In the Brazos Rd., Aztec, NM 67410 District IV 1220 S, St. Francis Dr., Santa Fe, NM 87505	State of New Mexico The Minerals and Natural Resources Intment Lation Division St. Francis Dr. Junuary, NM 87505 M. Loop System, Below, Grad	Form C-144 July 21, 2008 For temporary pits, closed-loop sytems, 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.
	d-Loop System, Below-Grac tive Method Permit or Closu	
Type of action: X Permit of Closure o Modificat Closure p below-gra	a pit, closed-loop system, below-grade f a pit, closed-loop system, below-grade tion to an existing permit lan only submitted for an existing permit ade tank, or proposed alternative method	tank, or proposed alternative method e tank, or proposed alternative method itted or non-permitted pit, closed-loop system,
Please be advised that approval of this request does	not relieve the operator of liability should operations	op system, below-grade tank or alternative request result in pollution of surface water, ground water or the e governmental authority's rules, regulations or ordinances.
	OCD Permit Number	5W         County:         Rio Arriba           -107.39697°W         NAD:         X 1927         1983
Lined Unlined Liner type: Thi	P&A ickness mil LLDPE her Volume:	HDPE PVC Other
3       Closed-loop System:       Subsection H of 19.15.1         Type of Operation:       P&A       Drilling a new         Orying Pad       Above Ground Steel Tanks         Lined       Unlined       Liner type:         Liner Seams:       Welded       Factory       Other	well Workover or Drilling (Applies to notice of intent) Haul-off Bins Other ekness mil LLDPE	o activities which require prior approval of a permit or HDPE PVD Other
Visible sidewalls and liner Visible sidewalls and liner Visible sidewalls and liner mil	f fluid: Produced Water Metal Visible sidewalls, liner, 6-inch lift and aut idewalls only	tomatic overflow shut-off
Submittal of an exception request is required. Exception	ons must be submitted to the Santa Fe Envir	opmental Bureau office for consideration of approval
Form C-144	Oil Conservation Division	Page 1 of 5

0 • 1 · 3								
Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pit, temporary pits, and below-grade tanks)								
Chain link, six feet in height, two strands of barbed wire at top ( <i>Required if located within 1000 feet of a permanent residence, school, hospita</i>	d, institution or church)							
and the stands of barbert wire evenly spaced between one and four feet								
X Alternate. Please specify 4' hog wire fencing topped with two strands barbed wire.								
7 Netting: Subsection E of 19.15.17.11 NMAC (Applies to pressure in the first sector)								
Netting:         Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)           X         Screen         Netting         Other								
Monthly inspections (If netring 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								
X Signed in compliance with 19.15.3.103 NMAC								
9								
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:								
X Administrative approval(s): Requests must be submitted to the appropriate division time in fight the second seco								
X Administrative approval(s): Requests must be submitted to the appropriate division district of the Santa Fe Environmental Bureau office for consideration of approval. (Fencing/BGT Liner)								
Lixception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.								
10 Siting Criteria (according according to 10 to								
Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding chapters to contributive time in the application.								
appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau Office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above grade-tunks associated with a closed with a closed of the santa fee for the same second								
does not apply to drying pads or above grade-tanks associated with a closed-loop system.								
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank.								
of the state Engineer - IwATERS database search: USGS; Data obtained from nearby wells	Yes X No							
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, labeled a state of the state	Yes XNo							
lake (measured from the ordinary high-water mark). - 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 XNo							
(Applies to temporary, emergency, or cavitation pits and below-grade tanks)								
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image								
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.	Yes No							
(Applied to permanent pits)								
- Visual inspection (certification) of the proposed site: Aerial photo: Satellite image Within 500 horizonal fact of a private depart. So the set of a private depart.								
Within 500 horizonal 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.	Yes XNo							
- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site.								
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	Yes XNo							
<ul> <li>Written confirmation or verification from the municipality; Written approval obtained from the municipality.</li> </ul>								
<ul> <li>Within 500 feet of a wetland.</li> <li>US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	Yes XNo							
Within the area overlying a subsurface mine. Written confirmation or verification or map from the NM EMNRD - Mining and Mineral Division	Yes XNo							
Within an unstable area.								
- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	Yes XNo							
Within a 100-year floodplain - FEMA map	Yes XNo							

2.8					
Temporary Pits, Emerg	ency Pits and Below-grade Tanks I flowing items must be attached to the app cost (Dalace	Permit Application	Attachment Checklist:	Subsection B of 19,15,17,9 NMAC	
1000	port (Below-grade Tanks) - based upo	press terrener. I trate the there	alle, by d check mark in the	they do the for the second s	
Hydrogeologic Dat	ta (Temporary and Emergency Pits) -	based upon the room	iruments of Democratic	ection B of 19.15.17.9 NMAC	
X Siting Criteria Con	npliance Demonstrations - based upor	n the appropriate rou	mements of Paragraph (.	(1) of Subsection B of 19:15.17.9	
X Design Plan - base	d upon the appropriate requirements of	of 10.15.17.11 NMA	C	) NMAC	
X Operating and Mai	intenance Plan - based upon the appro				
X Closure Plan (Pleas	se complete Boxes 14 through 18. if a	policiphica based	0F 19.15.17.12 NMAC		
19.15.17.9 NMAC	and 19.15.17.13 NMAC	(pprease) - sased u	pon the appropriate requi	rements of Subsection C of	
Previously Approved D	Design (attach copy of design)	API		r Permit	
12					
Closed-loop Systems Per	mit Application Attachment Check	dist: Subsection B of	19.15.17.9 NMAC		
Geologic and Hydre	lowing items must be attached to the application of the properties	lication. Please indica	te, by a check mark in the	box, that the documents are attached.	
	"Be made to my for on-site closu	(c) · based upon the	requirements of Paragra	oh (3) of Subsection B of 10 15 17 o	•
Design Plan - based	pliance Demonstrations (only for on- I upon the appropriate requirements o	site closure) - based	upon the appropriate req	uirements of 19.15.17.10 NMAC	
Operating and Main	tepance Plan, here store at	19.15.17.11 NMA	С		
Closure Plan / Plana	itenance Plan - based upon the approp	priate requirements of	f 19.15.17.12 NMAC		
NMAC and 19.15.1	e complete Boxes 14 through 18, if ap 7.13 NMAC	pplicable) - based up	on the appropriate requir	ements of Subsection C of 19.15.17	.9
Previously Approved D	esign (attach copy of design)	API			
	perating and Maintenance Plan	API			
13					
Permanent Pits Permit A	pplication Checklist: Subsection E	B of 19.15.17.9 NM/	AC		
Instructions: Each of the foll	lowing items must be attached to the app	plication. Please indic	ate, by a check mark in th	e hor that the documents and the t	
Hydrogeologic Repo	ort - based upon the requirements of P	aragraph (1) of Subs	ection B of 19 15 17 9 N	MAC	
Siting Criteria Comp	pliance Demonstrations - based upon t	the appropriate requi	rements of 19.15.17 101	NMAC	
Chimatological Pacto	ors Assessment				
Certified Engineering	g Design Plans - based upon the appro	opriate requirements	of 19.15.17.11 NMAC		
Dike Protection and	Structural Integrity Design: based upo	on the appropriate re-	quirements of 19.15.17.1	ÍNMAC	
Liner Specifications	gn - based upon the appropriate requir	rements of 19.15.17.	11 NMAC		
Ouality Control/Oual	and Compatibility Assessment - based ity Assurance Construction and Instal	d upon the appropria	te requirements of 19.15	17.11 NMAC	
Operating and Mainte	enance Plan - based upon the appropr	ilation Plan	10.15.17.12.50.61.0		
Freeboard and Overto	opping Prevention Plan - based upon t	the appropriate requi	19.15.17.12 NMAC	2000	
Nuisance or Hazardo	us Odors, including H2S, Prevention	Plan	rements of 19.15.17.11	NMAC	
Emergency Response	: Plan				1
Oil Field Waste Strea	m Characterization				
Monitoring and Inspe	ction Plan				
Erosion Control Plan					
Closure Plan - based u	upon the appropriate requirements of	Subsection C of 19.1	5.17.9 NMAC and 19.1.	5.17.13 NMAC	
14 Proposed Closure: 19.15.1	7.12 NIMAC				
nstructions: Please complete t	the applicable boxes, Boxes 14 through	18. in regards to the n	tonosed closure plan		
ype: Drilling Work	kover Emergency Cavitation			de Tank Closed-loop System	
Alternative			anchi Fit A Delow-gra	te rank []Closed-loop System	- 1
roposed Closure Method:	X Waste Excavation and Removal	(Below-Grade	Tank)		
l	Waste Removal (Closed-loop system				
l	On-site Closure Method (only for te	emporary pits and clos	ed-loop systems)		
	In-place Burial	On-site Trench			
	Alternative Closure Method (Except	tions must be submitt	ed to the Santa Fe Enviro	nmental Bureau for consideration)	
5					
Vaste Excavation and Rem	oval Closure Plan Checklist: (19.15.	.17.13 NMAC) Instruc	tions: Each of the followi	ng items must be attached to the closur	e plan
	the and the me and the me	ucneu.		Contraction of the Closure	
X Confirmation Sampling	res - based upon the appropriate require	rements of 19.15.17.	13 NMAC		
X Disposal Facility Name	g Plan (if applicable) - based upon the	appropriate requirer	ments of Subsection F of	19.15.17.13 NMAC	
X Soil Backfill and Cover	e and Permit Number (for liquids, dril	ting fluids and drill o	cuttings)		
X Re-vegetation Plan - ba	Design Specifications - based upon t	uie appropriate requi	rements of Subsection H	of 19.15.17.13 NMAC	
X Site Reclamation Plan -	sed upon the appropriate requirement	is of Subsection I of	19.15.17.13 NMAC		
Carl Concentration Film -	based upon the appropriate requirem	ents of Subsection C	i of 19.15.17.13 NMAC		

16		
Waste Removal Closure For Closed-loop Systems That Utilize Above ( Instructions: Please identify the facility or facilities for the disposal of liqu are required.	Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMA	C)
are required.	nnis, arning phas and ardi chaings. Use affactment if more than t	wo facilities
Disposal Facility Name:	Disposal Facility Permit #:	
Disposal Facility Name:	Disposal Facility Permit #	
Will any of the proposed closed-loop system operations and associat Yes (If yes, please provide the information No	ed activities occur on or in areas that will not be used for futu	re service and operations?
Required for impacted areas which will not be used for future service and	operations:	
Soil Backfill and Cover Design Specification - based upon th	e appropriate requirements of Subsection H of 19.15.17.13 N	AAC
Re-vegetation Plan - based upon the appropriate requirement     Site Reclamation Plan - based upon the appropriate requirement	s of Subsection I of 19.15.17.13 NMAC	
	Christol Subsection C of 19.15.17.13 NMAC	
17 Siting Criteria (Regarding on-site closure methods only: 19.15.1	7.10.00.00.0	
Instructions: Each siting criteria requires a demonstration of complication devices		
certain sating criteria may require administrative approval from the appropriate di for consideration of approval. Justifications and/or demonstrations of equivalency	strict office or may be considered an exception which must be submitted to	below. Requests regarding changes to the Santa Fe Environmental Bureau office –
Ground water is less than 50 feet below the bottom of the buried was	in the second seco	
<ul> <li>NM Office of the State Engineer - iWATERS database search: USGS</li> </ul>		Yes No
		N/A
Ground water is between 50 and 100 feet below the bottom of the but	ried waste	Yes No
<ul> <li>NM Office of the State Engineer - iWATERS database search; USGS;</li> </ul>		N/A
Ground water is more than 100 feet below the bottom of the buried w		Yes No
<ul> <li>NM Office of the State Engineer - iWATERS database search; USGS;</li> </ul>		
Within 300 feet of a continuously flowing watercourse, or 200 feet of any of (measured from the ordinary high-water mark).		Yes No
<ul> <li>Topographic map: Visual inspection (certification) of the proposed site</li> </ul>		
Within 300 feet from a permanent residence, school, hospital, institution; or Visual inspection (our if institution) of the	church in existence at the time of initial application.	Yes No
· Visual inspection (certification) of the proposed site; Aerial photo; satel	lite image	
Within 500 horizontal feet of a private, domestic fresh water well or spring th purposes, or within 1000 horizontal fee of any other fresh water well or sprin - NM Office of the State Engineer - iWATERS database: Visual inspectio	2: ID existence at the time of the initial continuation	Yes No
within incorporated municipal boundaries or within a defined municipal fres pursuant to NMSA 1978, Section 3-27-3, as amended.	h water well field covered under a municipal ordinance adopted	Yes No
<ul> <li>Written confirmation or verification from the municipality; Written app Within 500 feet of a wetland</li> </ul>	roval obtained from the municipality	
<ul> <li>US Fish and Wildlife Wetland Identification map: Topographic map: V</li> </ul>	isual inspection (certification) of the energy data	Yes No
Within the area overlying a subsurface mine.	inder inspection (certification) of the proposed site	
- Written confirantion or verification or map from the NM EMNRD-Minu	ing and Mineral Division	Yes No
Within an unstable area.		Yes No
<ul> <li>Engineering measures incorporated into the design; NM Bureau of Geole Topographic map</li> </ul>	ogy & Mineral Resources: USGS; NM Geological Society;	
Within a 100-year floodplain. - FEMA map		Yes No
<u>On-Site Closure Plan Checklist:</u> (19.15.17.13 NMAC) Instructions: by a check mark in the box, that the documents are attached.	Each of the following items must bee attached to the closur	e plan. Please indicate,
Siting Criteria Compliance Demonstrations - based upon the app	ropriate requirements of 19.15.17.10 NMAC	
Proof of Surface Owner Notice - based upon the appropriate requ	uirements of Subsection F 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 o	f a drying pad) - based upon the appropriate requirements of 19	0.15.17.11 NMAC
rolocols and Procedures - based upon the appropriate requireme	ents of 19.15.17.13 NMAC	
Confirmation Sampling Plan (if applicable) - based upon the app	ropriate requirements of Subsection F of 19.15.17.13 NMAC	
Waste Material Sampling Plan - based upon the appropriate requi	irements of Subsection F of 19.15.17.13 NMAC	
Disposal Facility Name and Permit Number (for liquids, drilling) Soil Cover Design based upon the comparison of the comparison o	fluids and drill cuttings or in case on-site closure standards can	not be achieved)
Soil Cover Design - based upon the appropriate requirements of S 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	ousection 1 of 19.15.17.13 NMAC	

Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

Operating Application Control solution         Operating of the information solution of the application is time, accurate and complete to the less of my knowledge and belief.           Name (Prant):         Creat Targe         Trik:         Regulatory Technickan           Signature:         Creat Targe Technickan         Approval Date:         Trik:           The:         OCD Permit Numbers:         Creat Targe Technickan         Trik:           Clearse Report (required within 60 date of clearser completed late carge at trik:         Creat Targe Technickan         Trik:           Clearse Report (required within 60 date of clearser completed late carge at trik:         Creat Targe Termit Numbers:         Trik:           Clearse Report (required within 60 date of clearser completed late carge at trik:         Creat Targe Termit Number:         Trik:           Clearse Report (required within 60 date of clearse completed late carge at trik:         Crearse Completion Date:         <	19 Operator Application (	"		
Nume       Crossil (alorg       Thi:       Regulatory, Technician         Nymatics:       Crossil (alorg)       Date:       12222008         20       Approval:       Permit Application (including closure plan)       Closure Plan (only)       OCD Conditions (see attachment)         20       Approval Date:	Lhereby certify that the inf	<u>ertification:</u> ormation submitted with this application is true.	accurate and complete to this le	
Signature:	Name (Print):			
cmmit address:	Signature:	1 a T		
20         21         220         231         242         243         254         255         256         257         258         259         259         250         251         251         252         253         254         255         255         256         257         258         259         259         250         251         252         252         253         254         255         256         256         256         256         257         258         259         250         251         252         252         253         254         254         255         256         256         257         258         258         259	e-mail address:			
QLCD Approval:       Permit Application (including closure plan)       Closure Plan (only)       OCD Conditions (see attachment)         QLCD Representative Signature:		General Contraction of Contraction o		
OLD Representative Signature:	· · · · · · · · · · · · · · · · · · ·	ermit Application (including closure plan)	Closure Plan (only)	OCD Conditions (see attachment)
Approval Date:         OCD Permit Number:         October Status:       Permet Status:         October Status:       Permit Number:         October Status:       Permit Number:         October Status:       Permit Number:         Opposition:       One Status:       Permit Number:         Opposition:       Permit Number:       Poince Status:         Opposition:       Permit Number:       Poince Status:       Poince Status:         Opposition:       Poince Status:       Poince Status:       Poince Status:       Poince Status:         Opposition:       Poince Status:       Poince Status:       Poince Status:       Poince Status:         Oppositis Color				
21         Closure Report (required within 60 days of closure completion); Subwave K #1915133MAAC           Instructions: Operators are required to obtain an approval closure plan prior to implementing uny closure a dividice and submitting the closure required.           Concore Report (required within 60 days of closure plan prior to implementing uny closure a dividice. Plans do not complete this section of the form until an approved closure plan has been obtained and the closure untividies. Plans do not complete this section of the form until an approved closure Days of the completion of the closure untividies. Plans do not complete this section of the form until an approved closure Days of the completion of the closure untividies. Plans do not complete this section of the form until an approved closure Method           21         Closure Method:         Closure Completion Date:           22         Closure Report Regarding Waste Removal Closure Method         Alternative Closure Method         Waste Removal (Closed-loop systems only)           1         If different from approved plan. plass captain.         23           23         Closure Report Regarding Waste Removal Closure For Closed-loop Systems That (Mitze Above Ground Steel Tanks or Haul-off Bins Only:           24         Disposal Facility Name:         Disposal Facility Permit Number:           25         Disposal Facility Name:         Disposal Facility Permit Number:           26         Vers the closed-loop system state obtains         Maste Above disposal facility Permit Number:           27         Vers the closed-loop syste				Approval Date:
Chaure Report (resulted within 60 days of closure completion):       Subsetsion K of (915)713 DMAC         Instructions: Operators are required lumbiant an upproved closure plan prior to implementing our closure activities. Please do not complete titis section of the form unit an upproved closure divisions. The closure extrictions. Please do not complete titis section of the form unit an upproved closure divisions. Please do not complete titis section of the form unit an upproved closure activities. Please do not complete titis section of the form unit an upproved closure activities. Please do not complete titis section of the form unit an upproved closure activities. Please do not complete titis section of the form unit an upproved closure activities. Please do not complete titis section of the form unit an upproved closure activities. Please do not complete titis section of the form unit an upproved closure activities. Please de not closure for the closure extended in the closure extended.         21       Closure Completion Date:         23       Closure Report Recarding Waste Removal Closure For Closed-loog Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:         24       Disposal Facility Name:       Disposal Facility Name:       Disposal Facility Permit Number:         25       Disposal Facility Name:       Disposal Facility Name:       Disposal Facility Name:       Disposal Facility Permit Number:         26       Cosere 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 document and experiation of the please indicate, by a check mark in the box than the document and existic and operations: <td>Tille:</td> <td></td> <td>OCD Permit</td> <td>Number:</td>	Tille:		OCD Permit	Number:
212         Closure Method:	Closure Report (require Instructions: Operators are report is required to be subj	required to obtain an approved closure plan pro mitted to the division within 60 days of the comm	ior to implementing any closure letion of the closure activities, en completed.	Please do not complete this section of the form until an
Clearer Method:	22			
Cleare Report Regarding Waste Removal Closure For Closed-loog Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: Instructions: Please identify 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 Name: Disposal Facility Permit Number: Were the closed-loop system operations and associated activities performed on or in areas that will not be used for future service and opeartions? Were the closed-loop system operations and associated activities performed on or in areas that will not be used for future service and opeartions? Were the closed-loop System Operations and associated activities performed on or in areas that will not be used for future service and opeartions? Still Rechamation (Photo Documentation) Still Rechamation (Photo Documentation) Still Rechamation Agest and Seeding Technique	Closure Method: Waste Excavation at If different from app		Alternative Closure M	ethod Waste Removal (Closed-loop systems only)
Instructions: Frease userily ine facility of facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities         Disposal Facility Name:		Waste Removal Closure For Closed-loop Surt	ome That Litilian About C	
Disposal Facility Name:	ansiructions: rieuse wenuig	the facility or facilities for where the liquids, d	trilling fluids and drill cuttings	nd Steel Tanks or Haul-off Bins Only; were disposed. Use attachment if more than two facilities
Disposal Facility Name:       Disposal Facility Permit Number:         Were the closed-loop system operations and associated activities performed on or in areas that will not be used for future service and operations?         Ves (If yes, please demonstrate compliance to the items below)       No         Required for inpact dareas which will not be used for future service and operations:       No         Site Reclamation (Photo Documentation)       No         Soil Backfilling and Cover Installation       Re-vegetation Application Rates and Seeding Technique         24       Cosure 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 of the following items must be attached to the closure report. Please indicate, by a check mark in the box of the following items must be attached to the closure report. Please indicate, by a check mark in the box of the following items must be attached to the closure report. Please indicate, by a check mark in the box of the following items must be attached to the closure report. Please indicate, by a check mark in the box of the following items must be attached to the closure report. Please indicate, by a check mark in the box of the following items must be attached to the closure report. Please indicate, by a check mark in the box of the following items must be attached to the closure report. Please indicate, by a check mark in the box of the following items must be attached to the closure report. Please indicate, by a check mark in the box of the following items must be attached to the closure second application and temporary pits)         Confirmation Sampling Analytical Results (if applicable)       Nab <td>and an and a second sec</td> <td></td> <td></td> <td></td>	and an and a second sec			
Were the closed-loop system operations and associated activities performed on or in areas that will not be used for future service and operations?         Yes (If yes, please demonstrate compliane to the items below)       No         Required for impacted areas which will not be used for future service and operations:       Site Reclamation (Photo Documentation)         Site Reclamation (Photo Documentation)       No         Re-vegetation Application Rates and Seeding Technique         Consure 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 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)       Disposal Facility Name and Permit Number         Site Reclamation (Photo Documentation)       Instruction:         Longitude:			_	
Yes (If yes, please demonstrate compliane to the items below)       No         Required for impacted areas which will not be used for future service and operations:       Site Reclamation (Photo Documentation)         Site Reclamation (Photo Documentation)       Re-vegetation Application Rates and Seeding Technique         24       Cosure 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 (if applicable)       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:		em operations and associated activities performe	Disposal Facility Per	mit Number:
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 (if applicable)         Disposal Facility Name and Permit Number         Soil Backfilling and Cover Installation         Re-vegetation Application Rates and Seeding Technique         Stie Reclamation (Photo Documentation)         On-site Closure Location:       Latitude:         Longitude:       NAD       1927       1983	Yes (If yes, please de	monstrate compliane to the items below)		e used for findre service and opeartions?
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 (if applicable)         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       1927       1983			operations	
	Site Reclamation (Ph	oto Documentation)		
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 (if applicable)       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 [ 1927 [ 1983				
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 (if applicable)         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       1927       1983	Re-vegetation Applic	ation Rates and Seeding Technique		
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 (if applicable) 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 [ 1927 [ 1983		Charlies to a second		
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 (if applicable) 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 [] 1927 [] 1983	the box, that the documer	<u>Iment Cnecklist:</u> Instructions: Each of the fo uts are attached.	ollowing items must be attached	d to the closure report. Please indicate, by a check mark in
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 (if applicable) 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 [] 1927 [] 1983	Proof of Closure No	otice (surface owner and division)		
Confirmation Sampling Analytical Results (if applicable) Waste Material Sampling Analytical Results (if applicable) 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 [ 1927 [ 1983 }  Deerator Closure Certification: hereby certify that the information and attachments submitted with this closure report is ture, accurate and complete to the best of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of the test of my knowledge and belief.				
Waste Material Sampling Analytical Results (if applicable) 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 [ 1927 [ 1983  5 Deerator Closure Certification: hereby certify that the information and attachments submitted with this closure report is ture, accurate and complete to the best of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of the test of my knowledge and belief.	Plot Plan (for on-sit	e closures and temporary pits)		
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 [ 1927 [ 1983 Somerator Closure Certification: hereby certify that the information and attachments submitted with this closure report is ture, accurate and complete to the best of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of the test of my knowledge and belief. Latence of test of my knowledge and belief. Latence of test of my knowledge and belief.	Confirmation Samp	ling Analytical Results (if applicable)		
Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Location: Latitude:Longitude:NAD [ 1927 [ 1983 Somerator Closure Certification: hereby certify that the information and attachments submitted with this closure report is ture, accurate and complete to the best of my knowledge and belief. Under the destination of the best of my knowledge and belief. Under the destination of the best of my knowledge and belief. Under the destination of the best of my knowledge and belief. Under the destination of the best of my knowledge and belief. Under the destination of the best of my knowledge and belief. Under the destination of the best of my knowledge and belief. Under the destination of the best of my knowledge and belief. Under the destination of the best of my knowledge and belief. Under the destination of the best of my knowledge and belief. Under the destination of the destination of the best of my knowledge and belief. Under the destination of the best of my knowledge and belief. Under the destination of the destination of the destination of my knowledge and belief. Under the destination of the destinati	Waste Material Saπ	pling Analytical Results (if applicable)		
Site Reclamation (Photo Documentation) On-site Closure Location: Latitude:Longitude:NAD [ 1927 [ 1983  Dependence Certification: hereby certify that the information and attachments submitted with this closure report is ture, accurate and complete to the best of my knowledge and belief. Latenary for the set of my knowledge and belief. Latenary for the set of my knowledge and belief.				
On-site Closure Location: Latitude:Longitude:NAD 1927 1983				
5 <b>Deerator Closure Certification:</b> hereby certify that the information and attachments submitted with this closure report is ture, accurate and complete to the best of my knowledge and belief. Unlage and the information and attachments submitted with this closure report is ture.				
Decrator Closure Certification: hereby certify that the information and attachments submitted with this closure report is ture, accurate and complete to the best of my knowledge and ballef. Unless write to a	On-site Closure Loc	ation: Latitude:	Longitude:	NAD 1927 1983
Deerator Closure Certification: hereby certify that the information and attachments submitted with this closure report is ture, accurate and complete to the best of my knowledge and ballef. Unleaversify the				
hereby certify that the information and attachments submitted with this closure report is ture, accurate and complete to the best of my knowledge and belief. Unless weith the		ation .		
and the approximate requirements and conditions specified in the approved closure plan.	hereby certify that the inform	ution and attachments submitted with this closur	re report is ture, accurate and c pecified in the approved closur.	complete to the best of my knowledge and belief. Talso certify that e plan.
lame (Print): Title:				
ignature: Date:	gnature:			
	mail address :			
-mail address: Telephone:			l elephone:	

1

.

,

New Mexico Office of the State Engineer

,

New Mexico Office of the State Eng POD Reports and Downloads	,				
Township: 27N Range: 05W Sections:					
NAD27 X: Y: Zone:	Searc	ch Radiu	is:	_	
County: Basin: Nur	mber:		Suffix:		
Owner Name: (First) (Last)	Non-E	Oomestic	C Dom	estic @	All
POD / Surface Data Report Avg Depth to Water Report	rt	Wat	er Column	Report	
Clear Form iWATERS Menu	Heip				
WATER COLUMN REPORT 08 (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are biggest to smallest)	/20/20		Dopth		(1-
POD Number Tws Rng Sec q q q Zone X	Y	Depth Well	Depth Water	Water Column	(in

460

1840

506

186

260

274

246

Record Count: 3

27N

27N

05W 27

05W 04

27N 05W 03

4 4 3

2 1

4 4

RG 81026

SJ 00199

SJ 00046

,	New	<i>Mexico Off</i> POD Repo	-	-					
Т	ownship: 26N Rang	ge: 06W	Sections:						
NAD	027 X: Y	:	Zone:	-	Searc	ch Radiu	s:		
County:	Basin:			• Num	nber:		Suffix:		
Owner Name:	(First)	(Last)		ſ	Non-E	Oomestic	C Dom	estic 6	All
POD / St	urface Data Report	Avg	Depth to W	ater Report		Wate	er Column	Report	
	Clea	r Form	iWATERS	Menu	Help				
	(quarters are 1=	NW 2=NE 3			/20/20				
POD Number	(quarters are bi Tws Rng Sec		smallest) Zone	x	¥	Depth Well	Depth Water	Water Column	(in
No Records fou	nd, try again								

,

Page	1	of	1
	-	~ ~	_

New Mexico Office of the State Engineer POD Reports and Downloads
Township: 26N Range: 05W Sections:
NAD27 X: Y: Zone: Search Radius:
County: Basin: Number: Suffix:
Owner Name: (First) (Last) CNon-Domestic CDomestic All
POD / Surface Data Report Avg Depth to Water Report Water Column Report
Clear Form IWATERS Menu Help
WATER COLUMN REPORT 08/20/2008
(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are biggest to smallest) Depth Depth Water (in POD Number Tws Rng Sec q q q Zone X Y Well Water Column
No Records found, try again

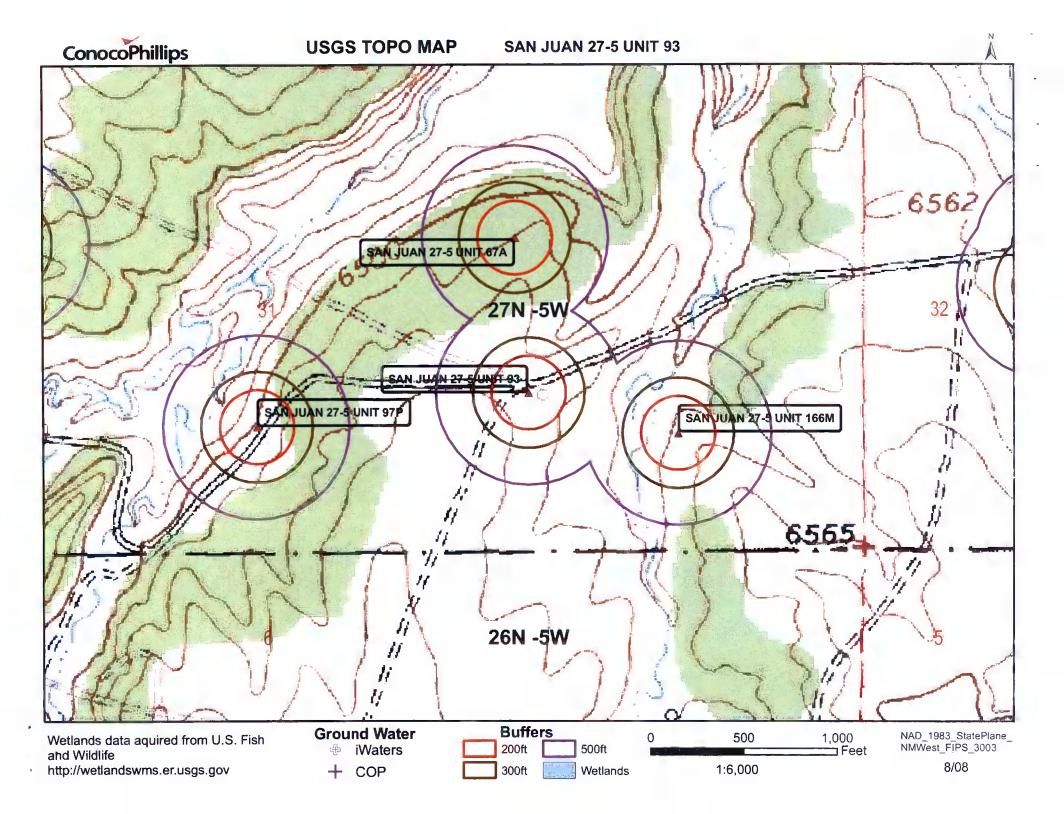
New Mexico Office of the State Engineer

New Mexico Office of the State Engineer POD Reports and Downloads
Township: 27N Range: 06W Sections:
NAD27 X: Y: Zone: Search Radius:
County: Basin: Number: Suffix:
Owner Name: (First) (Last) CNon-Domestic CDomestic CAll
POD / Surface Data Report Avg Depth to Water Report Water Column Report
Clear Form iWATERS Menu Help

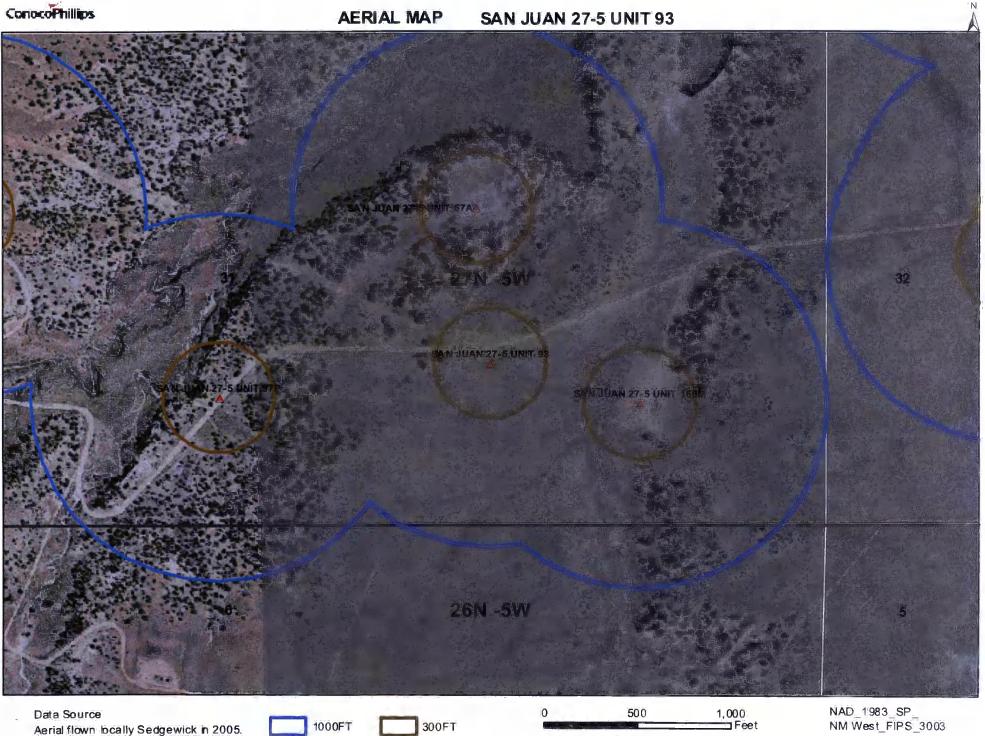
### WATER COLUMN REPORT 08/20/2008

							3=SW 4=SE smallest			Depth	Depth	Water (in
POD Number	Tws	Rng	Sec	đ	q	a	Zone	х	Y	Well	Water	Column
SJ 03001	27N	06W	07	2	2	1				141	41	100
SJ 02403	27N	06W	30	3	1	3				505	300	205
SJ 00213	27N	06W	32	1	4	4				1308	485	823
SJ 00062	27N	06W	32	3	3	3				452	301	151
SJ 00061	27N	06W	32	3	3	3				445	301	144

Record Count: 5



#### AERIAL MAP SAN JUAN 27-5 UNIT 93



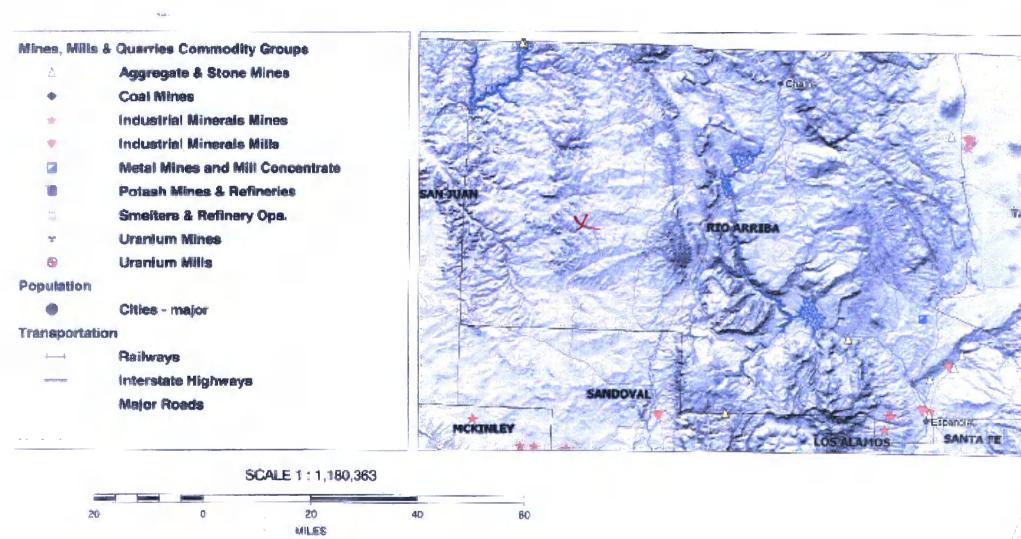
1:6,000

8/08

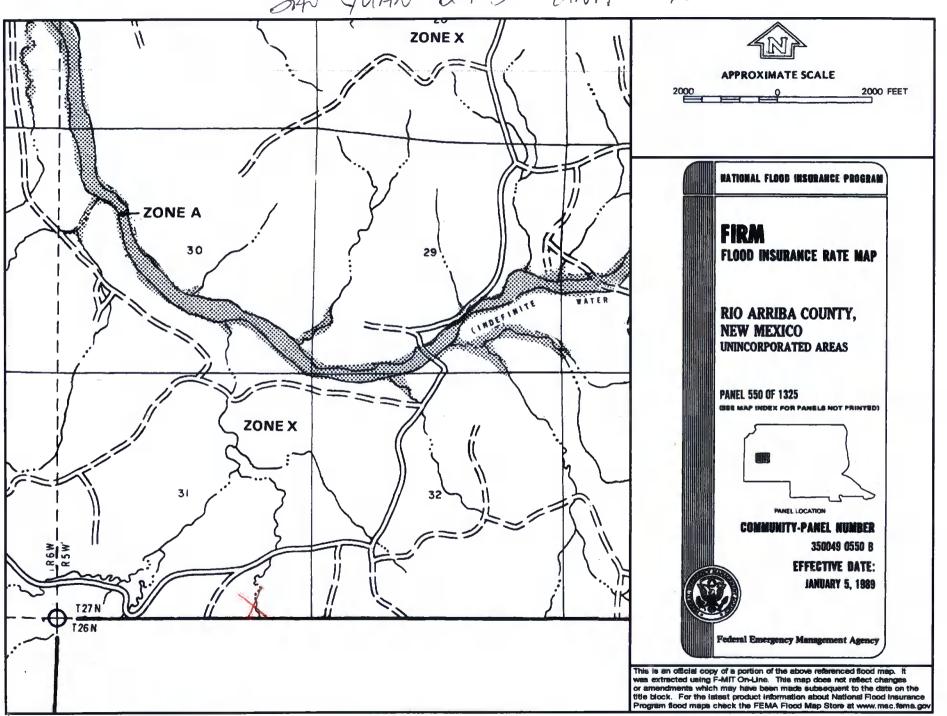
# Mines, Mills and Quarries Web Map

### SAN JUAN 27-5 UNIT 93

Unit Letter: O, Section: 31, Town: 027N, Range: 005W



5141 JUAN 27-5 UNIT #93



### **SAN JUAN 27-5 UNIT 93**

### Site Specific Hydrogeology

A visual site inspection confirming the information contained herein was performed on the well 'SAN JUAN 27-5 UNIT 93', which is located at 36.52591 degree, North latitude and 107.39697 degree, West longitude. This location is located on the Santos Peak 7.5' USGS topographic quadrangle. This location is in section 31 of Township 27 North Range 5 West of the Public Land Survey System (New Mexico Principal Meridian). This location is located in Rio Arriba County, New Mexico. The nearest town is Nageezi, located 26.3 miles to the southwest. The nearest large town (population greater than 10,000) is Farmington, located 47.2 miles to the west (National Atlas). The nearest highway is State Highway 403, located 9.7 miles to the southwest. The location is on BLM land and is 885 feet from the edge of the parcel as notated in the BLM land status layer updated January 2008. This location is in the Blanco Canyon. New Mexico, Sub-basin. This location is located 1996 meters or 6546 feet above sea level and receives 11.5 inches of rain each year. The vegetation at this location is classified as Inter-Mountain Basins Semi-Desert Shrub Steppe as per the Southwest Regional Gap Analysis Program.

The estimated depth to ground water at this point is 402 feet. This estimation is based on the data published on the New Mexico Engineer's iWaters Database website and water depth data from ConocoPhillips' Cathodic wells. Groundwater data available from the NM State Engineer's iWaters Database for wells near the proposed site are attached. The nearest stream is 352 feet to the east and is classified by the USGS as an intermittent stream. The nearest perennial stream is named Carrizo Creek and is 4.776 feet to the northeast. The nearest water body is 8,484 feet to the northeast. It is classified by the USGS as an intermittent lake and is 0.1 acres in size. The nearest spring is 25,953 feet to the southwest. All stream, river, water body and spring information was determined as per the USGS Hydrographic Dataset (High Resolution), downloaded 3/2008. The nearest water well is 5,538 feet to the north. The nearest wetland is a 1.4 acre other located 2,788 feet to the northeast. The slope at this location is 2 degree, to the northeast as calculated from USGS 30M National Elevation Dataset. This information is also discerned from the aerial and topographic map included. The surface geology at this location is SAN JOSE FORMATION--Siltstone. shale, and sandstone with a Sandstone dominated formations of all ages substrate. The soil at this location is 'Orlie fine sandy loam, 1 to 8 percent slopes' and is well drained and not hydric with moderate erosion potential as taken from the NRCS SSURGO map unit, downloaded January 2008. The nearest underground mine is 21.5 miles to the north as indicated on the Mines. Mills and Quarries Map of New Mexico provided.

### Regional Hydrogeological context:

The San Jose Formation of Eocene age occurs in New Mexico and Colorado, and its outcrop forms the land surface over much of the eastern half of the central basin. It overlies the Nacimiento Formation in the area generally south of the Colorado-New Mexico State line and overlies the Animas Formation in the area generally north of the State line. The San Jose Formation was deposited in various fluvial-type environments. In general, the unit consists of an interbedded sequence of sandstone, siltstone, and variegated shale. Thickness of the San Jose Formation generally increases from west to east (200 feet in the west and south to almost 2,700 feet in the center of the structural basin). Ground water is associated with alluvial and fluvial sandstone aquifers. Thus, the occurrence of ground water is mainly controlled by the distribution of sandstone in the formation. The distribution of such sandstone is the result of original depositional extent plus any post-depositional modifications, namely erosion and structural deformation. Transmissivity data for San Jose Formation are minimal. Values of 40 and 120 feet squared per day were determined from two aquifer tests (Stone et al. 1983, table 5). The reported or measured discharge from 46 water wells completed in San Jose Formation ranges from 0.15 to 61 gallons per minute and the median is 5 gallons per minute. Most of the wells provide water for livestock and domestic use. The San Jose Formation is a very suitable unit for recharge from precipitation because soils that form on the unit are sandy and highly permeable and therefore readily adsorb precipitation. However, low annual precipitation, relatively high transpiration and evaporation rates, and deep dissection of the San Jose Formation by the San Juan River and its tributaries all tend to reduce the effective recharge to the unit.

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

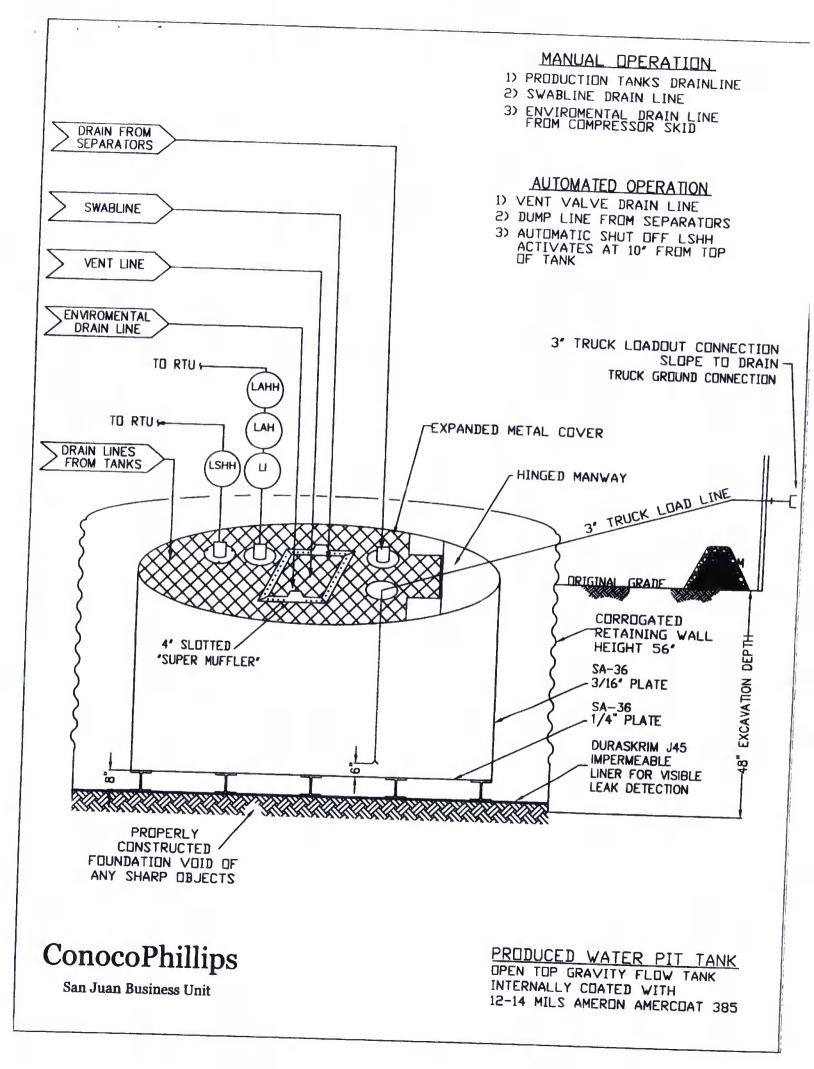
### Burlington Resources Oil & Gas Company, LP San Juan Basin Below Grade Tank Design and Construction

In accordance with NMAC 19.15.17 the following information describes the design and construction of below grade tanks on Burlington Resources Oil & Gas Company, LP (BR) locations. This is BR's standard procedure for all below grade tanks (BGT). A separate plan will be submitted for any BGT which does not conform to this plan.

### General Plan:

- 1. BR will design and construct a properly sized and approved BGT which will contain liquids and should prevent contamination of fresh water to protect the public health and environment.
- 2. BR signage will comply with 19.15.3.103 NMAC when BR is the operator. If BR is not the operator it will comply with 19.15.17.11NMAC. BR includes Emergency Contact information on all signage.
- 3. BR has approval to use alternative fencing that provides better protection. BR constructs fencing around the BGT using 4 foot hog wire fencing topped with two strands of barbed wire, or with a pipe top rail. A six foot chain link fence topped with three strands of barbed wire will be use if the well location is within 1000 feet of permanent residence, school, hospital, institution or church. BR ensures that all gates associated with the fence are closed and locked when responsible personnel are not onsite.
- 4. BR will construct a screened, expanded metal covering, on the top of the BGT.
- 5. BR shall ensure that a below-grade tank is constructed of materials resistant to the below-grade tank's particular contents and resistant to damage from sunlight as shown on design drawing and specification sheet.
- 6. The BR below-grade tank system shall have a properly constructed foundation consisting of a level base free of rocks, debris, sharp edges or irregularities to prevent punctures, cracks or indentations of the liner or tank bottom as shown on design drawing.
- 7. BR shall operate and install the below-grade tank to prevent the collection of surface water run-on. BR has built in shut off devices that do not allow a below-grade tank to overflow. BR constructs berms and corrugated retaining walls at least 6" above ground to keep from surface water run-on entering the below grade tank as shown on the design plan.
- 8. BR will construct and use a below-grade tank that does not have double walls. The below-grade tank's side walls will be open for visual inspection for leaks, the below-grade tank's bottom is elevated a minimum of six inches above the underlying ground surface and the below-grade tank is underlain with a geomembrane liner to divert leaked liquid to a location that can be visually inspected.

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



# PROPERTIES TEST METHOD J30BE J36BE J36BE

		Min Roll	Min. Roll Typical Roll		Carlo Cales Scener 16 19	the second second second second		
Appearance		Averages	Averages	Min. Roll Averages	Typical Ro Averages	II Min. Roll Averages	Typical Roll Averages	
and shadow and a strange of a second state of the second state of		Bla	Black/Black		k/Black	Black/Black		
Thickness	ASTM D 5199	27 mil	30 mil	32 mil	36 mil			
Weight Lbs Per MSF (oz/yd²)	ASTM D 5261	126 lbs (18.14)	140 lbs (20.16)	151 lbs	168 lbs	40 mil 189 lbs	45 mil 210 lbs	
Construction	1		1	(21.74)	(24.19)	(27.21)	(30.24)	
Ply Adhesion	ASTM D 413	CA	T	d with encapsul	ated tri-direction	onal scrim reinfo	rcement	
	ASTMU413	16 lbs	20 lbs	19 lbs	24 lbs	25 lbs	31 lbs	
1* Tensile Strength	ASTM D 7003	88 lbf MD 63 lbf DD	110 lbf MD 79 lbf DD	90 lbf MD 70 lbf DD	113 lbf MD 87 lbf DD	110 lbf MD 84 lbf DD	138 lbf MD 105 lbf DD	
1° Tensile Elongation @ Break % (Film Break)	ASTM D 7003	550 MD 550 DD	750 MD 750 DD	550 MD 550 DD	750 MD 750 DD	550 MD 550 DD	750 MD 750 DD	
1" Tensile Elongation @ Peak % (Scrim Break)	ASTM D 7003	20 MD 20 DD	33 MD 33 DD	20 MD 20 DD	30 MD 31DD	20 MD 20 DD	36 MD 36 DD	
Tongue Tear Strength:	ASTM D 5884	75 lbf MD 75 lbf DD	97 lbf MD 90 lbf DD	75 lbf MD 75 lbf DD	104 lbf MD 92 lbf DD	100 lbf MD 100 lbf DD	117 lbf MD 118 lbf DD	
Grab Tensile	ASTM D 7004	180 lbf MD 180 lbf DD	218 lbf MD 210 lbf DD	180 lbf MD 180 lbf DD	222 lbf MD 223 lbf DD	220 lbf MD 220 lbf DD	257 lbf MD 258 lbf DD	
Trapezoid Tear	ASTM D 4533	120 lbf MD 120 lbf DD	146 lbf MD 141 lbf DD	130 lbf MD 130 lbf DD	189 lbf MD 172 lbf DD	160 lbf MD 160 lbf DD	193 lbf MD 191 lbf DD	
Dimensional Stability	ASTM D 1204	<1	<0.5	<1	<0.5			
Puncture Resistance	ASTM D 4833	50 lbf	64 lbf	65 lbf		<1	<0.5	
Maximum Use Temperature		180° F			83 lbf	80 lbf	99 lbf	
Ainimum Use Temperature			180° F	180° F	180° F	180° F	180° F	
D = Machine Direction		-70° F	-70° F					

DD = Diagonal Directions

NI

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

\*Dimensional Stability Maximum Value

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

Note: IRANEN INDUSTRIES MAKES NO WARRANTIES AS TO THE PITMESS FOR A SPECIFIC USE OR MERCHANTABILITY OF PRODUCTS REFERRED TO, no quarantee of satisfactory, esuits from researce upon contained information or recommendations and associates all upperly for resulting loss or damage.



# PLANT LOCATION

Sioux Falls, South Dakota

# SALES OFFICE

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

J4588

# RAVEN INDUSTRIES INC. EXPOSED GEOMEMBRANE LIMITED WARRANTY

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

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

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

Any claim for any alleged breach of this warranty must be made in writing, by certified mail, to the General Manager of Engineered Films Division of Raven Industries Inc. within ten (10) days of becoming aware of the alleged defect. Should the required notice not be given, the defect and all warranties are waived by the Purchaser, and Purchaser shall not have any rights under this warranty. Raven Industries Inc. shall not be obligated to perform repairs or replacements under this warranty unless and until the area to be replaced is clean, dry, and unencumbered. This includes, but is not limited to, the area made available for repair and/or replacement of Raven geomembrane to be free from all water, dirt, sludge, residuals and liquids of any kind. If after inspection it is associated with the site inspection.

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

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

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

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

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

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

# Burlington Resources Oil & Gas Company, LP San Juan Basin Below Grade Tank Maintenance and Operating Plan

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

### General Plan:

- BR will operate and maintain a BGT to contain liquids and solids and maintain the integrity of the liner, liner system and secondary containment system to prevent contamination of fresh water and protect public health and environment. BR will accomplish this by performing an inspection on a monthly basis, installing cathodic protection, and automatic overflow shutoff devices as seen on the design plan.
- 2. BR will not discharge into or store any hazardous waste in the BGT.
- 3. BR shall operate and install the below-grade tank to prevent the collection of surface water run-on. BR has built in shut off devices that do not allow a below-grade tank to overflow. BR constructs berms and corrugated retaining walls at least 6" above ground to keep from surface water run-on entering the below grade tank as shown on the design plan.
- 4. As per 19.17.15.12 Subsection D, Paragraph 3, BR will inspect the below-grade tank at least monthly reviewing several items which include 1) containment berms adequate and no oil present, 2) tanks had no visible leaks or sign of corrosion, 3) tank valves, flanges, and hatches had no visible leaks and 4) no evidence of significant spillage of produced liquids. In addition, BR's multi-skilled operators (MSOs) are required to visit each well location once per week. If detected on either inspection, BR shall remove any visible or measurable layer of oil from the fluid surface of a below-grade tank in an effort to prevent significant accumulation of oil overtime. The written record of the monthly inspections will include the items listed above and will be maintained for five years.
- 5. BR shall require and maintain a 10" adequate freeboard to prevent overtopping of the below-grade tank.
- 6. If the below grade tank develops a leak, or if any penetration of the pit liner or below grade tank, occurs below the liquid's surface, then BR shall remove all liquid above the damage or leak line within 48 hours. BR shall notify the appropriate district office. BR shall repair or replace the pit liner or below grade tank, within 48 hours of discovery. If the below grade tank or pit liner does not demonstrate integrity, BR shall promptly remove and install a below grade tank or pit liner that complies with Subsection I of 19.15.17.11 NMAC. BR shall notify the appropriate district office of a discovery of leaks less than 25 barrels as required pursuant to Subsection B of 19.15.3.116 NMAC shall be reported within twenty-four (24) hours of discovery of leaks greater than 25 barrels. In addition, immediate verbal notification pursuant to Subsection B, Paragraph (1), and Subparagraph (d) of 19.15.3.116 NMAC shall be reported to the division's Environmental Bureau Chief.

### Burlington Resources Oil & Gas Company, LP San Juan Basin Below Grade Tank Closure Plan

In accordance with Rule 19.15.17.13 NMAC the following information describes the closure requirements of Below Grade Tanks (BGTs) on Burlington Resources Oil & Gas Company, LP locations hereinafter known as BR locations. This is BR's standard procedure for all BGTs. A separate plan will be submitted for any BGT which does not conform to this plan.

### General Requirements:

- BR shall close a below-grade tank within the time periods provided in Subsection A of 19.15.17.13 NMAC. This will include a) below-grade tanks that do 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, if not retrofitted to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC; b) permitted below-grade tanks within 60 days of cessation of the below-grade tank's operation., or c) an earlier date that the division requires because of imminent danger to fresh water, public health or the environment. For any closure, BR will file the C144 Closure Report as required.
- BR shall remove liquids and sludge from a below-grade tank prior to implementing a closure method and shall dispose of the liquids and sludge in a division-approved facility. The facilities to be used will be Basin Disposal (Permit #NM-01-005) and Envirotech Land Farm (Permit #NM-01-011). The liner after being cleaned well (Subsection D, Paragraph 1, Subparagraph (m) of 19.15.9.712 NMAC) will be disposed of at the San Juan County Regional Landfill located on CR 3100.
- 3. BR will receive prior approval to 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. Documentation of how the below-grade tank was disposed of or recycled will be provided in the closure report.
- 4. If there is any on-site equipment associated with a below-grade tank, then BR shall remove the equipment, unless the equipment is required for some other purpose.
- 5. BR shall test the soils beneath the below-grade tank to determine whether a release has occurred. BR shall collect, at a minimum, a five point, composite sample; collect individual grab samples from any area that is wet, discolored or showing other evidence of a release; and analyze for BTEX, TPH and chlorides to demonstrate that the benzene concentration, as determined by EPA SW-846 methods 8021B or 8260B or other EPA method that the division approves, does not exceed 0.2 mg/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 0.2 mg/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 50 mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method that the division approves, does not exceed 50 mg/kg; the TPH concentration, as determined by EPA method 418.1 or other EPA method that the division approves, does not exceed 250 mg/kg, or the background concentration, whichever is greater. BR shall notify the division of its results on form C-141.
- 6. If BR or the division determines that a release has occurred, then BR shall comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate.

- 7. If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Paragraph (4) of Subsection E of 19.15.17.13 NMAC, then BR shall backfill the excavation with compacted, nonwaste containing, earthen material; construct a division-prescribed soil cover; recontour and re-vegetate the site.
- 8. Notice of Closure will be given prior to closure to the Aztec Division office between 72 hours and one week via email or verbally. The notification of closure will include
  - i. Operator's name
  - ii. Location by Unit Letter, Section, Township, and Range. Well name and API number.
- 9. The surface owner shall be notified of BR's closing of the below-grade tank prior to closure as per the approved closure plan via certified mail, return receipt requested.
- 10. Re-contouring of location will match fit, shape, line, form and texture of the surrounding. Re-shaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be place in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with smooth surface, fitting the natural landscape.
- 11. BR shall seed the disturbed areas the first growing season after the operator closes the pit. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM stipulated seed mixes will used on federally jurisdicted lands and division-approved seed mixtures (administratively approved if required) will be utilized on all State or private lands. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) 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. If alternate seed mix is required by the state, private owner or tribe, it will be implemented with administrative approval if needed. BR will repeat seeding or planting will be continued until successful vegetative growth occurs.
- 12. A minimum of four feet of cover shall be achieved and the cover shall include one foot of suitable material to establish vegetation at the site, or the background thickness of topsoil, whichever is greater.
- 13. All closure activities will include proper documentation and be available for review upon request and will be submitted to OCD within 60 days of closure of the belowgrade tank. Closure report will be filed on C-144 and incorporate the following:
  - Soil Backfilling and Cover Installation
  - Re-vegetation application rates and seeding techniques •
  - Photo documentation of the site reclamation
  - **Confirmation Sampling Results**
  - Proof of closure notice