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

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, Be	elow-Grade Tank, or
Proposed Alternative Met	thod Permit or Closure Plan Application
Type of action: Below grade tank reginer of a pit or prop	stration osed alternative method y-grade tank, or proposed alternative method
$\square$ Modification to an exi	sting permit/or registration
<b>BGT1</b> $\square$ Modification to an exit	mitted for an existing permitted or non-permitted pit, below-grade tank,
or proposed alternative method	
	orm C-144) per individual pit, below-grade tank or alternative request
Please be advised that approval of this request does not relieve the opera environment. Nor does approval relieve the operator of its responsibility	tor of liability should operations result in pollution of surface water, ground water or the to comply with any other applicable governmental authority's rules, regulations or ordinances.
1. Operator: Dugan Production Corp.	OGRID #:006515
Address: PO Box 420 Farmington NM 87499-0420	
A DI Number 20.020.22076	OCD Permit Number:
API Number: $30-059-25070$	ip <u>23N</u> Range <u>6W</u> County: <u>Rio Arriba</u>
U/L or Qtr/Qtr       L       Section       5       Townshi         Center of Proposed Design: Latitude       36.2517014       Lo	
Surface Owner: 🛛 Federal 🗌 State 🗌 Private 🗌 Tribal Trust o	or Indian Anothent
Lined Unlined Liner type: Thicknessmil	-Well Fluid Management Low Chloride Drilling Fluid 🗌 yes 🗌 no
Liner Seams: Welded Factory Other	Volume:bbl Dimensions: L x W x D
<ul> <li><u>Alternative Method</u>:</li> <li>Submittal of an exception request is required. Exceptions must</li> </ul>	be submitted to the Santa Fe Environmental Bureau office for consideration of approval.
<ul> <li>5.</li> <li>Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permain the constitution of the</li></ul>	op (Required if located within 1000 feet of a permanent residence, school, hospital, between one and four feet

.

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)

Signs: Subsection C of 19.15.17.11 NMAC

🛛 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

Signed in compliance with 19.15.16.8 NMAC

#### Variances and Exceptions:

7.

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.

#### Siting Criteria (regarding permitting): 19.15.17.10 NMAC

Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Siting criteria does not apply to drying pads or above-grade tanks.

General siting	
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank. - □ NM Office of the State Engineer - iWATERS database search; □ USGS; □ Data obtained from nearby wells	□ Yes □ No □ NA
Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit. NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
<ul> <li>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)</li> <li>Written confirmation or verification from the municipality; Written approval obtained from the municipality</li> </ul>	🗌 Yes 🗌 No
<ul> <li>Within the area overlying a subsurface mine. (Does not apply to below grade tanks)</li> <li>Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division</li> </ul>	🗌 Yes 🗌 No
<ul> <li>Within an unstable area. (Does not apply to below grade tanks)</li> <li>Engineering measures incorporated into the design; NM Bureau of Geology &amp; Mineral Resources; USGS; NM Geological Society; Topographic map</li> </ul>	🗌 Yes 🗌 No
Within a 100-year floodplain. (Does not apply to below grade tanks) - FEMA map	🗋 Yes 🗌 No
Below Grade Tanks	
<ul> <li>Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark).</li> <li>Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	🗌 Yes 🗌 No
<ul> <li>Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;.</li> <li>NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site</li> </ul>	🗌 Yes 🗌 No
Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)	
<ul> <li>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.)</li> <li>Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	🗌 Yes 🗌 No
<ul> <li>Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application.</li> <li>Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>	🗌 Yes 🗌 No
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.	🗌 Yes 🗌 No

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<ul> <li>Within 100 feet of a wetland.</li> <li>US Fish and Wildlife Wetland Identification map; Topographic map; Visual insp</li> </ul>	pection (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 playa lake (measured from the ordinary high-water mark).		·
- Topographic map; Visual inspection (certification) of the proposed site		Yes No
<ul> <li>Within 300 feet from a permanent residence, school, hospital, institution, or church in ex</li> <li>Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>		🗌 Yes 🗌 No
Within 500 horizontal feet of a spring or a private, domestic fresh water well used by less watering purposes, or 1000 feet of any other fresh water well or spring, in the existence a - NM Office of the State Engineer - iWATERS database search; Visual inspection	at the time of the initial application;	🗌 Yes 🗌 No
Within 300 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual insp	pection (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 significa lake (measured from the ordinary high-water mark).		
- Topographic map; Visual inspection (certification) of the proposed site	L	Yes No
<ul> <li>Within 1000 feet from a permanent residence, school, hospital, institution, or church in e</li> <li>Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>		🗌 Yes 🗌 No
Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock wa	atering purposes, in existence at the time of	
initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection	n (certification) of the proposed site	🗌 Yes 🗌 No
<ul> <li>Within 500 feet of a wetland.</li> <li>US Fish and Wildlife Wetland Identification map; Topographic map; Visual insp</li> </ul>	pection (certification) of the proposed site	🗌 Yes 🗌 No
10. Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attac	chment Checklist: Subsection B of 19.15.17.9 NM	1AC
Instructions: Each of the following items must be attached to the application. Please	indicate, by a check mark in the box, that the docu	ments are
attached. Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Para	agraph (4) of Subsection B of 19.15.17.9 NMAC	
<ul> <li>Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirement</li> <li>Siting Criteria Compliance Demonstrations - based upon the appropriate requirement</li> <li>Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC</li> </ul>	nts of Paragraph (2) of Subsection B of 19.15.17.9 N	JMAC
<ul> <li>Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC</li> <li>Operating and Maintenance Plan - based upon the appropriate requirements of 19.1</li> </ul>	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: \_\_\_\_\_

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 documents are 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 19.15.17.9 NMAC and 19.15.17.13 NMAC Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC

<sup>12.</sup> <u>Permanent Pits Permit Application Checklist</u> : Subsection B of 19.15.17.9 NMAC <i>Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the of</i>	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 19.15.17.11 NMAC         Nuisance or Hazardous Odors, including H <sub>2</sub> S, Prevention Plan         Emergency Response Plan         Oil Field Waste Stream Characterization         Monitoring and Inspection Plan         Erosion Control Plan         Closure Plan - based upon the appropriate requirements of 19.15.17.9 NMAC and 19.15.17.13 NMAC		
<b>Proposed Closure:</b> 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 F Alternative Proposed Closure Method: Waste Excavation and Removal Waste Removal (Closed-loop systems only) On-site Closure Method (Only for temporary pits and closed-loop systems) In-place Burial On-site Trench Burial	luid Management Pit	
Alternative Closure Method		
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.		
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.		
<ul> <li>Ground water is less than 25 feet below the bottom of the buried waste.</li> <li>NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells</li> </ul>	☐ 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 ☐ No ☐ NA	
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	□ Yes □ No □ NA	
<ul> <li>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).</li> <li>Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	🗌 Yes 🗌 No	
<ul> <li>Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</li> <li>Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>	🗌 Yes 🗌 No	
<ul> <li>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.</li> <li>NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site</li> </ul>	🗌 Yes 🗌 No	
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		

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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 🗌 No
Within an unstable area.	
<ul> <li>Engineering measures incorporated into the design; NM Bureau of Geology &amp; Mineral Resources; USGS; NM Geological Society; Topographic map</li> </ul>	
	🔲 Yes 🗌 No
- FEMA map	🗌 Yes 🗌 No
<ul> <li>Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC</li> <li>Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection E of 19.15.17.13 NMAC</li> <li>Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K of 19.15.1</li> <li>Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.13 NMAC</li> <li>Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC</li> <li>Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 19.15.17.13 NMAC</li> <li>Waste Material Sampling Plan - based upon the appropriate requirements of 19.15.17.13 NMAC</li> <li>Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards car</li> <li>Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC</li> <li>Re-vegetation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC</li> <li>Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC</li> </ul>	9.15.17.11 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 be	elief.

Name (Print): <u>Kevin Smaka, PE</u> Title: <u>R</u>	egulatory Engineer
Signature: Klos & mahr	Date: 9-11-23
e-mail address: <u>Kevin.Smaka@duganproduction.com</u>	Telephone:505-325-1821 x1049
18. OCD Approval: 🗴 Permit Application (including closure plan	n) 🕱 Closure Plan (🍂
OCD Representative Signature: Victoria Veneg.	Approval Date: <u>10/02/2023</u>
Title: Environmental Specialist	OCD Permit Number: BGT1
	sure plan prior to implementing any closure activities and submitting the closure report. thin 60 days of the completion of the closure activities. Please do not complete this
20.         Closure Method:         □       Waste Excavation and Removal       □       On-Site Closure Method:         □       If different from approved plan, please explain.	od 🗌 Alternative Closure Method 🗌 Waste Removal (Closed-loop systems only)
21.         Closure Report Attachment Checklist: Instructions: Each of mark in the box, that the documents are attached.         Proof of Closure Notice (surface owner and division)         Proof of Deed Notice (required for on-site closure for prively)         Plot Plan (for on-site closures and temporary pits)         Confirmation Sampling Analytical Results (if applicable)         Waste Material Sampling Analytical Results (required for Disposal Facility Name and Permit Number         Soil Backfilling and Cover Installation         Re-vegetation Application Rates and Seeding Technique         Site Reclamation (Photo Documentation)	

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perator Closure Certification: hereby certify that the information and attachments submitted elief. I also certify that the closure complies with all applicable	I with this closure report is true, accurate and complete to the best of my knowledge and ble closure requirements and conditions specified in the approved closure plan.
ame (Print):	
gnature:	Date:
mail address:	Telephone:
,	

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## Below Grade Tank Closure Plan

Dugan Production Corp.

As directed by NMAC 19.15.17 the following plan/procedure has been prepared for closure of the below grade tank identified on the associated C-144.

- 1. Dugan will provide notice via-email to the NMOCD 72 hours prior to commencing closure activities. Dugan will also notify the appropriate surface owner by e-mail if possible or by certified letter.
- Dugan will close the pit, drying pad or below-grade tank by first removing all contents and, if applicable, synthetic liners and transferring those materials to a division approved facility. In this case Dugan will haul solid waste to Envirotech (Permit # NM-01-0011). Liquid waste will be hauled to Dugan's Sanchez O'Brien SWD #1 (Permit # SWD-694). If needed the pit liner will be disposed of at Waste Management's Crouch Mesa facility.
- 3. Dugan will take a composite 5-point soil sample underneath the BGT liner, grabbing stained and wet soils. The samples will be taken to a local lab and analyzed for BTEX, TPH and Chlorides. If the sample results do not exceed the limits in the applicable portion of table 1, found in NMAC 19.15.17, Dugan will continue with closure by backfilling the BGT vault and commencing reclamation activities. In the event the sampling results exceed the limits in table 1 Dugan will further delineate and remediate the soils in the BGT vault until samples are in the limits established in Table 1.

	T <i>I</i>	ABLE I	
Depth Below bottom of pit to groundwater less than 10,000 mg/l TDS	Constituent	Method	Limit
	Chloride	EPA 9056	600 mg/kg
	ТРН	Method 418.1	100 mg/kg
	BTEX	Method 8021B	50 mg/kg
<u>&lt;</u> 50 Feet	Benzene	Method 8021B	10 mg/kg
	Chloride	EPA 9056	10,000 mg/kg
	ТРН	Method 418.1	2,500 mg/kg
	GRO + DRO	Method 8015	1,000 mg/kg
	BTEX	Method 8021B	50 mg/kg
51 feet - 100 feet	Benzene	Method 8021B	10 mg/kg
	Chloride	EPA 9056	20,000 mg/kg
	ТРН	EPA 418.1	2,500 mg/kg
	GRO + DRO	Method 8015	1,000 mg/kg
	BTEX	Method 8021B	50 mg/kg
> 100 feet	Benzene	Method 8021B	10 mg/kg

- 4. All areas disturbed by the closure of pits and below-grade tanks, except areas reasonably needed for production operations or for subsequent drilling operations, shall be reclaimed as early and as nearly as practicable to their original condition or their final land use and shall be maintained to control dust and minimize erosion to the extent practicable.
- 5. Topsoil and subsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns. The disturbed area then shall be reseeded in the first favorable growing season following closure of a pit, drying pad associated with a closed-loop system or below-grade tank.

- 6. Reclamation of all disturbed areas no longer in use shall be considered complete when all ground surface disturbing activities at the site have been completed, and a uniform vegetative cover has been established that reflects a life-form ratio of plus or minus fifty percent (50%) of pre-disturbance levels and a total percent plant cover of at least seventy percent (70%) of pre-disturbance levels, excluding noxious weeds.
- 7. Other regulatory requirements. The re-vegetation and reclamation obligations imposed by other applicable federal or tribal agencies on lands managed by those agencies shall supersede these provisions and govern the obligations of any operator subject to those provisions, provided that the other requirements provide equal or better protection of fresh water, human health and the environment.
- 8. The operator shall notify the division when reclamation and re-vegetation are complete.
- 9. Concerning soil cover designs for closures after site contouring, where the operator has removed the below-grade tank or drying pad contents and liner, and if necessary remediated the soil beneath the below-grade tank or drying pad liner to chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, shall consist of the background thickness of topsoil or one foot of suitable material, whichever is greater.
  - Dugan has elected to submit this closure plan without any depth to groundwater and citing information and has elected to have all sampling results conducted at the most stringent standards of table 1.
  - In the event samples exceed the allowable limits Dugan will review the results and correlate the results with actual groundwater data. The groundwater determination will also be submitted to the division. In the event the soil samples fall below the allowed limits in table 1 Dugan will proceed with closure and reclamation as outlined in this closure plan. If the samples exceed the limits Dugan will delineate and remediate the contaminated soil in question until it meets the thresholds established in table #1.
  - Dugan has included with this C-144 submittal the original C-144 registration found in Dugan's records. This original is included as it contains a groundwater and citing information that is pertinent to this action.

#### Tyra Feil

From:	Kevin Smaka
Sent:	Tuesday, September 12, 2023 4:38 PM
То:	Barr, Leigh, EMNRD; Adeloye, Abiodun A; Velez, Nelson, EMNRD
Cc:	Tyra Feil; Dalvin Harrison; Carlos Ramos
Subject:	Notice of Sampling/BGT Closure

Dugan will be collecting soil samples as part of a below grade tanks closure and this coming Friday, 9/15/2023, at 10:00 AM.

The locations are listed below:

Strawberry #1 30-039-23076 L-03-23N-06W 1980 FSL 810 FWL

Gulf Federal 24 #1 30-043-20672 D-24-23N-06W 920 FNL 795 FWL

We will start at the Strawberry Well and then proceed to the Gulf Federal.

Please contact me should you have any questions

Kevin Smaka P.E. Regulatory Engineer Dugan Production Corp 505-486-6207 Received by OCD: 9/20/2023 11:50:00 AM



September 20, 2023

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

Re: Dugan Production Corp. previously submitted C-144's not in NMOCD database Strawberry #1 (30-039-23076)

To Whom It May Concern,

Dugan Production Corp. (DPC) is submitting a Closure Plan for the referenced well and would like to also submit the C-144 Closure Plan that was submitted on 9/27/2008, (signed by Kurt Fagrelius). This document was not scanned into the NMOCD records and DPC is submitting now to reflect that it had been submitted in a timely manner as required by NMOCD rules.

Sincerely,

Kevin Smaka, PE Regulatory Engineer

1.1

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.

### Pit, Closed-Loop System, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

Type of action: X Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method

Modification to an existing permit

X Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system,

below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

Depretator: Dugan Production Corp. OGRID #: 006515
Address: 709 East Murray Drive, Farmington, New Mexico 87401
Facility or well name: Strawberry #1
API Number:         30-039-23076         OCD Permit Number:
U/L or Qtr/Qtr L Section 3 Township 23N Range 6W County: Rio Arriba
Center of Proposed Design: Latitude 36.25176 North Longitude 107.46230 West NAD: X1927 1983
Surface Owner: 🔀 Federal 🗌 State 🗌 Private 🗌 Tribal Trust or Indian Allotment
2.
Pit: Subsection F or G of 19.15.17.11 NMAC
Temporary: Drilling Workover
Permanent Emergency Cavitation P&A
Lined Unlined Liner type: Thicknessmil LLDPE HDPE PVC Other
String-Reinforced
Liner Seams: 🗌 Welded 🗋 Factory 🗋 Other Volume:bbl Dimensions: L x W x D
3.
Closed-loop System: Subsection H of 19.15.17.11 NMAC
Type of Operation: P&A Drilling a new well Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)
Drying Pad Above Ground Steel Tanks Haul-off Bins Other
Lined Unlined Liner type: Thicknessmil LLDPE HDPE PVC Other
Liner Seams: 🗌 Welded 🔲 Factory 🗋 Other
4.
X         Below-grade tank:         Subsection I of 19.15.17.11 NMAC
Volume: 50 bbl Type of fluid: Producer H20
Tank Construction material:       Fiberglass       (See Closure Plan #2)
Secondary containment with leak detection Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
Visible sidewalls and liner Visible sidewalls only X Other No visible sidewalls, No leak detection
Liner type: Thicknessmil
5.
Alternative Method:
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

Received by OCD: 9/20/2023 11:50:00 AM

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7.

8.

Fencing:	Subsection D of 19.15.17.11	NMAC (Applies to permanent pits,	, temporary pits, and below-grade tanks)
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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'=3' Hog wire + 1 Strand barbed wire

Netting:	Subsection E of	`19.15.17.11 NM/	AC (Applies t	o permanent p	its and permanent	open top tanks)
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Screen Netting X Other Fiberglass cover

X Monthly inspections (If netting or screening is not physically feasible)

Signs: Subsection C of 19.15.17.11 NMAC

X 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

Signed in compliance with 19.15.3.103 NMAC

<ul> <li><u>Administrative Approvals and Exceptions</u>: Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance. </li> <li><i>Please check a box if one or more of the following is requested, if not leave blank:</i> <ul> <li>Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau consideration of approval.</li> <li>Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.</li> </ul> </li> </ul>	office for
<sup>10.</sup> 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 appro office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of a Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to dry 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
<ul> <li>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).</li> <li>Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	🗌 Yes 🛣 No
<ul> <li>Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</li> <li>(Applies to temporary, emergency, or cavitation pits and below-grade tanks)</li> <li>Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>	☐ Yes X No ☐ NA
<ul> <li>Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (<i>Applies to permanent pits</i>)</li> <li>Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>	Yes No
<ul> <li>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.</li> <li>NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site</li> </ul>	🗌 Yes 🔀 No
<ul> <li>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.</li> <li>Written confirmation or verification from the municipality; Written approval obtained from the municipality</li> </ul>	🔲 Yes 🗶 No
<ul> <li>Within 500 feet of a wetland.</li> <li>US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	🗌 Yes 🗶 No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	🗌 Yes 🗶 No
<ul> <li>Within an unstable area.</li> <li>Engineering measures incorporated into the design; NM Bureau of Geology &amp; Mineral Resources; USGS; NM Geological Society; Topographic map</li> </ul>	🗌 Yes 🕅 No

Yes X No

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Within a 100-year floodplain.

FEMA map

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11. 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 a	re
attached.         X         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 19.15.17.10 NMAC         X       Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC         X       Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 N	MAC
and 19.15.17.13 NMAC  Previously Approved Design (attach copy of design) API Number: or Permit Number:	
12. <u>Closed-loop Systems Permit Application Attachment Checklist</u> : 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 a subsected	ıre
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 19.15.17.93 and 19.15.17.13 NMAC	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 u	ise
above ground steel tanks or haul-off bins and propose to implement waste removal for closure)	
13. 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 a 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 Nuisance or Hazardous Odors, including H <sub>2</sub> S, Prevention Plan Emergency Response Plan Oil Field Waste Stream Characterization Monitoring and Inspection Plan Erosion Control Plan Closure: 19.15.17.13 NMAC	ire a
Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.	
Type:       Drilling       Workover       Emergency       Cavitation       P&A       Permanent Pit       Below-grade Tank       Closed-loop System         Alternative         Proposed Closure Method:       Waste Excavation and Removal       Waste Removal (Closed-loop systems only)         On-site Closure Method (Only for temporary pits and closed-loop systems)       In-place Burial       On-site Trench Burial         Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)       Incomplete Supervision	)
15.         Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to a closure plan. Please indicate, by a check mark in the box, that the documents are attached.         Image: State Plan Checklist:       (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to a closure plan. Please indicate, by a check mark in the box, that the documents are attached.         Image: Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC         Image: Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC         Image: Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)         Image: Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC         Image: Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC         Image: Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC	the
Form C-144 Oil Conservation Division Page 3 of 5	

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<sup>16.</sup> 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.	drilling fluids and drill cuttings. Use attachment if r	more than two						
Disposal Facility Name:	Disposal Facility Permit Number:							
Disposal Facility Name:	Disposal Facility Permit Number:	-1 I. I.						
Will any of the proposed closed-loop system operations and associated activities occur on or in areas that <i>will not</i> be used for future service and operations? Yes (If yes, please provide the information below) No								
Required for impacted areas which will not be used for future service and operations:         Soil Backfill and Cover Design Specifications based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC         Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC         Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC								
<sup>17.</sup> 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	re administrative approval from the appropriate dist l 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; Dat	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; Dat	a obtained from nearby wells	□ Yes □ No □ NA						
<ul> <li>Within 300 feet of a continuously flowing watercourse, or 200 feet of any other signake (measured from the ordinary high-water mark).</li> <li>Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	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; Satellit		🗌 Yes 🗌 No						
Within 500 horizontal feet of a private, domestic fresh water well or spring that less watering purposes, or within 1000 horizontal feet of any other fresh water well or s - NM Office of the State Engineer - iWATERS database; Visual inspection	spring, in existence at the time of initial application.	🗌 Yes 🗌 No						
<ul> <li>Within incorporated municipal boundaries or within a defined municipal fresh wat adopted pursuant to NMSA 1978, Section 3-27-3, as amended.</li> <li>Written confirmation or verification from the municipality; Written approx</li> </ul>		🗌 Yes 🗌 No						
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visu		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						
<ul> <li>Within an unstable area.</li> <li>Engineering measures incorporated into the design; NM Bureau of Geolog Society; Topographic map</li> </ul>	y & Mineral Resources; USGS; NM Geological	🗌 Yes 🗌 No						
Within a 100-year floodplain. - FEMA map		🗌 Yes 🗌 No						
<ul> <li>18.</li> <li>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.</li> <li>Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of Proof of Surface Owner Notice - based upon the appropriate requirements of the approprise requirements of the appropriate requirements of the appr</li></ul>	uirements of 19.15.17.10 NMAC	an. Please indicate,						

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	Construction/Design	Plan of	<b>Burial Trench</b>	(if applicable)	) based upo	on the appropriate	requirements o	f 19.15.17.11 NMAC

Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC

Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC  $\Box$ 

Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC

Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved) 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 I of 19.15.17.13 NMAC

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

19. 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): Kurt Fagrelius Title: Vice President, Exploration
Signature: Kurt Fagaling Date: September 27, 2008
e-mail address: kfagrelius@duganproduction.com Telephone: 505-325-1821(O), 505-320-8248(C)
20. OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment)
OCD Representative Signature: Approval Date:
Title: OCD Permit Number:
21. <u>Closure Report (required within 60 days of closure completion)</u> : Subsection K of 19.15.17.13 NMAC Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed. Closure Completion Date:
<ul> <li>22.</li> <li>Closure Method:</li> <li>Waste Excavation and Removal On-Site Closure Method Alternative Closure Method Waste Removal (Closed-loop systems only)</li> <li>If different from approved plan, please explain.</li> </ul>
23. <u>Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:</u> Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.
Disposal Facility Name: Disposal Facility Permit Number:
Disposal Facility Name: Disposal Facility Permit Number:
Were the closed-loop system operations and associated activities performed on or in areas that <i>will not</i> be used for future service and operations? 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
<ul> <li>24.</li> <li>Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.</li> <li>Proof of Closure Notice (surface owner and division)</li> <li>Proof of Deed Notice (required for on-site closure)</li> <li>Plot Plan (for on-site closures and temporary pits)</li> <li>Confirmation Sampling Analytical Results (if applicable)</li> <li>Waste Material Sampling Analytical Results (required for on-site closure)</li> <li>Disposal Facility Name and Permit Number</li> <li>Soil Backfilling and Cover Installation</li> <li>Re-vegetation Application Rates and Seeding Technique</li> <li>Site Reclamation (Photo Documentation)</li> <li>On-site Closure Location: Latitude Longitude NAD: [1927 ] 1983</li> </ul>
25. Operator Closure Certification:
I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.
Name (Print): Kurt Fagrelius Title: Vice President, Exploration
Signature: Date: September 27, 2008
e-mail address: kfagrelius@duganproduction.com Telephone: 505-325-1821

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#### Strawberry #1 Hydrogeologic Report

The Strawberry #1 is located on Federal land in the southeast of the San Juan Basin in Rio Arriba County, New Mexico. The area is characterized by high (7,200 feet ASL), northeast trending mesas with stands of pinon, juniper and occasional ponderosa, bordered by deep broad canyons on the north and south with grass and sage. The area is well drained by Escrito and Haynes Canyon that drain water from rain and snowmelt to the northeast.

A records search of the NM Office of the State Engineer -iWATERS database was conducted on a three square mile area centered on the Strawberry #1 location (Exhibit 2). No water wells were located in the search area. The results of the search are shown on Exhibit 1.

The main source of stock water in the region is encountered in valley-fill deposits in existing arroyos at shallow depths of approximately 15 - 50 feet below the surface and stock tanks constructed in surface shale layers along the upper reaches and confluences of arroyos. The below grade tank is not located in valley fill deposits of an existing arroyo. The closest arroyo is 275 feet to the west (Exhibit 2).

The San Jose Formation extends from the surface down to a depth of approximately 600 feet and the section is comprised of mudstone / shale with a trace of siltstone.

The Nacimiento ranges from 600-1380 feet and contains numerous sands 20-40 feet thick interbedded with mudstone / shale (20-60 feet thick) that have good reservoir qualities and should contain a good volume of poor quality water.

The San Jose and Nacimiento intervals are a source of ground water for livestock purposes and more rarely domestic use in some areas near the outcrop. With depth and distance from the outcrop, water quality decreases quickly and may be useful for livestock only (Stone, 1983).

Based on electric open hole logs, the iWATERS database, literature reviewed, depth to ground water ranges from 15 - 50 feet below the surface in major arroyos in the area. Moving away from the wash ground water depth drops rapidly to greater than 200 feet below the surface. At the location of the subject below grade tank, poor quality ground water might be found at depths of approximately 600-1310 feet below the surface in laterally discontinuous sand layers in the Nacimiento Formation. A deeper source of ground water would be the Ojo Alamo / Animas from 1380 down to 1490 feet.

Due to the excessive drilling depth, high silt content in the sands, poor water and reservoir quality and unpredictable nature of sand occurrence, there has not been any San Jose or Nacimiento water wells drilled in the area of the subject below grade tank.

This Hydrogeologic Report was prepared by Mr. Kurt Fagrelius, Geologist for Dugan Production. Mr. Fagrelius has been employed as a geologist for Dugan for the past 31-years, received a MS in Geology from NMIMT in Socorro, NM and a BS in Geology from FLC in Durango, CO.

- Stone, W.J., Lyford, F.P., Frenzel, P.F., Mizell, N.H., and Padgett, E.T., 1983, Hydrogeology and water resources of San Juan Basin, New Mexico: New Mexico Bureau of Mines and Mineral Resources Hydrologic Report 6, 70 p.
- Brown, D.R., and Stone, W.J., 1979, Hydrogeology of Aztec quadrangle, San Juan County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Hydrogeologic Sheet 1.
- Levings, G.W., Craigg, S.D., Dam, W.L. Kernodle, J.M., and Thorn, C.R., 1990, Hydrogeology of the San Jose, Nacimiento, and Animas Formations in the San Juan Structural Basin, New Mexico, Colorado, Arizona and Utah: U.S. Geological Survey, Atlas HA-720-A, Sheet 1 and 2.
- Thorn, C.R., Levings, G.W., Craigg, S.D., Dam, W.L., and Kernodle, J.M., 1990, Hydrogeology of the Ojo Alamo Sandstone in the San Juan Structural Basin, New Mexico, Colorado, Arizona and Utah: U.S. Geological Survey, Atlas HA-720-B, Sheet 1 and 2.

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			ffice of the State Engine orts and Downloads	leer	
	Township: 23	N Range: 06W	Sections: 2,3,4,9,10,1	1	
	NAD27 X:	Y:	Zone:	Search Radius:	
County:	H	Basin:	Numb	ber: Suf	fix:
Owner Na	ame: (First)	(Last)	Ν	Non-Domestic	Domestic All
P	OD / Surface Data R	eport Av	g Depth to Water Report	Water Co	lumn Report
		Clear Form	iWATERS Menu	Help	
		WATER CO	LUMN REPORT 09/26/2	008	
POD Number	(quarters a) Tws Rng	re 1=NW 2=NE 3=SM re biggest to smu g Sec q q q Zon	allest)	Depth Depth Well Water	Water (in feet) Column
no necords I	ound, try again				

http://iwaters.ose.state.nm.us: 7001/iWATERS/WellAndSurfaceDispatcher

			office of the State Englished State Englished State Englished State Stat				
	Township: 24N	Range: 06W	Sections: 33,34,35				
	NAD27 X:	Y:	Zone:	Search R	adius:		
County:	Ba	sin:	Nur	mber:	Suff	ix:	
Owner Na	ame: (First)	(Last)		Non-Dom	estic I	Domestic	Ali
PC	DD / Surface Data Rep	ort Av	g Depth to Water Repor	t	Water Col	umn Report	
		Clear Form	iWATERS Menu	Help			
		WATER CO	LUMN REPORT 09/26/	/2008			
POD Number	(quarters are	1=NW 2=NE 3=S biggest to sm Sec q q q Zo	allest)	Depth Y Well	Depth Water	Water Column	(in feet)
No Records fo	ound, try again						

#### Siting Criteria for the Strawberry #1 Below Grade Tank

- 1. Ground water is not less than 50-feet below the bottom of the below grade tank. Ground water is greater than 100-feet below the bottom of the below grade tank (See Hydrogeologic Report).
- 2. The below grade tank is not within 300-feet of a continuously flowing water course, or 200 feet of any other watercourse, lakebed, sinkhole, or playa lake (measured from ordinary high water mark). See the attached Topographic map (Exhibit 2) and Visual Inspection Certification of the location and area around the subject below grade tank.
- 3. The below grade tank is not within 300-feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. See the attached Satellite Image (Exhibit 3) and Visual Inspection certification of the location and area around the subject below grade tank.
- 4. The below grade tank is not within 500-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. See the attached NM Office of the State Engineer iWATERS database search (Exhibit 4) and Visual Inspection certification of the location and area around the subject below grade tank.
- 5. The below grade tank is not located within the incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978 Section 3-27-3, as amended. See the attached Topographic map of the location and area around the subject below grade tank.
- 6. The below grade tank is not located within 500-feet of a wetland. See the attached Topographic map and Visual Inspection Certification of the location and area around the subject below grade tank.
- The below grade tank is not located within the area overlying a subsurface mine. See the attached Mine, Mills and Quarry Map of New Mexico (New Mexico, EMND 2008) (Exhibit 5) showing the location and area around the subject pit.
- 8. The below grade tank is not located within an unstable area. See the attached Topographic map of the location and area around the subject below grade tank.
- 9. The below grade tank is not located within a 100-year floodplain area. See the attached FEMA map (Exhibit 6) of the 100 year floodplain showing the location and area around the subject pit.

#### Strawberry #1 Below Grade Tank Visual Inspection Certification

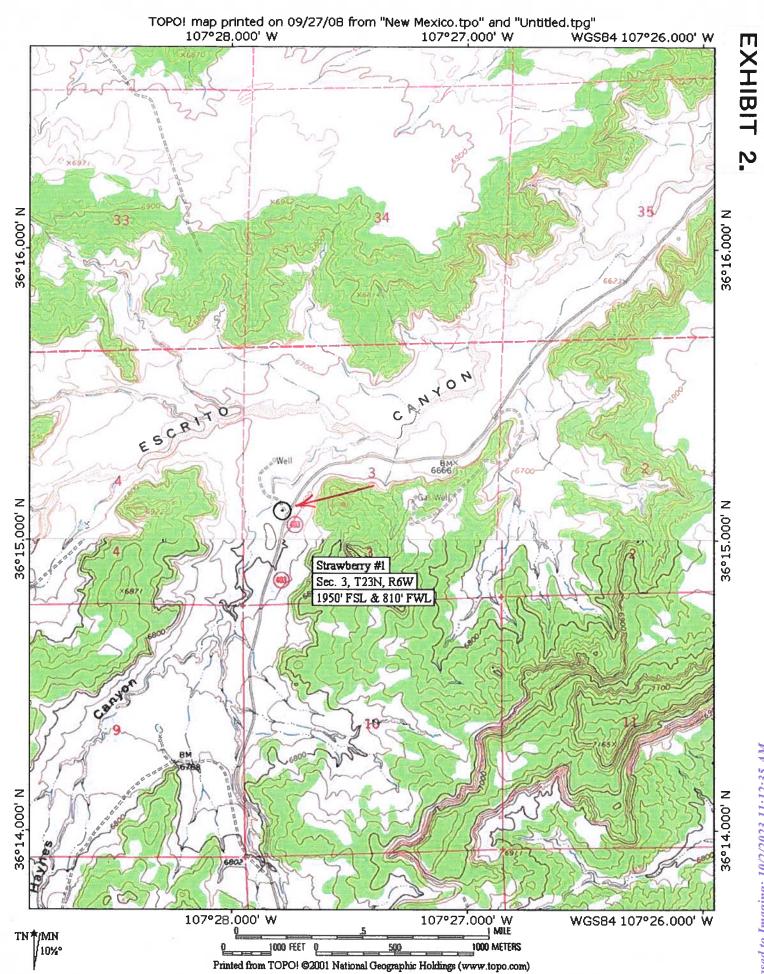
I, Kurt Fagrelius, Vice President of Exploration for Dugan Production Corp. 709 East Murray Drive, Farmington, New Mexico hereby certify that I or persons under my direct supervision, prepared the attached exhibits and conducted a Visual Inspection of the location and area around the Strawberry #1 below grade tank (July 28, 2008). The location of the Strawberry #1 below grade tank is in compliance with all siting criteria and standards for below grade tanks established by the State of New Mexico, Energy Minerals and Natural Resources Department 19.15.17.10 NMAC.

Kurt Fagartin Kurt Fagrelius

October 30, 2008 Date

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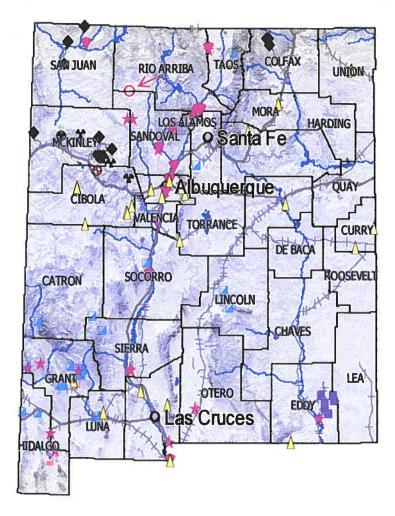
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EXHIBIT 4.

	Y:	Zone:	Search	n Radius:	
Basin	:		Number:	Suffix:	
	(Last)		Non-Do	omestic Domestic	All
ata Report	Αν	g Depth to Water I	Report	Water Column Repo	ort
	Clear Form	iWATERS Mer	nu Help		
	ata Report	Basin: (Last) ata Report Ave	Basin: (Last) ata Report Avg Depth to Water F	Basin: Number: (Last) Non-Do	Basin:       Number:       Suffix:         (Last)       Non-Domestic       Domestic         ata Report       Avg Depth to Water Report       Water Column Report

POD Number	-		e biggest to Sec q q q	 x	¥	Depth Well	Depth Water	(in	feet)
No Records found	try ag	ain							

No Records found, try again



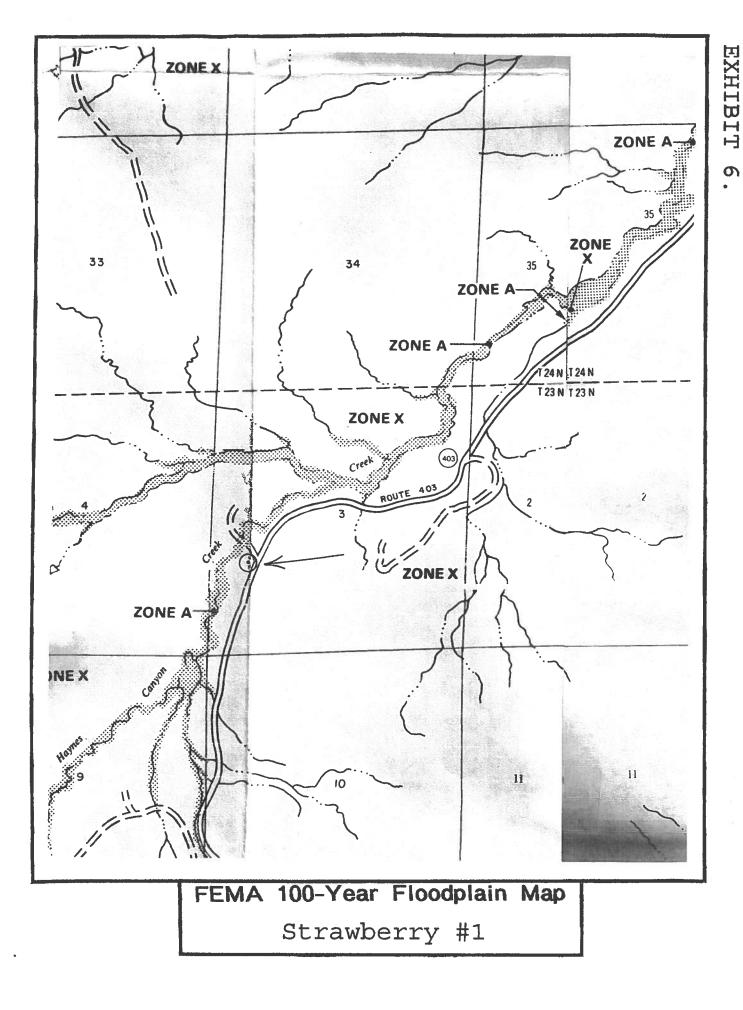
# Mine, Mills and Quarry Map of New Mexico

Dugan Production Corp.

Strawberry #1

Taken from the New Mexico Energy, Minerals and Natural Resources Department. Mining and Minerals Division.

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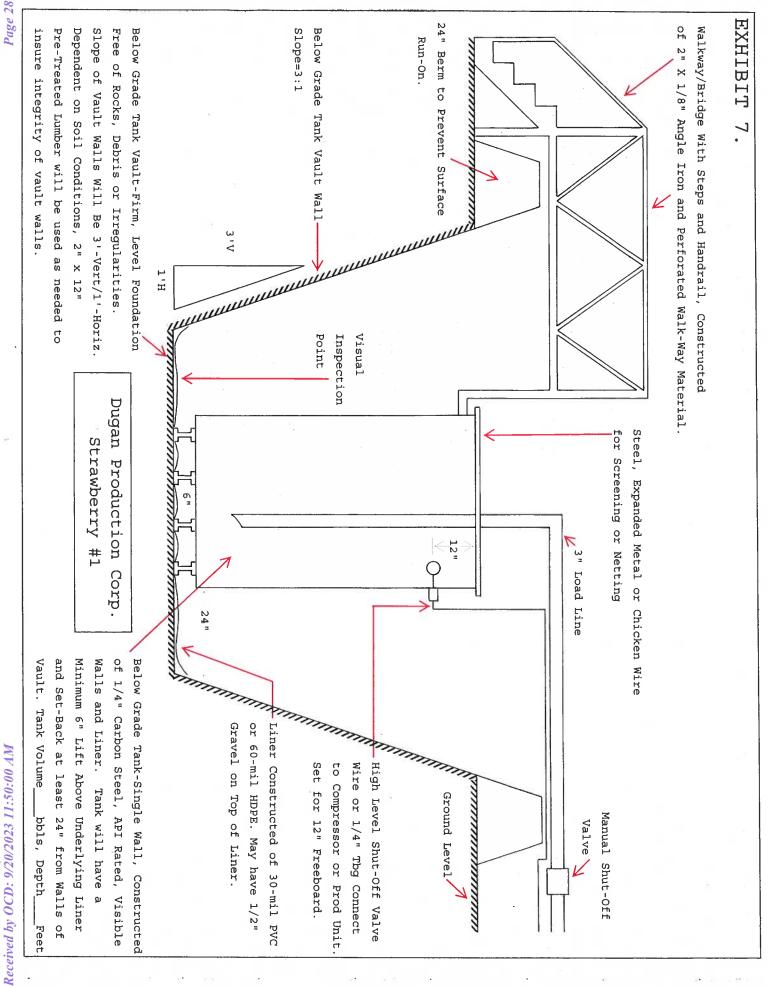


### Strawberry #1 Below Grade Tank Design and Construction Plan

The Strawberry #1 below grade tank will be designed and constructed in accordance with the following requirements:

- 1. Below grade tank will be designed and constructed to contain liquids and solids, prevent contamination of fresh water and protect the public health and environment (Exhibit 7).
- 2. Stockpile topsoil prior to digging below grade tank vault, keep separate from subsoil and use as final cover and fill when closing below grade tank vault.
- 3. Sign-12" by 24" with operator name, lease name, well #, location (unit letter, qtr/qtr, Sect., Twp., and Rge.) and emergency phone #'s will be posted on location. Sign will be posted in a location where it can be easily read.
- 4. Fencing around the Strawberry #1 below grade tank will be constructed and operated in a manner that prevents unauthorized access and shall be maintained in good condition to protect the public and wildlife. Fencing will include a 4-foot hog wire fencing with two strands of barbed wire or top rail of re-bar or pipe on top. See the attached request for Administrative Approval. If the Strawberry #1 below grade tank were located within 1000 feet of a house, school, hospital or church, a chain link fence at least six feet in height with at least two strands of bared wire on top would be constructed.
- 5. The Strawberry #1 below grade tank will be covered with steel, expanded metal or chicken wire for screening or netting on top of the tank.
- 6. Strawberry #1 below grade tank will be designed and constructed to ensure the confinement of liquids and prevent unauthorized releases. Pit will be constructed with a firm, level foundation and interior slopes, smooth and free of rocks or sharp edges to prevent punctures, cracks or indentations of the liner or tank bottom. Slope walls of the below grade tank vault will be constructed with a 3'vertical x 1' horizontal slope to prevent collapse of the walls. Dependent on soil conditions, 2"x12" pre-treated lumber will be used as needed to insure integrity of vault walls. Properly operating, high level shut off valve and manual control valves will be installed (valve will close when fluid reaches 12 inches from top of tank) to prevent overflow of tank. Berms (24 inches in height) will be constructed around the perimeter of the below grade tank vault to prevent overflow of the tank vault in the event the high level shut off valve fails and the below grade tank overflows and also prevent the collection and entrapment of surface water.
- 7. Strawberry #1 below grade tank will be constructed of materials resistant to the tank's particular contents and resistant to damage from sunlight. Tank will be API rated and constructed of carbon steel with a wall thickness of <sup>1</sup>/<sub>4</sub>".
- 8. Liner will be 30-mil flexible PVC or 60-mil HDPE, string reinforced, impervious material, resistant to UV light, hydrocarbons, salt, acidic or basic liquids. The liner will have a hydraulic conductivity less than 1 x 10-9 cm/sec. Liner compatibility will comply with EPA SW-846 Method 9090A. A specification sheet on properties of liner material to be used will be provided to the NMOCD prior to installation.

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- 9. The Strawberry #1 below grade tank will be constructed with single walled sides and bottom, which will be open for visual inspection for leaks. The below grade tank will be elevated a minimum of 6-inches above the underlying ground surface and set back at least 24" from walls of vault. The below grade tank will be underlain with a geo-membrane liner designed to divert any leaked fluid to a visual inspection point. Liner may be covered with gravel.
- 10. The Strawberry #1 below grade tank will be equipped with a properly operating automatic high-level shut-off control device (valve will close when fluid reaches 12 inches from top of tank) and manual controls to prevent overflows.
- 11. Diversionary berms, ditches or sloping will be constructed as necessary to prevent overflow and the collection of surface water entrapment.
- 12. A walkway/bridge with steps and handrail, will be constructed of 2"x1/8" angle iron and perforated walk-way material to provide personnel access to the top of below grade tank.

### Strawberry #1 Below Grade Tank Maintenance and Operation Plan

The Strawberry #1 below grade tank will be maintained and operated in accordance with the following requirements:

- 1. The Strawberry #1 below grade tank will be operated and maintained to contain liquids and solids and maintain the integrity of the tank / liner system or secondary containment system to prevent contamination of fresh water and protect public health and environment. Design features which include containment berms and high level shut off valves and manual shut off valves will be constructed to insure containment of liquids and solids (Exhibit 7). Steel tank will be set level, with a minimum of 6 inches of lift underlain by a liner (sloped to one corner) on top of a firm, smooth foundation bottom (vault floor) will be constructed providing visual leak detection to insure tank integrity.
- 2. All fluids collected in the below grade tank and below grade tank vault will be recycled, reused, reclaimed or disposed of in a manner approved by NMOCD rules.
- 3. Do not dispose of solid waste, trash, debris or hazardous material into the below grade tank or the below grade tank vault.
- 4. If the Strawberry #1 below grade tank develops a leak or if a penetration occurs below the liquids surface, all liquid will be removed above the damage or leak line within 48-hours. The NMOCD office will be notified within 48-hours of the discovery. The below grade tank / liner system or secondary containment system will then be either modified, retrofitted or replaced in accordance with Subsection I of 19.15.17.11 NMAC. If applicable, the replacement or retrofit below grade tank / liner system or secondary containment system will meet the design and construction requirements of rule 19.15.17.11 NMAC.

In the event a spill or undesirable event occurs, the provisions of rule 19.15.3.116 NMAC may apply. If considered a "Major Release" (any fluid greater than 25-bbls; any volume which results in fire, or will reach a water course, or may endanger public health, or results in substantial property or environmental damage; any gas greater than 500-mcf; any volume detrimental to water or exceeding established standards) verbal notice will be provided to the NMOCD Santa Fe Environmental Bureau Chief (Wayne Price at 505-476-3490) and Aztec District OCD (Brandon Powell at 505-334-6178) offices within 24-hours of discovery of leak, plus written notice will be provided to the NMOCD Aztec and Santa Fe Environmental Bureau within 15-days after discovery, using C-141. If considered a "Minor Release" (any fluid greater than 5-bbls but less than or equal to 25-bbls or any gas greater than 50-mcf but less than 500-mcf, written notice using Form C-141 will be provided to the NMOCD Santa Fe Environmental Bureau Chief in Santa Fe and the Aztec District OCD office. The Bureau of Land Management will be notified in accordance with the provisions of BLM NTL-3A.

- 5. Below grade tank will be constructed and operated in a manner that prevents the tank from over flow and prevents surface water from entering the pit. Diversion berms will be constructed around the sides of pit and an automatic high level shut-off will be installed.
- 6. Any measurable oil will be continuously removed from the Strawberry #1 below grade tank to prevent a significant accumulation of oil overtime.

7. The Strawberry #1 below grade tank will be inspected at least monthly and records of each inspection will be maintained for five years. The below grade monitoring report to be used, is shown below. Integrity inspections of fencing, berms, below grade tank, screening, below grade tank, vault slopes and leak detection will be made and recorded. Any solid waste, trash, debris or hazardous material in the below grade tank or below grade tank vault will be noted and removed. High level shut off valve and manual shut off valve will be tested to insure valves are operating properly. Freeboard and fluid levels in the below grade tank will be recorded, monitored and removed (See #2, Maintenance and Operation Plan) as needed. Records wills be used to assist in scheduling frequency of future fluid removal.

Check and Record Integrity			Trash	Trash Note and Pick-Up Check for Proper Operation				Freeboard	Fluid Level	Signature				
Date	Fence	Berms	Tank	Tank	Vault	Leak	Tank \	Vault	Location		Manual	Minimum 12"		
				Screen	Slopes	Detect.				Shut off valve	Shut off valve	Top - Down	Bottom - Up	
												·		
							l							
Ao/Yr	<b> </b>	0 - 0	and F	= Fair, P	- Dees		V		N = No	0 = 0	d, B = Bad		a Inches	Monitor's

8. Adequate freeboard will be maintained to prevent overtopping of the Strawberry #1 below grade tank. High level shut off valves will close when fluid reaches 12 inches from top of tank.

## Strawberry #1 Below Grade Tank Closure Plan-Methods, Procedures and Protocols

1. Comply with deadlines for closure of a pit or below grade tank established by the State of New Mexico, Energy Minerals and Natural Resources Department 19.15.17.13 NMAC, or an earlier date if required by the NMOCD in the case of imminent danger to fresh water, public health or the environment.

Existing	Permit Applc. Submittal or	File Closure Plan By	Stop Use By	Close By
On June 16, 2008	Modification Request			
Temporary Pit - Unlined	Not Permtd under 19.15.17	7/16/2008	Upon drlg rig release	9/16/2008
Permanent Pit - Unlined or Lined	Not permitted with NMOCD	7/16/2008	6-16-2008	12/16/2008
Permanent Pit - Unlined	Permitted with NMOCD	12-16-2008	6-16-2010	6-16-2011
BGT-Aprvd. Design	Not Permtd under 19.15.17	12/16/2008	failed integrity replc	
	Applc. by 9-16-2008		w/apprvd design	
BGT-Not Aprvd Design Nor Retrofit	Not Permtd under 19.15.17	12/31/2008	<mark>6/16/2013</mark>	<mark>6-16-2013</mark>
to Comply w/19.15.17	Mod. Rqust by 9-16-2008			
BGT-Not Aprvd Design Nor Retrofit	NA	12/16/2008	6/16/2013	6/16/2013
to comply w/19.15.17				
Permanent Pit-Design and Constr	Mod. Rqust by 12-16-2008	12/16/2008	failed integrity replc	60-days after cessation
Does not comply w/19.15.17	Comply w/in 18-mos of aprvl	submit w/mod request	w/apprvd design	
permitted and lined				
Permanent Pit-Design and Constr	Permit Applc by 12-16-2008	12/16/2008		60-days after cessation
Does not comply w/19.15.17	Comply w/in 18-mos of aprvl	submit w/permit Applc		-
Registered and Lined				
Permanent Pit	Permitted under 19.15.17	60-Days prior to close		
Temporary Pit	Permitted under 19.15.17	Prior to closure	Upon drlg rig release	6-mos after rig release
BGT	Permitted under 19.15.17	12/16/2013	failed integrity replc	60-days after cessation
		or prior to closure	w/apprvd design	

- 2. Provide the NMOCD district office at least 72-hours notice but no greater than 1 week prior to any closure operations. Notice will include operator name, well name and number, API number, and location (unit letter, section, township and range).
- 3. The Strawberry #1 below grade tank is not an approved design under rule 19.15.17. Upon approval of this application, the existing below grade tank will be closed and a new below grade tank that complies with the design requirements of rule 19.15.17 as illustrated in the design plan (Exhibit 7) will be constructed.

- 4. Below grade tank will be closed within 60-days after cessation of use or by 6-16-2013 whichever comes first.
- 5. Closure notice will be provided by certified mail to surface owner prior to closing the below grade tank. Proof of notice will be provided to the Environmental Bureau in the NMOCD Santa Fe office and attached to the final closure report.
- 6. Remove all liquid from below grade tank prior to closure and dispose of at the Dugan Production operated Sanchez O'Brien SWD #1 salt water disposal well (permit SWD-694) located 1650 feet from the South line and 990 feet from the West line (Unit L) of Section 6, Township 24 North, Range 9 West.
- 7. All solids from the below grade tank and all solids removed from the below grade tank vault will be excavated, hauled to and disposed of at either the Envirotech facility (permit #NM-01-0011) facility located in Section 6, Township 26 North, Range 10 West or the IEI facility (permit NM-01-0010B) located in Section 2, Township 29 North, Range 12 West.
- 8. Remove below grade tank and obtain prior approval from the NMOCD to dispose (in an approved NMOCD facility), recycle, reuse or reclaim the tank. Documentation of the final disposition of the tank will be provided to the NMOCD in the final closure report.
- 9. Remove pit liner system, if applicable and dispose of only the pit liner material at an NMOCD approved, solid waste facility (Waste Management's Crouch Mesa facility, San Juan County, New Mexico) in accordance with subparagraph (m) of Paragraph (1) of Subsection D of 19.15.9.712.
- 10. On site equipment associated with the below grade tank will be removed unless it is needed for some other purpose.
- 11. Collect at a minimum, a five point, composite sample; also, collect individual grab samples from any area that is wet, discolored or showing other evidence of a release; and analyze for Benzene, BTEX, TPH, GRO/DRO and chlorides to demonstrate that Benzene, BTEX, TPH, GRO/DRO and chlorides do not exceed the standards as specified in 19.15.17.13.E or the background chloride concentration, whichever is greater.

Components	Test Method	Limit (mg/kg)
Benzene	EPA SW-846 8021B or 8260B	0.2
BTEX	EPA SW-846 8021B or 8260B	50
ТРН	EPA SW-846 418.1	100
GRO/DRO	EPA SW-846 8015M	NS
Chlorides	EPA 300.1	250 or Background

- 12. The NMOCD will be notified of the testing results on form C-141.
- 13. If it is determined that a release has occurred, rule 19.15.3.116 NMAC and 19.15.1.19 NMAC will be complied with as required.

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- 14. If the sampling results demonstrate that a release has not occurred, or that any release does not exceed the concentrations specified above or background concentrations, the below grade tank vault will be backfilled with compacted, non-waste containing, earthen material.
- 15. Stockpiled sub-surface soil will be used to backfill below grade tank vault and re-contour (to a final or intermediate cover that blends with the surrounding topography). A minimum of four feet of compacted, non-waste containing, earthen material will be used as backfill.
- 16. Stockpiled surface soil will be used as a cover over the backfilled below grade tank vault and disturbed area no longer needed for production operations. The soil cover will include either the background thickness of top soil or one foot of suitable material to establish vegetation at the site whichever is greater. The soil cover will be constructed to the site's existing grade and prevent water collection or ponding and erosion of the cover material.
- 17. Disturbed areas will be seeded the first growing season after the below grade tank is closed. Seeding will be accomplished by drilling on contour whenever possible or by other division approved methods. BLM stipulated seed mixes will be used on all Federal lands and NMOCD approved seed mixes (administratively approved if required) will be used on all State or private lands. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. If alternate seed mix is required by the state, private owner or tribe, it will be implemented with administrative approval if needed. Seeding or planting will be continued until successful vegetative growth occurs.
- 18. The NMOCD will be notified within 60-days of closure of the below grade tank. The closure report will be filed on form C-144 and will include the following:
  - a. Proof of Closure Notice (surface owner and division)
  - b. Confirmation Sampling Analytical Results (if applicable)
  - c. Disposal Facility Name and Permit Number
  - d. Soil Backfilling and Cover Installation
  - e. Re-vegetation Application Rates and Seeding Technique
  - f. Site Reclamation (Photo Documentation)
- 19. The NMOCD will be notified once successful re-vegetation has been achieved.

#### Strawberry #1 Below Grade Tank Request for Administrative Approval

Administrative approval is hereby requested for an alternative to the fencing design for the Strawberry #1 below grade tank.

The request for administrative approval cited above is needed to help minimize environmental impact and increase safety and protect wildlife and public health. The alternative proposed will protect fresh water, public health, safety and the environment more effectively than the design and construction specifications established by the State of New Mexico, Energy Minerals and Natural Resources Department do in rule 19.15.17.11 NMAC.

<u>The proposed alternative fencing design</u> will include T-posts spaced 10-feet apart. Hog wire / field fence 4-feet in height will be strung tightly and anchored to the top and bottom of each T-post. Small holes (3" high X 6" wide) in the hog-wire will be located at ground level with increasing larger holes (up to 7" high X 6" wide) located at the top of the fence. Anchor braces will be put at all four corners to strengthen and tighten the fence. Two strands of barbed wire or a pipe / re-bar top rail will be constructed above the hog wire. This fence design (developed over the last 30-years) has proven to be very effective controlling unauthorized access to below grade tanks.

The existing rule (19.15.17.11.D.3) would require the operator to fence the below grade tank with a four foot fence that has at least four strands of barbed wire evenly spaced in the interval between on foot and four feet above the ground level. The proposed fencing alternative would provide better security against unauthorized access to below grade tanks. The smaller holes in hog-wire (3" X 6" up to 7" X 6") is more effective at controlling unauthorized access by the public and wildlife than 4-strands of barbed wire spaced 12" apart.

The proposed fence around the below grade tank will be constructed and operated in a manner that prevents unauthorized access and shall maintain the fence in good condition to protect the public and wildlife.

The request for administrative approval cited above is needed to help minimize environmental impact, increase safety and protect wildlife and public health. The alternatives proposed will protect fresh water, public health, safety and the environment more effectively than the design and construction specifications established by the State of New Mexico, Energy Minerals and Natural Resources Department do in rule 19.15.17.11 NMAC.

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

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

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

District IV

CONDITIONS

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

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

CONDITIONS

Operator:	OGRID:		
DUGAN PRODUCTION CORP	6515		
PO Box 420	Action Number:		
Farmington, NM 87499	267417		
	Action Type:		
	[C-144] Below Grade Tank Plan (C-144B)		
	·		

Created By	Condition	Condition Date
vvenegas	NMOCD has reviewed the closure plan submitted by [6515] DUGAN PRODUCTION CORP for a BGT associate with well 30-039-23076 STRAWBERRY #001 [3856]. The closure Plan has been approved with the following conditions of approval: The operator must meet the requirements of the rule, NMAC 19.15.17.13 Closure and Site Reclamation Requirements. If it is determined that a release has occurred, the operator must follow all applicable requirements of 19.15.29 NMAC which includes electronically filing a C-141 Form via OCD Permitting. The BGT closure report must include the automated/assigned Incident Number provided upon C-141 Form submittal. The operator should comply with NMAC 19.15.29 Releases, to delineate, remediate and close the incident.	10/2/2023

CONDITIONS

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Action 267417