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 M Energy Minerals and Natu Department Oil Conservation I 1220 South St. Fra Santa Fe, NM 8	ural Resources t Division uncis Dr.	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.
Type of action: Below Permi 39-22436 Closu Modi Closu or proposed alternative met <i>Instructions: Please submit o</i>	hod one application (Form C-144) per in	or Closure F method proposed alternati egistration sting permitted on adividual pit, below	ive method non-permitted pit, below-grade tank, grade tank or alternative request
1.	of its responsibility to comply with an RID # <u>217817</u> <u>dexico 87499</u> <u>2</u> nber:	y other applicable go Range <u>7W</u> (	overnmental authority's rules, regulations or ordinances.
2. Pit: Subsection F, G or J of 19.15.17.11 NI Temporary: Drilling Workover Permanent Emergency Cavitation  Lined Unlined Liner type: Thickness String-Reinforced Liner Seams: Welded Factory Other	P&A Multi-Well Fluid Manage	ment La	ow Chloride Drilling Fluid 🗌 yes 🗌 no
3.         Image: Subsection I of 19.15.1         Volume: Max 120 bbl       Type of         Tank Construction material: Metal         Image: Secondary containment with leak detection         Image: Visible sidewalls and liner Image: Visible sidewalls and limage: Visible sidewalls and liner Image: Vis	f fluid: <u>Produced Water</u> I Visible sidewalls, liner, 6-inch l walls only I Other	Well does no Please revie ift and automatic ov	
4. Alternative Method: Submittal of an exception request is required. E	xceptions must be submitted to the S	Santa Fe Environme	ntal Bureau office for consideration of approval.
<ul> <li>5.</li> <li>Fencing: Subsection D of 19.15.17.11 NMAC (A)</li> <li>☐ Chain link, six feet in height, two strands of b <i>institution or church</i>)</li> <li>☐ Four foot height, four strands of barbed wire of Alternate. Please specify <u>4' hog wire fence wire f</u></li></ul>	parbed wire at top (Required if locate evenly spaced between one and four	ed within 1000 feet of feet	

elp

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

Screen 🗌 Netting 🗌 Other\_

6.

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:

X 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 material are provided below. Siting criteria does not apply to drying pads or above-grade tanks.

General siting	
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank	□ Yes ⊠ No □ 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 □ NA
<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)	
<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
Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application.	🗌 Yes 🗌 No
- 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

<ul> <li>Within 100 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
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 lake (measured from the ordinary high-water mark).	🗌 Yes 🗌 No
- Topographic map; Visual inspection (certification) of the proposed site	
<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
<ul> <li>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.</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 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. <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 doc attached.</i> <ul> <li>Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC</li> <li>Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC</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 19.15.17.12 NMAC</li> <li>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</li> <li>Previously Approved Design (attach copy of design) API Number: or Permit Number:</li> </ul> </li> </ul>	cuments are NMAC 15.17.9 NMAC
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 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         Previously Approved Design (attach copy of design) API Number: or Permit Number:	.15.17.9 NMAC

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 box, that 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         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	documents are
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         Multi-well Fl         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	luid Management Pit
<ul> <li><sup>14.</sup></li> <li><u>Waste Excavation and Removal Closure Plan Checklist</u>: (19.15.17.13 NMAC) <i>Instructions: Each of the following items must be a 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>Re-vegetation Plan - 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>	
15. <u>Siting Criteria (regarding on-site closure methods only)</u> : 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. P 19.15.17.10 NMAC for guidance.	cce material are Please refer to
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
<ul> <li>Ground water is between 25-50 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 □ NA
<ul> <li>Ground water is more than 100 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 □ NA
<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>	🗌 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 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>	🗌 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	

- 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
<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 planes of the box, that the documents are attached.         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         Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K 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         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 (if applicable) - 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 cann         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         Still Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC         Still 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 belie         Name (Print):      Kelly G. RobertsTitle:      Staff Regulatory Technician         Signature:      Date:      II/3/15         e-mail address:      Kelly.Roberts@conocophillip.com      Telephone:      505-326-9775	ief.
18. OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment)	
OCD Representative Signature: Approval Date.	
OCD Representative Signature: Approval Date:	
	the closure report.
Title:	the closure report.

h this closure report is true, accurate and complete to the best osure requirements and conditions specified in the approved	st of my knowledge and l closure plan.
Title:	
Date:	
Telephone:	
	Date:

## San Juan 28-7 Unit 231E (BELOW GRADE TANK)

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.

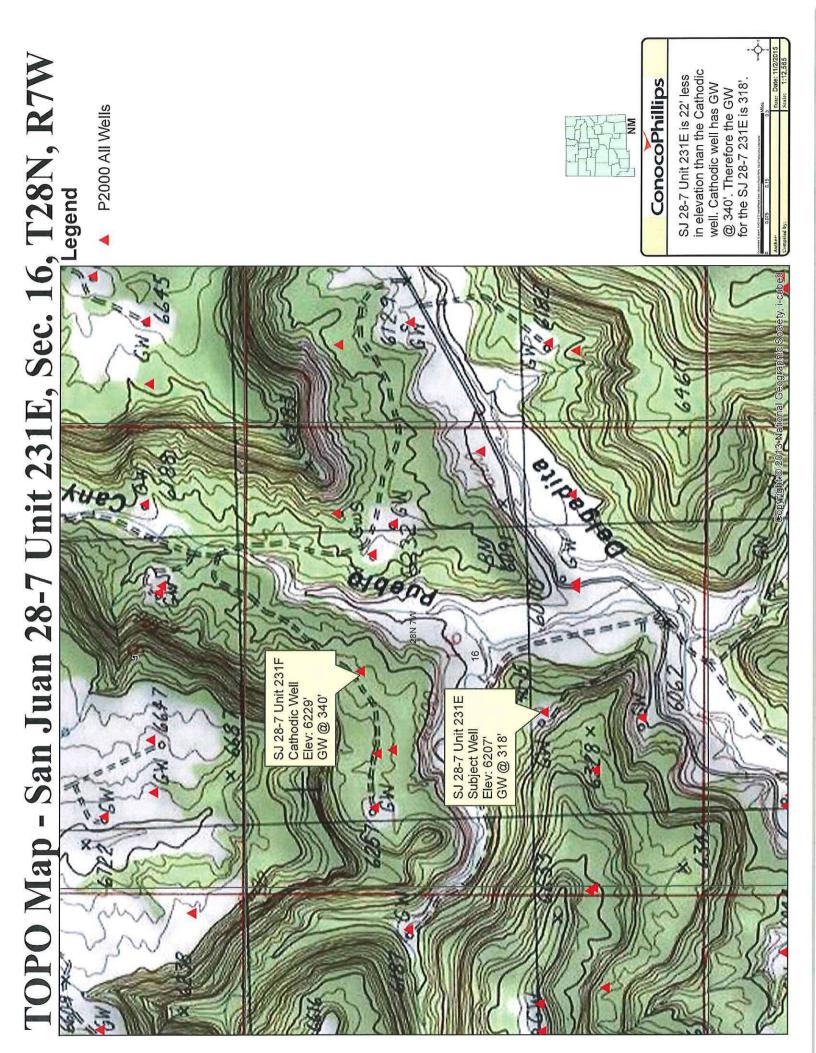
- 1. Fencing
  - Fencing as described in Section 5 under Alternate, COPC will construct all new fences around the below grade tank utilizing 48" steel mesh field-fence (hog-wire) on the bottom with a single strand of barbed wire on top. T-posts shall be installed every 12 feet and corners shall be anchored utilizing a secondary T-post. Below grade tanks will be fenced at all times, regardless of location.
- 2. <u>Geo-membrane Liner</u>
  - The geo-membrane liner consists of a 45-mil flexible LLDPE material manufactured by Raven Industries as J45BB. This product is a four layer reinforced laminated containing no adhesives. The outer layers consist of a high strength polyethylene film manufactured using virgin grade resins and stabilizers for UV resistance in exposed applications. The J45BB is reinforced with 1300 denier (minimum) tri-directional scrim reinforcement. It exceeds ASTMD3083 standard by 10%. J45BB has a warranty for 20 years from Raven Industries and is attached. It is typically used in Brine Pond, Oilfield Pit liner and other industrial applications. The manufacture specific sheet is attached and the design attached displays the proper installation of the liner.
- 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.

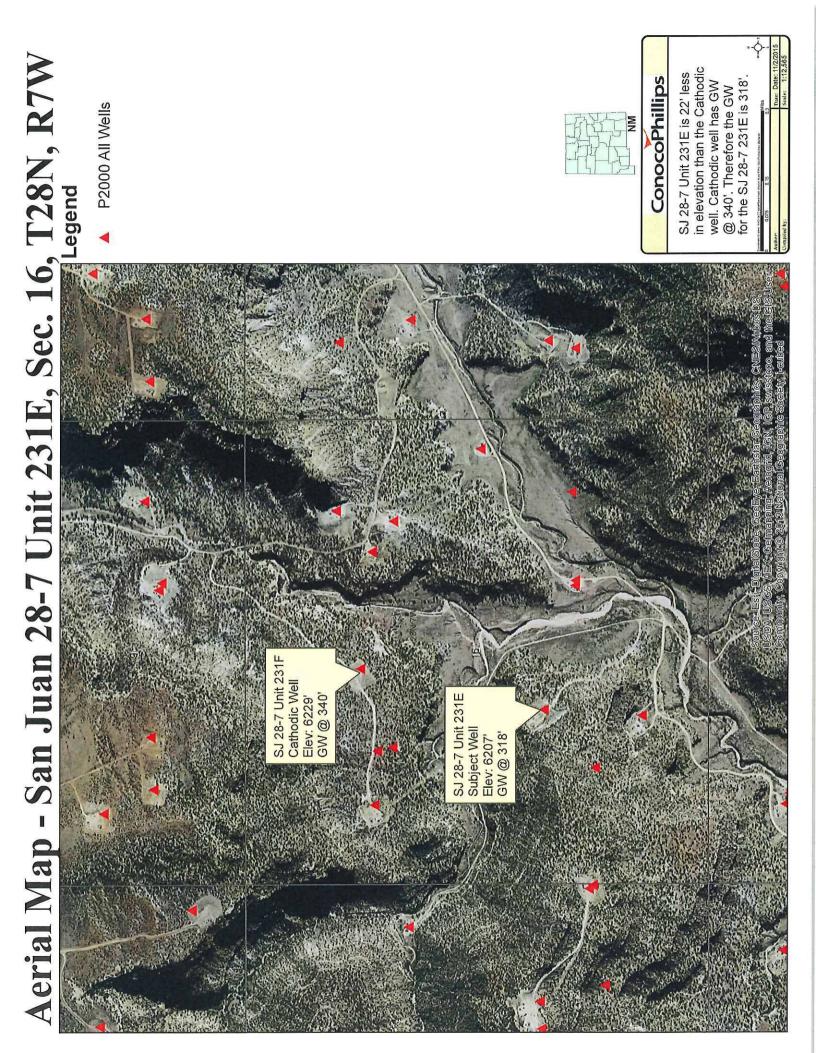
TIERRA CORROSION CONTROL, INC. DRILLING LOG

COMPANY: Conoco Phillips LOCATION: San Juan 28-7 #231F STATE: NM BIT SIZE: 7 7/8" LBS COKE BACKFILL: 3,200# ANODE TYPE: 2" X 60" Duriron DATE: July 25, 2008 LEGALS: Sec16 T28N R7W DRILLER: Gilbert Peck CASING SIZE/TYPE: 8" X 20' PVC VENT PIPE: 340' ANODE AMOUNT: 15

COUNTY: Rio Arriba DEPTH: 340' COKE TYPE: Asbury PERF PIPE: 180' BOULDER DRILLING: None

DEPTH	DRILLER'S LOG	AMPS	DEPTH	DRILLER'S LOG	AMPS	ANODE #	DEPTH	NO COKE	COKE
20	Casing	.3	310		.3	1	295	.8	2.5
25	Sandstone	.3	315		.3	2	285	.9	2.8
30		.9	320		.3	3	275	.9	3.0
35	Gray Shale	1.4	325		.3	4	265	2.9	6.1
40		1.1	330		.3	5	255	2.2	5.7
45	Sandstone	.5	335	•	.3	6	245	1.4	5.4
50		.6	340			7	235	.8	4.5
55		.6	345	0		8	205	.8	2.3
60		.3	350			9	195	.8	2.3
65		.3	355			10	195	.8	2.3
70		.3	360						
75		.5	365			11	165	.9	2.2
80		.5	370			12	155	.9	2.2
85		.5	375			13	145	1.3	3.3
90		.6	380			14	120	1.8	3.6
95		.8	385			15	110	1.1	3.6
100		.7	390			16			
105	V	.6	395			17			
110	Gray Shale	1.1	400			18			
115		1.7	405			19			
120		1.8	410			20			
125	Sandstone	.6	415			20			
130		.3	420 425						
135 140		.3	425			22			-
140	Gray Shale	1.3	430			23			
145	Sandstone	.9	440			24			-
155		.9	445			25			
160		.9	450		-	26			
165		.9	455			27			
170		.9	460			28			
175		.9	465			29			
180		.8	470			30			
185		.8	475						
190		.8	480						
195		.8	485						
200		.8	490					-	
205		.8	495			WATER D			
210		.8	500			ISOLATIC	N PLUGS	i:	
215		.6				LOGING	VOLTS: 12	2.28	
220		.3						<b>JTO BATTE</b>	RY
225		.3				TOTAL A			5. SAR
230		.3						- ANCE: 1.00	
235	×	.8						ANCE. 1.00	
240	Gray Shale	1.1				REMARK	5:		
245		1.4							
250		1.7							
255		2.2							
260		2.4							
265		2.9							
270	Canalatana	1.8							
275	Sandstone	.9 .9							
280		.9							
285		.9							
290 295		.8							
300		.0				B			
305	¥	.3							
500	1.000	.0	L						





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

## Well Name: San Juan 28-7 Unit 231E

1. <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 28-7 Unit 231F** with groundwater @ 340' as indicated in the **Cathodic Data Sheet** attached. The subject well is 22' less in elevation making depth to groundwater at 318'.

 Distance to watercourse (should not be within 100 feet of a continuously flowing 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 28-7 Unit #231E

## **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.

## ConocoPhillips Company San Juan Basin Below Grade Tank Design and Construction

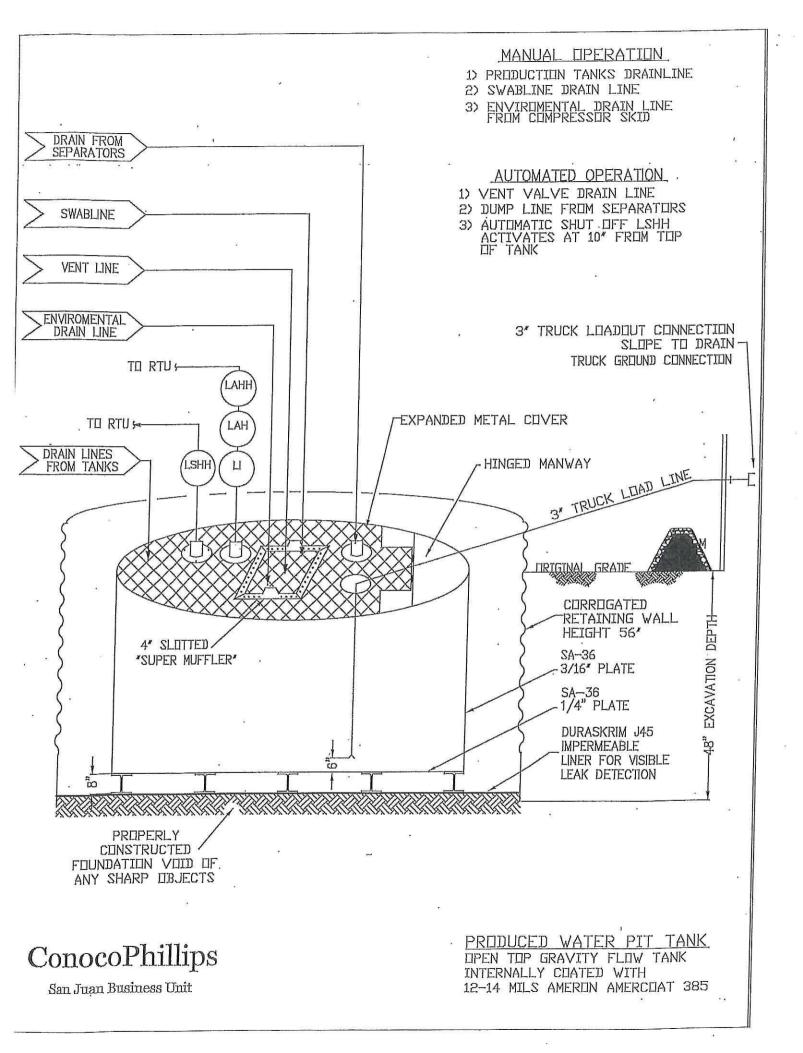
In accordance with NMAC 19.15.17 the following information describes the design and construction of below grade tanks on ConocoPhillips Company hereinafter known as COPlocations. This is COP's standard procedure for all below grade tanks (BGT). A separate plan will be submitted for any BGT which does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

### General Plan:

- 1. COP 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. COP signage will comply with 19.15.17.11.C NMAC.
- 3. COP 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 at all times regardless of location.
  - a. If the below grade tank is located within 1000 feet of an occupied permanent residence, school, hospital, institution or church, COP will construct all new fences utilizing 72" chain link security 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. COP will construct a screened, expanded metal covering, on the top of the BGT.
- COPwill ensure that a below-grade tank is constructed of materials resistant to the below-grade tank's particular contents and resistant to damage from sunlight as shown on design drawing and specification sheet.
- The COP below-grade tank 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. COP shall operate and install the below-grade tank to prevent the collection of surface water run-on. COP has built in shut off devices that do not allow a below-grade tank to overflow. COP constructs berms and corrugated retaining walls at least 6" above ground to keep from surface water run-on entering the below grade tank as shown on the design plan.
- 8. COP will construct and use a below-grade tank that does not have double walls. The below-grade tank's side walls will be open for visual inspection for leaks, the below-grade tank's bottom is elevated a minimum of six inches above the underlying ground surface and the below-grade tank is underlain with a

geomembrane liner to divert leaked liquid to a location that can be visually inspected.

- 9. COP has equipped the below-grade tanks with the ability to detect high level in the tank and provide alarm notification and shutdown process streams into the tank. Once high level is detected RTU logic closes the inlet separator sales valve and does not permit vent valve to open. This shutdown of the sales valve and gagging of the vent valves prevents any hydrocarbon process streams from entering the pit tank once a high level is detected. Furthermore, an electronic page is sent to the COP MSO for that well site and to the designated contract "Water-Hauling" Company indicating a high level and that action must be taken to address this alarm. The environmental drain line from COP's compressor skid under normal operating conditions is in the open position. The environmental drain line is in place to capture any collected rain water or spilled lubricants from our compressor skids. The swab drain line is a manually operated drain and by normal operating procedures is in the closed position. The tank drain line is also a manually operated drain and during normal operations it is in the closed position.
- 10. The geomembrane liner consists of a 45-mil flexible LLDPE material manufactured by Raven Industries as J45BB. This product is a four layer reinforced laminated containing no adhesives. The outer layers consist of a high strength polyethylene film manufactured using virgin grade resins and stabilizers for UV resistance in exposed applications. The J45BB is reinforced with 1300 denier (minimum) tri-directional scrim reinforcement. It exceeds ASTMD3083 standard by 10%. J45BB has a warranty for 20 years from Raven Industries and is attached. It is typically used in Brine Pond, Oilfield Pit liner and other industrial applications. The manufacture specific sheet is attached and the design attached displays the proper installation of the liner.
- 11. The general specification for design and construction are attached in the COP document.



# DURA-SKRIM®

# JB0, JB6 & J45

AveragesBlack/Black	PROPERTIES	TEST METHOD	) J	30BB	J3	6BB	J4	5BB
Thickness         ASTM D 5199         27 mil         30 mil         32 mil         36 mil         40 mil         45 mil           Weight Ebs Fee MSE         ASTM D 5261         128 lbs         140 lbs         151 lbs         168 lbs         189 lbs         210 ll           (CZVG)         ASTM D 5261         128 lbs         (140 lbs         151 lbs         168 lbs         189 lbs         210 ll           (CZVG)         **Extrusion laminated with encapsulated tri-directional scrim reinforcement         (24.19)         (27.21)         (30.22           (Cobstruction         **Extrusion laminated with encapsulated tri-directional scrim reinforcement         29 Adhesion         ASTM D 7003         88 lbf MD         110 lbf MD         70 lbf DD         84 lbf DD         140 lbf MD         160 lbf MD         140 lbf MD         160 lbf					E 1997			Typical Roll Averages
Weight LLS: Per MSF. (coV/C)         ASTM D 5261         126 lbs (18.14)         140 lbs (20.16)         151 lbs (21.74)         16B lbs (24.19)         189 lbs (27.21)         210 ll (30.22)           Construction         **Extrusion laminated with encepsulated tri-directional scrim reinforcement           Ply Adhesion         ASTM D 413         16 lbs         20 lbs         19 lbs         24 lbs         25 lbs         31 lb           11 Densite Strengtin         ASTM D 7003         88 lbf MD 63 lbf DD         110 lbf MD 79 lbf DD         90 lbf MD 79 lbf DD         113 lbf MD 87 lbf DD         110 lbf MD 84 lbf DD         105 lbf           11 Densite Elongation (2) Break % (Elim Break)         ASTM D 7003         550 MD 550 DD         750 MD 750 DD         550 MD 750 DD         750 MD 750 DD         750 MD 750 DD         550 MD 750 DD         750 MD 750 DD         550 MD 750 DD         750 DD         750 MD 750 DD         750 DD         750 MD 750 DD	Appearance		Bla	ck/Black	Black	(/Black	Black	Black
ASTM D 6201         (18.14)         (20.16)         (21.74)         (24.19)         (27.21)         (30.2)           Construction         **Extrusion laminated with encapsulated tri-directional scrim reinforcement           PVAdhesion         ASTM D 413         16 lbs         20 lbs         19 lbs         24 lbs         25 lbs         31 lb           11 Tensital Strength         ASTM D 7003         88 lbf MD         110 lbf MD         90 lbf MD         413 lbf MD         110 lbf MD         138 lbf DD         19 lbs         24 lbs         25 lbs         31 lb           11 Tensital Strength         ASTM D 7003         88 lbf DD         750 MD         750 DD         750 MD         750 MD         750 DD         750 MD         750 MD         750 MD         750 MD         750 MD         750 DD         750 MD         750 DD         750 DD         750 DD         750 DD         750 DD         750 MD         750 DD	Thickness	ASTM D 5199	27 mil	30 mil	32 mil	36 mil	40 mit	45 mil
Py Adhesion         ASTM D 413         16 lbs         20 lbs         19 lbs         24 lbs         25 lbs         31 lb           11 Tensile Strendtin         ASTM D 7003         88 lbf MD 63 lbf DD         110 lbf MD 79 lbf DD         90 lbf MD 79 lbf DD         113 lbf MD 87 lbf DD         110 lbf MD 84 lbf DD         138 lbf           11 tensile Strendtin         ASTM D 7003         550 MD 63 lbf DD         750 MD 750 DD         550 MD 550 DD         750 MD 750 DD         550 MD 750 DD         550 MD 750 DD         750 MD 750 DD         20 MD 850 DD         36 MD 20 DD         20 MD 31 DD         20 MD 20 DD         36 DL           100 lbf MD         117 lbf M 180 lbf MD         97 lbf MD 90 lbf DD         75 lbf MD 75 lbf DD         100 lbf MD 92 lbf DD         100 lbf MD 100 lbf MD         117 lbf M 100 lbf DD           103 lbf MD         180 lbf MD 180 lbf DD         218 lbf MD 180 lbf DD         120 lbf MD 180 lbf DD         222 lbf MD 222 lbf DD         220 lbf MD 220 lbf DD         220 lbf DD 220 lbf DD         220 lbf DD 220 lbf DD         120 lbf DD 160 lbf DD		ASTM D 5261						210 lbs (30.24)
11 Tensile/Strength         ASTM D 7003         68 lbf MD 63 lbf DD         110 lbf MD 79 lbf DD         90 lbf MD 79 lbf DD         113 lbf MD 87 lbf DD         110 lbf MD 84 lbf DD         138 lbf 105 lbf           11 LeftSile/Elongation (Q) Break % (Elm(Break))         ASTM D 7003         550 MD 550 DD         750 MD 750 DD         560 MD 550 DD         750 MD 750 DD         30 MD 20 DD         20 MD 30 DD         36 MI 20 DD         36 MI 20 DD         36 MI 20 DD         30 MD 20 DD         20 MD 31 DD         20 MD 20 DD         36 MI 20 DD         36 DI           Tongule Teal Strength         ASTM D 5884         75 lbf MD 75 lbf DD         97 lbf MD 90 lbf DD         75 lbf MD 75 lbf DD         104 lbf MD 100 lbf MD         117 lbf M 100 lbf MD         117 lbf M 118 lbf II           Grab Tensile         ASTM D 7004         180 lbf MD 180 lbf DD         180 lbf MD 180 lbf DD         222 lbf MD 223 lbf DD         220 lbf MD 257 lbf M 220 lbf DD         257 lbf M 258 lbf D           Trapezold Tear         ASTM D 4533         120 lbf MD 120 lbf DD         146 lb	Construction		**Ex	rusion laminated	l with encapsula	ted tri-direction	al scrim reinfor	cement
Careford         ASTM D 7003         63 lbf DD         79 lbf DD         70 lbf DD         87 lbf DD         84 lbf DD         105 lbf           11 tensile Elongation @ Break % (ElimBreak)         ASTM D 7003         550 MD 550 DD         750 MD 750 DD         550 MD 550 DD         750 MD 750 DD         550 MD 550 DD         750 MD 750 DD         550 DD         750 MD 550 DD         750 DD         36 MD 30 MD         20 MD 20 DD         36 MD 36 DE           10 rest         ASTM D 7003         20 MD 20 DD         33 MD 20 DD         20 MD 33 DD         36 MD 20 DD         30 MD 20 DD         20 DD         36 ML 20 DD         36 DE           Tongule treat Strength         ASTM D 5884         75 lbf MD 75 lbf DD         97 lbf MD 90 lbf DD         75 lbf MD 75 lbf DD         104 lbf MD 100 lbf MD         117 lbf M 148 lbf I           Grab Lensile         ASTM D 7004         180 lbf MD 180 lbf DD         218 lbf MD 210 lbf DD         180 lbf MD 223 lbf DD         220 lbf MD 220 lbf DD         257 lbf M 220 lbf DD         220 lbf MD 220 lbf DD         258 lbf E           Trapezoid Tear         ASTM D 4533         120 lbf MD 120 lbf DD         146 lbf MD 141 lbf DD         130 lbf MD 130 lbf DD         189 lbf MD 160 lbf MD         160 lbf MD 160 lbf DD         193 lbf M 1	Ely Adhesion	ASTM D 413	16 lbs	20 lbs	19 lbs	24 lbs	25 ibs	31 lbs
Break % (Elim(Break))         ASTM D 7003         550 DD         750 DD         30 MD         20 MD         33 MD         20 DD         33 MD         20 DD         30 MD         20 DD         36 MI           Peak % (SptimBreak)         ASTM D 7003         20 DD         33 DD         20 DD         31 DD         20 DD         36 DD           Tonguler Pear Strangin         ASTM D 5884         75 lbf MD         97 lbf MD         75 lbf MD         104 lbf MD         100 lbf MD         117 lbf M           Grab Tensile         ASTM D 5884         75 lbf MD         97 lbf MD         75 lbf DD         104 lbf MD         100 lbf MD         117 lbf M           Grab Tensile         ASTM D 7004         180 lbf MD         218 lbf MD         180 lbf MD         222 lbf MD         220 lbf MD         257 lbf M           Grab Tensile         ASTM D 4533         120 lbf MD         146 lbf MD         130 lbf MD         223 lbf DD         220 lbf MD         258 lbf D           Irrapezold If tear         ASTM D 4533         120 lbf MD         146 lbf MD         130 lbf MD         189 lbf MD         160 lbf DD         193 lbf M	t 12 Tensile/Strength	ASTM D 7003		A Contraction of the second seco				138 lbf MD 105 lbf DD
Peak % (Softini Break);         ASTM D 500         20 DD         33 DD         20 DD         31 DD         .20 DD         36 DD           Tonguler Fear Strendth         ASTM D 5884         75 lbf MD         97 lbf MD         75 lbf MD         104 lbf MD         100 lbf MD         117 lbf M           Tonguler Fear Strendth         ASTM D 5884         75 lbf DD         97 lbf MD         75 lbf DD         92 lbf DD         100 lbf MD         117 lbf M           Kerab Tensile         ASTM D 7004         180 lbf MD         218 lbf MD         180 lbf MD         222 lbf MD         220 lbf MD         257 lbf M           Eirabezold Tear         ASTM D 4533         120 lbf MD         146 lbf MD         130 lbf MD         223 lbf DD         220 lbf MD         258 lbf D           Eirabezold Tear         ASTM D 4533         120 lbf MD         146 lbf MD         130 lbf MD         189 lbf MD         160 lbf DD         193 lbf M           Zio lbf DD         120 lbf DD         146 lbf MD         130 lbf MD         189 lbf MD         160 lbf DD         193 lbf D           Zio lbf DD         ASTM D 4533         120 lbf DD         146 lbf MD         130 lbf MD         189 lbf MD         160 lbf DD		ASTM D 7003						750 MD 750 DD
ASTM D 5884       75 lbf DD       90 lbf DD       75 lbf DD       92 lbf DD       100 lbf DD       118 lbf L         2Grab Tensile       ASTM D 7004       180 lbf MD       218 lbf MD       180 lbf MD       222 lbf MD       220 lbf MD       257 lbf MD       258 lbf D         2Grab Tensile       ASTM D 7004       180 lbf MD       180 lbf MD       218 lbf MD       180 lbf MD       222 lbf MD       220 lbf MD       257 lbf MD       258 lbf D         Frabezold Teas       ASTM D 4533       120 lbf MD       146 lbf MD       130 lbf MD       189 lbf MD       160 lbf MD       193 lbf M         Frabezold Teas       ASTM D 4533       120 lbf DD       146 lbf DD       130 lbf MD       189 lbf MD       160 lbf MD       193 lbf M         Frabezold Teas       ASTM D 1204       <1	1 Tensile Elongation @ Peak % (SoimBreak)	ASTM D 7003						36 MD 36 DD
ASTIM D 7004         180 lbf DD         210 lbf DD         180 lbf DD         223 lbf DD         220 lbf DD         258 lbf D           Irabezold Tear         ASTM D 4533         120 lbf MD         146 lbf MD         130 lbf MD         189 lbf MD         160 lbf MD         193 lbf M           Irabezold Tear         ASTM D 4533         120 lbf DD         146 lbf MD         130 lbf MD         189 lbf MD         160 lbf MD         193 lbf M           Irabezold Tear         ASTM D 4533         120 lbf DD         144 lbf DD         130 lbf DD         172 lbf DD         160 lbf MD         193 lbf D           Iphensional Stability         ASTM D 1204         <1	nonguerrea Strength	ASTM D 5884						117 lbf MD 118 lbf DD
ASTM D 4533         120 lbf DD         141 lbf DD         130 lbf DD         172 lbf DD         160 lbf DD         191 lbf D           Dimensional Stability         ASTM D 1204         <1	Grab Tensile	ASTM D 7004		218 lbf MD 210 lbf DD				257 lbf MD 258 lbf DD'
Euncture: Resistance         ASTM D 4833         50 lbf         64 lbf         65 lbf         83 lbf         80 lbf         99 lbf           Maximum: Use=Lemperature:         180° F         180° F <t< td=""><td>Trapezoid Tear</td><td>ASTM D 4533</td><td></td><td></td><td></td><td></td><td></td><td>193 lbf MD 191 lbf DD</td></t<>	Trapezoid Tear	ASTM D 4533						193 lbf MD 191 lbf DD
MaximumUse         180° F         180	Dimensional Stability	ASTM D 1204	<1	<0.5	<1	<0,5	<1	<0.5
	Puncture:Resistance at the	ASTM D 4833	50 lbf	64 lbf	65 lbf	83 lbf	80 lbf	99 lbf
-70° F -70° F -70° F -70° F -70° F -70° F	Maximum Use TemperatureL		180° F	180° F	180° F	-180° F	180° F	180° F
	Minimum Use Lemperature		-70° F	-70° F	-70° F	-70° F	-70° F	-70° F

MD = Machine Direction DD = Diagonal Directions



Note: Minimum Roll Averages are set to take into account product variability in addition to testing variability between laboratories.

\*Dimensional Stability Maximum Value

\*\*DURA-SKRIM J30BB, J36BB & J45BB are a four layer reinforced laminate containing no adhesives. The outer layers consist of a high strength polyethylene film manufactured using virgin grade resins and stabilizers for UV resistance in exposed applications. 'DURA-SKRIM J30BB, J36BB & J46BB are reinforced with a 1300 denier (minimum) tri-directional scrim reinforcement.

Note: RAVEN INDUSTRIES MAKES NO WARRANTIES AS TO THE FITNESS FOR A SPECIFIC USE OR MERCHANTABILITY OF PRODUCTS REFERRED TO, no guarantee of satisfactory results from reliance upon contained information or recommendations and disclaims all liability for resulting loss or damage.





Sloux Falls, South Dakota

# SALES OFFICE

P.O. Box 5107 Sloux Falls, SD 57117-5107 (605) 335-0174 (605) 331-0333 FAX 800-635-3456

08/06

## RAVEN INDUSTRIES INC. EXPOSED GEOMEMBRANE LIMITED WARRANTY

Raven Industries Inc. warrants Dura-Skrim J30BB, J36BB, and J45BB to be free from manufacturing defects and to be able to withstand normal exposure to sunlight for a period of 20 years from the date of sale for normal use in approved applications in the U.S and Canada, excluding Hawaii. This warranty is effective for products sold and shipped from January 1, 2008 to December 31, 2008. These dates will be updated prior to December 31, 2008.

This Limited Warranty does not include damages or defects in the Raven geomembrane resulting from acts of God, casualty or catastrophe including but not limited to: earthquakes, floods, piercing hail, or tornadoes. The term "normal use" as used herein does not include, among other things improper handling during transportation, unloading, storage or installation, the exposure of Raven geomembranes to harmful chemicals, atypical atmospheric conditions, abuse of Raven geomembranes by machinery, equipment or people; improper site preparation or covering materials, excessive pressures or stresses from any source or improper application or installation. Raven geomembrane material warranty is intended for commercial use only and is not in effect for the consumer as defined in the Magnuson Moss Warranty or any similar federal, state, or local statues. The parties expressly agree that the sale hereunder is for commercial or industrial use only.

Should defects or premature loss of use within the scope of the above Limited Warranty occur, Raven Industries Inc. will, at its option, repair or replace the Raven geomembrane on a pro-rata basis at the then current price in such manner as to charge the Purchaser/User only for that portion of the warranted life which has elapsed since purchase of the material. Raven Industries Inc. will have the right to inspect and determine the cause of any alleged defect in the Raven geomembrane and to take appropriate steps to repair or replace the Raven geomembrane if a defect exists which is covered under this warranty. This Limited Warranty extends only to Raven's geomembrane, and does not extend to the installation service of third parties nor does it extend to materials furnished or installed by others in connection with the intended use of the Raven geomembranes.

Any claim for any alleged breach of this warranty must be made in writing, by certified mail, to the General Manager of Engineered Films Division of Raven Industries Inc. within ten (10) days of becoming aware of the alleged defect. Should the required notice not be given, the defect and all warranties are waived by the Purchaser, and Purchaser shall not have any rights under this warranty. Raven Industries Inc. shall not be obligated to perform repairs or replacements under this warranty unless and until the area to be repaired or replaced is clean, dry, and unencumbered. This includes, but is not limited to, the area made available for repair and/or replacement of Raven geomembrane to be free from all water, dirt, sludge, residuals and liquids of any kind. If after inspection it is determined that there is no claim under this Limited Warranty, Purchaser shall reimburse Raven Industries Inc. for its costs associated with the site inspection.

In the event the exclusive remedy provided herein fails in its essential purpose, and in that event only, the Purchaser shall be entitled to a return of the purchase price for so much of the material as Raven Industries Inc. determines to have violated the warranty provided herein. Raven Industries Inc. shall not be liable for direct, indirect, special, consequential or incidental damages resulting from a breach of this warranty including, but not limited to, damages for loss of production, lost profits, personal injury or property damage. Raven Industries Inc. shall not be obligated to reimburse Purchaser for any repairs, replacement, modifications or alterations made by Purchaser unless Raven Industries Inc. specifically authorized, in writing, said repairs, replacements, modifications or alteration in advance of them having been made. Raven Industry's liability under this warranty shall In no event exceed the replacement cost of the material sold to the Purchaser for the particular installation in which it failed.

Raven Industries Inc. neither assumes nor authorizes any person other than the undersigned of Raven Industries Inc. to assume for it any other or additional liability in connection with the Raven geomembrane made on the basis of the Limited Warranty. The Limited Warranty on the Raven geomembrane herein is given in lieu of all other possible material warranties, either expressed or implied, and by accepting delivery of the material; Purchaser waives all other possible warranties, except those specifically given. This Limited Warranty may only be modified by written document mutually executed by Owner and Raven Industries Inc.

Limited Warranty is extended to the purchaser/owner and is non-transferable and non-assignable; i.e., there are no third-party beneficiaries to this warranty.

Purchaser acknowledges by acceptance that the Limited Warranty given herein is accepted in preference to any and other possible materials warranties.

THIS LIMITED WARRANTY SHALL BE GOVERNED BY SOUTH DAKOTA LAW AND VENUE FOR ALL LEGAL PROCEEDINGS IN CONNECTION WITH THIS LIMITED WARRANTY SHALL, BE IN MINNEHAHA COUNTY, SOUTH DAKOTA. RAVEN INDUSTRIES INC. MAKES NO WARRANTY OF ANY KIND OTHER THAN THAT GIVEN ABOVE AND HEREBY DISCLAIMS ALL WARRANTIES, BOTH EXPRESSED OR IMPLIED, OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THIS IS THE ONLY WARRANTY THAT APPLIES TO THE MATERIALS REFERRED TO HEREIN AND RAVEN INDUSTRIES INC. DISCLAIMS ANY LIABILITY FOR ANY WARRANTIES GIVEN BY ANY OTHER PERSON OR ENTITY, EITHER WRITTEN OR ORAL.

RAVEN INDUSTRIES' WARRANTY BECOMES AN OBLIGATION OF RAVEN INDUSTRIES INC. TO PERFORM UNDER THE WARRANTY ONLY UPON RECEIPT OF FINAL PAYMENT AND EXECUTION BY A DULY AUTHORIZED OFFICER OF RAVEN INDUSTRIES INC.

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

In accordance with Rule 19.15.17 the following information describes the operation and maintenance of Below Grade Tank (BGT) on ConocoPhillips, LP (BR) locations. This is BR's standard procedure for all BGT. A separate plan will be submitted for any BGT which does not conform to this plan.

### General Plan:

- COP will operate 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 environment. COP will perform an inspection on a monthly basis, installing 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 operate and install the below-grade tank to prevent the collection of surface water run-on. COP has built in shut off devices that do not allow a below-grade tank to overflow. COP constructs berms and corrugated retaining walls at least 6" above ground to keep from surface water run-on from entering the below grade tank as shown on the design plan.
- 4. As per 19.17.15.12 Subsection D, Paragraph 3, COP will inspect the belowgrade tank 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 five 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 a below-grade tank in an effort to prevent significant accumulation of oil overtime.
- 5. COP shall require and maintain a 10" adequate freeboard to prevent overtopping of the below-grade tank.

If the below grade tank develops a leak, or if any penetration of the pit liner or below grade tank, occurs below the liquid's surface, then COP will remove all liquid above the damage or leak line within 48 hours of discovery, notify the appropriate division office pursuant to 19.15.29 NMAC and repair the damage or replace the pit liner or below-grade tank as applicable. COP will repair or replace the pit liner or below grade tank. If the below grade tank or pit liner does not demonstrate integrity, COP will promptly remove and install a below grade tank or pit liner that complies with Subsection I of 19.15.17.11 NMAC

A Major Release shall be reported by giving both immediate verbal notice and timely written notice by filing form C-141 within 15 days pursuant to Subsection C, Paragraphs (1) and (2) of 19.15.3.116 NMAC. A Major Release is:

(a) an unauthorized release of a volume, excluding natural gases, in excess of 25 barrels;

(b) an unauthorized release of any volume which: (i) results in a fire; (ii) will reach a water course;

(iii) may with reasonable probability endanger public health; or

/ (iv) results in substantial damage to property or the environment;

(c) an unauthorized release of natural gases in excess of 500 mcf; or

(d) a release of any volume which may with reasonable probability be detrimental to water or cause an exceedance of the standards in Section 19, Subsection B, Paragraphs (1) and (2) or (3) of 19.15.1 NMAC.

• A Minor Release shall be reported by giving timely written notice by the filing of form C-141 within 15 days pursuant to Subsection C, Paragraph (2) of 19.15.3.116 NMAC. A Minor Release is an unauthorized release of a volume, greater than 5 barrels but not more than 25 barrels; or greater than 50 mcf but less than 500 mcf of natural gases.

## ConocoPhillips Company San Juan Basin: New Mexico Assets Production BGT Closure Plan

In accordance with Rule 19.15.17.13 NMAC, the following plan describes the general closure requirements of below-Grade Tanks (BGT) on ConocoPhillips Company locations in the San Juan Basin of New Mexico. This is COP's standard closure procedure for all BGTs 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:
  - Remove all liquids and sludge and dispose in a division approved manner.
- Within 72 Hrs 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 verbally and in writing/email.
- Within 6 months of cessation of operation COP will:
  - 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:**

- 1. 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 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.
- 2. Notice of closure will be given to the Division District 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
- 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.
- 4. 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.

Revised 9/4/2014

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.
- 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.

0.	address and Dife	where Contents are Domovad	
Depth below bottom of pit to groundwater less than 10,000	Constituent	where Contents are Removed Method*	Limit**
groundwater less than 10,000	Chloride	EPA 300.0	600 mg/kg
≤50 feet	ТРН	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	ТРН	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
$\frown$	Chloride	EPA 300.0	20,000 mg/kg
> 100 feet	ТРН	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.
- 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

12.