Jones, Brad A., EMNRD

From:

Clenney, Laura E < Laura. Clenney@chevron.com>

Sent:

Wednesday, August 08, 2012 3:48 PM

To:

Jones, Brad A., EMNRD

Cc:

Barnes, Leslie (LeslieBarnes)

Subject:

Chevron Below Ground Tank Replacements

Brad,

Chevron is planning to replace the following 12 BGT's in 2012, beginning in mid to late August with a planned completion in late October. Each site is listed in the table below. Identified in the 5th column of the table is the BGT targeted for removal, so you can reference it from the respective C-144's.

We are in the process of revising the C144 packages, beginning with the Keys Com #001 and Mexico Federal B #001 packages which should arrive at your office the week of August 13th.

Well Name	API	Global Positioning Coordinates	ULSTR	Pit Tank/ BGT
KEYS COM #001	30-045-07641	36.678344/107.910790	N-32-29N-10W	BGT #1
MEXICO FEDERAL B #001	30-045-07575	36.67821/107.903642	N-9 -28N-10W	BGT #1
RINCON UNIT #011	30-039-06648	36.511551/107.51163	* K-6 -26N-06W	BGT #1
RINCON UNIT #083	30-039-07005	36.564423/107.433258	B-23-27N-06W	BGT #1
RINCON UNIT #085	30-039-07072	36.577438/107.55613	H-15-27N-07W	BGT #1
RINCON UNIT #093	30-039-06539	36.495069/107.539531	P-11-26N-07W	BGT #1
RINCON UNIT #100A	30-039-21972	36.543428/ 107.434117	J-26-27N-06W	BGT #1
RINCON UNIT #101	30-039-06693	36.512185/107.532949	L-1 -26N-07W	BGT #1
RINCON UNIT #136	30-039-82376	36.564792/107.540523	A-23-27N-07W	BGT #1
RINCON UNIT #159	30-039-07071	36.57653/107.505573	G-18-27N-06W	BGT #1
RINCON UNIT #171	30-039-06944	36.555018/107.478559	M-21-27N-06W	BGT #1
RINCON UNIT #176	30-039-82373	36.534753/107.530862	5-31-27N-06W	BGT #1

Please let me know if you need additional information in order to process the approval of these BGT packages.

Thanks,

Laura Clenney

Facilities Engineer - San Juan FMT Laura.Clenney@Chevron.com

Chevron North America Exploration and Production

Mid-Continent Business Unit 332 ROAD 3100 Aztec, NM 87410

Tel 505 333 1950 Mobile 281 881 0322

Form C-144 July 21, 2008

District I 1625 N. French Dr., Hobbs, NM 88240 District II

1301 W. Grand Avenue, Artesia, NM 88210

District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources Department 2010 MAR 40if Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

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For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.

For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

•	<u>Pi</u>	it, Closed-Loop System, Below-Grade Tank, or
Propo	sed.	Alternative Method Permit or Closure Plan Application

Proposed Alternative Method Permit or Closure Plan Application
Type of action: Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method Modification to an existing permit Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method
Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, 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.
1.

Operator: Chevron Midcontinent, LP OGRID #: 241333				
Address: P.O. Box 36366 Houston, TX 77236				
Facility or well name: _Rincon Unit No. 100A				
API Number: <u>30-039-21972</u> OCD Permit Number:				
U/L or Qtr/Qtr Qtr/Qtr J Section 26 Township 27 Range 6W County: Rio Arriba				
Center of Proposed Design: Latitude 36_543428° Longitude 107_434117° NAD: 1927 1983				
Surface Owner: Federal State Private Tribal Trust or Indian Allotment				
2.				
□ Pit: Subsection F or G of 19.15.17.11 NMAC				
Temporary: Drilling Workover				
Permanent Emergency Cavitation P&A				
Lined Unlined Liner type: Thicknessmil LLDPE HDPE PVC Other				
☐ String-Reinforced				
Liner Seams: Welded Factory Other Volume: bbl Dimensions: L x W x D				
3.				
Closed-loop System: Subsection H of 19.15.17.11 NMAC				
Type of Operation: P&A Drilling a new well Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)				
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other				
Lined Unlined Liner type: Thicknessmil LLDPE HDPE PVC Other				
Liner Seams: Welded Factory Other				
4.				
Volume: _60 bbl Type of fluid: Produced water				
Tank Construction material: <u>Steel</u>				
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off				
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☒ Other Buried				
Liner type: Thicknessmil				
5.				

Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

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, institution or church) Four foot height, four strands of barbed wire evenly spaced between one and four feet Alternate. Please specify Four foot, pipe frame with square wire mesh.	hospital,
7. Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks) □ Screen ☑ Netting □ Other □ Monthly inspections (If netting or screening is not physically feasible)	
8. 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 19.15.3.103 NMAC	
Administrative Approvals 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: Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau consideration of approval. Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	office for
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 accept material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the approoffice or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of a Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying above-grade tanks associated with a closed-loop system.	priate district pproval.
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - Please reference hydrogeologic report and printout from iWATERS database. 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). - Please reference the attached topographic map with distance rings. In addition, a field visit was conducted by Envirotech in July 2008 certifying that, at the time, there were no watercourses within the distance specified above.	☐ Yes ☒ No ☐ Yes ☒ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Please reference the attached aerial photo. In addition, a field visit was conducted by Envirotech in July 2008 certifying that, at the time, there were no referenced buildings within the distance specified above.	Yes No
 Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) Please reference the attached aerial photo. In addition, a field visit was conducted by Envirotech in July 2008 certifying that, at the time, there were no referenced buildings within the distance specified above. 	Yes No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - Please reference the attached iWATERS printout. In addition, a field visit was conducted by Envirotech in July 2008 certifying that, at the time, there were no wells or springs within the distances specified above.	☐ Yes ☒ No ☐ Yes ☒ No
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. The site is not within any known incorporated municipal boundaries, please reference the attached topographic map.	☐ Yes ☒ No
Within 500 feet of a wetland. - Please reference the attached topographic map with distance rings. In addition, a field visit was conducted by Envirotech in July 2008 certifying that, at the time, there were no wetlands within the distance specified above	☐ Yes ☑ No
Within the area overlying a subsurface mine. - Please reference the attached topographic map Within an unstable area.	☐ Yes ☑ No
 Please reference the attached topographic map which includes FEMA flood map data. The map indicates the well site is outside of any known 100 year floodplains. Within a 100-year floodplain. FEMA map 	☐ Yes ⊠ No

Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.
Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
Previously Approved Design (attach copy of design) API Number: or Permit Number:
12. Closed Jean Systems Pounit Application Attachment Checklists, Subsection D of 10.15.17.0 NMAC.
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are
attached. Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC 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 Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
Previously Approved Design (attach copy of design) API Number:
Previously Approved Operating and Maintenance Plan API Number:(Applies only to closed-loop system that use
above ground steel tanks or haul-off bins and propose to implement waste removal for closure)
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 documents are attached. Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Climatological Factors Assessment Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC 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 ₂ S, Prevention Plan Emergency Response Plan Oil Field Waste Stream Characterization Monitoring and Inspection Plan Erosion Control 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 Closed-loop System 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 (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached. ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC ☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC ☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) ☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC ☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC) Instructions: Please indentify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.				
Disposal Facility Name: Disposal Facility Permit Number:				
Disposal Facility Name: Disposal Facility Permit Number:				
Will any of the proposed closed-loop system operations and associated activities occur on or in areas that will not be used for future service and operations? Yes (If yes, please provide the information below) No				
required for impacted areas which will not be used for future service and operations: Soil Backfill and Cover Design Specifications based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC				
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 material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.				
Ground water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	Yes No			
Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA			
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA			
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 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 private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	☐ Yes ☐ No			
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. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ 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			
Within the area overlying a subsurface mine Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No			
 Within an unstable area. 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 FEMA map	☐ Yes ☐ No			
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Proof of Surface Owner Notice - based upon the appropriate requirements of 19.15.17.13 NMAC Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 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 Subsection F of 19.15.17.13 NMAC Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC 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 G of 19.15.17.13 NMAC				

Operator Application Certification:
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.
Name (Print): Rodney Bailey Title: Waste & Water Group Lead
Signature: Date: March 1, 2010
e-mail address: Bailerg@chevron.com Telephone: (432) 687 7123
20. OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment)
OCD Representative Signature: Approval Date: 4/17/12
Title: OCD Permit Number:
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed. Closure Completion Date:
22.
Closure Method: Waste Excavation and Removal On-Site Closure Method Alternative Closure Method Waste Removal (Closed-loop systems only) If different from approved plan, please explain.
Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.
Disposal Facility Name: Disposal Facility Permit Number: Disposal Facility Permit Number:
Disposal Facility Name: Disposal Facility Permit Number:
Yes (If yes, please demonstrate compliance to the items below) No
Required for impacted areas which will not be used for future service and operations: Site Reclamation (Photo Documentation) Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique
24. Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check
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) 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 Site Reclamation (Photo Documentation) On-site Closure Location: Latitude Longitude NAD:
25.
<u>Operator Closure Certification:</u> 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:
e-mail address:

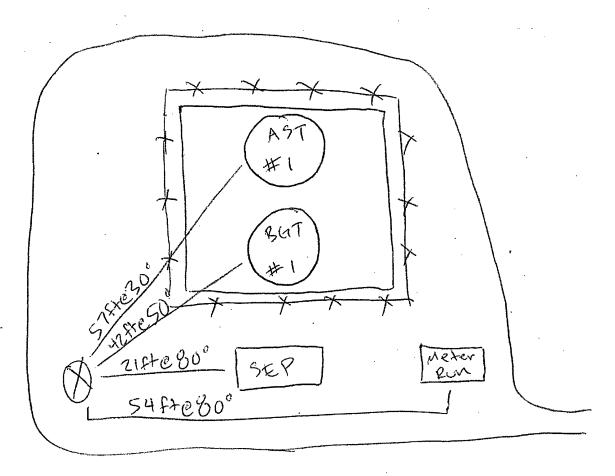
ø	Well Name & Number:	, UNIT #1	<u>—</u> acı A	
0	API#: 3003921972			
9				•
ø		<u>でし</u> Townsh		
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		A		
ø	Pit Tank #1: Manufacturer:	4		
ø	Serial #: DO	m: <u> </u>	, Size_	<u>NA</u> bbl
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9				
ø	Tank Configuration: Double Wall	Single Wall X	(Buried \times or E	ExposedWalls)
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	o Fence Type: Cattle Panel	Field Fence	Barbwire	<u> </u>
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Ø	Vancourage varieties and the second s			_
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	o If N/A – Dimensions: Diameter			
0				
0	Tank Configuration: Double Wall		•	ExposedWalls)
0	F		lid Fiber)	÷
0	Secondary Containment: Yes No			
0	Fencing around berm: Yes No_ o Fence Type: Cattle Panel		Rarbwiro	
	o rence Type. Cattle Tanes	ricid rence	Daibwiie	_
Q	Above-Ground Tank #1: Manufactu	irer: PERMI	AN TANK	
				210 bbl
	o If N/A – Dimensions: Diameter			
9	Material: Steel × Gal			
9	Contents: Produced Water Con			
0	Secondary Containment: Yes No_			·
	7			
0	Above-Ground Tank #2: Manufactu	irer:		
0	Serial #: DO	M:	Size_	bbl
	○ If N/A – Dimensions: Diameter_		Height	
•	Material: Steel Gal	vanized	Fiberglass	
0	Contents: Produced Water Con	ndensate(State	e #)	Recycled Oil
Θ.	Secondary Containment: Yes No_			
0				
0				bbl
	 If N/A – Dimensions: Diameter_ 		•	
0	Material: Steel Gal		•	
0			e #)	Recycled Oil
0	Secondary Containment: Yes No			

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Schematic Key:				
Separator	SEP	Artificial Lift AL	Condensate Tank	COND
Compressor	COM	Meter Run METER RUN		
Dehydrator	DEH	Well Head	Water Tank	WATER

Measure any distance 1000ft or less of the following:

From wellhead to any continuous flowing or significant/water course.

From below-grade tanks to any permanent residence, school, church, hospital, etc. NA

Chevron Midcontinent, LP BGT Permit Siting Criteria Summary Sheet Rincon Unit #100A

- Groundwater is estimated to be 255 feet below the bottom of the BGT. This was calculated using information from the cathodic well located on the well site. The top of casing elevation for the cathodic well is 6648 feet and the depth to groundwater is recorded as 260 feet; see the attached Data Sheet for Deep Ground Bed Cathodic Protection Wells. (Depth to groundwater for water wells is measured from the top of casing so that all wells are labeled from a common point of interest.) This gives a groundwater elevation of 6388 feet. The topographic map indicates the site elevation to be 6648 feet. The BGT is buried five (5) feet below ground surface which gives a bottom of the BGT elevation of 6643 feet. The difference between the BGT bottom elevation and groundwater elevation is 255 feet.
- The below-grade tank is not within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake. The nearest continuously flowing watercourse is the San Juan River estimated to be 23 miles northwest of the BGT. The nearest lake is Navajo Lake estimated to be 20 miles northwest of the BGT. The nearest significant watercourse is approximately 736 feet west of the BGT and is an un-named, ephemeral, first order tributary to Ice Canyon Creek located approximately 3000 feet south of the BGT; see attached *Topographic Map*. (The red dot on the topographic map indicates the location of the BGT.) There are no lakebeds, sinkholes, or playa lakes within 200 feet of the BGT or within the mapped area of the *Topographic Map*.
- The below-grade tank is not within 300 feet of a permanent residence, school, hospital, institution, or church in existence at the time of initial application; see the attached Aerial Map. (The red dot on the aerial map indicates the location of the BGT.) There are no permanent residences, schools, hospitals, institutions or churches within the mapped area of the Aerial Map. The nearest residence is seven (7) miles southwest of the BGT. The nearest school, hospital, institution, or church is at least 24 miles southwest of the BGT.
- The BGT is not within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. There are no freshwater springs within the mapped area of the *Topographic Map*. The closest water well is estimated to be 5,354 meters (3.33 miles) southwest of the BGT and was revealed on the attached *NMOSE Water Column/Average Depth to Water Report*. (The water well is located outside the boundaries of the *Topographic Map* and therefore not shown.)
- The below-grade tank is not 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; see the attached *Municipal Boundary Map*. The closest boundary is the Nageezi Municipal Boundary located approximately 24 miles southwest of the site. (The Nageezi City Limits are colored orange and the BGT is indicated by a red circle on the *Municipal Boundary Map*.)
- The below-grade tank is not within 500 feet of a wetland; see the attached Topographic Map and U.S. Fish
 and Wildlife Service National Wetlands Inventory Map. Any wetlands on the topographic map are noted in
 dark blue. The nearest wetland area is approximately 1.1 miles to the northwest of the BGT and is identified as
 other on the U.S. Fish and Wildlife Service National Wetlands Inventory Map.
- The below-grade tank is not within an area overlying a subsurface mine; see the attached NM EMNRD-Mining
 and Mineral Division Map. The nearest mine is an aggregate mine located approximately 33 miles northwest
 of the BGT.
- The below-grade tank is not within an unstable area; see the attached USGS Geologic Map and USGS Karst
 Map. The site is indicated on the maps by a red square. The nearest Karst Feature is approximately 30 miles
 southeast of the site and is shown on the USGS Karst Map. The underlying geology is comprised of the San
 Jose Formation, a Tertiary formation composed of shale, siltstone and sandstone.
- The well site is outside of any known 100 year floodplains as evidenced on the attached FIRM Flood Insurance Rate Map. (Any floodplains are indicated by blue dotted hatching on the map.)

HYDROGEOLOGIC REPORT

Rincon Unit #100A Hydrogeologic Report

Topography and Surface Hydrology

The Rincon Unit #100A well site is located in what is considered the Colorado River Basin, within the Santos Peak, Rio Arriba County, New Mexico, United States Geological Survey (USGS) 7.5-minute Quadrangle Map approximately 24 miles to the northeast of the Nageezi, New Mexico, municipal boundary; see attached *Municipal Boundary Map*. The largest, continuously flowing streams of the Colorado River Basin are the Animas and San Juan Rivers. The San Juan River is the closest continuously flowing waterway to the site and is approximately 23 miles northwest of the site. Most stream channels within the Colorado River Basin are ephemeral, with some being intermittent (Stone et al., 1983). The tributaries of the San Juan River that contribute large quantities of water during precipitation events are Canyon Largo, Gallegos Canyon, Chaco River, and the La Plata River. The Rincon Unit #100A well site is on the eastern portion of Encinada Mesa. The general topographic slope of the site is to the southeast. Storm water runoff flows off of the Rincon Unit #100A well site toward the southeast and then follows storm water channels off of the mesa toward an un-named first order tributary of Carrizo Canyon Wash. The nearest ephemeral wash is approximately 736 feet to the west of the well site and is an unnamed, first order tributary of the Ice Canyon Creek. The Ice Canyon Creek is approximately 3,000 feet to the south of the well site and is an ephemeral wash that only exists during periods of heavy precipitation and is a second order tributary to the San Juan River; see attached *Topographic Map*.

Wetland areas can be found to the northeast within Carrizo Canyon and to the northwest within Martinez Canyon wash. The nearest wetland area to the Rincon Unit #100A well site is approximately 1.1 miles northwest of the BGT. This wetland area is identified as other on the attached *U.S. Fish and Wildlife Service National Wetlands Inventory Map*. The well site is not located within a 100 year flood zone as indicated on the attached *Firm Flood Insurance Rate Map*.

Residential areas are mostly within the San Juan River Valley to the north and within the Bloomfield City Municipal Boundaries. The closest permanent residence is approximately 7 miles to the southwest of the Rincon Unit #100A well site. The nearest school is the Dzilth-Na-O-Dith-Hle School located 24 miles southwest of the Rincon Unit #100A in Nageezi, New Mexico. All other schools, churches and institutions are all located within Blanco and the Bloomfield City Municipal Boundaries. The closest hospital is located within Farmington, New Mexico, approximately 15 miles west of Bloomfield.

The only mining activities identified are to the northwest of the Rincon Unit #100A. The mining activities are Aggregate and Stone Mines and the nearest mine is approximately 33 miles northwest of the well site; see attached NM EMNRD - Mining and Mineral Division Map.

Soil

The San Juan Basin contains a wide range of soil types, with the northwest part of the basin, including the bulk of the drainage area of the Chaco and San Juan Rivers, characterized by light-colored, cool, desertic soil types. The higher elevations bordering the basin are characterized by moderately dark to dark mountain soils, and the area in between the two zones being characterized by dark-colored, western plateau soils. The majority of the soils within the basin are of alluvial valley fill and consist of gravel, sand, silt, and clay (Stone et al., 1983). The soil type in the area of the Rincon Unit #100A well site is the Vessilla-Menefee-Orlie complex. This soil is characterized by moderate organic material and high permeability. The unit consists of slope alluvium over residuum weathered from sandstone. The unit is low to moderately steep and ranges between one (1) and 30 percent sloping grade. It is a well drained soil with a very low available water capacity. The depth to paralithic bedrock is between 10 and 20 inches. The underlying bedrock is mainly weathered sandstone and shale with visible outcrops along the canyon rim to the west of the well site. The unit is found between the elevations of 6,100 feet and 7,200 feet. Mean annual precipitation is between 13 to 16 inches per year (Natural Resources Conservation Service Soil Survey).

Geology and Groundwater Hydrology

The area geology is comprised of mostly sandstone, mudstone, and siltstone. Karst features are formed by the dissolution of soluble rocks, such as limestone and dolomite, and can be characterized by springs, caves, sinkholes. The nearest documented Karst features are approximately 30 miles southeast of the well site in accordance with a search of Karst features conducted from the New Mexico Institute of Mining and Technological Petroleum Recovery Research Center Webb Mapping Portal. The information used to create the Karst feature search was compiled using data from the United States Geological Survey (USGS) Digital Engineering Aspects of Karst Map web site. The identified Karst features consist of fissures, tubes and caves generally less than 1,000 feet long, 50 feet or less vertical extent, in moderately to steeply dipping beds of carbonate rock.

Most water supplies in the San Juan Basin are from groundwater that is accessed through wells completed within the surficial valley-fill deposits of Quaternary age and sandstones of Tertiary, Cretaceous, Jurassic, and Triassic age. The Rincon Unit #100A well site lies in the San Jose Formation Aquifer which dips at 7 degrees to the north-east (Frenzel, 1983). The San Jose Formation ranges from less than 200 feet in the west and south to nearly 2,700 feet in the basin center between Cuba and Gobernador (Frezel, 1983).

The San Jose Formation (Tsj) is the youngest Tertiary unit in the San Juan Basin and was named by Simpson (1948, p. 277-283). It is of early Eocene age and as early as 1875 was correlated with the Wasatch Formation in Wyoming. The San Jose is the surface formation in the eastern two-thirds of the San Juan Basin. Although largely exposed in New Mexico, the San Jose also straddles the New Mexico/Colorado State boundaries. It outcrops in its west, south and northeast boundaries in a broad, and in some places irregular, southeasterly trending band in the Blanco Canyon to Largo Canyon area. On the east side, it rises structurally and outcrops in a narrow band along the west face of the Nacimiento Uplift forming the eastern boundary of the San Juan Basin. There are several smaller, isolated remnants of the San Jose Formation west of the central exposure. The San Jose has eroded deeply in some areas and because of differential resistance to erosion of its various sandstone and shale units, produces a large thickness variance and in some places formation of very rugged topographic expression (Baltz, 1967, p. 45). In some places it erodes to horseshoe-shaped badlands and massive cliffs. The San Jose overlays the nonresistant slope-forming Nacimiento Formation (Tn). Thickness of the San Jose ranges from less than 200' at the outcrop on the west and south sides to almost 2700 feet in the the Basin center (Stone, et al, p. 25). The thickness is 1300' or less on the southern part of the Tapicitos Plateau where the San Jose structurally rises and its upper beds are eroded. In the Largo Plains area (Largo Canyon) which marks the western exposure of the preserved San Jose, more than half of the Formation was removed by erosion (Baltz, p. 46). The San Jose Formation contact is that of an angular unconformity surface with the underlying Paleocene-age Nacimiento Formation near the Nacimiento Uplift, but is slightly disconformable to conformable in the Basin center (Stone, et al, p. 25). The San Jose Formation is comprised of four identifiable rock facies (in ascending order) called the Cuba Mesa, the Regina, the Llaves and the Tapicitos Members. These four members are only present in the far eastern part of the basin (Brimhall, 1973, p. 198). Within the preserved area, only the Cuba Mesa and Regina are widespread throughout the basin. The oldest Member of the San Jose is the Cuba Mesa (150-800 feet thick), which is largely a massive cliff-forming buff and yellow, rusty-weathering cross-bedded arkosic coarse-grained sandstone with lenticular reddish, green and gray shale beds (Baltz, p. 46). The Cuba Mesa is overlain in the southern two-thirds of the area by drab-colored variegated shale and interbedded soft to hard sandstones known as the Regina Member (100 to 1700 feet thick) and overlain in the northern one-third by a thick sequence of sandstone called the Llaves (50 to 1300 feet thick) which in turn intertongues and grades southward into the Regina. In the northeastern part of the area, the upper Llaves Member grades southward and westward into the red silty mudstones, siltstones and interbedded poorly consolidated sandstones of the Tapicitos Member (120-500 feet thick) (Stone, et al, p. 25).

The nearest registered water well determined by a radius search of 6000 meters (3.7 miles) from the center of the BGT on the Rincon Unit #100A well site is approximately 5,354 meters (3.3 miles) southwest of the BGT with a depth of groundwater of 485 feet below the top of casing; see attached New Mexico Office of the State Engineer Water Column/Average Depth to Water Report. Due to the distances of the water wells from the well site, water well data was not used in the determination of depth to groundwater. Groundwater is estimated to be 255 feet below the bottom of the BGT. This was calculated using information from the cathodic well located on the well site. The top of casing elevation for the cathodic well is 6,648 feet and the depth to groundwater is recorded as 260 feet; see the attached Data Sheet for Deep Ground Bed Cathodic Protection Wells. This gives a groundwater elevation of 6,388 feet. The topographic map indicates the site elevation to be 6,648 feet. The BGT is buried approximately five

(5) feet below the surface elevation giving the bottom of the BGT an elevation of approximately 6,643 feet. The difference between the BGT bottom elevation and groundwater elevation is 255 feet.

Resources

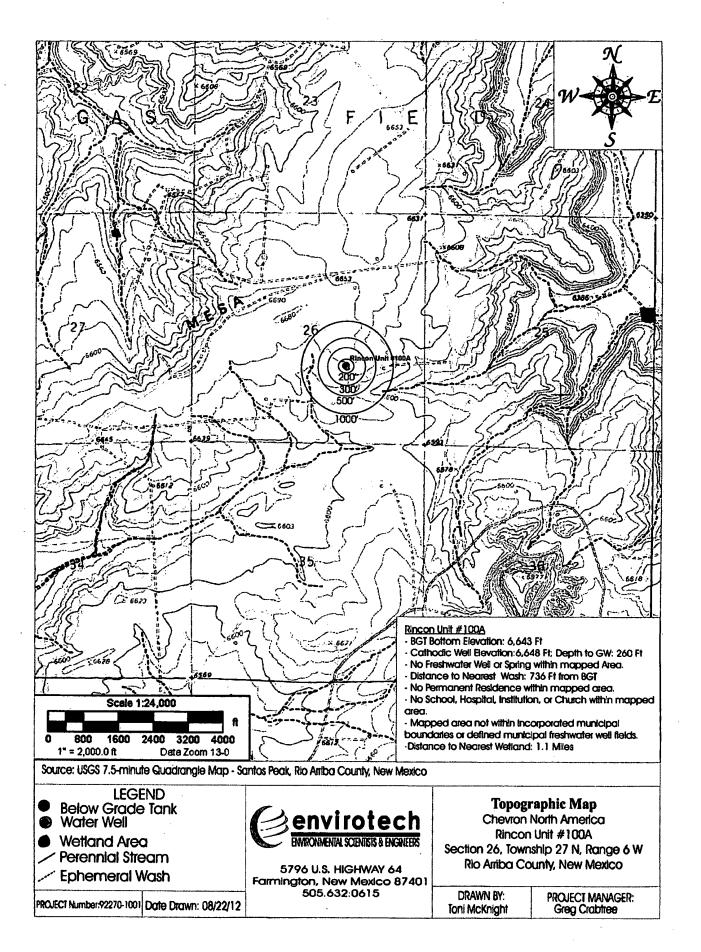
New Mexico Office of the State Engineer (NMOSE) New Mexico Water Right Reporting System (iWaters database)

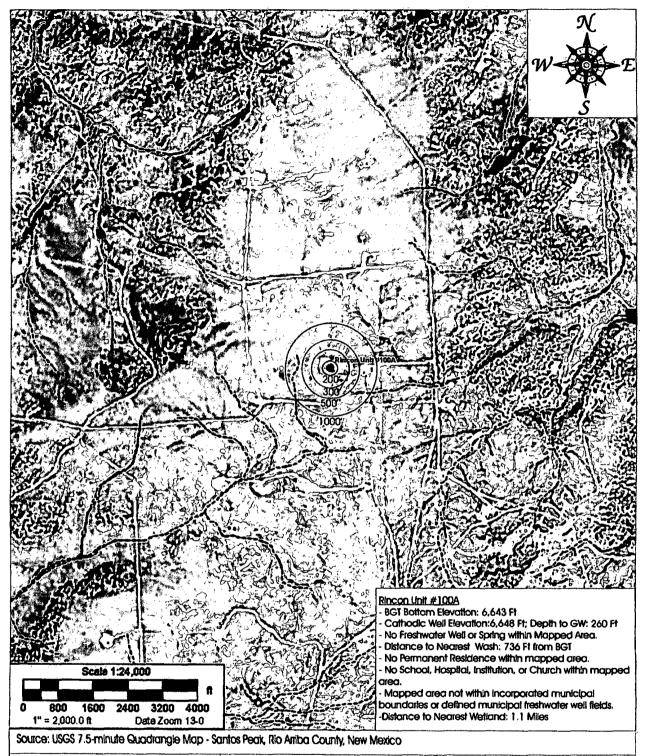
Stone et al., 1983, Hydrogeology and Water Resources of the San Juan Basin, New Mexico: Socorro, New Mexico Bureau of Mines and Mineral Resources Hydrologic Report 6, 70 p.

Natural Resources Conservation Service Soil Survey web page

New Mexico Institute of Mining and Technological Petroleum Recovery Research Center Webb Mapping Portal

SITING CRITERIA COMPLIANCE DEMONSTRATIONS





LEGEND

- Below Grade Tank
- Water Well
- Wetland Area
- Perennial Stream
- " Ephemeral Wash

PROJECT Number:92270-1001 Date Drawn; 08/22/12



5796 U.S. HIGHWAY 64 Farmington, New Mexico 87401 505.632.0615

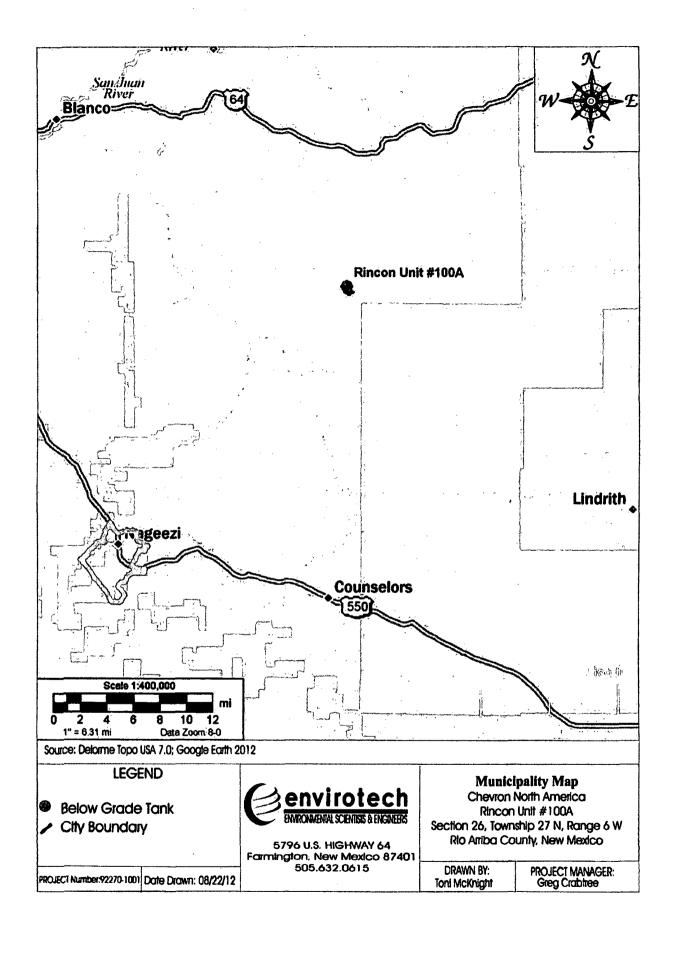
Aerial Map

Chevron North America Rincon Unit #100A Section 26, Township 27 N, Range 6 W Rio Arriba County, New Mexico

DRAWN BY: Toni McKnight PROJECT MANAGER: Greg Crabtree 100A= 30-039-21972 122= 30-039-06892 Pluggeel.

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS NORTHWESTERN NEW MEXICO (Submit 3 copies to OCD Aztec Office)

Elevation 6648' Completion Date 6-9-90 Total C	epth 480' Land Type* F
Casing, Sizes, Types & Depths None	•
If Casing is cemented, show amounts & types u	
If Cement or Bentonite Plugs have been placed	-
None	
Depths & thickness of water zones with descri	ption of water when possible
Fresh, Clear, Salty, Sulphur, Etc. 260' - 280'	Deep 20' Thick
Depths gas encountered: NA	BEALINES
•	M = 1 · · · · · · · · · · · · · · · · · ·
Type & amount of coke breeze used: NA	MAY21 1990
Type & amount of coke breeze used: NA Depths anodes placed: 275' to 420'	MAY21 1990
Type & amount of coke breeze used: NA Depths anodes placed: 275' to 420' Depths vent pipes placed: 480'	MAY21 1990 OIL CON. DIV.
Depths gas encountered: NA Type & amount of coke breeze used: NA Depths anodes placed: 275' to 420' Depths vent pipes placed: 480' Vent pipe perforations: 240'	MAY21 1990 OIL CON. DIV.
Type & amount of coke breeze used: NA Depths anodes placed: 275' to 420' Depths vent pipes placed: 480' Vent pipe perforations: 240' Remarks: El Paso Natural Gas Co. was the operator at the	MAY21 1990 OIL CON. DIV. DIST. 8 a time this ground bed was installed
Type & amount of coke breeze used: NA Depths anodes placed: 275' to 420' Depths vent pipes placed: 480' Vent pipe perforations: 240'	MAY21 1990 OIL CON. DIV. SIST. 8 a time this ground bed was installed





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

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned,

C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD

Y Distance Well Water Column

Depth Depth Water

POD Number

Code Subbasin County 64 16 4 Sec Tws Rng

276897

823

SJ 00213

4 4 1 32 27N 06W

4045750*

5354 1308

485

Average Depth to Water: Minimum Depth: 485 feet 485 feet

Maximum Depth:

485 feet

Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 282107.2

Northing (Y): 4046985

Radius: 6000

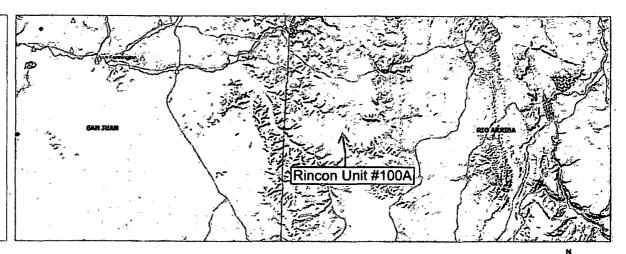
*UTM location was derived from PLSS - see Help

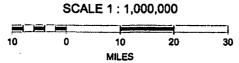
The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

MMQonline Public Version

NM EMNRD - Mining and Mineral Division Map Chevron North America / Rincon Unit #100A

Mines, Mills & Quarries Commodity Groups				
Δ	Aggregate & Stone Mines			
•	Coal Mines			
#	Industrial Minerals Mines			
♥	Industrial Minerals Mills			
Ø	Metal Mines and Mill Concentrate			
0	Potash Mines & Refineries			
a .	Smelters & Refinery Ops.			
*	Uranium Mines			
€	Uranium Mills			
Population	•			









U.S. Fish and Wildlife Service

National Wetlands Inventory



Aug 30, 2012

Wetlands

Freshwater Emergent

Freshwater Forested/Shrub
Estuanne and Marine Deepwater

Estuarine and Marine

Freshwater Pond

Lake

Singria

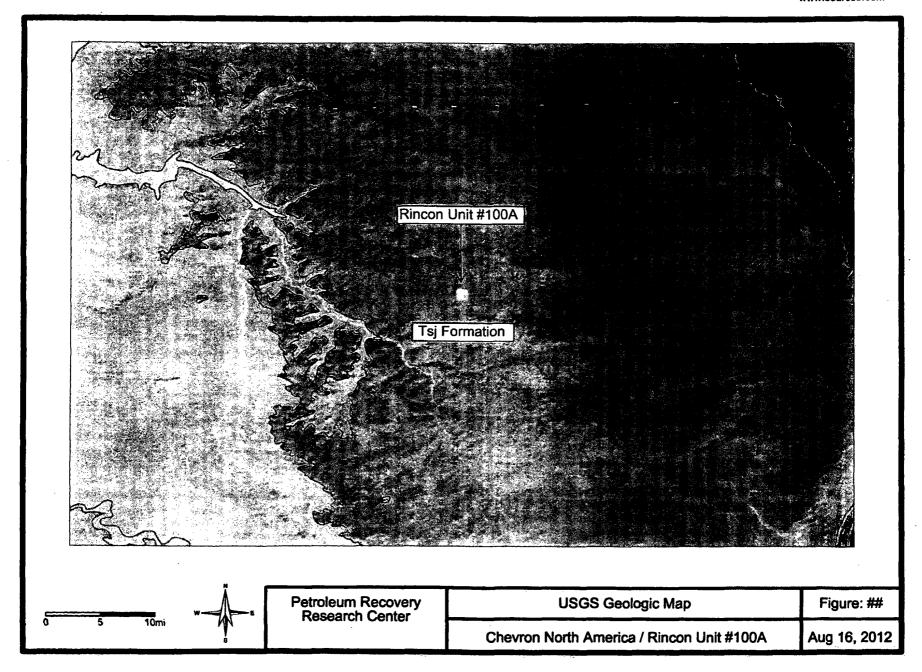
Riverine

Other



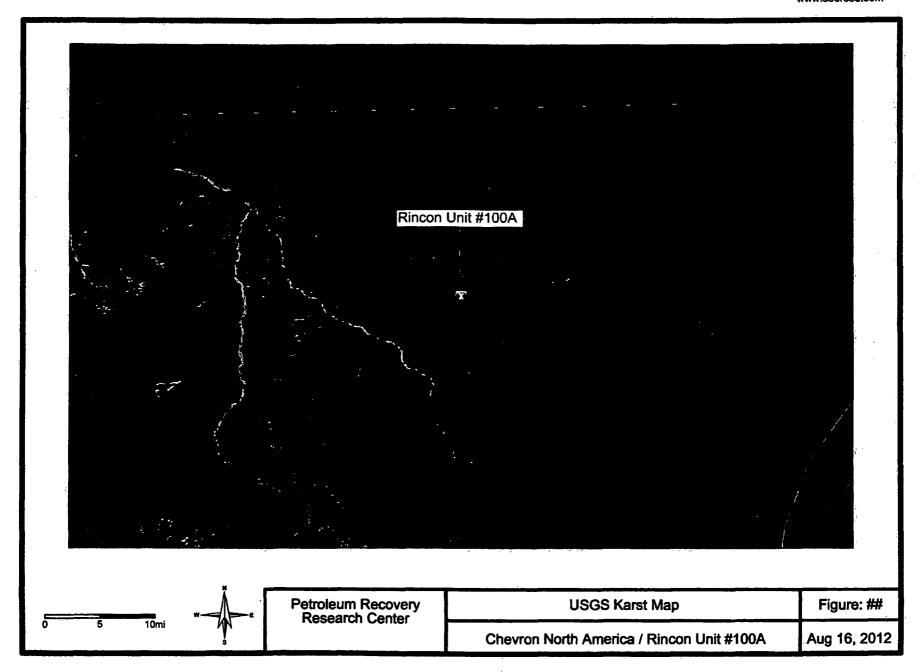
his map is for goneral retenance only. The US Fish and Wildlife Service is not sponsible for the occurrey or currentness of the base data shown on this map. All retaints related data should be used in accordance with the layer metadata found on the Wildfreich Newson with July

User Remarks:



USGS Geologic Map Legend

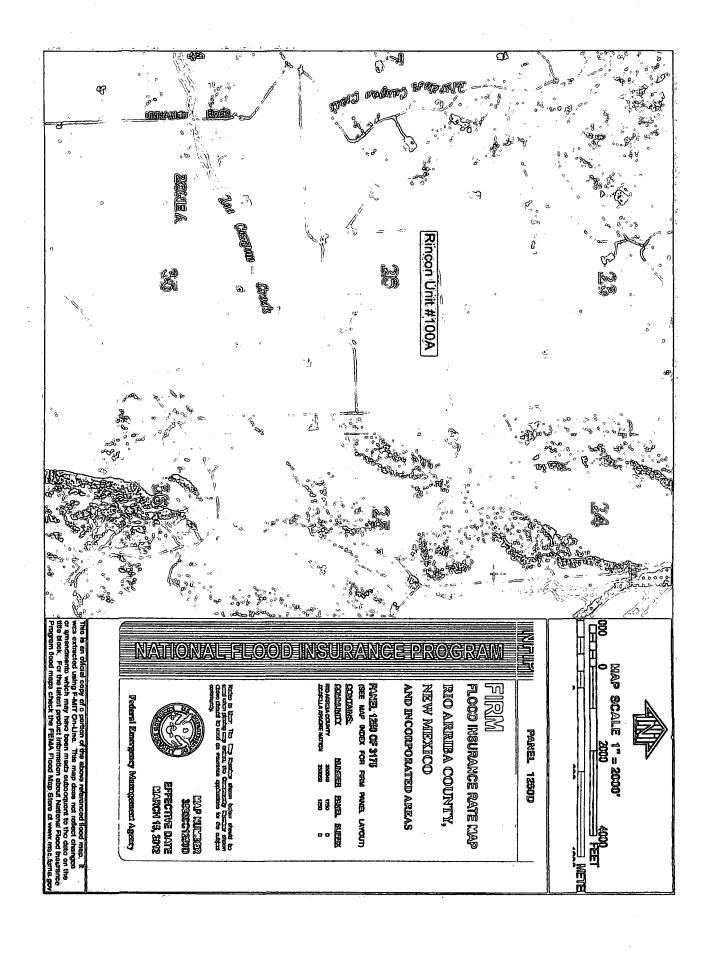
Tpc, Tertiary-Poison Canyon Formation
Tps, Tertiary-Paleogene sedimentary units
Tsf, Tertiary-Loxer and Hiddle Santa Fe Group
Tsj, Tertiary-San Jose Formation
Tual, Tertiary-Upper Oligocene andesites and basaltic andesites
Tuan, Tertiary-Lower Miocene and appearost Oligocene basaltic andesites
Tui, Tertiary-Miocene to Oligocene silicic to intermediate intrusive rocks; dikes, stocks, plugs, and distremes
Tuin, Upper and Middle Tertiary mafic intrusive rocks
Turf, Tertiary-Upper Oligocene silicic (or felsic) flows and masses and associated pyroclasite rocks
Turp, Tertiary-Upper Oligocene rhyplitic pyroclastic rocks
Tus, Upper Tertiary sedimentary units
Tou, Tertiary-Volcanic and some volcaniclastic rocks; undifferentiated
Tu, Middle Tertiary volcanic rocks; undifferentiated
Water Hater
X, Precambrian-Lower Proterozoic rocks; undivided
The Market Process of
Xno, Precambrian-Lower Proterozoic metamorhic rocks; dominantley mafic
Mrs. Precambrian-Lower Proterozoic metasedimentary rocks
Mms. Precambrian-Lower Proterozoic metamorphic rocks, undivided
En Ap., Precambrian-Lower Proterozoic plutonic rocks
TMp, Precambrian-Middle and Loser Proterozoic plutonic rocks, undivided
Tp, Precambrian-Middle Proterozoic platonic rocks
Ys, Precambrian-Middle Proterozoic sedimentary rocks
ds, Quaternary-Distarbed Ground



USGS Karst Map Legend

Karst – use for unstable areas

Fissures and voids present to a depth of 250 ft (75 m) or more in areas of subsidence from piping in thick, unconsolidated material Fissures, tubes and caves generally less than 1,880 ft (380 m) long; 50 ft (15 m) or less vertical extent; In gently dipping to flat-lying beds of carbonate rock Fissures, tubes and caves generally less than 1,000 ft (380 m) long; 50 ft (15 m) or less vertical extent; in moderately to steeply dipping beds of carbonate rock Fissures, tubes, and caves generally absent; where present in small isolated areas. less than 50 ft (15 m) long; less than 50 ft (15 m) vertical extent; in gently dipping to flat-lying beds of carbonate rock Fissures, tubes, and caves over 1,889 ft (380 m) long; 50 ft (15 m) to over 258 ft (75 m) vertical extent; in gently dipping to flat-luing beds of carbonate rock Fissures, tubes, and caves over 1.000 ft (300 m) long; 50 ft (15 m) to over 250 ft (75 m) vertical extent; in gently dipping to flat-lying beds of gupsum Fissures, tubes, and caves over 1,889 ft (389 m) long; 58 ft (15 m) to over 258 ft (75 m) vertical extent; in moderately to steeply dipping beds of carbonate rock Fissures, tubes, and tunnels present to a depth of 258 ft (75m) or more in lava Fissures, tubes, and tunnels present to a depth of 50 ft. (15 m) in lava ✓ transparent - no karst



BELOW GRADE TANK (BGT) DESIGN AND CONSTRUCTION PLAN

SUBMITTED TO:

ENVIRONMENTAL BUREAU,

NEW MEXICO OIL CONSERVATION DIVISION

ON BEHALF OF:

CHEVRON USA INC., CHEVRON MIDCONTINENT, L.P., AND FOUR STAR OIL & GAS

COMPANY
P.O. Box 730

AZTEC, NEW MEXICO 87410

(505) 333-1901

Chevron San Juan Basin

Below Grade Tank Design and Construction Plan

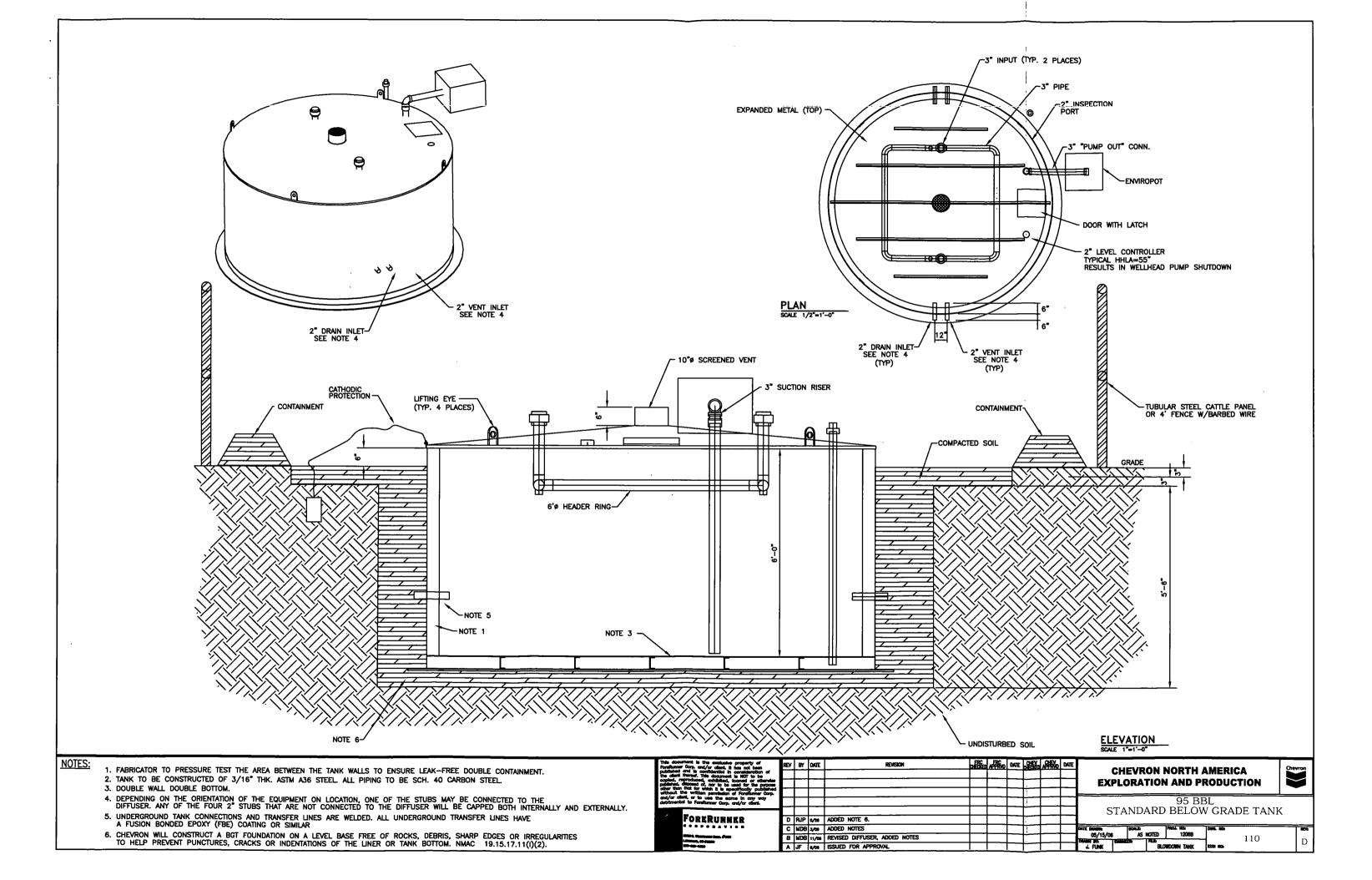
INTRODUCTION

In accordance with NMAC §§ 19.15.17.9(B)(4) and 19.15.17.11 Chevron (representing Chevron USA Inc, Chevron Midcontinent, L.P., and Four Star Oil & Gas Company) submits this Design and Construction Plan for below grade tanks (BGTs) in New Mexico. This Plan contains standard conditions that attach to multiple BGTs.

- 1. Chevron will design and construct a BGT to contain liquids and solids, prevent contamination of fresh water, and protect public health and the environment. NMAC § 19.15.17.11(A).
- 2. Chevron will post an upright sign not less than 12 inches by 24 inches with lettering not less than two inches in height in a conspicuous place on the fence surrounding the BGT, unless the BGT is located on a site where there is an existing well, signed in compliance with NMAC § 19.15.16.8, that is operated by Chevron. Chevron will post the sign in a manner and location such that a person can easily read the legend. The sign will provide the following information: Chevron's name; the location of the site by quarter-quarter or unit letter, section, township and range; and emergency telephone numbers. NMAC § 19.15.17.11(C).
- 3. Chevron will fence or enclose a BGT in a manner that prevents unauthorized access and will maintain the fences in good repair. Fences are not required if there is an adequate surrounding perimeter fence that prevents unauthorized access to the well site or facility, including the BGT. NMAC § 19.15.17.11(D)(1).
- 4. Chevron will fence or enclose a BGT located within 1000 feet of a permanent residence, school, hospital, institution or church with a chain link security fence, at least six feet in height with at least two strands of barbed wire at the top. Chevron will close and lock all gates associated with the fence when responsible personnel are not on-site. NMAC § 19.15.17.11(D)(2).
- 5. Chevron will fence BGTs to exclude livestock with a four foot fence that has at least four strands of barbed wire evenly spaced in the interval between one foot and four feet above ground level. NMAC § 19.15.17.11(D)(3). Chevron may install tubular steel cattle panels, as it determines appropriate (photo of cattle

- panel fence submitted to NMOCD, 24 June 2009). As illustrated on the attach photo.
- 6. Chevron will screen the permanent opening on the tank top with expanding steel mesh in order to render it non-hazardous to wildlife, including migratory birds. NMAC § 19.15.17.11(E).
- 7. Chevron's BGTs will be constructed with the design features illustrated on the attached drawing.
- 8. Only double-walled, double-bottomed BGTs will be installed.
- 9. Chevron will use 3/16" carbon steel which is resistant to the anticipated contents and resistant to damage from sunlight. NMAC § 19.15.17.11(I)(1).
- 10. Chevron will construct a BGT foundation on a level base free of rocks, debris, sharp edges or irregularities to help prevent punctures, cracks or indentations of the liner or tank bottom. NMAC § 19.15.17.11(I)(2).
- 11. Chevron will construct a BGT to prevent overflow and the collection of surface water run-on. NMAC § 19.15.17.11(I)(3). Chevron, or a contractor representing Chevron, will install a level control device to help prevent overflow from the BGT and will use berms and/or a diversion ditch to prevent surface run on from entering the BGT. NMAC §§ 19.15.17.11(I)(3), 19.15.17.12(A)(7), and 19.15.17.12(D)(1).
- 12. All BGTs, in which the side walls are not open for visible inspection for leaks, will be double walled with leak detection capability. NMAC § 19.15.17.11(I)(4)(b).
- 13. Chevron, as the operator of a below-grade tank constructed and installed prior to June 16, 2008 that does not meet all the requirements in Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC and is not included in Paragraph (6) of Subsection I of 19.15.17.11 NMAC, is not required to equip or retrofit the below-grade tank 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 below-grade tank does not demonstrate integrity, the operator shall promptly remove that below-grade tank and install a below-grade tank that complies with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, as illustrated in the approved drawing. Chevron shall comply with the operational requirements of 19.15.17.12 NMAC.

14. Chevron, as the operator of a below-grade tank constructed and installed prior to June 16, 2008 that is single walled and where any portion of the tank sidewall is below the ground surface and not visible, shall equip or retrofit the below-grade tank to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, or close it, within five years after June 16, 2008. If the existing below-grade tank does not demonstrate integrity, Chevron shall promptly remove that below-grade tank and install a below-grade tank that complies with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, as illustrated in the approved drawing. Chevron shall comply with the operational requirements of 19.15.17.12 NMAC.



BELOW GRADE TANK (BGT) OPERATING AND MAINTENANCE PLAN

SUBMITTED TO:

ENVIRONMENTAL BUREAU,

NEW MEXICO OIL CONSERVATION DIVISION

ON BEHALF OF:

CHEVRON USA ÎNC., CHEVRON MIDCONTINENT, L.P., AND FOUR STAR OIL & GAS COMPANY

P.O. Box 730

AZTEC, NEW MEXICO 87410

(505) 333-1901

Chevron

San Juan Basin

Below Grade Tank Operating and Maintenance Plan

INTRODUCTION

In accordance with NMAC §§ 19.15.17.9(B)(4) and 19.15.17.12 Chevron (representing Chevron USA Inc, Chevron Midcontinent, L.P., and Four Star Oil & Gas Company) submits this Operating and Maintenance Plan (O&M Plan) for below grade tanks (BGTs) in New Mexico. This O&M Plan contains standard conditions that attach to multiple BGTs. If needed for a particular BGT, a modified O&M Plan will be submitted to the New Mexico Oil Conservation Division (NMOCD or the division) for approval prior to implementation.

GENERAL PLAN:

- 1. Chevron, or a contractor representing Chevron, will operate and maintain a BGT to contain liquids and solids to prevent contamination of fresh water and to protect public health and environment. NMAC § 19.15.17.12(A)(1).
- 2. Chevron will not discharge into or store any hazardous waste in a BGT. NMAC § 19.15.17.12(A)(3).
- 3. If a BGT develops a leak or is penetrated below the liquid surface, Chevron will remove liquid above the damage within 48 hours, notify the appropriate division district office within 48 hours of discovery and will promptly repair the BGT. If a BGT develops a leak Chevron will remove liquid above the damage within 48 hours, notify the appropriate division district office within 48 hours of discovery and will promptly repair or replace the BGT. If replacement is required, the BGT will meet all specification included in the attached approved design drawing and comply with 19.15.17.11(I)(1-4).
- 4. If Chevron as an operator of a below-grade tank that was constructed and installed prior to June 16, 2008 that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC and discovers that the below-grade tank does not demonstrate integrity or that the below-grade tank develops any of the conditions identified in Paragraph (5) of Subsection A of 19.15.17.12 NMAC, then Chevron or their representative shall close the existing below-grade tank pursuant to the closure requirements of 19.15.17.13 NMAC and install a below-grade tank that complies with the requirements of Paragraphs

- (1) through (4) of Subsection I of 19.15.17.11 NMAC. NMAC § 19.15.17.12(D)(5). If replacement is required, the BGT will meet all specification included in the attached approved design drawing.
- 5. If Chevron as the operator of the below-grade tank that was constructed and installed prior to June 16, 2008 that does not comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC and equips or retrofits the existing tank to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, then Chevron or their representative 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. Chevron shall demonstrate to the division whether the evidence of contamination indicates that an imminent threat to fresh water, public health, safety or the environment exists. If the division determines that the contamination does not pose an imminent threat to fresh water, public health, safety or the environment, the operator shall complete the retrofit or the replacement of the below-grade tank. If Chevron or division determines that the contamination poses an imminent threat to fresh water, public health, safety or the environment, then Chevron shall close the existing below-grade tank pursuant to the closure requirements of 19.15.17.13 NMAC prior to initiating the retrofit or replacement. NMAC § 19.15.17.12(D)(6). If replacement is required, the BGT will meet all specification included in the attached approved design drawing.
- 6. Chevron, or a contractor representing Chevron, will use berms and/or diversion ditches to prevent surface run-on from entering the BGT by diverting surface water run-on away from the bermed area. NMAC §§ 19.15.17.12(A)(7) and 19.15.17.12(D)(1).
- 7. Chevron, or a contractor representing Chevron, will not allow a BGT to overflow and will maintain adequate freeboard on existing BGTs by routine inspections utilizing pumper trucks whose routes are timed based on known production rates. Fluid is pumped out on this schedule. For newly constructed BGTs Chevron, or a contractor representing Chevron, will maintain adequate freeboard by installing level control devices that automatically shut off inflow to alleviate potential overtopping. NMAC § 19.15.17.12(D)(1) and 19.15.17.12(D)(4).
- 8. Chevron, or a contractor representing Chevron, will remove a visible or measurable layer of oil from the fluid surface of a BGT. NMAC § 19.15.17.12(D)(2).
 - **9.** Chevron, or a contractor representing Chevron, will inspect the BGT to assess compliance with NMAC § 19.15.17.12, Operational Requirements, at least once monthly and maintain a written record of each inspection for at least five (5) years. The approved inspection form is attached.

Chevron: New Mexico Inspection Form for Below Grade Tanks

Inspection	Date:	
		_

Below Grade Tank (BGT) Location:				
Does the BGT have adequate freeboard to prevent overflow;	yes	no		
Does the tank have visible leaks or sign of corrosion;	yes	no		
Do tank valves, flanges and hatches have visible leaks;	yes	no		
Is there evidence of significant spillage of produced liquids;	yes	no		
Is this a single of double wall tank;				
Are berms and/or diversion ditches in place to prevent surface				
run-on from entering the BGT;	yes	no		
Have visible or measurable layers of oil been removed from				
liquid surface fluid;	yes	no		

BELOW GRADE TANK (BGT) CLOSURE PLAN

SUBMITTED TO:

ENVIRONMENTAL BUREAU, NEW MEXICO OIL CONSERVATION DIVISION

ON BEHALF OF:

CHEVRON USA INC., CHEVRON MIDCONTINENT, L.P., AND FOUR STAR OIL & GAS

COMPANY

P.O. Box 730

AZTEC, NEW MEXICO 87410

(505) 333-1901

Cheyron San Juan Basin Below Grade Tank Closure Plan

INTRODUCTION

In accordance with NMAC §§ 19.15.17.9(B)(4) and 19.15.17.13, Chevron (representing Chevron USA Inc, Chevron Midcontinent, L.P., and Four Star Oil & Gas Company) submits this Closure Plan for below grade tanks (BGTs) in New Mexico. This Closure Plan contains standard conditions that attach to multiple BGTs. If needed for a particular BGT, a modified Closure Plan for a proposed alternative closure will be submitted to the New Mexico Oil Conservation Division (NMOCD or the division) for approval prior to closure.

CLOSURE PLAN PROCEDURES AND PROTOCOLS (NMAC §§ 19.15.17.9(C) and 19.15.17.13).

- 1) Chevron, or a contractor acting on behalf of Chevron, will close a BGT within the time periods provided in NMAC § 19.15.17.13(A), or by an earlier date required by NMOCD to prevent an imminent danger to fresh water, public health, or the environment. NMAC § 19.15.17.13(A).
- 2) Chevron, or a contractor acting on behalf of Chevron, will close an existing BGT that does not meet the requirements of NMAC § 19.15.17.11(I)(1 through 4) or is not included in NMAC § 19.15.17.11(I)(5) within five years after June 16, 2008, if not retrofitted to comply with § 19.15.17.11(I)(1 through 4). NMAC § 19.15.17.13(A)(4).
- 3) Chevron shall close an existing below-grade tank that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, if not retrofitted to comply with Paragraphs 1) through (4) of Subsection I of 19.15.17.11 NMAC, prior to any sale or change of operator pursuant to 19.15.9.9 NMAC.
- 4) Chevron, or a contractor acting on behalf of Chevron, will close a permitted BGT within 60 days of cessation of the BGT's operation or as required by the transitional provisions of NMAC § 19.15.17.17(B) in accordance with a closure plan that the appropriate division district office approves. NMAC §§ 19.15.17.13(A)(9) and 19.15.17.9(C).
- 5) In accordance with NMAC § 19.15.17.13(J)(1), Chevron will notify the surface owner by certified mail, return receipt requested, of its plans to close a BGT prior to beginning closure activities. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records is sufficient to demonstrate compliance. Chevron will also notify the appropriate division district office verbally or by other means at least 72 hours, but not more than one 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 closure is associated with a particular well, then the notice shall also include the well's name, number and API number. NMAC § 19.15.17.13(J)(2).

- 6) Chevron, or a contractor acting on behalf of Chevron, will remove liquids and sludge from a BGT prior to implementing a closure method and will dispose of the liquids and sludge in a division approved facility. NMAC § 19.15.17.13(E)(1). A list of Chevron currently approved disposal facilities is included at the end of this document.
- 7) The proposed method of closure for this Closure Plan is waste excavation and removal. NMAC §§ 19.15.17.13 (E)(1).
- 8) Chevron, or a contractor acting on behalf of Chevron, shall remove the below-grade tank and dispose of it in a division-approved facility or recycle, reuse, or reclaim it in a manner that the appropriate division district office approves. When required, prior approval for disposal will be obtained. NMAC § 19.15.17.13(E)(2). Documentation regarding disposal of the BGT and its associated liner, if any, will be included in the closure report.
- 9) Waste generated during closure will be handled and disposed of in accordance with applicable laws. NMAC § 19.15.35.8(C)(1)(m) provides that plastic pit liners may be disposed at a solid waste facility without testing before disposal, provided they are cleaned well.
- 10) Chevron, or a contractor acting on behalf of Chevron, will remove on-site equipment associated with a BGT unless the equipment is required for some other purpose. NMAC § 19.15.17.13(E)(3).
- 11) Chevron, or a contractor acting on behalf of Chevron, will test the soils beneath the BGT to determine whether a release has occurred. At a minimum, 5 point composite samples will be collected along with individual grab samples from any area that is wet, discolored, or showing other evidence of a release. Samples will be analyzed for BTEX, TPH and chlorides to demonstrate that the benzene concentration, as determined by EPA SW-846 methods 8021B or 8260B or EPA method that the division approves, does not exceed 0.2mg/kg; total BTEX concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 50mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 100mg/kg; and the chloride concentration, as determined by EPA method 300.1 or other EPA method that the division approves, does not exceed 250mg/kg; or the background concentration, whichever is greater. Chevron, or a contractor acting on behalf of Chevron, will notify the NMOCD Division District office of its results on form C-141. NMAC § 19.15.17.13(E)(4).
- 12) If Chevron or the division determines that a release has occurred, Chevron will comply with NMAC §§ 19.15.29 and 19.15.30, as appropriate. NMAC § 19.15.17.13(E)(5).
- 13) If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in NMAC § 19.15.17.13(E)(4), Chevron will backfill the excavation with compacted, non-waste containing, earthen materials; construct a division prescribed soil cover; re-contour and re-vegetate the site. The division-prescribed soil cover, recontouring and re-vegetation requirements shall comply with NMAC § 19.15.17.13)(G, H and I). NMAC § 19.15.17.13(E)(6).

- 14) As per NMAC § 19.15.17.13(G)(1), once Chevron has closed a BGT or is no longer using the BGT or an area associated with the BGT, Chevron will reclaim the BGT location and all areas associated with it including associated access roads not needed by the surface estate owner to a safe and stable condition that blends with the surrounding undisturbed area. Chevron will substantially restore impacted surface area to the condition that existed prior to its oil and gas operations by placement of soil cover as provided in NMAC § 19.15.17.13(H) (see below), recontour the location and associated areas to a contour that approximates the original contour and blends with the surrounding topography, and re-vegetate according to NMAC § 19.15.17.13(I). NMAC § 19.15.17.13(G)(1).
- 15) Chevron may propose an alternative to the re-vegetation requirement of NMAC § 19.15.17.13(G)(1) if it demonstrates that the proposed alternative effectively prevents erosion, and protects fresh water, human health and the environment. The proposed alternative must be agreed upon in writing by the surface owner. Chevron will submit the proposed alternative, with written documentation that the surface owner agrees to the alternative, to the division for approval. NMAC § 19.15.17.13(G)(2).
- 16) Soil cover for closures where Chevron has removed the pit contents or remediated the contaminated soil to the division's satisfaction will consist of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater. NMAC § 19.15.17.13(H)(1).
- 17) Chevron will construct the soil cover to the site's existing grade and prevent ponding of water and erosion of the cover material. NMAC § 19.15.17.13(H)(3).
- 18) As per NMAC § 19.15.17.13(I)(1) and 19.15.17.13(G)(2), Chevron will seed or plant disturbed areas during the first growing season after it is no longer using a BGT or an area associated with the BGT including access roads unless needed by the surface estate owner as evidenced by a written agreement with the surface estate owner, if any and written approval by NMOCD.
- 19) Seeding will be accomplished by drilling on the contour whenever practical or by other division approved methods. Chevron will obtain vegetative cover that equals 70% of the native perennial vegetative cover (un-impacted 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 maintain that cover through two successive growing seasons. During the two growing seasons that prove viability, Chevron will not artificially irrigate the vegetation. NMAC § 19.15.17.13(I)(2).
- 20) Chevron will notify the division when it has seeded or planted and when it successfully achieves re-vegetation. NMAC § 19.15.17.13(I)(5).
- 21) Seeding or planting will be repeated until Chevron successfully achieves the required vegetative cover. NMAC § 19.15.17.13(I)(3).

- 22) When conditions are not favorable for the establishment of vegetation, such as periods of drought, the division may allow Chevron to delay seeding or planting until soil moisture conditions become favorable or may require Chevron to use additional cultural techniques such as mulching, fertilizing, irrigating, fencing or other practices. NMAC § 19.15.17.13(I)(4).
- 23) As per NMAC § 19.15.17.13(K), within 60 days of closure completion, Chevron will submit a closure report containing the elements required by NMAC § 19.15.17.13(K) including:
 - i) Confirmation sampling results,
 - ii) A plot plan,
 - iii) Details on back-filling, capping and covering, where applicable, including revegetation application rates and seeding technique,
 - iv) Proof of closure notice to the surface owner, if any, and the division,
 - v) Name and permit number of disposal facility, and
 - vi) Photo documentation.
- 24) The closure report will be filed on NMOCD Form C-144. Chevron will certify that all information in the closure report and attachments is correct and that it has complied with all applicable closure requirements and conditions specified in the approved closure plan. NMAC § 19.15.17.13(K).
- 25) As requested, the following are the current Chevron approved Waste Disposal Sites for the identified waste streams:

Soils and Sludges

i) Envirotech Inc. Soil Remediation Facility, Permit No. NM-01-0011

Solids

ii) San Juan County Regional Land Fill (NMAC § 19.15.35.8 items only, with prior NMOCD approval when required)

<u>Liquids</u>

- i) Key Energy Disposal Facility, Permit No. NM-01-0009
- ii) Basin Disposals Facility, Permit No. NM-01-005.
- 26) These waste disposal sites are subject to change if their certification is lost or they are closed or other more appropriate, equally protective sites become available. Chevron will provide notice if such a change is affected.