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 Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

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.

		-		

806	D		-Loop System, B				
	Propos	sed Alternati	ve Method Permi	t or Closur	<u>e Plan A</u>	pplication	
	Type of action: below-grade tank	☐ Closure of a p☐ Modification☐ Closure plan	t, closed-loop system, book, closed-loop system, but to an existing permit only submitted for an extractive method	pelow-grade ta	nk, or propo	osed alternative meth	nod
Instruct			orm C-144) per individual	nit, closed-loon .	system, belov	w-grade tank or altern	ative request
Please be advised t	hat approval of this req	quest does not relieve	the operator of liability shorponsibility to comply with a	uld operations res	sult in pollution	on of surface water, grou	and water or the
	errion Oil & Gas C	orporation	OGRID#:	14634			
Address: 610 R	Reilly Ave Farming	ton, NM 87401					
Facility or well i	name: Susco Federa	ıl #10					
API Number: 3	80-045-34310	(OCD Permit Number:				
U/L or Qtr/Qtr	P Sect	tion 9 Townshi	p 26N Range	12W	County:	San Juan	
		,	ongitude 108.110978W	NAD: ⊠1	927 🔲 1983		,
_	_		l Trust or Indian Allotment				
2.							
Pit: Subsec	ction F or G of 19.15.	.17.11 NMAC					i
Temporary:	Drilling Workove	er					•
Permanent] Emergency Cav	vitation					
☑ Lined ☐ U	Inlined Liner type:	Thickness 20 n	nil 🔲 LLDPE 🛛 HDPE	PVC 🗆 O	ther		
⊠ String-Reinf	orced						
Liner Seams:	Welded 🛭 Factory	Other	Volu	ıme: 1140 bbl	Dimensions:	L 80 x W 40 x D 8	
3.							
Closed-loop	System: Subsection	n H of 19.15.17.11	NMAC				
Type of Operation intent)	on: P&A Drill	ling a new well	Workover or Drilling (App	plies to activities	s which requi	re prior approval of a p	permit or notice of
_ ′	☐ Above Ground St	teel Tanks 🔲 Hau	ıl-off Bins 🔲 Other		_		
Lined Un	lined Liner type: Th	nickness	mil 🔲 LLDPE 🗌	HDPE ☐ PVC	C Other		
Liner Seams:] Welded 🔲 Factory	Other					
4.							
	e tank: Subsection I						
			A			-	l
	on material:						
-			ble sidewalls, liner, 6-inch				
☐ Visible side	walls and liner \(\subseteq \text{V}	isible sidewalls on	y, Other			,	
Liner type: Thi	ckness	mil 🔲 F	IDPE PVC Other				
5.							
Alternative				a . p = :		or c	
Submittal of an	exception request is re	eaurea. Excention	s must be submitted to the	Santa re Enviro	umental Bur	eau office for consider	auon 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, a institution or church)	hospital,
☑ Four foot height, four strands of barbed wire evenly spaced between one and four feet	
☐ Alternate. Please specify:	
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	
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:	
☐ 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 appropriate or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of 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. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ⊠ No
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. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☑ No ☐ NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No ☑ NA
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 search; 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

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:
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 Preeboard 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 Closure Plan - based upon the appropriate requirements of 19.15.17.19 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:
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 □ Site Reclamation 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 Instructions: Please indentify the facility or facilities for the disposal of liquids, 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 of Yes (If yes, please provide the information below) ☐ No	occur on or in areas that will not be used for future serv	vice and operations?
Required for impacted areas which will not be used for future service and operation Soil Backfill and Cover Design Specifications based upon the appropriate Re-vegetation Plan - based upon the appropriate requirements of Subsection Site Reclamation Plan - based upon the appropriate requirements of Subsection	e requirements of Subsection H of 19.15.17.13 NMAC I of 19.15.17.13 NMAC	C
Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the provided below. Requests regarding changes to certain siting criteria may require considered an exception which must be submitted to the Santa Fe Environmenta demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC	e administrative approval from the appropriate disti I Bureau office for consideration of approval. Justi	rict office or may be
Ground water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Database search;	a obtained from nearby wells	☐ Yes ☑ No ☐ NA
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; Dat	a 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; Database search;	a obtained from nearby wells	⊠ Yes □ No □ NA
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other sig lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	nificant watercourse or lakebed, sinkhole, or playa	☐ Yes ⊠ No
Within 300 feet from a permanent residence, school, hospital, institution, or church - Visual inspection (certification) of the proposed site; Aerial photo; Satellite		☐ Yes ☒ No
Within 500 horizontal feet of a private, domestic fresh water well or spring that les watering purposes, or within 1000 horizontal feet of any other fresh water well or service. NM Office of the State Engineer - iWATERS database; Visual inspection	pring, in existence at the time of initial application.	☐ Yes ☒ No
Within incorporated municipal boundaries or within a defined municipal fresh water adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approx		☐ Yes ☒ No
Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map; Topographic map; Visu	al 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	g and Mineral Division	☐ Yes ⊠ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geolog Society; Topographic map	y & Mineral Resources; USGS; NM Geological	☐ 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 by a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Construction/Design Plan of Temporary Pit (for in-place burial of a drying proceeding Protocols and Procedures - based upon the appropriate requirements of 19.1 Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Disposal Facility Name and Permit Number (for liquids, drilling fluids and Confirmation Plan - based upon the appropriate requirements of Subsection Re-vegetation Plan - based upon the appropriate requirements of Subsection Site Reclamation Plan - based upon the appropriate requirements of Subsection	uirements of 19.15.17.10 NMAC f Subsection F of 19.15.17.13 NMAC propriate requirements of 19.15.17.11 NMAC pad) - based upon the appropriate requirements of 19. 5.17.13 NMAC uirements of Subsection F of 19.15.17.13 NMAC Subsection F of 19.15.17.13 NMAC lrill cuttings or in case on-site closure standards cannot of 19.15.17.13 NMAC I of 19.15.17.13 NMAC	15.17.11 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): Philana Thompson Title: Regulatory Compliance Specialist	
Signature: ////////////////////////////////////	0/14/08
e-mail address: pthompson@merrion.bz	36
OCD Approval: Permit Application (including closure plan) Closure Plan (only) COD Condi	tions (see attachment)
OCD Representative Signature: 8 A	pproval Date: 10/30/08
Title: Eurivo 15 pec 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. The closure report is required to be submitted to the division within 60 days of the completion of the closure section of the form until an approved closure plan has been obtained and the closure activities have been contained.	e activities. Please do not complete this
☐ Closure Completion	Date:
22. Closure Method: Waste Excavation and Removal On-Site Closure Method Alternative Closure Method If different from approved plan, please explain.	Vaste Removal (Closed-loop systems only)
Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Groun Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings two facilities were utilized.	s were disposed. Use attachment if more than
	Jumber:
Disposal Facility Name: Disposal Facility Permit N Were the closed-loop system operations and associated activities performed on or in areas that will not be used	
☐ 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 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	
25.	
Operator Closure Certification: I hereby certify that the information and attachments submitted with this closure report is true, accurate and could be lief. I also certify that the closure complies with all applicable closure requirements and conditions specifies.	
Name (Print): Title:	
Signature: Date:	
a mail addrass:	

O KINLOCK BROWN

3 PETE WILFORD

Depth Depth (in

180

220

Well Water

102

258

254

Date

4039642 '05/29/1978 05/30/1978 4045920

4045867 12/27/1988 12/29/1988 4046001 09/18/1979 09/28/1979

New Mexico Office	of the State Engineer
POD Reports	and Downloads

26N 12W 06

26N 12W 04

26N 12W 03 1 4

	POD Reports and Downtoads		
	Township 26N Range 12W Sections NAD27 X Y Zone Search Radius	,	
	County Basin Number Suffix	•	
•	Owner Name (First) (Last) Non-Domestic Domestic All		
	POD / Surface Data Report - Avg Depth to Water Report Water Column Report	•	
	Clear Form WATERS Menu Help		
POD / SURFACE	DATA REPORT 09/03/2008	_	

13

13

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	1			len:	artore are	9 1=NW 2=NE 3=SW 4≃SE	١.						
		' 1											
(acre	ft per ann	um)		, (qr	arters are	e biggest to smallest	. х х	are in Feet		UTM are	ın Meters)	Start
Use	Diversion	Owner	POD	Number	Source	Tws Rng Secqqq	' Zone	x	Y	UTM_Zone	Easting	Northing	Date
_ DOM	3	LEROY BENDER	RG	30567	Shallow	26N 12W 25 2				13	225906	4039642	'05/29/1
DOM	0	EDWARD L. MONTOYA	RG RG	34247	_	26N 12W 05				13	219249	4045920	•

Shallow

Shallow

RG 50222 SJ 01058

Record Count: 5

DOM

OB File Nbr KG 30567

RG 34247 RG 45509 RG 50222

J 01058

State of New Mexico District I Form C - 102 1625 N. French Dr., Hobbs, NM 88240 Energy. Minerals & Mining Resources Department District I ISOI W. Grand Ave., Artesia, NM 88210 Revised October 12, 2005 OIL CONSERVĂTION DIVISION Submit to Appropiate District Office 2040 South Pachese MAY Santa Fe. NM 875097 MAY State Lease - 4 Copies District # Fee Lease - 3 Copies 1000 Rio Brazos Rd., Aztec, NM 87410 1220 S. St. Francis Dr., Santa Fe. NM 87505 WELL LOCATION AND ACREAGE DEDICATION MENDED REPORT APA Number Pool Code GALLOP (ASSOC.) 30-045-26980 Property Code Property Noise Well Number Susco Fed 10 OGRID No. Operator Name Bevalion 014634 6048 ·MERRION OIL & GAS CORPORATION Surface Location Feet from> North/South | Feet from> U or Los County Rgs. Lot lon Ecal/Weel .P 9 12 W. 26 N. 893 889 San Juan South East Bottom Hole Location If Different From Surface UL or Lot Rge. Feet from North/South | Feet From> Egat/West County Dedicated Acres Joint or hill Consolidation Code Order No. 80 No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division. S 89 57 E 527ľ OPERATOR CERTIFICATION hereby certify that the information contains herein is true and complete to the best of my dioretedge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the bottom hale location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest. or to a voluntary paol agreement or a computerry pooling order heretofore entered by the dission. 0.03. Date Z MAY 2, 2007 êwtanpii P € S Printed Name BRIAN-WOOD SURVEYOR CERTIFICATION I hereby certify that the well location shows on this plat was platted from field notes of actual verveys made by me or under my supervision, and that the same is true and correct to the best of my belief. **NAD 83** decimal of degree 5280 rev: 03 28 '07 36.497919 N 108,10978 W d Soot of Professional Surveyo HUDOL G. LO WEXICO 6844 893 REO LAHO

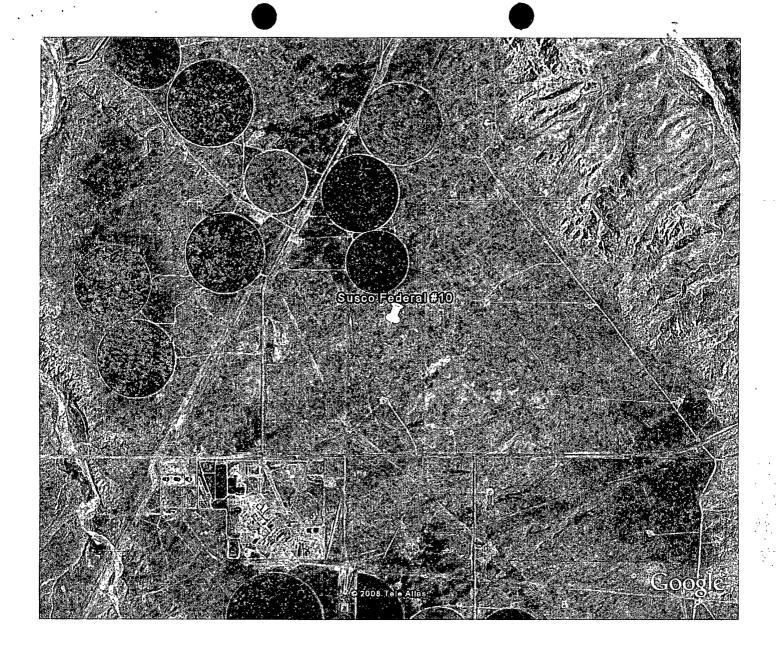
N 89 55

2640

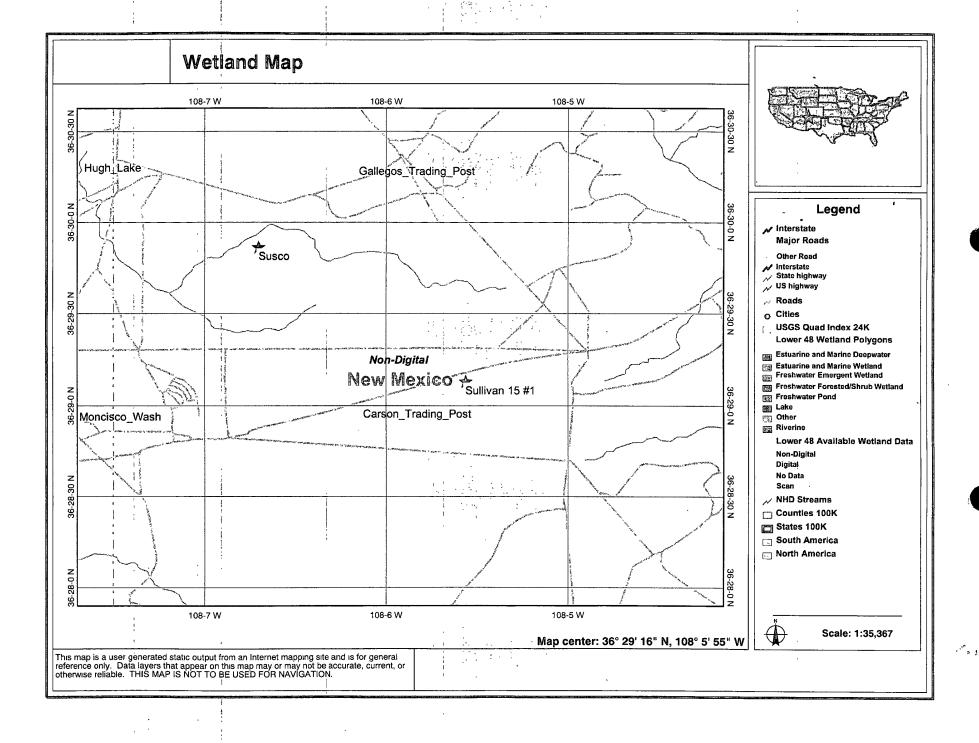
Certificate Number

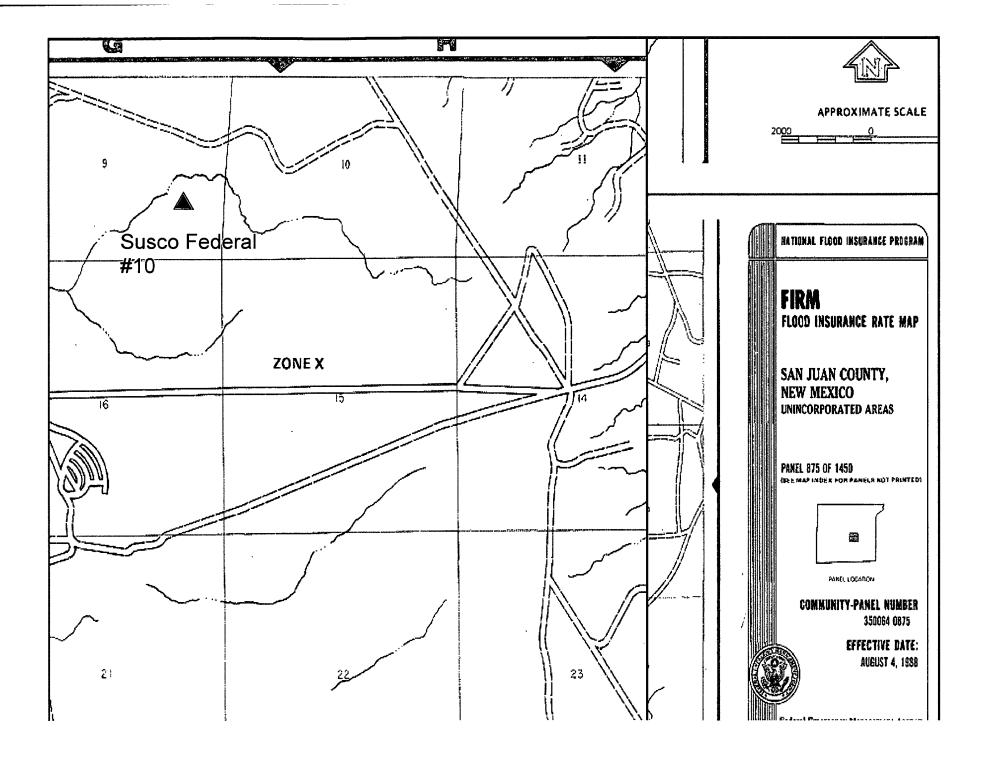
2634" **

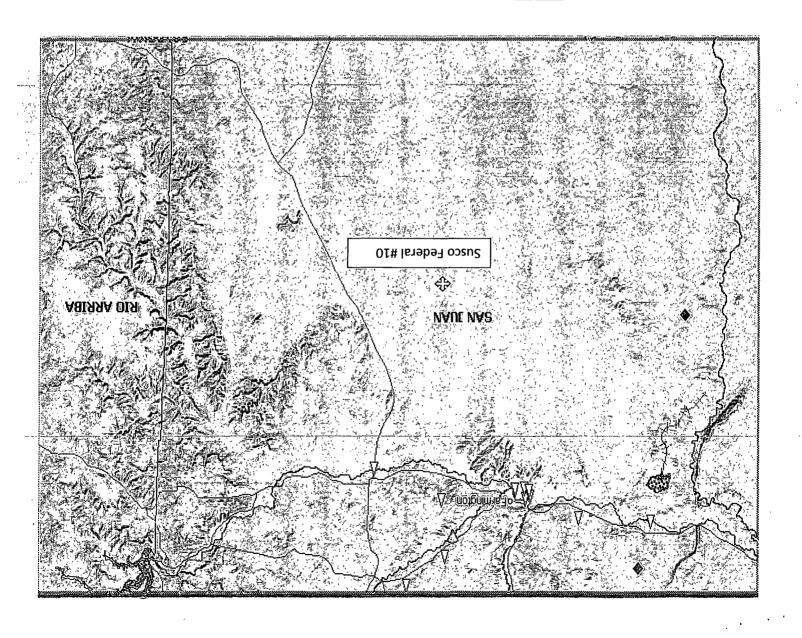
N 89'59' W ++



.







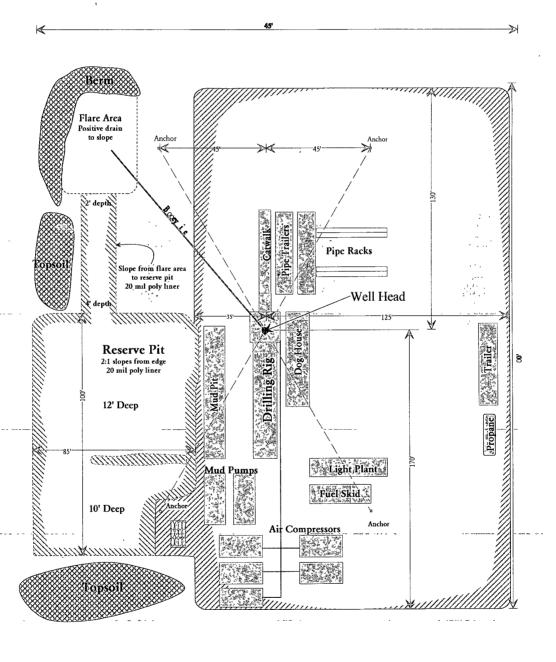
		alliM muins1U.	Ф	
		SaniM muins1U	*	- FA SPORE
***		Smelters & Refinery Ops.	E	
		Potash Mines & Refineries		
		Metal Mines and Mill Concentrate		-to-20% rs t . A Stribusco militaria prospessyll
	ļ	Industrial Minerals Mills	۵	
		Industrial Minerals Mines	*	
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		Aggregate & Stone Mines	Σ	
		क्ष Quarries Commodity Groups	slliM ,esniM	



Merrion Oil & Gas Corporation Location Layout Susco Federal #10

By: TSF Date: 21-AUG-2008





Susco Federal #10 S9, T26N, R12W Hydrogeologic Data

Susco Federal #10 is located on Navajo Nation Trust Lands within the Navajo Indian Irrigation Project (NIIP) in the San Juan structural basin in San Juan County, New Mexico. The region is a northwest-trending asymmetric structural depression. The basin merges gradually into adjacent depressions or uplifts. The structural boundaries principally consist of large, elongate domal uplifts; low marginal platforms; and abrupt monoclines.

A records search of the NM office of the State Engineer- iWaters database was conducted for the T26N-12W, (iWaters report attached & also indicated on topo). The closest water wells are located in S3, T26N, R12W which is 1.55 miles from the current well location. The well was drilled to a depth of 254', the top of the water was reported at 220'. The water for this well is used for domestic purposes and no other information was available. The next closest water well is located in S4, T26N, R12W which is 1.40 miles from the current location, a well was drilled to a depth of 258', the top of the water was reported at 180'. The water for this well is used also used for domestic purposes only and no other information was available.

GROUND WATER:

The **Ojo Alamo** Sandstone is a source of water for public supply, domestic and livestock use in areas where water quality is suitable for these uses. Water wells generally are on or near the outcrop areas. The altitude of the potentiometric surface of water In the Ojo Alamo Sandstone at approximately 6,000' +. Water in the Ojo Alamo sandstone occurs under both water-table and artesian conditions although no flowing wells are know to exist.

The **Nacimiento** formation is a source of water for public-supply, commercial, private-domestic, and livestock use where water quality is suitable. The closest altitude of the potentiometric surface ground water to this location is 6603'. Water in the Nacimiento formation occurs under both water-table and artesian conditions.

The combined **Kirtland Shale** formation and Fruitland formation is a source of water for domestic and livestock use where water quality is acceptable. The altitude of the potentiometric surface of water In the Kirtland Shale formation is at approximately 5,885' +. Water in the Kirtland Shale formation occurs under both water-table and artesian conditions although no flowing wells are know to exist. The mining of coal and production of coal-bed methane from the Fruitland formation in parts of the basin also have resulted in significant quantities of water produced as a secondary product.

GEOLOGY

The *Ojo Alamo* formation crops out inside the central basin and typically forms cliffs and dipslopes or caps low mesa and forms rounded hills. The majority of Ojo Alamo rocks occur in New Mexico. The unit pinches out in the northwest about halfway between Farmington and the Colorado state line west of the La Plata River. In general the OJo Alamo Sandstone consists of overlapping sheet like sequences of conglomeratic sandstones and sandstones which locally contain Inter-bedded shale lenses. The sandstones are arkosic, light brown to rusty brown or buff and tan and contain abundant silicified wood. The sandstones are medium to very coarse grained and often conglomeratic containing pebbles of various compositions that decrease in size and quantity from west to east across the basin. Thickness of the OJo Alamo Sandstone is variable, it ranges from 70 feet to a max of 200 feet.

The *Nacimiento* formation crops out in a broad band inside the southern and western margins of the central basin, and in a narrow band along the west face of the Nacimiento uplift. The Nacimiento is a nonresistant unit and typically erodes to low, rounded hills or forms badlands topography. The Nacimiento formation occurs only in approximately the southern two-thirds of the basin where it conformably overlies and intertongues with the Ojo Alamo Sandstone. Along a line from Dulce, New Mexico to the La Plata River valley near the New Mexico-Colorado State line, the Nacimiento formation grades laterally into the main part of the Animas Formation thus, in this area the two formations occupy the same stratigraphic interval. Strata of the Nacimiento formation were mainly deposited in lake beds in the central basin area with lesser deposition in stream channels. Total thickness of the Nacimiento formation ranges from about 500' to 1300'.

The *Kirtland Shale* formation occurs in New Mexico in the San Juan structural basin and is a northwest-trending asymmetric structural depression. The principal boundaries prinicipally consist of large, elongate, domal uplifts; low, marginal platforms; and abrupt monoclines. The Kirtland shale formation and Fruitland formation are treated as a single hydrogeologic unit because they are commonly mapped together. The San Juan structural basin contains a thick sequence of sedimentary rocks ranging in age from Cambrian through Tertiary but principally from Pennsylvanian through Tertiary. The maximum thickness of the sequence of rocks is about 14,000'. Topography formed on the unit typically varies from rolling to rough, and commonly, badlands are developed. In general the undivided Kirtland Shale and Fruitland Formation consists of varous thicknesses of inter-bedded and repetitive sequences of non-marine channel sandstone, siltstone, shale, and claystone. Coal beds and carbonaceous shales are common in the Fruitland Formation. The Kirtland Shale does not contain coal and has been divided into three members which in ascending order are the lower shale member Farmington Sand stone Member and upper shale member.

Reference:

- HA-720B Hydrogeology of the Ojo Alamo Sandstone in the San Juan structural basin, New Mexico, Colorado, Arizona, and Utah, Thorn, C. R.; Levings, G. W.; Craigg, S. D.; Dam, W. L.; Kernodle, J. M., 1990, USGS, atlas format. (1,000,000 and 2,000,000 scale)
- HA-720C Hydrogeology of the Kirtland Shale and Fruitland Formation in the San Juan structural basin, New Mexico, Colorado, Arizona, and Utah, Kernodle, J. M.; Thorn, C. R.; Levings, G. W.; Craigg, S. C.; Dam, W. L., 1990, USGS, atlas format. (1,000,000 and 2,000,000 scale)
- HA-720A Hydrogeology of the San Jose, Nacimiento, and Animas formations in the San Juan structural basin, New Mexico, Colorado, Arizona, and Utah, Levings, G. W.; Craigg, S. D.; Dam, W. L.; Kernodle, J. M.; Thorn, C. R., 1990, USGS, atlas format. (1,000,000 and 2,000,000 scale)

Philana Thompson

From:

Philana Thompson

Sent:

Wednesday, September 03, 2008 2:10 PM

To:

'd_lucero@frontiernet.net'

Subject:

Susco Federal #10 API 30-045-34310

The following temporary pit will be closed on-site. Per the new New Mexico OCD Pit Rule #17, we are required to notify the surface owner. Please feel free to contact me at any time if you should have any questions or concerns. Thank you ;-)

If you are not the person these notifications should be directed to please let me know ;-)

Philana Thompson Merrion Oil & Gas Regulatory Compliance Specialist pthompson@merrion.bz 505-324-5336

Merrion Oil & Gas Corp Pit Design and Construction Plan

In accordance with Rule 19.15.17 the following information describes the design and construction of temporary pits on Merrion Oil & Gas Corp. (MOG) locations. This is MOG's standard procedure for all temporary pits for New Drill purposes. A separate plan will be submitted for any temporary pit which does not conform to this plan.

General Plan:

- 1) MOG will design and construct a temporary pit to contain liquids and solids and prevent contamination of fresh water and protect public health and environment.
- 2) Prior to construction of the pit, topsoil will be stockpiled in the construction zone for later use in restoration. This material will not be stored with in 300 ft. of a continuously flowing water course, or 200 ft of any other significant water course or lake bed, sinkhole, or playa lake.
- 3) MOG will post a well sign on location that lists the following: the operator on record as the operator; the location of the well site by UL, S, T, R; and emergency telephone numbers. The location will be signed in accordance with rule 19.15.3.103 Sign on wells.
- 4) MOG shall construct all new fences utilizing 48" steel mesh field-fence (hog wire) on the bottom with a single strand of barbed wire on top. T-posts shall be installed every 12 feet and corners shall be anchored utilizing a secondary T-post. Temporary pits will be fenced at all times excluding drilling or workover operations, when the front side of the fence will be temporarily removed for operational purposes.
- 5) MOG will construct the temporary pit so that the foundation and interior slopes are firm and free of rocks, debris, sharp edges or irregularities to prevent liner failure.
- 6) MOG shall construct the pit so that the slopes are no steeper than two horizontal feet to 1 vertical foot.
- 7) Pit walls will be walked down by a crawler type tractor following construction.
- 8) All temporary pits will be lined with a 20-mil, string reinforced, HDPE liner, complying with EPA SW-846 method 9090A requirements.
- 9) Geotextile will be installed beneath the liner when rocks, debris, sharp edges or irregularities cannot be avoided.
- 10) All liners will be anchored in the bottom of a compacted earth-filled trench at least 18 inches deep.
- 11) MOG will minimize liner seams and orient them up and down, not across a slope. Factory seams will be used whenever possible. MOG will ensure all field seams are welded by qualified personnel. Field seams will be overlapped four to six inches and will be oriented parallel to the line of maximum slope. MOG will minimize the number of field seams in corners and irregularly shaped areas.
- 12) The liner shall be protected from any fluid force or mechanical damage through the use of mud pit slides, or a manifold system.
- 13) The pit shall be protected from run-off and/or run-on by constructing and maintain diversion ditches around the location or around the perimeter of the pit in some cases.
- 14) The volume of the pit shall not exceed 10 acre-feet, including freeboard.
- 15) Temporary blow pits will be constructed to allow gravity flow to discharge into lined drill pit.
- 16) The lower half of the blow pit (nearest lined pit) will be lined with the same 20 ml liner. The upper half of the blow pit will remain unlined as allowed in Rule 19.15.17.11.F.11.
- 17) MOG will not allow freestanding liquids to remain on the unlined portion of a temporary blow pit.

Merrion Oil & Gas Corp Maintenance and Operating Plan

In accordance with Rule 19.15.17 the following information describes the operation and maintenance of temporary pits on Merrion Oil & Gas Corp. (MOG) locations. This is MOG's standard procedure for all temporary pits for new drill purposes. A separate plan will be submitted for any temporary pit which does not conform to this plan.

General Plan:

- 1) MOG will operate and maintain a temporary pit to contain liquids and solids and prevent contamination of fresh water and protect public health and environment.
- 2) MOG will conserve drilling fluids by transferring liquids to pits ahead of the rigs whenever possible. All other drilling fluids will be disposed of at *Pretty Lady 30 11 34 #1 permit #SWD-1034*.
- 3) MOG will not discharge or store any hazardous waste in any temporary pit.
- 4) MOG shall remove any liquids from the temporary pit used for cavitation within 48 hours after completing cavitation. MOG may request and receive additional time to remove the liquids from the temporary pit used for cavitation if the MOG demonstrates to the Aztec OCD district office's satisfaction that it is not feasible to access the location with 48 hours.
- 5) If any pit liner's integrity is compromised, or if any penetration of the liner occurs above the liquid's surface, then MOG shall notify the Aztec OCD office by phone or email within 48 hours of the discovery and repair the damage or replace the liner.
- 6) If a leak develops below the liquid's level, MOG shall remove all liquids above the damaged liner within 48 hours and repair the damage or replace the liner. MOG shall notify the Aztec OCD office by phone or email within 48 hours of the discovery for leaks less than 25 bbls. For discovery of leaks greater than 25 bbls, MOG shall notify the Aztec OCD office as required to Subsection B of 19.15.3.116 NMAC within 24 hours of discovery. 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.
- The liner shall be protected from any fluid force or mechanical damage through the use of mud pit slides, or a manifold system.
- 8) The pit shall be protected from run-off by constructing and maintaining diversion ditches around the location or around the perimeter of the pit in some cases.
- 9) MOG shall immediately remove any visible layer of oil from the surface of the temporary pit after cessation of a drilling or workover operation. Oil absorbent booms will be utilized to contain and remove oil from the pit's surface. An oil absorbent boom will be stored on-site until closure of the pit.
- 10) Only fluids generated during the drilling or workover process may be discharged into a temporary pit.
- 11) MOG will maintain the temporary pit free of miscellaneous solid waste or debris.
- 12) During drilling or workover operations, MOG will inspect the temporary pit at least once daily to ensure compliance with this plan. Inspections will be logged in the MOG pit tracking system. MOG will file this log with the Aztec OCD office upon closure of the pit.
- 13) After drilling or workover operations, MOG will inspect the temporary pit weekly so long as liquids remain in the temporary pit. A log of the inspections will be stored in MOG's office electronically and will be filed with the Aztec OCD office upon closure of the pit.
- 14) MOG shall maintain at least two feet of freeboard for a temporary pit.
- 15) MOG shall remove all free liquids from a temporary pit within 30 days from the date the operator releases the drilling rig.
- 16) MOG shall remove all free liquids from a cavitation pit within 48 hours after completing cavitation. MOG may request additional time to remove liquids from the Aztec OCD office if it is not feasible to remove liquids within 48 hours.

Merrion Oil & Gas Corp Closure Plan

In accordance with Rule 19.15.17.12 NMAC the following information describes the closure requirements of temporary cavitation pits on Merrion Oil & Gas Corp. (MOG) locations. This is MOG's standard procedure for all temporary pits utilized for new drills. A separate plan will be submitted for any temporary pit which does not conform to this plan.

All closure activities will include proper documentation and be available for review upon request and will be submitted to the OCD within 60 days of closure. Closure reports will be filed on C-144 and incorporate the following:

- Details of Capping and Covering, where applicable.
- Plot Plan (Pit diagram)
- Inspection reports
- Sampling results
- C-105
- Copy of deed notice will be filed with County Clerk

General Plan:

- 1) All free standing liquids will be removed at the start of the pit closure process from the pit and disposed of in a division approved facility or recycle, reuse or reclaim the liquids in a manner that the appropriate division district office approves.
- 2) The preferred method of closure for all temporary pits will be on-site burial, assuming that all the criteria listed in sub-section (B) of 19.15.17.13 are met.
- 3) The surface owner was notified prior to on-site burial of MOG's closing of the temporary pit as per the approved closure plan using email notification, email notification is attached.
- 4) Within 6 months of the Rig off status occurring MOG will ensure that temporary pits are closed, recontoured, and re-seeded.
- 5) Notice of closure will be given to the Aztec OCD office between 72 hours and one week of closure via email, or verbally. The notification of closure will include the following:
 - I. Operator's name
 - II. Location by UL, S, T and R. Well name and API number.
- 6) Liner of temporary pit shall be removed above the "mud level" after stabilization. Removal of liner will consist of manually or mechanically cutting liner at mud level and removing all remaining liner. Care will be taken to remove "ALL" of the liner i.e., edges of liner entrenched or buried. All excessive liner will be disposed of at a licensed disposal facility.
- 7) Pit contents shall be mixed with non-waste containing, earthen material in order to achieve the solidification process. The solidification process will be accomplished using a combination of natural drying and mechanically mixing. Pit contents will be mixed with non-waste, earthen material to a consistency that is deemed safe and stable. The mixing ratio shall not exceed 3 parts clean soil to 1 part pit contents.
- 8) A five point composite sample will be taken of the pit using sampling tools and all samples tested per Subsection B of 19.15.17.13(B)(1)(b). In the event that the criteria are not met, all contents will be handled per Subparagraph (a) of Paragraph (1) of Subsection B of 19.15.17.13 i.e., Dig and haul.

Components	Test Method	Limit (mg/Kg)		
Benzene	EPA SW-846 8021B or 8260B	0.2		
BTEX	EPA SW-846 8021B or 8260B	50		
TPH ^c	EPA SW-846 418.1	2500		
GRO/DRO	EPA SW-846 8015M	500		
Chlorides	EPA 300.1	(DGW >50 & <100) 500		
		(DGW >100) 1000		

9) A five point composite sample will be taken from the cavitation pit pursuant to 19.15.17.13 (B)(1)(b)(i) in order to assure there has not been any type of release.

Components	Test Method	Limit (mg/Kg)
Benzene	EPA SW-846 8021B or 8260B	0.2
BTEX	EPA SW-846 8021B or 8260B	50
TPH	EPA SW-846 418.1	2500
GRO/DRO	EPA SW-846 8015M	500
Chlorides	EPA 300.1	500

- 10) Upon completion of solidification and testing standards being passed, the pit area will be backfilled with compacted, non-waste containing, earthen material. 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. If standard testing fails MOG will dig and haul all contents pursuant to 19.15.17.13.i.a. After doing such, confirmation sampling will be conducted to ensure a release has not occurred.
- 11) During the stabilization process if the liner is ripped by equipment the Aztec OCD office will be notified within 48 hours and the liner will be repaired if possible. If the liner can not be repaired then all contents will be excavated and removed.
- 12) Dig and haul material will be transported to Envirotech and/or IEI.
- 13) Re-contouring of location will match fit, shape, line, form and texture of the surroundings. 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 placed in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with a smooth surface, fitting the natural landscape.
- 14) Notification will be sent to the OCD when the reclaimed area is seeded.
- 15) MOG shall see 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 or Forest Service stipulated seed mixes will be used on federal 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. Repeat seeding or planting will be continued until successful vegetative growth occurs.

Туре	Variety or Cultivator	PLS/A
Western Wheatgrass	Arriba	3.0
Indian Ricegrass	Paloma or rimrock	3.0
Slender Wheatgrass	San Luis	2.0
Crested Wheatgrass	Hy-crest	3.0
Bottlebrush Squirreltail	Unknown	2.0
Four-wing Saltbrush	Delar	.25

Species shall be planted in pounds of pure live seed per acre: Present Pure Live Seed (PLS) \approx Purity X Germination/100. Two lost of seed can be compared on the basis of PLS as follows:

Source No. One (poor quality)		Source No. two (bett	Source No. two (better quality)		
Purity	50 percent	Purity	80 percent		
Germination	40 percent	Germination	63 percent		
Percent PLS	20 percent	Percent PLS	50 percent		
5lb. bulk seed required to make		2lb. bulk seed requir	2lb. bulk seed required to make		
1lb. PLS		1lb. PLS			

- 16) The temporary pit will be located with a steel marker, no less than four inches in diameter, cemented in a hole three feet deep in the center of the onsite burial upon the abandonment of all the wells on the pad. The marker will include a threaded collar to be used for future abandonment. The top of the marker will contain a welded steel 12" square plate that indicates the onsite burial of the temporary pit. The plate will be easily removable and a four foot tall riser will be threaded into the top of the collar marker and welded around the base with the operator's information at the time of all wells on the well pad are abandoned. The operator's information will include the following:
 - I. Operator name
 - II. Lease name
 - III. Well name and number
 - IV. Unit number
 - V. Section
 - VI. Township
 - VII. Range
 - VIII. An indicator that the marker is an onsite burial location

Pit Inspection Form

Unit Letter: P_Section: 9 Township: 2611	Range:	
County: <u>San Juan</u>		
Location Name: <u>SUSCO Federal</u> #10		
Number of wells to the pit:/		
Total daily volume (in barrels) to the pit:		
Pit Type:		
Temporary: X Drilling Workover		
Permanent Emergency Cavitation P&A		
☑ Lined ☐ Unlined Liner type: Thickness <u>20</u> mi	I □LLDPE 🕽 HDPE □	PVC Other
∑ String-Reinforced	,	
Liner Seams: Welded Factory Other Volum	e://40 bbl Dimensions:	L 80 xw 40 xd8
Visual Inspection: Yes No within 300 feet of a continuously flowing watercourse, or 200 or playa lake (measured from the ordinary high-water mark)	feet of any other significant	watercourse or lakebed, sinkhole
Yes No P		
within 300 feet from a permanent residence, school, hospital,	institution or church in exist	ence at the time of initial
application		
YesNo	and the stand of the stand	
within 500 feet of a private, domestic fresh water well or spri watering purposes, or within 1000 feet of any other fresh wat		
Yes No Within 500 feet of a wetland	or won or spring, in existence	out the time of midul approaches
Comments:		
CERTIFICATION		
I hereby certify that the information submitted is true and cor	rect to the best of my knowle	edge and belief.
Signature: // /////////////////////////////////	Title: 1/w duction Date: 9-4-08	Foreman
Printed Name: L. Carl Merilatt	Date: 9-4-08	
E-mail Address:		

A pit is defined as any below grade or surface feature which receives any materials other than fresh water.