District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 State of New Mexico
Energy Minerals and Natural Resources
Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144 Revised June 6, 2013

For temporary pits, below-grade tanks, and multi-well fluid management pits, submit to the appropriate NMOCD District Office.

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

Pit, Below-Grade Tank, or						
Proposed Alternative Method Permit or Closure Plan Application						
Type of action:						
X Permit of a pit or proposed alternative method Closure of a pit, below-grade tank, or proposed alternative method						
Modification to an existing permit/or registration						
Closure plan only submitted for an existing permitted or non-permitted pit, below-grade tank, or proposed alternative method						
Instructions: Please submit one application (Form C-144) per individual pit, below-grade tank or alternative request						
Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the						
environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.						
Operator: TnT Environmental, Inc. OGRID #: 308209						
Address: HC 74 Box 113						
Facility or well name:						
API Number: 30-039-31257 OCD Permit Number:						
U/L or Qtr/Qtr L NW/SW Section 8 Township 25N Range 3W County: Rio Arriba						
Center of Proposed Design: Latitude N36.40994 Longitude W107.17595 NAD: □1927 X 1983						
Surface Owner: Federal State X Private Tribal Trust or Indian Allotment						
2.						
X Pit: Subsection F, G or J of 19.15.17.11 NMAC						
Temporary: X Drilling Workover						
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A ☐ Multi-Well Fluid Management ☐ Low Chloride Drilling Fluid ☑ yes ☐ no						
Lined Unlined Liner type: Thickness 20 mil LLDPE HDPE PVC Other						
X String-Reinforced						
Liner Seams: Welded Factory Other Volume: 12,983 bbl Dimensions: L 135' x W 45 x D 12'						
3. Delaw goods to the Subsection Left 10 15 17 11 NIMAC.						
Below-grade tank: Subsection I of 19.15.17.11 NMAC Volume: bhl. Type of fluid:						
Volume:bbl Type of fluid: Tank Construction material: DIL CONS. DIV.						
Secondary containment with leak detection Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off						
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other						
Liner type: Thicknessmil						
Line type. Thereiess in Thore in the Control of the						
4. Alternative Method:						
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.						
Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks)						
Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, hospital,						
institution or church)						
Four foot height, four strands of barbed wire evenly spaced between one and four feet						
X Alternate. Please specify 4 ft Hog Wire						

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)	
7. Signs: Subsection C of 19.15.17.11 NMAC 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers X Signed in compliance with 19.15.16.8 NMAC	
A Digited in compliance with 15/15/16/6 NAMACE	
Natiances and Exceptions: Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance. Please check a box if one or more of the following is requested, if not leave blank: Variance(s): Requests must be submitted to the appropriate division district for consideration of approval. Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	
9. Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptance are provided below. Siting criteria does not apply to drying pads or above-grade tanks.	otable source
General siting	
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank. - MNM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes 💢 No ☐ NA
Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit. NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes 🔀 No ☐ NA
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. (Does not apply to below grade tanks) - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes 🄀 No
Within the area overlying a subsurface mine. (Does not apply to below grade tanks) - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes 🕱 No
 Within an unstable area. (Does not apply to below grade tanks) Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map 	☐ Yes 💢 No
Within a 100-year floodplain. (Does not apply to below grade tanks) - FEMA map	Yes 💢 No
Below Grade Tanks	
Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)	
Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.) - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ሺ No
Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application.	☐ Yes 🗶 No
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	
Within 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application. NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes 🛣 No

Within 100 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes 🔀 No				
Temporary Pit Non-low chloride drilling fluid					
Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	Yes No				
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image					
Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application; - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site					
Within 300 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No				
Permanent Pit or Multi-Well Fluid Management Pit					
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	Yes No				
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No				
Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☐ No				
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	Yes No				
Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 Natructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do 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. and 19.15.17.13 NMAC Previously Approved Design (attach copy of design) API Number: or Permit Number:	9 NMAC				
11.					
Multi-Well Fluid Management Pit Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the do attached. Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC A List of wells with approved application for permit to drill associated with the pit. Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19 and 19.15.17.13 NMAC Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC	0.15.17.9 NMAC				
Previously Approved Design (attach copy of design) API Number: or Permit Number:					

Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC	_
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the attached.	documents are
Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC	
Climatological Factors Assessment	
☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC	
☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC	
☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC ☐ Quality Control/Quality Assurance Construction and Installation Plan	
Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC	
☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC ☐ Nuisance or Hazardous Odors, including H 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 Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC	
Proposed Closure: 19.15.17.13 NMAC	
Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.	
Type: Drilling Workover Emergency Cavitation P&A Permanent Pit Below-grade Tank Multi-well Fl	luid Management Pit
Proposed Closure Method: Waste Excavation and Removal Waste Removal (Closed-loop systems only)	
On-site Closure Method (Only for temporary pits and closed-loop systems)	
☐ In-place Burial ☐ On-site Trench Burial ☐ Alternative Closure Method	
Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.13 NMAC 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 H of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC	
15. Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable sour provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. F	
19.15.17.10 NMAC for guidance.	
Ground water is less than 25 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ∑ No☐ NA
Ground water is between 25-50 feet below the bottom of the buried waste NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ¼ No ☐ NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	X Yes No
Within 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes 🗖 No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes 🛣 No
Within 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, in existence at the time of initial application.	☐ Yes 💢 No
- NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes 🔀 No
Within 300 feet of a wetland.	
US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes 🛣 No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance	

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 the area overlying a subsurface mine Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes 🄀 No
Within an unstable area.	
 Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map 	Yes 🔀 No
Within a 100-year floodplain.	
- FEMA map	☐ Yes 🔀 No
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection E of 19.15.17.13 NMAC Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K of 19.15.17. Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19. Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 19.15.17.13 NMAC Waste Material Sampling Plan - based upon the appropriate requirements of 19.15.17.13 NMAC Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC	.11 NMAC 15.17.11 NMAC
17.	
Operator Application Certification: I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and believe to the best of my knowledge.	ief
Name (Print): The Composite Title: Assur / Engineen	
Signature: Date: Bli Zoi4	
e-mail address:	٤
organicate.	٤
e-mail address:	
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e-mail address:	the closure report. complete this cop systems only)

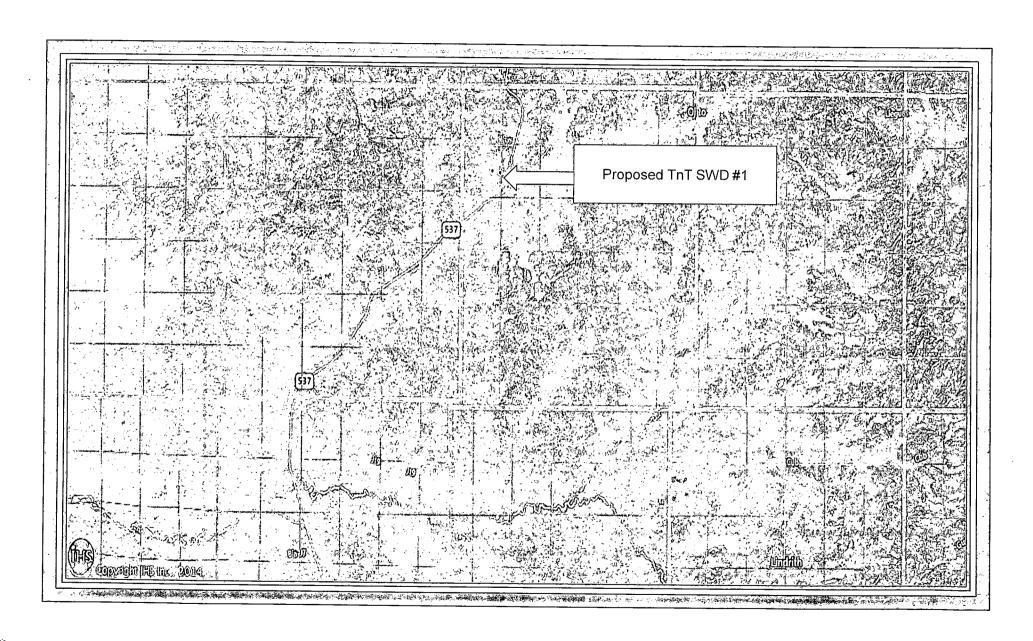
22. Operator Closure Certification:	
I hereby certify that the information and attachments submitted with this closure report belief. I also certify that the closure complies with all applicable closure requirements	
Name (Print):	Title:
Signature:	Date:
e-mail address:	Telephone:

Form C-144 Oil Conservation Division Page 6 of 6

19.15.17.15 Exceptions and Variances.

TnT is requesting a variance to the fencing requirements (Subsection D of 19.15.17.11 NMAC). Instead of using 4 strands of barbwire spaced evenly every foot, TnT would like to utilize standard 4 ft hogwire. The hogwire is easier to install and will provide better or equal protection of fresh water, public health and the environment. The location is within the existing TnT Environmental Inc, working land farm and surface water disposal facility. The fence will act as a temporary deterrent for any wildlife for personal that may encounter the temporary pit.

TnT SWD #1

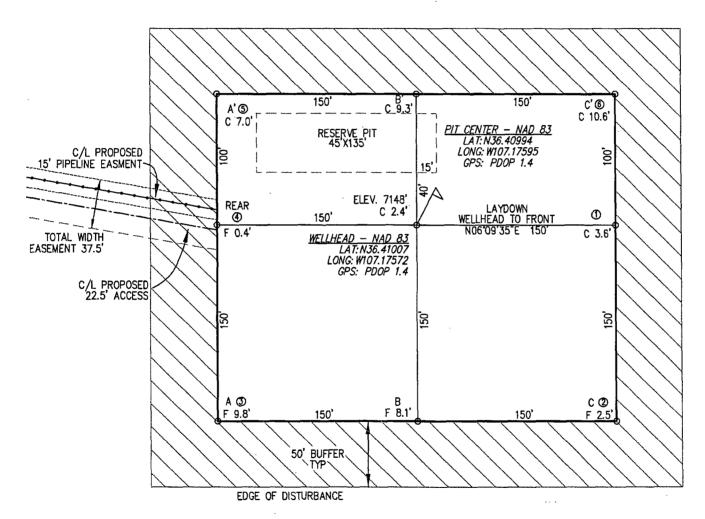


TNT ENVIRONMENTAL TNT SWD #1

1761' FSL, 439' FWL

SEC. 8, T-25-N, R-3-W, N.M.P.M. RIO ARRIBA COUNTY, NEW MEXICO

ELEVATION: 7148'



THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR THE COST OF ANY AND ALL DAMAGES WHICH OCCUR AS A RESULT OF A FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING NEW MEXICO ONE CALL SYSTEM, INC. AT 1-800-321-ALERT THREE (3) DAYS PRIOR TO THE START OF ANY EXCAVATION WORK.

DATE:	REVISION	DISTURBA	NCE ARE
			ACRES
		PAD	1.72
<u> </u>		BUFFER	1.49
		TOTAL	3.21

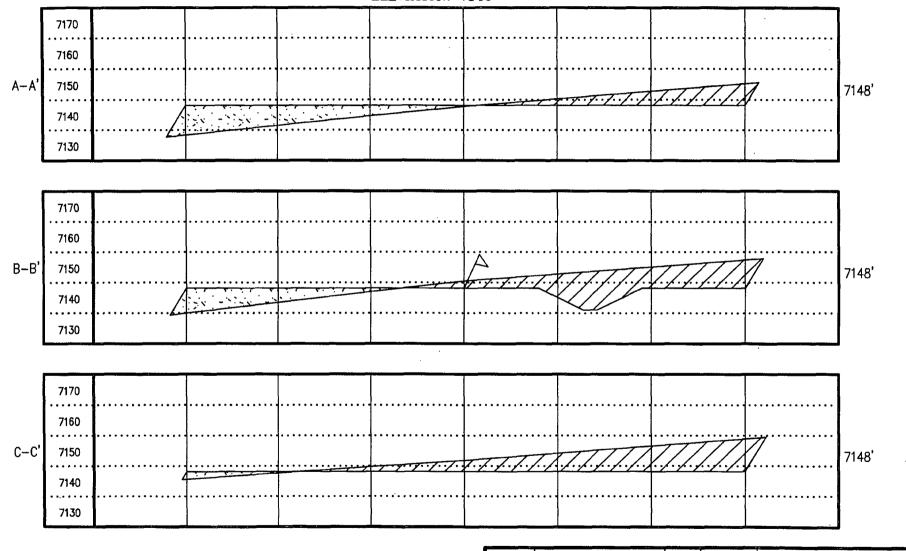
P.O. BOX 6456, FARMINGTON, N.M. 87499
108 LLANO STREET, AZTEC, N.M. 87410
PHONE: (505)334-1500

SCALE 1"=70"

SCALE: 1"=50' DATE: 05/06/2014

TNT ENVIRONMENTAL TNT SWD #1 1761' FSL, 439' FWL SEC. 8, T-25-N, R-3-W, N.M.P.M. RIO ARRIBA COUNTY, NEW MEXICO

ELEVATION: 7148'



ALL SLOPES 2:1 UNLESS OTHERWISE NOTED TOTAL VOLUME OF CUT & FILL CUT: 186000.00 C.F. / 6888.89 C.Y. FILL: 173333.33 C.F. / 6419.75 C.Y.

HORIZONTAL SCALE 1"=50' VERTIC	AL SCALE 1"=	30
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DATE:	REVISION			Г
		LAT.	N36.41007	
		LONG.	W107.17572	_
		NAD	83	
		PDOP	1.4	
DRAWN BY: BB	CAD DWG: TINTSWD\CU	TFILL.DWG		sc

\wedge	
BASIN SURVEYING,	INC.
P.O. BOX 6456, FARMINGTON, N.M. 87	
108 LLANO STREET, AZTEC, N.M. 874	110
PHONE: (505)334-1500	

SCALE: 1"=50"

DATE: 05/06/2014

Hydro geological report for TnT SWD #1

Regional Hydro geological context:

The TnT SWD #1 is located on private surface (which is owned by TnT Environmental, Inc) in Rio Arriba County, New Mexico. The well location sits on a sagebrush covered flat/plain adjacent to highway 537 in what is considered the lower limits of Ojitos Canyon which slopes slightly to the drainage area from the wash coming from canyon to the south. Soils are mostly deep silty loams and sandy loams. The project area is in a mixed woodland-scrubland environment. Vegetation includes sparse juniper, sagebrush, rabbit brush, snakeweed, cheat grass, grama grass, galleta grass, clover, and buchweheat.

A records search of the NM Office of the State Engineer – iWATERS database indicates that the closest know water well is 800' feet away in Section 8, T25N, R3W. The depth to ground water is listed as 265'. This well is owned by TnT Environmental, Inc. (the landowner and operator of the proposed TnT SWD #1). The next closest well is 1604 meters away.

Geologic maps of the area indicate that the surface formation at the proposed well site is the San Jose formation. 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 modification, namely erosion and structural deformation. Transmissivity data for San Jose Formation are minimal. Values of 40 and 120 feet squared 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 unity are sandy and highly permeable and therefore readily absorb 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 of 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, 70p

Site specific information:

Surface hydrology: The site is located at the upper end of the Ojitos Canyon drainage and is

drained by a number of small intermittent drainages

1st water-bearing formation: San Jose, tertiary Formation thickness: 200 - 700 feet

Underlying formation: Nacimiento, Tertiary Depth to groundwater: Greater than 100'.

FEMA Map - 100 year floodplain

The attached FEMA Map indicates that the proposed location is outside of the mapped 100 year floodplain.

Siting Criteria Compliance Demonstrations

The TnT SWD #1 is not located in an unstable area. The location is not over a mine and is not on the side of a hill. The location of the excavated pit material will not be located within 300' of any continuously flowing watercourse or 200' from any other intermittent watercourse.

TnT Environmental
TnT SWD #1
Temporary Drilling Reserve Pit Application
Siting Criteria

- 1. According to the iWaters Database from the State Engineers Office, the closest know water well is 800 feet the proposed TnT Environmental SWD #1 location in Section 8, T25N, R3W and was drilled to a depth of 750'. See attached printout.
- 2. As shown on the attached topographic map and aerial photos, there are no continuously flowing watercourses within 300' of the well, or any significant watercourses, lakebeds, sinkholes, or playa lakes within 200' of the well. Note: the aerial phots shows a man-made retention pond where the proposed location is staked. The landowner has since removed the retention pond.
- 3. There are no permanent residences, schools, hospitals, institutions, churches within 300' of the well.
- 4. There are no domestic water wells or springs within 500' of the well. See iWaters Database printout.
- 5. The well is not located within any municipal boundaries.
- 6. The well is not within 500' of any wetlands. See attached topographic map and aerial photos.
- 7. There are no subsurface mines in Section 8, T25N, R3W. See attached map from the NM EMNRD Mining and Mineral Division.
- 8. The TnT SWD #1 is not located in an "unstable" area. The location is not over a mine and is not on the side of a hill. The location of the excavated pit material will not be located within 300' of a continuously flowing watercourse or 200' from any other watercourse.
- 9. The well is not located in a 100-year floodplain as visible on the topographic map and the FEMA Flood Insurance Rate Map.
- 10. In the event that the composite pit sample that is mixed 3:1 with native soils does not meet the requirements for onsite burial, the pit contents will be removed and disposed of at the TNT Land Farm (NMOCD Permit #NM 1-8).



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

C=the file is

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

(quarters are smallest to largest) closed)

(In feet)

Sub-QQQ Depth Depth Water **POD Number** Code basin County 64 16 4 Sec Tws Rng X Well Water Column Distance 3 1 3 08 25N 03W 304876 4031601* -{-}> 265 750 4030829* 4.3 4 1 1 18 25N 03W 303470 1604 325 56 269

> Average Depth to Water: 160 feet

> > Minimum Depth: 56 feet

Maximum Depth: 265 feet

Record Count: 2

SJ 01305

SJ 02224

UTMNAD83 Radius Search (in meters):

Easting (X): 304876

Northing (Y): 4031601

Radius: 5000

(NAD83 UTM in meters)

*UTM location was derived from PLSS - see Help

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Geologic maps of the area indicate that the surface formation at the proposed well site is the San Jose formation. The San Jose Formation of Eccene 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 modification, namely erosion and structural deformation. Transmissivity data for San Jose Formation are minimal. Values of 40 and 120 feet squared 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 unity are sandy and highly permeable and therefore readily absorb 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 of 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, 70p

Site specific information:

Surface hydrology: The site is located at the upper end of the Ojitos Canyon drainage and is

drained by a number of small intermittent drainages

1st water-bearing formation: San Jose, tertiary
Formation thickness: 200 - 700 feet
Underlying formation: Nacimiento, Tertiary

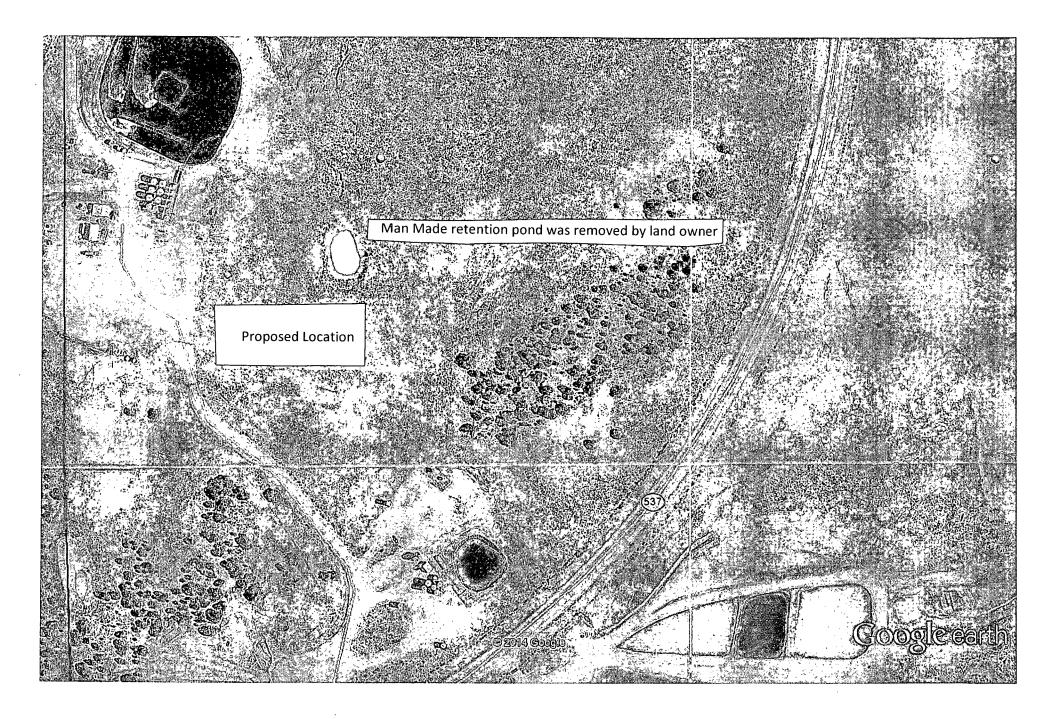
Depth to groundwater: Greater than 100'.

FEMA Map - 100 year floodplain

The attached FEMA Map indicates that the proposed location is outside of the mapped 100 year floodplain.

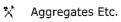
Siting Criteria Compliance Demonstrations

The TnT SWD #1 is not located in an unstable area. The location is not over a mine and is not on the side of a hill. The location of the excavated pit material will not be located within 300' of any continuously flowing watercourse or 200' from any other intermittent watercourse.



Proposed TnT SWD #1

Legend



Clay & Shale / Brick

Coal

Gypsum

X Humate

Limestone

-Ö- Metals

4 Other

Perlite



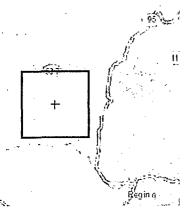
Pumice

∑, Salt

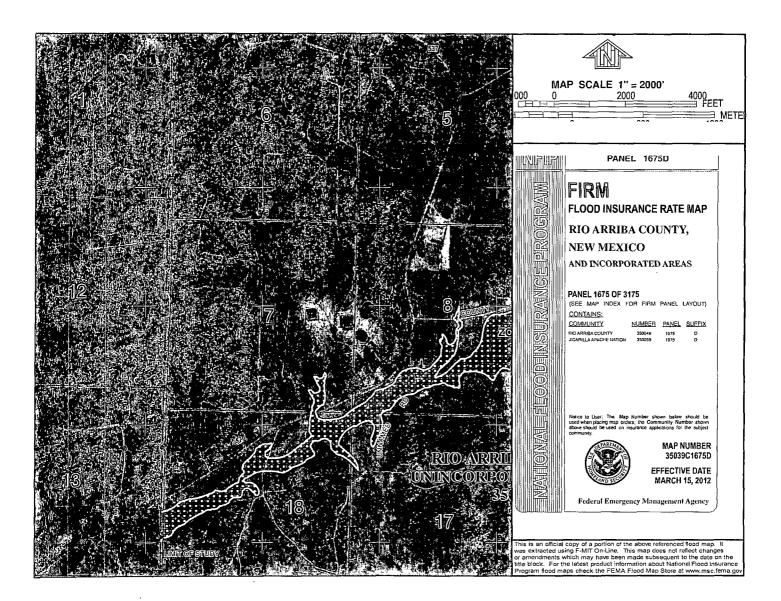
♦ Scoria

Travertine

Zeolites



[537]



District I 1625 N. French Dr., Hobbs, NM 88240 Phone: (575) 393-6161 Fax: (575) 393-0720 District II 811 S. First St., Artesia, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720 District III 1000 Rio Brazos Road, Aztec, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170 District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505 .

NAD 83 LAT: N36.41007

LONG: W107.17572 GPS: PDOP 1.4

NB9'38'16"E 5277.09'

439'

State of New Mexico

Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION

1220 South St. Fancis Dr. Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

was plotted from field notes of actual surveys made by me

N.M. PLS #9673

or under my supervision, and that the sa

Correct to the the best of D5/06/2013

Date of Survey
Signature and Seal of Post

FD. 2 1/2" B.C. 1916 G.L.O. ☐ AMENDED REPORT

' A	PI Number	•		² Pool Code			³ Pool Na	me	
⁴ Property C	Code		⁵ Property Name ⁶ Well Number						
			TNT SWD 1					1	
⁷ OGRID N	0.							Elevation 7148	
					¹⁰ Surface I	Location		<u> </u>	
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<i>L</i> .	8	T25N	R3W	.]	1761'	SOUTH	439'	WEST	RIO ARRIBA
			ⁿ Bot	tom Hole	Location 1	If Different F	rom Surface	;	<u> </u>
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
² Dedicated Acres	¹³ Joint or	r Infill 14 C	onsolidation (Code 15 Orde	er No.			SCAL	SEP 17'14
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TnT Environmental, Inc. SWD #1 Pit Design and Construction Plan

In accordance with Rule 19 15 17 the following information describes the design and construction for temporary pits on TnT Environmental's locations; this is TnT's standard procedure for all temporary pits.

General Plan

- 1 TnT 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 constructing the pit, topsoil will be stockpiled in the construction zone for later use in restoration
- TnT will post a well sign, not less than 12" by 24", on the well site prior to construction of the temporary pit. The sign will list the operator on record as the operator, the location of the well by unit letter, section, township range, and emergency telephone numbers (complying with 19.15.16.8 NMAC)
- 4 TnT shall construct all new fences unitizing 48' steel mesh field-fence (hogwire) on the bottom. 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 overwork operations, when the front side of the fence will be temporarily removed for operational purposes
- 5 TnT shall 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 TnT 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, LLDPE 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 TnT will minimize liner seams and orient them up and down, not across a slope. Factory seams will be used whenever possible. TnT 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. TnT 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-on by constructing and maintaining diversion ditched around the location or around the perimeter of the pit in some cases
- 14 The volume of the pit shall not exceed **12,983 bbls**, including freeboard
- 15 If needed, 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 mil liner. The upper half of the blow pit will remain unlined as allowed in Rule 19.15.17.11. F (11)
- 17 TnT will not allow freestanding liquids to remain on the unlined portion of temporary blow pit

TnT Environmental TnT SWD #1 Maintenance and Operating Plan

In accordance with Rule 19 15 17.12 the following information described the operation and maintenance of temporary pits on TnT's locations.

General Plan

- 1 TnT 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 TnT will conserve drilling fluids by either recycling, reusing or disposed of in a manner approved by division rules and that prevents contamination fo fresh water and protects public health and the environment. Drilling fluids will be disposed at TNT Evap ponds & Land Farm/Disposal, Permit # NM-01-008
- 3 TnT will not discharge or store any hazardous waste in any temporary pit
- 4 If any pit liner's integrity is compromised or if any penetration of the liner occurs above the liquid's surface, then TnT shall notify the Aztec Division office by phone or email within 48 hours of the discovery and repair the damage or replace the liner
- If a leak develops below the liquid's level or if any penetration of the pit liner occurs below the liquids's surface, TnT shall remove all liquids above the damaged liner within 48 hours and repair the damage or replace the liner. TnT shall notify the Aztec Division office pursuant to 19.15.29.NMAC.
- The liner shall be protected from any fluid force or mechanical damage through the use of mud pit slides, or manifold system
- 7 The pit shall be protected from run-on by constructing and maintaining diversion ditches around the location or around the perimeter of the pit in some cases
- 8 TnT shall immediately remove any visible layer or oil from the surface of 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 pit
- 9 Only fluids generated during the drilling or workover process may be discharged into a temporary pit
- 10 TnT will maintain the temporary pit free of miscellaneous solid waste or debris
- 11 During drilling or workover operations, TnT will inspect the temporary pit at least once daily to ensure compliance with this plan. Inspections will be logged in the IADC reports and company morning reports. TnT will file this log with the Aztec Division office upon closure of the pit
- 12 After drilling or workover operations, TnT will inspect the temporary pit weekly so long as liquids remain in the temporary pit. A log of the inspections will be stored at TnT's office electronically and will be filed with the Aztec Division office upon closure of the pit
- 13 TnT shall maintain at least two feet of freeboard for a temporary pit
- 14 TnT shall remove all free liquids from a temporary pit within 30 days from the date the operator releases the drilling or workover rig
- 15 TnT shall remove all free liquids from a cavitations within 48 hours after completing cavitations. TnT may request additional time to remove liquids from Aztec Division office if it is not feasible to remove liquids within 48 hours

TnT Environmental TnT SWD #1 Closure Plan

In accordance with Rule 19.15.17.9 NMAC and 19.15.17.13 NMAC the following information describes the closure requirements of temporary pits on TnT's locations. This is TnT's standard procedure for all temporary pits.

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

- Detail on 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
- The preferred method of closure for all temporary pits will be on-site burial, pursuant to Subsection B of 19.15.17.9 and assuming that all criteria listed in sub-section (D) of 19.15.17.13 are met
- Prior to closure, the surface owner shall (which in this case is the same as the operator) be notified at least 72 hrs but not more than one week prior to TnT's proposed closure plan using a means that provides proof of notice i.e., certified mail, return receipt requested
- 4 Within 6 months of the Rig Off status occurring TnT will ensure that temporary pits are closed, recontoured, and reseeded
- 5 Notice of Closure will be given to the Aztec Division office 72 hours but not more than one week of closure via email, or verbally. The notification of closure will include the following:
 - i. Operator's name
 - Location by Unit Letter, Section, Township, and Range. Well name and API Number
- All contents, including synthetic pit liners, will be buried in place. By folding outer edges of the pit liner to overlap waste material, and then installing a geomembrane liner cover that is 20 mil string reinforced LLDPE, synthetic material an then installing a geomembrane liner cover that is 20 mil string reinforced LLDPE, synthetic material, impervious, resistant to ultra violet light, petroleum hydrocarbons, salts, acid and alkaline.
- 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 a safe and stable. The mixing ratio shall not exceed 3 parts clean soil to 1 part pit contents. The waste mixture must pass the paint filter liquids test (EPA SW-846, Method 9095 or other test methods approved by the division.
- A five point composite sample will be taken of the pit using sampling tools and all samples tested per Subsection D of 19.15.17.13 (5). The concentration of any contaminant in the stabilized waste is cannot be higher than the parameters listed in Table II of 19.15.17.13 NMAC. In the event that the criteria are not met, all contents will be handled per Subsection C of 19.15.17.13 i.e., Dig and haul

Components	Tests Method	Limit (mg/Kg)
Benzene	EPA SW-846 8021B or 8015M	10
BTEX	EPA SW-846 8021B or 8260B	50
TPH	EPA SW-846 418.1	2500
GRO/DRO	EPA SW-846 8015M	1000
Chlorides	EPA 300.1	80,000

- 9 Upon completion of solidification and testing, 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 (with chloride concentrations less than 600 mg/Kg) to establish vegetation at the site, or the background thickness of topsoil, whichever is greater
- 10 Re-contouring of location will match fit, shape, line, form and texture of the surrounding area. 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 smooth surface, fitting the natural landscape
- 11 Notification will be sent to OCD when the reclaimed area is seeded
- 12 Following 19.15.17.13 (H) (5) (a-e), TnT shall seed the distributed 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. Suggested BLM stipulated seed mixed will be used on federal lands. In this case (private surface) the operator and surface owner have agreed to defer to the federal (BLM) stipulated seed mix. 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 thorough two successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs
- 13 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 be a four foot tall riser with the operator's information at the time of all wells on the pad are abandoned. The operator's information will include the following: Operator Name, Lease Name, Well Name and Number, unit Number, Section, Township, Range and an indicator that the marker is an onsite burial location