness and is reinforced with polyester scrim. The geomembrane liner has a hydraulic conductivity of less than 5 X 10<sup>-14</sup> cm/s and is resistant to ultraviolet light, petroleum hydrocarbons, salts and acidic and alkaline solutions. The manufacturer specific sheet is attached.
- 12. The general specification for design and construction are attached



# SuperScrim™ H Product Specifications

### This product meets GRI GM 25 Specifications

Properties	Minimum Average Values						
			H30	H36	H45		
Thickness, Nominal (mils) Min. Ave. (mils)	ASTM D5199	Per roll	30 27	36 32	45 40		
Weight Nominal (lb/1000, ft²) Min. Ave. (lb/1000, ft²)	ASTM D5261	Per roll	140 125	168 151	210 189		
Grab Tensile Strength (lb), min. ave. Elongation (%), min. ave.	ASTM D7004 (each direction) (each direction)	30,000 lb	300 25	310 25	320 25		
Tongue Tear (lb), min. ave.	ASTM D5884 (each direction)	30,000 lb	130	130	130		
Index Puncture (lb), min. ave.	ASTM D4833	30,000 lb	85	103	105		
Ply Adhesion (lb), min. ave. (1)	ASTM D6636	30,000 lb	20	25	25		
(a) Standard OIT Or	ASTM D3895	Formulation	· >100	>100	>100		
(b) High Pressure OIT	ASTM D5885		>1000	>1000	>1000		
	Standard Roll D	imensions					
Roll Width (3), ft 11.83 11.83							
Roll Length (3), ft	1500	1230	1000				
Roll Area, ft <sup>2</sup>			17,745	14,551	11,830		

<sup>(1)</sup>Alternatively, an acceptable ply adhesion is to have a film tearing bond occur within the sheet material. <sup>(2)</sup>The Manufacturer has the option to select either one of the OIT methods listed to evaluate the

antioxidant effectiveness in the geomembrane.

<sup>(3)</sup>Roll widths and lengths have a tolerance of  $\pm 1\%$ 

\*Custom material thicknesses also available

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This is a preliminary data sheet based upon laboratory testing of initial manufacturing lots and may be changed without notice as additional product testing data becomes available.



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# SuperScrim<sup>™</sup> WC Product Specifications

Properties	Test Method	Minimum Average Values					
		9 mil	12 mil	16 mil	20 mil	24 mil	30 mil
Weight	D5261	5.4 oz/yd <sup>2</sup>	5.7 oz/yd <sup>2</sup>	7.2 oz/yd <sup>2</sup>	9.6 oz/yd <sup>2</sup>	11.5 oz/yd <sup>2</sup>	13.4 oz/yd <sup>2</sup>
Thickness		9 mil	12 mil	16 mil	20 mil	24 mil	30 mil
Grab Tensile (lbs.)	D751	MD 200 CD 135	MD 210 CD 176	MD 230 CD 210	MD 330 CD 286	MD 352 CD 300	MD 352 CD 300
Mullen Burst	D6241	300 psi	350 psi	400 psi	600 psi	680 psi	780 psi
Accelerated UV Weathering	D4355	>80% after 2000 hrs exposure	>90% after 2000 hrs exposure				
		Standard I	Roll Dimensio	ns			
Roll Length (2), Ft		3,000	3,000	4,000	3,000	2,250	2,250
Roll Width (2), Ft		12	12	12	12	12	12
Roll Area, Ft <sup>2</sup>		36,000	36,000	48,000	36,000	27,000	27,000

(1)9 of 10 views shall be Category 1 or 2. No more than 1 view from Category 3. <sup>(2)</sup>Roll widths and lengths have a tolerance of  $\pm$  1%

Custom material thicknesses also available

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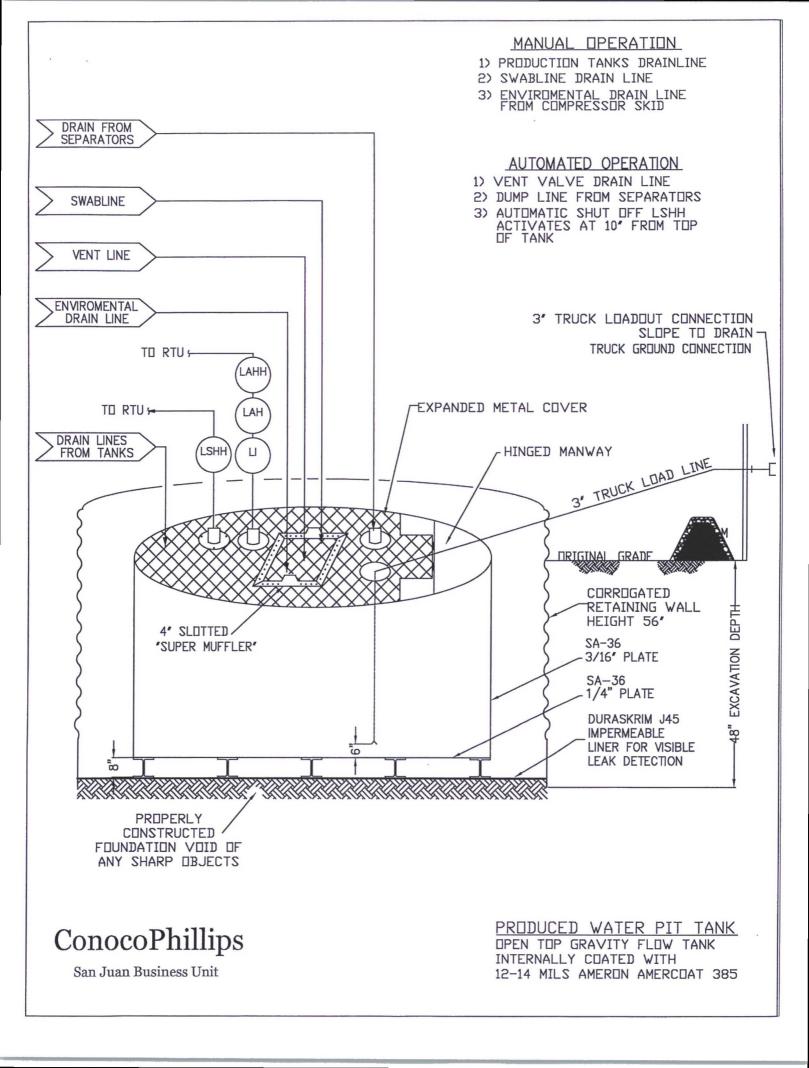
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# ConocoPhillips Company San Juan Asset Below Grade Tank Maintenance and Operating Plan

In accordance with Rule 19.15.17 the following information describes the operation and maintenance of a below-grade tank (BGT) on a Burlington Resources Oil & Gas Company, LP (COP) location. This is COP's standard procedure for all BGT's. A separate plan will be submitted for any BGT which does not conform to this plan.

## **General Plan:**

- COP will operator and maintain a BGT to contain liquids and solids and maintain the integrity of the liner, liner system and secondary containment system to prevent contamination of fresh water and protect public health and the environmental. COP will perform an inspection on a monthly basis, install cathodic protection and automatic overflow shutoff devices as seen on the design plan.
- 2. COP will not discharge into or store any hazardous waste in the BGT.
- 3. COP shall operator and install the BGT to prevent the collection of surface water run-on. COP has built in shut-off devices that do not all ow a BGT to overflow. COP constructs berms and corrugated retained walls at least 6" above grade to keep surface water run-on from entering the BGT as shown on the design plan.
- 4. As per 19.15.17.12.D(3), COP will inspect the BGT for leakage and damage at least monthly. The operator will document the integrity of each tank at least annually and maintain a written record for 5 years. Inspections may include 1) containment berms adequate and no oil present, 2) tanks had no visible leaks or sign of corrosion, 3) tank valves, flanges, and hatches had no visible leaks and 4) no evidence of significant spillage of produced liquids. COP shall remove any visible or measurable layer of oil from the fluid surface of the BGT in an effort to prevent significant accumulation of oil overtime.
- 5. COP shall maintain adequate freeboard to prevent overtopping of the BGT.
- 6. If a BGT develops a leak, then COP shall removal all liquid above the damage or leak within 48 hours of discovery, notify the appropriate division office pursuant to 19.15.29 NMAC and repair the damage or replace BGT as applicable.
- 7. If COP discovers a BGT designed in accordance with 19.15.17.11.I(5) has lost integrity the BGT will promptly be drained and removed from service and COP will follow the approved closure plan. If COP discovers a retrofitted BGT designed in accordance with 19.15.17.11.I(4)(a-c), does not demonstrate integrity or that the BGT develops any of the conditions identified in Paragraph (5) of Subsection A of 19.15.17.12 NMAC shall repair the damage or close the existing BGT pursuant to the closure requirements of 19.15.17.13 NMAC.
- 8. If COP equips or retrofits the existing BGT to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, COP shall visually inspect the area beneath the BGT during the retrofit and document any areas that are wet, discolored or showing other evidence of a release on form C-141. COP shall measure and report to the division the concentration of contaminants in the wet or discolored soil with respect to the standards set forth in Table I of 19.15.17.13 NMAC. If there is no wet or discolored soil or if the concentration of contaminants in the wet or discolored soil is less than the standard set forth in Table I of 19.15.17.13 NMAC, then COP will proceed with the closure requirements of 19.15.17.13 NMAC prior to initiating the retrofit or replacement.

## ConocoPhillips Company San Juan Asset Production BGT Closure Plan

In accordance with Rule 19.15.17.13 NMAC, the following plan describes the general closure requirements of a below-grade tank (BGT) on any ConocoPhillips Company (COP) location in the San Juan Asset. This is COP's standard closure procedure for all BGT's regulated under Rule 19.15.17 NMAC and operated by COP. For those closures which do not conform to this standard closure plan, a separate BGT specific closure plan will be developed and utilized.

### **Closure Conditions and Timing for BGT:**

- Within 60 days of cessation of operation COP will:
  - o Remove all liquids and sludge and dispose in a division approved manner.
- Within 72 hours or 1 week prior to closure COP will:
  - Give notice to surface owners by certified mail. For public entities by email as specified on the variance page.
  - o Give notice to Division District Office verbal or in writing/email.
- Within 6 months of cessation of operation COP will:
  - o Remove BGT and dispose, recycle, reuse, or reclaim in a division approved manner.
  - o Remove unused onsite equipment associated with the BGT.
- Within 60 days of closure COP will:
  - Send the Division District Office a Closure Report per 19.15.17.13.F (1).

### **General Plan Requirements:**

- Prior to initiating any BGT closure, except in the case of an emergency, COP will notify the surface owner of the intent to close the BGT by certified mail no later than 72 hours or 1 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.
- 2. Notice of closure will be given to the Division District office between 72 hours and 1 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
- 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 Division District Office approved facility.
- Solids and sludge's will be shoveled and/or vacuumed out for disposal at one of the Division District Office approved facilities, depending on the proximity of the BGT site: Envirotech Land Farm (Permit #NM-01-011), Industrial Ecosystems Inc. JFJ Land Farm (Permit #NM-01-0010B), and Basin Disposal (Permit #NM-01-005).
- 5. COP will obtain prior approval from the Division District Office 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 Division District Office. 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.
- 6. Any equipment associated with the BGT that is no longer required for some other purpose, following the closure, will be removed.

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7. Following removal of the tank and any liner material, COP 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.

		Table I						
Closure Criteria for Soils Beneat	h Below-Grade Ta	nks, Drying Pads Associated with Closed-Loop	Systems and Pits					
where Contents are Removed								
Depth below bottom of pit to	Constituent	Method*	Limit**					
groundwater less than 10,000								
mg/I TDS								
	Chloride	EPA 300.0	600 mg/kg					
≤50 feet	TPH	EPA SW-846 Method 418.1	100 mg/kg					
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg					
	Benzene	EPA SW-846 Method 8021B or 8015M	10 mg/kg					
	Chloride	EPA 300.0	10,000 mg/kg					
51 feet-100 feet	TPH	EPA SW-846 Method 418.1	2,500 mg/kg					
	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg					
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg					
	Benzene	EPA SW-846 Method 8021B or 8015M	10 mg/kg					
	Chloride	EPA 300.0	20,000 mg/kg					
> 100 feet	TPH	EPA SW-846 Method 418.1	2,500 mg/kg					
	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg					
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg					
	Benzene	EPA SW-846 Method 8021B or 8015M	10 mg/kg					

\*Or other test methods approved by the division

\*\*Numerical limits or natural background level, whichever is greater

(19.15.17.13 NMAC-Ro, 19.15.17.13 NMAC 3/28/2013)

- 8. If the Division District Office and/or COP determine there is a release, COP will comply with 19.15.17.13.C.3b.
- 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 containing earthen material compacted and covered with a minimum of one foot top soil, or background thickness of top soil, whichever is greater. The surface will then be re-contoured to match the native grade, prevent ponding of water, and prevent erosion of cover material.
- 10. For those portions of the former BGT area no longer required for production activities, COP will seed the disturbed area in the first favorable growing season following the closure of the BGT. Seeding will be accomplished via drilling on the contour whenever practical, or by other Division District Office approved methods. COP will notify the Division District Office when reclamation and re-vegetation is complete.

Reclamation of the BGT shall be considered complete when:

- Established vegetative cover reflects a life form ratio of +/- 50% of pre disturbance levels.
- Total plant cover is at least 70% of pre-disturbance levels (Excluding noxious weeds) OR
- Pursuant to 19.15.17.13.H.5d COP 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.

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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.

#### **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 Division District Office Form C-144. The Report will include the following:

- Proof of Closure Notice (surface owner and Division District Office)
- Backfilling & cover installation
- Confirmation Sampling Analytical Results
- Application Rate & Seeding techniques
- Photo Documentation of Reclamation