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

## State of New Mexico **Energy Minerals and Natural Resources** Department Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-144 Revised April 3, 2017

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.
Operator: Simcoe, LLC OGRID #: 329736
Address: 1199 Main Ave, Suite 101 Durango, CO 81301
Facility or well name: Northeast Blanco 063 M
API Number: 30-045-33476 OCD Permit Number:
U/L or Qtr/Qtr O Section 1 Township 31N Range 07W County: San Juan
Center of Proposed Design: Latitude 36.92387 Longitude -107.51857 NAD83
Surface Owner: ☑ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment
Pit: Subsection F, G or J of 19.15.17.11 NMAC   Temporary: Drilling Workover   Drilling Workover   Drilling Workover   Low Chloride Drilling Fluid yes no   Lined Unlined Liner type: Thicknessmil LLDPE HDPE PVC Other   String-Reinforced   String-Reinforced   String-Reinforced   Volume:bbl Dimensions: Lx Wx D
3.
4.  Alternative Method: 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 (Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)

Four foot height, four strands of barbed wire evenly spaced between one and four feet ☑ Alternate. Please specify Steel Mesh Fence with single strand barbed wire

Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)  Screen Netting Other Expanded metal or solid vaulted top	
☐ Monthly inspections (If netting or screening is not physically feasible)	
7.	
Signs: Subsection C of 19.15.17.11 NMAC  12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers	
Signed in compliance with 19.15.16.8 NMAC	
☑ Signed in compnance with 19.13.16.8 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.	
9. Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptance are provided below. Siting criteria does not apply to drying pads or above-grade tanks.	ptable source
General siting	
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank.  - □ NM Office of the State Engineer - iWATERS database search; □ USGS; □ Data obtained from nearby wells	☐ Yes ☑ No ☐ 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
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. ( <b>Does not apply to below grade tanks</b> )  - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ☐ No
Within the area overlying a subsurface mine. ( <b>Does not apply to below grade tanks</b> ) - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. (Does not apply to below grade tanks)  - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain. (Does not apply to below grade tanks) - FEMA map	Yes No
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	☐ 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
<u>Temporary Pit using Low Chloride Drilling Fluid</u> (maximum chloride content 15,000 mg/liter)	
Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.)  - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial 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

Within 100 feet of a wetland.	□ V □ N-
- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	Yes No
Temporary Pit Non-low chloride drilling fluid	
Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site	Yes No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application;  - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Permanent Pit or Multi-Well Fluid Management Pit	
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).	
- Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.  - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.	
- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	Yes No
Within 500 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	Yes No
10.  Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 N	IMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the doc	
<ul> <li>attached.</li> <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</li> <li>✓ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC</li> <li>✓ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC</li> </ul>	) NMAC
<ul> <li>✓ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC</li> <li>✓ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19. and 19.15.17.13 NMAC</li> </ul>	15.17.9 NMAC
Previously Approved Design (attach copy of design) API 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 docattached.	cuments are
<ul> <li>□ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC</li> <li>□ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC</li> <li>□ A List of wells with approved application for permit to drill associated with the pit.</li> <li>□ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19</li> </ul>	15 17 9 NMAC
and 19.15.17.13 NMAC  Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC  Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC	.15.17.7 IWIAC
☐ Previously Approved Design (attach copy of design) API Number: or Permit Number:	

Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC	
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the d	locuments are
attached.  ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC	
Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC	
Climatological Factors Assessment	
☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC	
Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC	
☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC	
Quality Control/Quality Assurance Construction and Installation Plan	
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC	
☐ Nuisance or Hazardous Odors, including H <sub>2</sub> S, Prevention Plan	
Emergency Response Plan	
☐ Oil Field Waste Stream Characterization ☐ Monitoring and Inspection Plan	
☐ Erosion Control Plan	
Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC	
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 Flu	uid Management Pit
☐ 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	
14.	
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) 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.	ttached to the
☑ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC	
Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC	
<ul> <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> </ul>	
Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC	
Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC	
15. Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC	
Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source	ce material are
provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. Pl	lease refer to
19.15.17.10 NMAC for guidance.	
Ground water is less than 25 feet below the bottom of the buried waste.	☐ Yes ☐ No
- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	□ NA
Ground water is between 25-50 feet below the bottom of the buried waste	Yes No
- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	∐ NA
Ground water is more than 100 feet below the bottom of the buried waste.	Yes No
- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	∐ NA
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).	☐ Yes ☐ No
- Topographic map; Visual inspection (certification) of the proposed site	
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.	☐ Yes ☐ No
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	
Within 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence	☐ Yes ☐ No
at the time of initial application.  - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	
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	☐ 168 ☐ 100
whith incorporated municipal obundances of within a defined municipal fresh water well field covered under a municipal ordinance	

adopted pursuant to NMSA 1978, Section 3-27-3, as amended.  - Written confirmation or verification from the municipality; Written approval obtained from the	e municipality	☐ Yes ☐ No
Within the area overlying a subsurface mine Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Divi	sion	☐ Yes ☐ No
Within an unstable area Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resou	rces; USGS; NM Geological	
Society; Topographic map		☐ Yes ☐ No
Within a 100-year floodplain FEMA map		☐ Yes ☐ No
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items to by a check mark in the box, that the documents are attached.  Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.  Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection E of 1 Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the 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 Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Soil Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Site Reclamation Plan -	.17.10 NMAC 9.15.17.13 NMAC nents of Subsection K of 19.15.17. ne appropriate requirements of 1917.13 NMAC C ase on-site closure standards cann IMAC 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		ef.
Name (Print): Sabre Beebe Title: Envi	ronmental Coordinator	
Signature: Sabra Beabe Date: Ju	ne 20, 2023	
e-mail address: sabre.beebe@ikavenergy.com Telephone:	970-852-5172	
18.  OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD	O Conditions (see attachment)	
OCD Representative Signature: Shelly Wells	Approval Date: <u>6/27/20</u>	23
Title: Environmental Specialist-Advanced OCD Permit Nur	nber: BGT2 Modification	
Closure Report (required within 60 days of closure completion): 19.15.17.13 NMAC  Instructions: Operators are required to obtain an approved closure plan prior to implementing any The closure report is required to be submitted to the division within 60 days of the completion of the section of the form until an approved closure plan has been obtained and the closure activities have   Closure Completion (Page 19.15.17.13 NMAC)	e closure activities. Please do not	
Closure Method:  Waste Excavation and Removal On-Site Closure Method Alternative Closure Metho  If different from approved plan, please explain.	d ☐ Waste Removal (Closed-lo	oop systems only)
21.  Closure Report Attachment Checklist: Instructions: Each of the following items must be attached mark in the box, that the documents are attached.  Proof of Closure Notice (surface owner and division)  Proof of Deed Notice (required for on-site closure for private land only)  Plot Plan (for on-site closures and temporary pits)  Confirmation Sampling Analytical Results (if applicable)  Waste Material Sampling Analytical Results (required for on-site closure)  Disposal Facility Name and Permit Number  Soil Backfilling and Cover Installation  Re-vegetation Application Rates and Seeding Technique	d to the closure report. Please in	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:					

Simcoe, LLC will be removing the current BGT per NMAC 19.15.17.12.D.(6) The operator of a below-grade tank who equips or retrofits the existing tank to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC shall visually inspect the area beneath the below-grade tank during the retrofit and document any areas that are wet, discolored or showing other evidence of a release on form C-141. The operator 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 the operator shall proceed with the closure requirements of 19.15.17.13 NMAC prior to initiating the retrofit or replacement.

Current tank is a double/double steel tank that will be re-installed as a single/double steel tank. Re-install will include a liner, culvert, sidewalls exposed and high level device



Above grade tank to be removed and replaced with a 80 bbl double wall/double bottom below grade tank sides not visible.



Northeast Blanco Unit 063 M 80 bbl double/double bgt Retrofit installation

**FIGURE** 

# NEBU #63M Below Ground Tank Hydrogeologic Report for Siting Criteria

# General Geology and Hydrology

The San Juan Basin is a typical Rocky Mountain basin with a gently dipping southern flank and a steeply dipping northern flank. Asymmetrically layered Tertiary sandstones and shales, along with Quaternary alluvial deposits, dominate surficial geology (Dane and Bachman, 1965). The proposed pit location will be located in the north-central San Juan Basin near Navajo Lake. The predominant geologic formation is the San Jose Formation of Tertiary age, which underlies surface soils and is often exposed (Dane and Bachman, 1965). Deposits of Quaternary alluvial and aeolian sands occur near the surface of the area, especially near streams and washes.

Cretaceous and Tertiary sandstones, as well as Quaternary alluvial deposits, serve as the primary aquifers in the San Juan Basin (Stone et al., 1983). In most of the proposed area, the San Jose Formation lies at the surface and overlies the Nacimiento Formation. Thickness of the San Jose ranges from 200 to 2700 feet, thickening from west to east across the region of interest (Stone et al., 1983). Aquifers within the coarser and continuous sandstone bodies of the San Jose Formation are between 0 and 2700' deep in this section of the basin (Stone et al., 1983). Groundwater within these aquifers flows regionally to the southwest, toward the San Juan River. More locally, groundwater flow is controlled by Navajo Lake. Little specific hydrogeologic data is available for the San Jose Formation system, but "numerous wells and springs used for stock and domestic supplies" draw their water from the San Jose Formation (Stone et al., 1983).

The prominent soil types at the proposed site are entisols and aridisols, which are defined as soils exhibiting little to no profile development (www.emnrd.state.nm.us). Soils are basically unaltered from their parent rock. Miles of arroyos, washes and intermittent streams exist as part of the drainage network towards the San Juan River. These features often cut into soil and other unconsolidated materials, contributing to sedimentation downstream. The sudden influx of water from storm events easily erodes the soils that cover the area and prohibits effective recharge to the underlying aquifers.

Regional weather further prohibits active recharge. The climate is arid, averaging almost 13 inches of rainfall annually. As is typical of the southwestern United States monsoonal weather patterns, most precipitation falls from July through September. The heaviest rainfall occurs in the summer in isolated, intense cloudbursts. September through June is relatively dry. Snow generally falls from December to mid-February and averages less than one-half inch in depth. The most active recharge occurs during the winter snowmelt periods from the upper elevations (Western Regional Climate Center www.wrcc.dri.edu).

The predominant vegetation is sagebrush and grasses with a more restricted pinon-juniper association (Dick-Peddie, 1993).



Northeast Blanco Unit 063 M 80 bbl double/double bgt Retrofit installation

**FIGURE** 

# Site Specific Hydrogeology

Depth to groundwater at the site is estimated to be greater than 100'. This estimation is based on data from Stone and others (1983), the USGS Groundwater Atlas of the United States and depth to groundwater data published on the New Mexico State Engineer's iWaters Database website. Local topography, proximity to adjacent channels and springs and observations made during a site visit are also taken into consideration.

The region is dominated by Navajo Lake and its associated canyons and gullies as evidenced on the attached topographic map and aerial photo. Relatively large, flat-topped mesas composed of thick sandstone sequences surround the perimeter of the lake and are often over 200 feet higher in elevation than the lake. Canyons and gullies erode into the sandstone and are filled with alluvium. This particular site is located on a mesa top 2.88 miles away from the main channel of Navajo Lake, and over 420 feet higher in elevation than the surface of the lake water. To the east lies Cottonwood Canyon, a first order tributary to the lake. To the west-southwest lies Negro Andy Canyon, another first order tributary to the lake.

The massive sandstone outcrops, upon which the site in question is situated, is part of the San Jose Formation. Beds of water-yielding sandstone are present in the San Jose Formation, which are fluvial in origin and are interbedded with mudstone, siltstone & shale. Porous sandstones form the principal aquifers in the area, while relatively impermeable shales and mudstones form confining units between the aquifers (Stone et al., 1983). "Extensive intertonguing" of different members of this formation is reported (Stone et al., 1983). Local aquifers exist within the San Jose Formation at depths greater than 100 feet and thicknesses of the aquifer can be up to several hundred feet (USGS, Groundwater Atlas of the US; Stone et al., 1983).

Depth to groundwater data is extremely limited in this region. Groundwater data available from the NM State Engineer's iWaters Database for wells near the below grade tank are attached and are plotted on the iWaters Groundwater Data Map. The nearest permitted well lies 4220 feet southeast (SJ 03685). The water is used for livestock watering, as are many others in the surrounding area. Depth to groundwater in the permitted water well is recorded as 310 feet. Other wells located near Navajo Lake at similar elevations to the site in question contain groundwater at depths in excess of 400 feet.

The elevation difference of over 400 feet between the site and Navajo Lake, the lack of other surface water features and groundwater depths greater than 400 feet deep in nearby permitted water wells is enough to suggest that groundwater at the site is greater than 100 feet.



Northeast Blanco Unit 063 M 80 bbl double/double bgt Retrofit installation

**FIGURE** 

# New Mexico Office of the State Engineer POD Reports and Downloads

Township: 30N Range: 07V Sections:

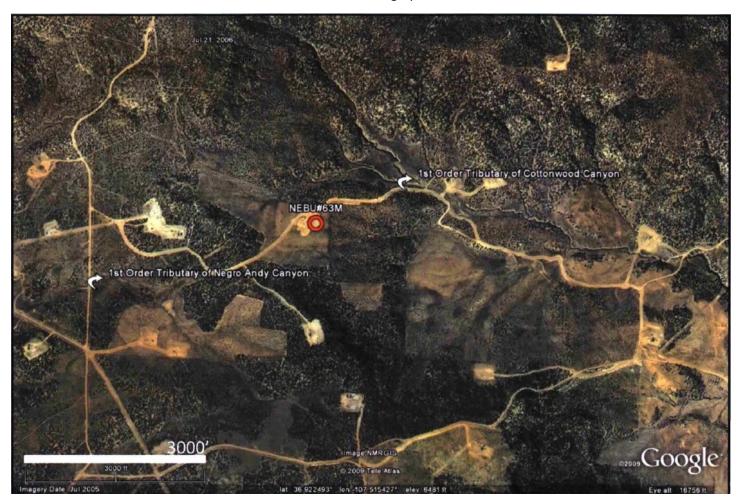
#### WATER COLUMN REPORT 12/06/2008

	(quarter												
	(quarter									Depth	Depth		(in feet)
POD Number	Tws	Rng	Sec	q.	P	P	Zone	x	Y	Well	Water	Column	
SJ 02698	30N	0770	15	3	1					402	255	247	
SJ 02366	30N	0770	15	3	1		C	114800	2117300	345	225	120	
SJ. 03640	30N	077	15	3	1	2				433	241	192	
SJ 00837	30N	079	17	4	4					400			
SJ 03385	30N	0770	17	4	4	4				520	460	60	
SJ 03006	30N	9730	24	1	3	3				100			
SJ 03082	30X	0770	24	3	1	1				9.8	€1	37	
SJ 03485	30N	0770	24	3	1	<u>1</u>				12€	60	66	
SJ 02818	30N	079	24	3	1	2				€ €	42	44	
SJ 03773 POD1	30N	077	24	3	1	2		126639	2112238	120	70	50	
SJ 03053	30N	0790	24	3	4	4				200			
SJ 03075	30N	077	25	1	2	2				165	76	87	
SJ 03774 POD1	30N	079	28	1	3	3		126554	2107670	300	220	80	
SJ 02983	30N	0770	25	1	4	3				262	4.0	222	
SJ 00035	30%	077	33	4	2	2				547	467	80	
SJ 03301	30N	0770	34	4	4	4				21	10	11	

Record Count: 16



## Aerial Photograph

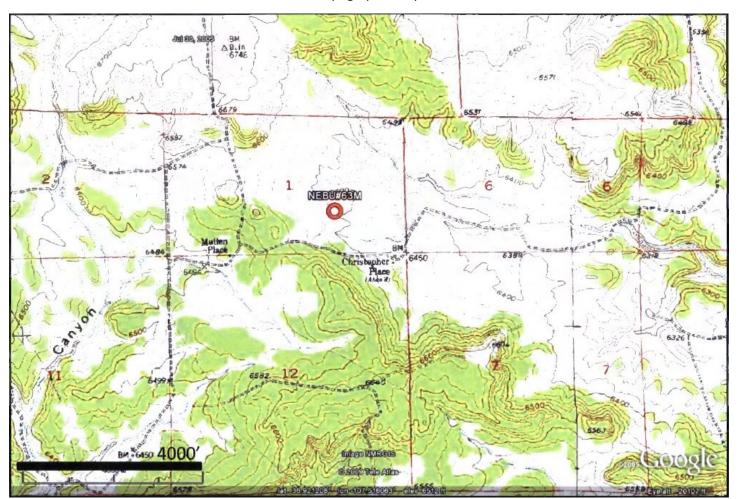




Northeast Blanco Unit 063 M 80 bbl double/double bgt Retrofit installation

**FIGURE** 

Topographic Map

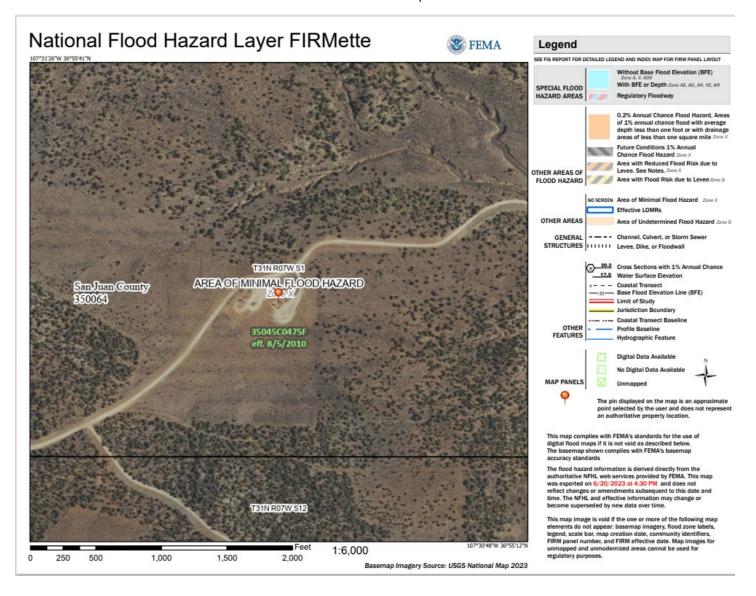




Northeast Blanco Unit 063 M 80 bbl double/double bgt Retrofit installation

**FIGURE** 

#### **FEMA Flood Map**





## **Ground Water Map**



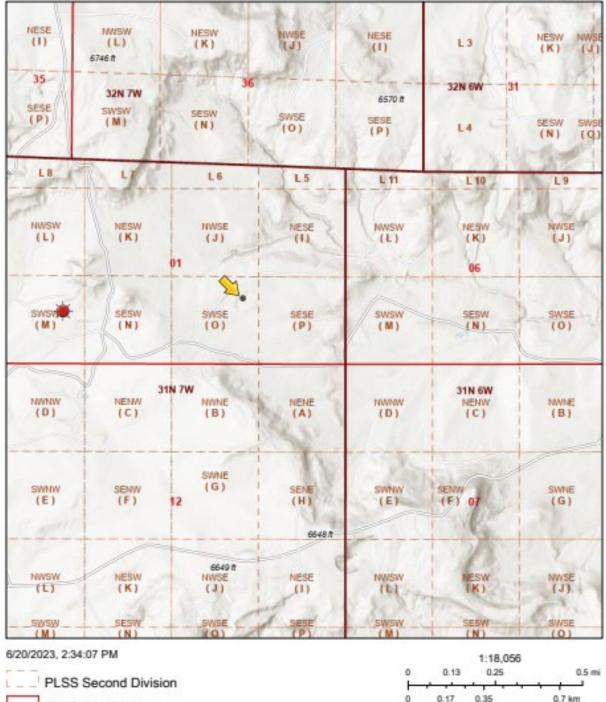


Northeast Blanco Unit 063 M 80 bbl double/double bgt Retrofit installation

**FIGURE** 

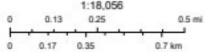
#### Active Mine Map

# Active Mines in New Mexico NEBU 063M



PLSS First Division

PLSS Townships



Earl Community Maps Contributors, San Juan County, NM, Earl, HERE, Garmin, SafeGraph, GeoTechnologies, Inc., METINAGA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, Earl, NASA,

EMNRD MMD GIS Coordinato

NM Energy, Minerals and Natural Resources Department (http://nm-emnyt.maps.arcgis.com/apps/webappv/ewer/index.htm?id=165e577974664d88641790897ca2795)



Northeast Blanco Unit 063 M 80 bbl double/double bgt Retrofit installation

**FIGURE** 

## SIMCOE LLC

## SAN JUAN BASIN, NORTHWEST NEW MEXICO

#### BELOW-GRADE TANK DESIGN AND CONSTRUCTION PLAN

Pursuant to Rule 19.15.17.11 NMAC, SIMCOE LLC (SIMCOE) shall construct a below-grade tank (BGT) or modify an existing permitted BGT according to the following plan. Any deviations from this plan will be addressed on the New Mexico Oil Conservation Division's (NMOCD) form C-144 at the time of submittal.

## **Design and Construction Plan**

- 1. SIMCOE will design and construct a BGT which will be constructed to contain liquids and prevent contamination of fresh water and protect public health and the environment.
- 2. SIMCOE as the well operator shall install and maintain a well sign that adheres to 19.15.16.8 NMAC. The sign will be posted at the well site to address, at a minimum;
  - a. Well Number
  - b. Property name
  - c. Operators name
  - d. Location by footage, quarter-quarter section, township and range (or unit letter)
  - e. API number
  - f. Emergency contact information
- 3. SIMCOE will fence or enclose its BGTs in a manner that prevents unauthorized access and shall maintain its fence in good repair.
- 4. SIMCOE will fence or enclose a BGT located within 1,000 feet of a permanent residence, school, hospital, institution or church with, at a minimum a chain link security fence at least six (6) feet in height with at least two (2) strands of barbed wire at the top. SIMCOE will ensure that all gates associated with the fence are closed and locked when responsible personnel are not on-site.
- 5. SIMCOE is requesting NMOCD's approval for an alternative fence design that provides, at a minimum, equivalent protection to the design specified in Paragraph 3 of Subsection D of 19.15.17.11 NMAC for BGTs beyond the stated distance in paragraph 4 of this document. SIMCOE's proposed design for its BGTs will utilize 48" steel mesh field-fence (hog wire) with a metal or steel top rail. Perimeter T-post will be installed roughly every 10 feet.
- 6. SIMCOE will construct an expanded metal covering that completely covers the top of the BGT. The covering will be constructed such that it will prevent hazardous conditions to wildlife, including migratory birds
- 7. SIMCOE shall construct the BGT of materials that are resistant to produced water, any contained liquids, and damage from sunlight. SIMCOE's BGTs will be constructed of fiberglass or carbon steel that meets the requirements of ASTM A36.
- 8. SIMCOE's BGTs shall have a properly constructed earthen foundation consisting of a level base free of rocks, debris, sharp edges, or irregularities as to prevent punctures, cracks or indentations to the tank bottom as demonstrated on the design drawing.
- 9. SIMCOE will construct and operate the BGT to prevent surface water run-on by using both earthen berms and leaving a portion of the BGT above the original grade as demonstrated on the design drawing.
- 10. SIMCOE will construct and operate the BGT to prevent overflow and overfilling of the BGT. Overflow will be prevented by use of either a manual shut off valve or an electronic high fluid level detector that will automatically engage an electronic shut-off valve when a one (1) foot freeboard is reached. The high-level automatic alarm notifies well optimizers when liquid level has reached within a pre-set distance to the top of the BGT. The high-level alarm will trigger the automatic shutdown valve which will close in the well until the liquid level can be lowered.

- 11. SIMCOE will construct and install a double-walled tank design per Subparagraph (b) of Paragraph (4) of Subsection I of19.15.17.11 NMAC with a two (2) inch diameter leak detection port. The floor supports located in the annular space of the tank bottom will be channeled to allow outward movement of liquid between the walls. Leak detection will be monitored per SIMCOE's Operating and Maintenance Plan. The walls of the BGT will be constructed of fiberglass or carbon steel that meets the ASTM A36 standard. SIMCOE's BGT design will ensure containment of tank contents and protect underlying groundwater. The production equipment line drain is manual or automated drain that allows water level in production equipment (generally the separator) to be maintained within the equipment's operating parameters. The environmental drain is a manually operated drain that is used to drain liquids off of equipment. The tank drain is a manually operated drain, typically in the closed position that is used to rid the condensate tank of any water accumulation. The vent drain is a manually operated drain off the discharge of production equipment (usually the separator) and is used to blowdown the wellsite. The swab drain line is a manually operated drain originating between the wellhead and separator and is used during well workovers when large amounts of liquid are removed from the well and sent straight to the BGT.
- 12. SIMCOE owned and operated single walled BGTs constructed and installed prior to June 16, 2008 that has the side walls open for visual inspection and that does not meet all the requirements in Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC is not required to equip or retrofit the BGT to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC so long as it demonstrates integrity. If the existing BGT does not demonstrate integrity, SIMCOE shall promptly drain the BGT and remove it from service and comply with the closure requirements of 19.15.17.13 NMAC.
- 13. SIMCOE owned and operated single walled BGTs constructed and installed prior to June 16, 2008 and where any portion of the tank sidewall is below the ground surface and not visible shall equip or retrofit the BGT to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, or close it, by June 16, 2013. If the existing BGT does not demonstrate integrity, SIMCOE shall promptly drain the BGT, remove it from service and comply with the closure requirements of 19.15.17.13 NMAC.
- 14. SIMCOE owned and operated double walled BGTs constructed and installed prior to June 16, 2008 and which does not meet all the requirements in Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC is not required to equip or retrofit the BGT to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC so long as it demonstrates integrity. If the existing BGT does not demonstrate integrity, SIMCOE shall promptly drain the BGT, remove it from service and comply with the closure requirements of 19.15.17.13 NMAC.
- 15. The general specifications for the design and construction of the BGT have been provided in the attached SIMCOE design and construction schematic.

## SIMCOE LLC

#### SAN JUAN BASIN, NORTHWEST NEW MEXICO

## BELOW-GRADE TANK OPERATING AND MAINTENANCE PLAN

Pursuant to Rule 19.15.17.12 NMAC, SIMCOE LLC (SIMCOE) shall maintain and operate a below-grade tank (BGT) by following the plan shown below. Deviations from this plan will be addressed with a submittal to the New Mexico Oil Conservation Division (NMOCD) using form C-144 at the time of the BGT registration or modification to an existing BGT registration.

# **Operating and Maintenance Plan**

- 1. SIMCOE's BGTs will be operated to contain liquids and solids. SIMCOE will maintain the integrity of the BGT and secondary containment system as to prevent impacts to fresh water and to protect public health and the environment. SIMCOE will use automated high fluid level alarms and automated shut-off valves to ensure that liquids are contained within the vessel and that the vessel does not overflow. These alarms and shut-off valves will be consistent with those demonstrated in the design plan.
- 2. SIMCOE will not knowingly discharge to or store any hazardous waste in a BGT.
- 3. If a BGT develops a leak below the liquid surface, SIMCOE shall remove 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 the BGT as applicable.
- 4. SIMCOE will adhere to Subsection D of 19.15.17.12 NMAC. The requirements are as follows;
  - a. SIMCOE shall not allow a below-grade tank to overflow or allow surface water run-on to enter the BGT.
  - b. SIMCOE shall remove any measurable layer of oil from the fluid surface of a BGT.
  - c. SIMCOE shall inspect the BGT for leakage and damage at least monthly and will document the integrity of each tank at least annually and maintain record of the integrity for five years.
  - d. SIMCOE shall maintain adequate freeboard to prevent overtopping of the below-grade tank.
  - e. If SIMCOE discovers that the BGT tank 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, SIMCOE shall repair the damage or close the existing BGT pursuant to the closure requirements of 19.15.17.13 NMAC.
  - f. If any of SIMCOE's BGTs are equipped or retrofitted to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, then SIMCOE 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. SIMCOE will attempt to 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 SIMCOE shall proceed with the closure requirements of 19.15.17.13 NMAC prior to initiating the retrofit or replacement.

# SIMCOE LLC (Previously BP America) SAN JUAN BASIN, NORTHWEST NEW MEXICO

#### **Below-Grade Tank Closure Plan**

This plan will address the standard protocols and procedures for closure of below-grade tanks (BGTs) on this SIMCOE, LLC well sites. As stipulated in Paragraph A of 19.15.17.13 NMAC, SIMCOE, LLC shall close a BGT within the time periods provided in 19.15.17.13 NMAC, or by an earlier date that the New Mexico Oil Conservation Division (NMOCD) requires because of imminent danger to fresh water, public health, safety, or the environment. If deviations from this plan are necessary, any specific changes will be included on form C-144 and approved by the NMOCD. SIMCOE, LLC shall close an existing BGT that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or is not included in Paragraph (5) of Subsection I of 19.15.17.11 NMAC within five years after June 16, 2008, if not retrofit with a BGT that complies with the SIMCOE, LLC NMOCD approved BGT design attached to the SIMCOE, LLC Design and Construction Plan. SIMCOE, LLC shall close an existing BGT that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, if not previously retrofitted to comply with the SIMCOE, LLC NMOCD approve BGT Design attached to the SIMCOE, LLC Design and Construction Plan, prior to any sale or change in operator pursuant to 19.15.9.9 NMAC. SIMCOE, LLC shall close the permitted BGT within 60 days of cessation of the BGTs operation or as required by the transitional provisions of Subsection B, D, or E of 19.15.17.17 NMAC.

#### **General Closure Plan**

- SIMCOE, LLC shall notify the surface owner by certified mail that it plans to close a BGT. Evidence
  of mailing of the notice to the address of the surface owner shown in the county tax records
  demonstrates compliance with this requirement.
- 2. SIMCOE, LLC shall notify the division District III office verbally or by other means at least 72 hours, but not more than one (1) week, prior to any closure operation. The notice shall include the operator's name, and the location to be closed by unit letter, section, township, and range. If the BGT closure is associated with a particular well, then the notice shall also include the well's name, number, and API number.
- 3. SIMCOE, LLC shall remove liquids and sludge from the BGT prior to implementing a closure method and dispose of the liquids and sludge in a NMOCD's division-approved facility. The facilities to be utilized are:
  - a. JFJ Land farm, Permit NM-01-010(B) (Solids and Sludge)
  - b. Basin Disposal, Permit NM-01-0005 (Liquids)
  - c. Envirotech Inc Soil Remediation Facility, Permit NM-01-0011 (Solids and Sludge)
  - d. Simcoe, LLC Operated 13 GCU SWD # 1, API 30-045-28601 (Liquids)
  - e. Simcoe, LLC Operated GCU 259 SWD, API 30-045-20006(Liquids)
  - f. Simcoe, LLC Operated GCU 306 SWD, API30-045-24286 (Liquids)
  - g. Simcoe, LLC Operated GCU 307 SWD, API30-045-24248 (Liquids)
  - h. Simcoe, LLC Operated GCU 328 SWD, API 30-045-24735(Liquids)
  - Simcoe, LLC Operated Pritchard SWD #1, API 30-045-28351 (Liquids)

- 4. Simcoe, LLC shall remove the BGT and dispose of it in a NMOCD approved facility or recycle, reuse, or reclaim it in a manner that the NMOCD approves. If a liner is present and must be disposed of it will be cleaned by scraping any soils or other attached materials on the liner to a de minimus amount and disposed at a permitted solid waste facility, pursuant to Subparagraph (m) of Paragraph (1) of Subsection C of 19.15.35.8 NMAC. Documentation as to the final disposition of the removed BGT will be provided in the final closure report.
- 5. Simcoe, LLC shall remove any on-site equipment associated with a BGT unless the equipment is required for well production.
- 6. Simcoe, LLC shall sample the soils beneath the BGT to determine whether a release has occurred. Simcoe, LLC shall collect at a minimum: a five (5) point composite sample and analyze for BTEX, TPH and chlorides. The testing methods for those constituents are as follows.

Table 1 Closure Criteria for Soils Beneath Below-Grade Tanks						
Depth below bottom of pit to groundwater less than 10,000 mg/l TDS	Constituent	Method*	Limit**			
	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			
51 feet-100 feet	Chloride	EPA 300.0	10,000 mg/kg			
	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			
	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			

Notes:

mg/Kg = milligram per kilogram

BTEX = benzene, toluene, ethylbenzene, and total xylenes

**TPH = totalpetroleum hydrocarbons** 

TDS = total dissolved solids.

- \* Or other test methods approved by the division
- \*\* Numerical limits or natural background level, whichever is greater
- 7. Simcoe, LLC shall notify the division District III office of its results on form C-141.

- 8. If it is found that a release has occurred, then Simcoe, LLC will comply with 19.15.30 NMAC and 19.15.29 NMAC, as appropriate.
- 9. If the sampling demonstrates that a release has not occurred or that any release does not exceed the concentrations specified above, then BP shall backfill the excavation, with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover, re-contour and revegetate the location. The location will be reclaimed if it is not with in the active process area.
- 10. Simcoe, LLC shall reclaim the BGT location, and all areas associated with the BGT including associated access roads to a safe and stable condition that blends with the surrounding undisturbed area. Simcoe, LLC shall substantially restore the impacted surface area to the condition that existed prior to oil and gas operations by placement of the soil cover as provided in Subsection H of 19.15.17.13 NMAC, re-contour the location and associated areas to a contour that approximates the original contour and blends with the surrounding topography and revegetate according to Subsection I of 19.15.17.13 NMAC. 11. The soil cover for closures where the BGT has been removed or remediated to the NMOCD's satisfaction shall consist of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater.
- 12. Simcoe, LLC shall seed the disturbed area the first growing season after closure of the BGT. Seeding will be conducted by drilling on the contour whenever practical or by other division-approved methods. Vegetative cover will be, at a minimum, 70% of the native perennial vegetative cover (un-affected by overgrazing, fire or other intrusion damaging to native vegetation), consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintenance of that cover through two successive growing seasons. During the two growing seasons that prove viability, there shall be no artificial irrigation of the vegetation.
- 13. Simcoe, LLC shall seed, plant and re-seed pursuant to Paragraph (3) of Subsection I of 19.15.17.13 NMAC, until the location successfully achieves the required vegetative cover.
- 14. Pursuant to Paragraph (5) of Subsection I of 19.15.17.13 NMAC, Simcoe, LLC shall notify the NMOCD when it has seeded or planted and when it successfully achieves revegetation.
- 15. Within 60 days of closure completion, Simcoe, LLC shall submit a closure report on NMOCD's form C-144, and will include the following:
  - a. proof of closure notification (surface owner and NMOCD)
  - b. sampling analytical reports: information required by 19.15.17 NMAC.
  - c. disposal facility name and permit number
  - d. details on back-filling, capping, covering, and where applicable re-vegetation application rates and seeding techniques and
  - e. site reclamation, photo documentation. Disposal Facility Name and Permit Number
- 16. Simcoe, LLC shall certify that all information in the report and attachments is accurate, truthful, and compliant with all applicable closure requirements and conditions specified in the approved closure plan.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III 1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. **Santa Fe, NM 87505** 

CONDITIONS

Action 230850

#### **CONDITIONS**

Operator:	OGRID:
SIMCOE LLC	329736
1199 Main Ave., Suite 101	Action Number:
Durango, CO 81301	230850
	Action Type:
	[C-144] Below Grade Tank Plan (C-144B)

#### CONDITIONS

Created I	By Condition	Condition Date
scwell	s None	6/27/2023