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 April 3, 2017

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.

# Proposed Alternative Method Permit or Closure Plan Application

Type of action:  Below grade tank registration  Permit of a pit or proposed alternative method  Closure of a pit, below-grade tank, or proposed alternative method  BGT1  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
ease 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 vironment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.
•
Operator: Harvest Four Corners, LLC OGRID #: 37388
Address: 1755 Arroyo Dr., Bloomfield, NM 87413
Facility or well name: Richardson 11
API Number: <u>30-045-12178 Richardson #011 – Hilcorp (318679)</u> OCD Permit Number:
U/L or Qtr/Qtr NW/NW (D) Section 22 Township 31N Range 12W County: San Juan
Center of Proposed Design: Latitude 36.888632 Longitude -108.089858 NAD83
Surface Owner:  Federal  State  Private Tribal Trust or Indian Allotment
Pit: Subsection F, G or J of 19.15.17.11 NMAC
1 Fit: Subsection 1. O of J of 19.13.17.11 NIVIAC
— —
Temporary: Drilling Workover
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A ☐ Multi-Well Fluid Management ☐ Low Chloride Drilling Fluid ☐ yes ☐ no
□ Permanent       □ Emergency       □ Cavitation       □ P&A       □ Multi-Well Fluid Management       Low Chloride Drilling Fluid       □ yes       □ no         □ Lined       □ Unlined       Liner type: Thickness        mil       □ LLDPE       □ HDPE       □ PVC       □ Other
Temporary: Drilling Workover  Permanent Emergency Cavitation P&A Multi-Well Fluid Management Low Chloride Drilling Fluid yes no Lined Unlined Liner type: Thicknessmil LLDPE HDPE PVC Other  String-Reinforced
□ Permanent       □ Emergency       □ Cavitation       □ P&A       □ Multi-Well Fluid Management       Low Chloride Drilling Fluid       □ yes       □ no         □ Lined       □ Unlined       Liner type: Thickness        mil       □ LLDPE       □ HDPE       □ PVC       □ Other
Temporary: Drilling Workover  Permanent Emergency Cavitation P&A Multi-Well Fluid Management Low Chloride Drilling Fluid yes no Lined Unlined Liner type: Thicknessmil LLDPE HDPE PVC Other  String-Reinforced
Temporary: Drilling Workover  Permanent Emergency Cavitation P&A Multi-Well Fluid Management Low Chloride Drilling Fluid yes no Lined Unlined Liner type: Thicknessmil LLDPE HDPE PVC Other  String-Reinforced Liner Seams: Welded Factory Other Volume: bbl Dimensions: L x W x D  Below-grade tank: Subsection I of 19.15.17.11 NMAC
Drilling   Workover   Permanent   Emergency   Cavitation   P&A   Multi-Well Fluid Management   Low Chloride Drilling Fluid   yes   no   Lined   Unlined   Liner type: Thickness   mil   LLDPE   HDPE   PVC   Other   String-Reinforced   Liner Seams:   Welded   Factory   Other   Volume:   bbl Dimensions: L   x W   x D   String-Reinforced   X Welded   Subsection I of 19.15.17.11 NMAC   Wolume:   45   bbl Type of fluid: Produced water   Pounds   Pounds   Produced water   Produced wa
Drilling   Workover   Permanent   Emergency   Cavitation   P&A   Multi-Well Fluid Management   Low Chloride Drilling Fluid   yes   no   Lined   Unlined   Liner type: Thickness   mil   LLDPE   HDPE   PVC   Other   String-Reinforced   Volume:   bbl Dimensions: L   x W   x D   Melded   Factory   Other   Volume:   bbl Dimensions: L   x W   x D   Melded   Subsection I of 19.15.17.11 NMAC   Volume:   45   bbl Type of fluid:   Produced water   Tank Construction material:   Metal
Permanent   Emergency   Cavitation   P&A   Multi-Well Fluid Management   Low Chloride Drilling Fluid   yes   no   Lined   Unlined   Liner type: Thickness   mil   LLDPE   HDPE   PVC   Other   String-Reinforced   Liner Seams:   Welded   Factory   Other   Volume:   bbl Dimensions: L   x W   x D   Melance   Languagement   Low Chloride Drilling Fluid   yes   no   Lined   Unlined   Liner type: Thickness   mil   LLDPE   HDPE   PVC   Other   Languagement   Low Chloride Drilling Fluid   yes   no   Lined   Liner type: Thickness   mil   LLDPE   HDPE   PVC   Other   Languagement   Low Chloride Drilling Fluid   yes   no   Lined   Liner type: Thickness   mil   LLDPE   HDPE   PVC   Other   Languagement   Low Chloride Drilling Fluid   yes   no   Lined   Liner type: Thickness   mil   LLDPE   HDPE   PVC   Other   Low Chloride Drilling Fluid   yes   no   Lined   LLDPE   HDPE   PVC   Other   Languagement   Low Chloride Drilling Fluid   yes   no   Lined   LLDPE   HDPE   PVC   Other   Languagement   Low Chloride Drilling Fluid   yes   no   Lined   LLDPE   HDPE   PVC   Other   Languagement   Low Chloride Drilling Fluid   yes   no   Lined   LLDPE   HDPE   PVC   Other   Languagement   Low Chloride Drilling Fluid   yes   no   LLDPE   Nother   Languagement   Low Chloride Drilling Fluid   yes   no   Languagement   Low Chloride Drilling Fluid   yes   no   LLDPE   PVC   Other   Languagement   Low Chloride Drilling Fluid   yes   no   Languagement   yes   Languagement   yes   Languagement
Femporary: □ Drilling □ Workover □ Permanent □ Emergency □ Cavitation □ P&A □ Multi-Well Fluid Management □ Low Chloride Drilling Fluid □ yes □ no □ Lined □ Unlined □ Liner type: Thickness □ mil □ LLDPE □ HDPE □ PVC □ Other □ String-Reinforced □ Liner Seams: □ Welded □ Factory □ Other □ Volume: □ bbl □ Dimensions: L □ x W □ x D □ Nolume: □ 45 □ bbl □ Type of fluid: Produced water □ Tank Construction material: Metal □ Secondary containment with leak detection □ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off □ Visible sidewalls and liner □ Visible sidewalls only □ Other □ no liner □ Visible sidewalls only □ Other □ visible sidewalls only □ Other □ visible sidewalls only □ Other □ visible sidewalls only
Permanent   Emergency   Cavitation   P&A   Multi-Well Fluid Management   Low Chloride Drilling Fluid   yes   no   Lined   Unlined   Liner type: Thickness   mil   LLDPE   HDPE   PVC   Other   String-Reinforced   Liner Seams:   Welded   Factory   Other   Volume:   bbl Dimensions: L   x W   x D   Melance   Languagement   Low Chloride Drilling Fluid   yes   no   Lined   Unlined   Liner type: Thickness   mil   LLDPE   HDPE   PVC   Other   Languagement   Low Chloride Drilling Fluid   yes   no   Lined   Liner type: Thickness   mil   LLDPE   HDPE   PVC   Other   Languagement   Low Chloride Drilling Fluid   yes   no   Lined   Liner type: Thickness   mil   LLDPE   HDPE   PVC   Other   Languagement   Low Chloride Drilling Fluid   yes   no   Lined   Liner type: Thickness   mil   LLDPE   HDPE   PVC   Other   Low Chloride Drilling Fluid   yes   no   Lined   LLDPE   HDPE   PVC   Other   Languagement   Low Chloride Drilling Fluid   yes   no   Lined   LLDPE   HDPE   PVC   Other   Languagement   Low Chloride Drilling Fluid   yes   no   Lined   LLDPE   HDPE   PVC   Other   Languagement   Low Chloride Drilling Fluid   yes   no   Lined   LLDPE   HDPE   PVC   Other   Languagement   Low Chloride Drilling Fluid   yes   no   LLDPE   Nother   Languagement   Low Chloride Drilling Fluid   yes   no   Languagement   Low Chloride Drilling Fluid   yes   no   LLDPE   PVC   Other   Languagement   Low Chloride Drilling Fluid   yes   no   Languagement   yes   Languagement   yes   Languagement
Femporary: □ Drilling □ Workover □ Permanent □ Emergency □ Cavitation □ P&A □ Multi-Well Fluid Management □ Low Chloride Drilling Fluid □ yes □ no □ Lined □ Unlined □ Liner type: Thickness □ mil □ LLDPE □ HDPE □ PVC □ Other □ String-Reinforced □ Liner Seams: □ Welded □ Factory □ Other □ Volume: □ bbl □ Dimensions: L □ x W □ x D □ Nolume: □ 45 □ bbl □ Type of fluid: Produced water □ Tank Construction material: Metal □ Secondary containment with leak detection □ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off □ Visible sidewalls and liner □ Visible sidewalls only □ Other □ no liner □ Visible sidewalls only □ Other □ visible sidewalls only □ Other □ visible sidewalls only □ Other □ visible sidewalls only

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  Alternate. Please specify Four ft high welded fence (hog wire) which may include top rebar rail or barbed wire or combination			
6.			
Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks)			
☐ Screen ☑ Netting ☐ Other_Expanded metal			
☐ 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			
Signed in compliance with 19.15.16.8 NMAC  No sign – tank scheduled for removal			
8. Variances 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.			
Exception(s). Requests must be submitted to the Santa Fe Environmental Buleau 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 of the compliance for each siting criteria below in the application.	ptable source		
material are provided below. Siting criteria does not apply to drying pads or above-grade tanks.			
Consulsiting			
General siting			
Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank.	☐ Yes ⊠ No		
- MM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	□ 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	⊠ NA		
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance	□ Vas □ Na		
adopted pursuant to NMSA 1978, Section 3-27-3, as amended. (Does not apply to below grade tanks)	Yes No		
- Written confirmation or verification from the municipality; Written approval obtained from the municipality			
Within the area overlying a subsurface mine. (Does not apply to below grade tanks)	☐ Yes ☐ No		
- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division			
Within an unstable area. (Does not apply to below grade tanks)	☐ Yes ☐ No		
- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map			
Within a 100-year floodplain. (Does not apply to below grade tanks)  - FEMA map			
Below Grade Tanks			
Delow Grade Taliks			
Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured	☐ Yes ⊠ No		
from the ordinary high-water mark).  - Topographic map; Visual inspection (certification) of the proposed site			
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			
- Privi Office of the State Engineer - TwATERS database search; visual inspection (certification) of the proposed site			
Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)			
Within 100 fact of a continuously flaving watercourse or any other significant watercourse or within 200 fact of any labels of a significant watercourse or within 200 fact of any labels of a significant watercourse or within 200 fact of any labels of a significant watercourse or within 200 fact of any labels of a significant watercourse or within 200 fact of any labels of a significant watercourse or within 200 fact of any labels of a significant watercourse or within 200 fact of any labels of a significant watercourse or within 200 fact of any labels of a significant watercourse or within 200 fact of any labels of a significant watercourse or within 200 fact of any labels of a significant watercourse or within 200 fact of any labels of a significant watercourse or within 200 fact of any labels of a significant watercourse or within 200 fact of any labels of a significant watercourse or within 200 fact of any labels of a significant watercourse or within 200 fact of any labels of a significant watercourse or within 200 fact of any labels of a significant watercourse or within 200 fact of any labels of a significant watercourse or within 200 fact of any labels of a significant watercourse or within 200 fact of any labels of a significant watercourse or within 200 fact of a significant watercourse or within			
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.)	☐ Yes ☐ No		
- Topographic map; Visual inspection (certification) of the proposed site			

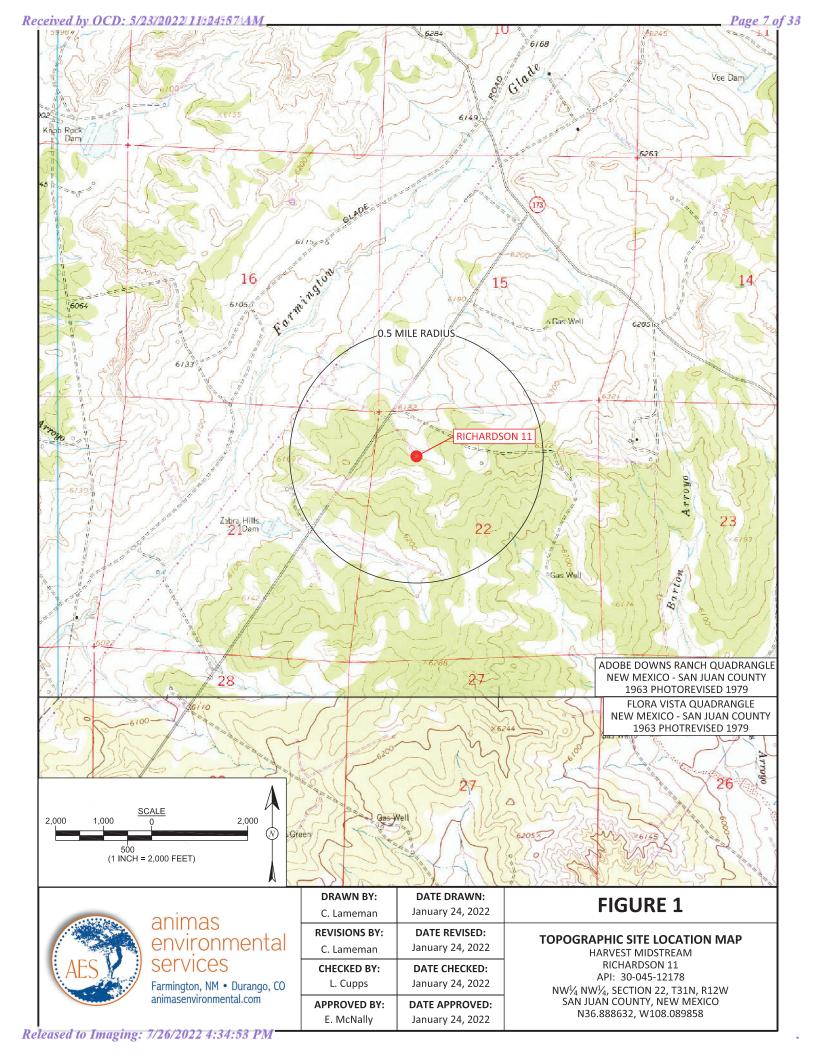
Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application.  - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image		
Within 200 horizontal feet of a spring or a private, domestic fresh 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		
Within 100 feet of a wetland.  - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site		
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	Yes No	
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	☐ 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	
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		
<ul> <li>initial application.</li> <li>NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site</li> </ul>	☐ 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 NMAC  Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.    Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC   Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC   Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC   Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC   Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC   Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC    Previously Approved Design (attach copy of design)   API Number: or Permit Number: _		
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  Previously Approved Design (attach copy of design) API Number: or Permit Number:		
LI Freviously Approved Design (attach copy of design) API Number: or Permit Number:		

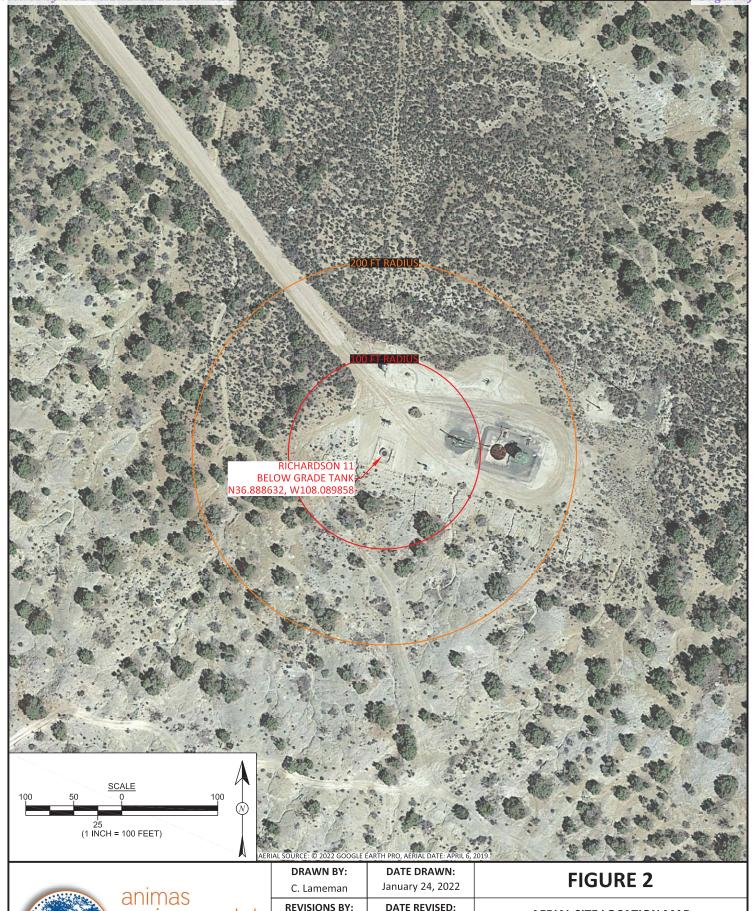
Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC  Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the attached.	documents are	
Hydrogeologic Report - based upon the requirements of Paragraph (1) 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		
<ul> <li>☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC</li> <li>☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC</li> <li>☐ Quality Control/Quality Assurance Construction and Installation Plan</li> </ul>		
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		
<ul> <li>Nuisance or Hazardous Odors, including H₂S, Prevention Plan</li> <li>Emergency Response Plan</li> <li>Oil Field Waste Stream Characterization</li> </ul>		
☐ 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 F	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		
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.  ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC ☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection 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		
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. P. 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   NA		
Ground water is more than 100 feet below the bottom of the buried waste.  - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells    Yes   No   NA		
Within 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		
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 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.  - 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 houndaries 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  N				
Within the area overlying a subsurface mine Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No			
Within an unstable area.  - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological				
Society; Topographic map	☐ Yes ☐ No			
Within a 100-year floodplain FEMA map	☐ Yes ☐ No			
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.  Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC  Proof of Surface Owner Notice - based upon the appropriate requirements of 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 19.15.17.11 NMAC  Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.13 NMAC  Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC  Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of 19.15.17.13 NMAC  Waste Material Sampling Plan - based upon the appropriate requirements of 19.15.17.13 NMAC  Siting Criteria Complian - based upon the appropriate requirements 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				
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 below.	ief.			
Name (Print): Monica Smith Title: Environmental Specialist				
Signature: Date: 2/8/2022				
e-mail address: msmith@harvestmidstream.com  Telephone: _(505) 632-4625				
18.  OCD Approval: Permit Application (including closure plan) X Closure Plan (only) OCD Conditions (see attachment)				
OCD Representative Signature: Victoria Venegas Approval Date: 03/11	/2022			
Title: Environmental Specialist OCD Permit Number: BGT1				
Closure Report (required within 60 days of closure completion): 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 is required to be submitted to the division within 60 days of the completion of the closure activities. Please do no section of the form until an approved closure plan has been obtained and the closure activities have been completed.  Closure Completion Date:				
20.  Closure Method:  Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-l ☐ If different from approved plan, please explain.	oop systems only)			
Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please in 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 private land only) □ Plot Plan (for on-site closures and temporary pits) □ Confirmation Sampling Analytical Results (if applicable) □ Waste Material Sampling Analytical Results (required for on-site closure) □ Disposal Facility Name and Permit Number □ Soil Backfilling and Cover Installation □ Re-vegetation Application Rates and Seeding Technique □ Site Reclamation (Photo Documentation) ○ On-site Closure Location: Latitude □ NAD: □192				

22.	
Operator Closure Certification:	
I hereby certify that the information and attachments submitted with this closure repobleief. I also certify that the closure complies with all applicable closure requirement	
Name (Print): Monica Smith	Title: Environmental Specialist
Signature: Monicas moth	Date:5/23/2022
e-mail address: msmith@hravestmidstream.com	Telephone:505-632-4625

OCD Closure Report Approval: Jaclyn Burdine Jaclyn Burdine, Environmental Specialist-A; 7/26/2022; BGT1







# animas environmental services

Farmington, NM • Durango, CO animasenvironmental.com

DRAWN DT.	DATE DRAWN.
C. Lameman	January 24, 2022
REVISIONS BY:	DATE REVISED:
C. Lameman	January 24, 2022
CHECKED BY:	DATE CHECKED:
L. Cupps	January 24, 2022
APPROVED BY:	DATE APPROVED:
E. McNally	January 24, 2022

### **AERIAL SITE LOCATION MAP**

HARVEST MIDSTREAM
RICHARDSON 11
API: 30-045-12178
NW¼ NW¼, SECTION 22, T31N, R12W
SAN JUAN COUNTY, NEW MEXICO
N36.888632, W108.089858

### **RICHARDSON 11**

Site Specific Hydrogeology

A visual site inspection confirming the information contained herein was performed on the well 'RICHARDSON 11', which is located at 36.88880 degree, North latitude and 108.08949 degree, West longitude. This location is located on the Abode Downs Ranch 7.5' USGS topographic quadrangle. This location is in Section 22 of Township 31 North Range 12 West of the Public Land Survey System (New Mexico Principal Meridian). This location is located in San Juan County, New Mexico. The nearest town is La Plata, located 6.4 miles to the northwest. The nearest large town (population greater than 10,000) is Farmington, located 12.5 miles to the southwest (National Atlas). The nearest highway is State Highway 574, located 0.9 miles to the northeast. The location is on BLM land. This location is in the Middle San Juan Arizona, Colorado, New Mexico, Subbasin. This location is located 1908 meters or 6258 feet above sea level and receives 13 inches of rain each year. The vegetation at this location is classified as Inter-Mountain Basins Semi-Desert Grassland as per the Southwest Regional Gap Analysis Project.

The estimated depth to ground water at this point is 298 feet. This estimation is based on the data published on the New Mexico Engineer's NMWRSS Database website and water depth data from ConocoPhillips' Cathodic wells. The nearest stream is eleven hundred feet to the north and is classified by the USGS as an intermittent stream. The nearest perennial stream is 3,227 feet to the southwest. The nearest water body is 3,219 feet to the southwest. It is classified by the USGS as an intermittent lake and is 2.2 acres in size. The nearest spring is 34,818 feet to the east. All stream, river, water body and spring information was determined as per the USGS Hydrographic Dataset (High Resolution), downloaded 3/2008. The nearest water well is 8,019 feet to the northwest. The slope at this location is 4 degrees, to the north as calculated from USGS 30M National Elevation Dataset. This information is also discerned from the aerial and topographic map included. The surface geology at this location is NACIMIENTO FORMATION—Shale and sandstone with a Shale dominated formations of all ages substrate. The soil at this location is 'Blancot-Notal association, gently sloping' and is well drained and not hydric with moderate erosion potential as taken from the NRCS SSURGO map unit, downloaded January 2008.

### Regional Geological context:

The Nacimiento Formation is of Paleocene age (Baltz, 1967, p. 35). It crops out in a broad band inside the southern and western margins of the central basin and in a narrow band along the west face of the Nacimiento Uplift. The Nacimiento is a nonresistant unit and typically erodes to low, rounded hills or forms badland topography.

The Nacimiento Formation occurs in approximately only the southern two-thirds of the San Juan Basin where it conformably overlies and intertongues with the Ojo Alamo Sandstone (Fassett 1974 p. 2.29). The Nacimiento Formation grades laterally into the main part of the Animas Formation (F) Issett at 1971.

p. 34); thus, in this area, the two formations occupy the same stratigraphic interval.

Strata of the Nacimiento Formation were deposited in lakebeds in the central basin area with lesser deposition in stream channels (Brimhall, 1973, p. 201). In general, the Nacimiento consists of drab, interbedded black and gray shale with discontinuous, white, medium- to very coarse grained arkosic sandstone (Stone e al., 1983, p.30). Stone et al. indicated that the formation may contain more sandstone-than commonly reported because some investigators assume the slope-forming strata in the unit area.

shales, whereas in many places the strata actually are poorly consolidated sandstones. Total thickness of the Nacimiento Formation ranges from about 500 to 1,300 feet. The unit generally thickens from the basin margins toward the basin center (Steven et al., 1974). The sandstone deposits within the Nacimiento Formation are much thinner than the total thickness of the formation because their environment of deposition was localized stream channels (Brimhall, 1973, p. 201). The thickness of the combined San Jose, Animas, and Nacimiento Formations ranges from 500 to more than 3 500 feet.

### **Hydraulic Properties:**

Reported well yields for 53 wells completed in either the Animas or Nacimiento Formations range from 2 to 90 gallons per minute and the median yield is 7.5 gallons per minute. The primary use of water from Nacimiento and Animas Formations is domestic and livestock supplies. There are no known aquifer tests for the Animas or Nacimiento Formations, but specific capacities reported for six wells range from 0.24 to 2.30 gallons per minute per foot of drawdown (Levings et al., 1990).

The Animas and Nacimiento Formations are in many ways hydrologically similar to the San Jose Formation because sands in both units produce approximately the same quantities of water. However, the greater percentage of fine materials in the Animas and Nacimiento Formations may restrict downward vertical leakage to the Ojo Alamo Sandstone or Kirtland Shale. The poorly cemented fine material is highly erodible, forms a badland terrain, and supports only spotty vegetation. These conditions are more conductive to runoff than retention of precipitation.

### References:

Baltz, E.H., 1967, Stratigraphy and regional tectonic implications of part of Upper Cretaceous rocks, east-central San Juan Basin, New Mexico: USGS Professional Paper 552, 101 p.

Brimhall, R.M., 1973, Ground-water hydrology of Tertiary rocks of the San Juan Basin, New Mexico, in Fassett, J.E., ed., Cretaceous and Tertiary rocks of the Southern Colorado Plateau: Four Corners Geological Society Memoir, p. 197-207.

Fassett, J.E., 1974, Cretaceous and Tertiary rocks of the eastern San Juan Basin, New Mexico and Colorado, in Guidebook of Ghost Ranch, central-northern New Mexico: New Mexico Geological Society, 25th Field Conference, p. 225-230.

Fassett, J.E., and Hinds, J.S., 1971, Geology and fuel resources of the Fruitland Formation and Kirtland Shale of the San Juan Basin, New Mexico and Colorado: USGS Professional Paper 676, 76 p. 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: USGS Hydrologic Investigations Atlas HA-720-A, 2 sheets.

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.

# **Site Specific Hydrogeology Addendum**

Harvest does not have access to the referenced depth to water data from the ConocoPhillips' cathodic wells. Since there are three water wells located approximately 0.85 miles from the Richardson 11 site with depths to water ranging from 64 to 88 feet bgs, Harvest will utilize the closure standards for depths to water between 51-100 feet as noted in the attached Table 1 for the Richardson 11 BGT.

New Mexico Office of the State Engineer

# Active & Inactive Points of Diversion

(with Ownership Information)

No PODs found.

PLSS Search:

Section(s): 22

Range: 12W Township: 31N The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

ACTIVE & INACTIVE POINTS OF DIVERSION

10/6/21 9:21 PM



**BGT Siting Criteria - Summary Information Sheet** 19.15.17.10(A.8) NMAC Site Name: Richardson 11 Pit Identifier: **BGT** API #: 30-045-12178 Lat/Long: 36.888632, -108.089858 Qtr/Qtr-Section-Township-Range: NW/NW (D)-22-31N-12W Land Jurisdiction: Federal County: San Juan Determination made by: Lany Cupps (Environmental Coordinator) Date: 2/8/2022 **Depth to Groundwater Determination** No 🗸 Is groundwater less than 25 feet below the bottom of below grade tank? Yes Cathodic Report/Site Specific Hydrogeology H.G. report indicates depth to groundwater is about 298' bgs Elevation Differential Water Wells none in section - 3 wells located within 1 mile of site DTW 64-88 ft Cathodic Report Nearby Wells --**Distance to Waterbodies** Is the BGT within 100 feet of a continuously flowing watercourse, significant Yes No 🗸 watercourse, lake bed, sinkhole, wetland or playa lake? Nearest continuously flowing watercourse, significant An unnamed significant watercourse that drains to watercourse, lake bed, sinkhole, wetland or playa lake Farmington Glade is 1100 ft to the NNW (measured from the ordinary high-water mark): **Distance to Water Sources** Is the BGT within 200 horizontal feet of a spring or fresh water well used for public Yes 🗌 No 🗸 or livestock consumption?

No springs or registered wells within 200 feet

Springs or wells within 200 feet:

# Harvest Four Corners LLC Closure Plan - Below Grade Tanks

In accordance with Rule 19.15.17.13 NMAC of the New Mexico Administrative Code (NMAC), the information within this document describes the closure requirements to be used by Harvest Four Corners LLC (Harvest) when closing Below Grade Tanks (BGTs). This is Harvest's standard procedure for all BGTs. A separate closure plan will be submitted for any BGT closure which does not conform to this plan.

Pit Rule Citation (NMAC)	Rule Requirement	Operator Requirements
19.15.17.13.A		This plan describes Harvest proposed closure methods and the proposed procedures and protocols to implement and complete BGT closure.
19.15.17.13.C(1)		Prior to commencing BGT closure, Harvest will obtain a NMOCD approved closure plan before any closure activities start. Harvest understands that the NMOCD considers the start of closure for a BGT is when the BGT is being removed from the ground.
19.15.17.13.C(2)	Closure Plan	Harvest will remove liquids and sludge from a BGT prior to commencing closure actions and will dispose the material in a NMOCD approved facility.
19.15.17.13.C.3(a)		Following removal of the tank and any liner material, Harvest will test the soils beneath the BGT in accordance with 19.15.17.13.C.3(a) NMAC. Samples will be collected from beneath the liner and/or BGT for obvious stained or wet soils, or any other evidence of contamination.
19.15.17.13.C.3(b)		If any contaminant concentration is higher than the parameters listed in Table I of 19.15.17.13 NMAC, the NMOCD may require additional delineation upon review of the results and Harvest must receive approval before proceeding with closure.
19.15.17.13.C.3(c)		Upon completion of BGT removal, if all contaminant concentrations are less than or equal to the parameters listed in Table I of 19.15.17.13 NMAC, the excavation will be backfilled with non-waste contained, uncontaminated, earthen material.
19.15.17.13.E(1)	Notification	Notice of closure will be given to the surface owner at least 72 hours, but not more than one week, prior to any closure operation via Certified mail. As a variance (if approved with the closure plan), surface owners which are public entities (State, BLM, or Tribal) will be notified by email or phone. The notification of closure will include the following: operators name, well name and API number (if applicable), and location (ULSTR).
19.15.17.13.E(2)	Notification	Notice of Closure will be given to the NMOCD office at least 72 hours, but not more than one week, prior to any closure operation via Certified mail. As a variance (if approved with the closure plan), the NMOCD district office will be notified by email or phone. The notification of closure will include the following: operators name, well name and API number (if applicable), and location (ULSTR).
19.15.17.13.F(1)	Reporting	Operator will send the NMOCD a closure report in accordance with 19.15.17.F(1) NMAC within 60 days of closure including the following items: Proof of closure notice, analytical results, backfill information, revegetation, and photo documentation of reclamation. Harvest understands that the NMOCD considers the closure date the day in which the BGT is backfilled and re-contoured. Revegetation is still required but, may be addressed in closure report.
19.15.17.13.G.4(a)		Within 60 days of cessation of operations, Harvest will remove liquids and sludge from a BGT prior to implementing a closure method and will dispose of the material in a NMOCD approved facility. Disposal facilities to be used by Harvest are listed below based on the listed waste types.
19.15.17.13.G.4(b)	Timing	Within 6 months of cessation of operations, Harvest will dispose, recycle, reuse, or reclaim the BGT in a NMOCD approved manner. If required, Harvest will provide documentation of the disposition of the BGT to the NMOCD. Liner materials will be cleaned to remove soils or contaminated material for disposal as solid waste. Disposal facilities to be used by Harvest are listed below based on the listed waste types.
19.15.17.13.H.1(a)		Harvest will reclaim the area by substantially restoring the impacted surface area to the condition that existed prior to oil and gas operations by placement of soil cover as described below for 19.15.17.13.H.2 NMAC. The location and associated areas will be recontoured that approximates the original contour and blends with the surrounding topography and revegetate as described below for 19.15.17.13.H.5 NMAC.
19.15.17.13.H.1(b)	Reclamation	Harvest will submit an alternative plan to be approved by the NMOCD and written approval from the surface owner before submitting the C-144 application.
19.15.17.13.H.1(c)		If a BGT is removed from an area where production operations will continue, the area will be reclaimed in such a way to minimize dust and erosion to the extent practicable.
19.15.17.13.H.2		Cover will include one foot of suitable material, with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, to establish vegetation at the site, or the background thickness of topsoil, whichever is greater.
19.15.17.13.H.4		Harvest will construct the soil cover to the existing grade to prevent ponding of water and erosion of the cover material.

### Harvest Four Corners LLC Closure Plan - Below Grade Tanks

Pit Rule Citation (NMAC)	Rule Requirement	Operator Requirements
19.15.17.13.H.5(a) 19.15.17.13.H.5(b) 19.15.17.13.H.5(c) 19.15.17.13.H.5(d) 19.15.17.13.H.5(e)	Reclamation	For those portions of the former BGT area no longer in use with the exception where production operations will continue, the area will be reclaimed as nearly as practicable to their original condition or their final land use. Reclamation will begin as early as practical. The areas will be maintained to minimize dust and topsoils placed and contoured to limit erosion control, maintain stability, and preserve surface-water flow patterns. Harvest will seed the disturbed areas the first favorable growing season following closure of the BGT. Harvest will comply with obligations imposed by other applicable federal or tribal agencies in which their re-vegetation and reclamation requirements provide equal or better protection of fresh water, human health and the environment. Harvest will notify the NMOCD when reclamation and re-vegetation is complete.

Summary of Waste Materials and Disposal Facilities		
Waste Types Disposal Facility		
Steel Tank	San Juan County Landfill; Steel Recycling	
Fiberglass Tank	San Juan County Landfill; Bondad Landfill; Re-use	
Liner (cleaned – absent soil / sludge)	San Juan County Landfill; Bondad Landfill	
Sludge	Envirotech; Industrial Ecosystems Inc.; T-N-T; Bondad Landfill	
Liquids (Water / Hydrocarbons)	Basin Disposal; Key Energy; T-N-T	
Contaminated Soil	Envirotech; Industrial Ecosystems Inc.; T-N-T; Bondad Landfill	
Fencing / Miscellaneous	Re-use or Scrap	

Closure Criteria for Soils Beneath Below Grade T	Table 1	d with Closed Loop Systems and Pits w	here contents are Removed
Depth Below Bottom of pit to groundwater less than	Constituent	Method	Limit**
10,000 mg/l		3000000	
	Chloride	EPA 300.0	600 mg/kg
	TPH	EPA SW-846	100 mg/kg
		Method 418.1	7
≤50 feet	BTEX	EPA SW-846	50 mg/kg
	Mod Sole	8021B or 8260B	5- 10 SOURCE (SEC.)
	Benzene	EPA SW-846	10 mg/kg
		8021B or 8260B	
	Chloride	EPA 300.0	10,000 mg/kg
	TPH	EPA SW-846	2,500 mg/kg
		Method 418.1	
	GRO+DRO	EPA SW-846	1,000 mg/kg
51 feet - 100 feet		Method 8015M	
	BTEX	EPA SW-846	50 mg/kg
		8021B or 8260B	<u> </u>
	Benzene	EPA SW-846	10 mg/kg
		8021B or 8260B	2007 - 1985 
	Chloride	EPA 300.0	20,000 mg/kg
	TPH	EPA SW-846	2,500 mg/kg
		Method 418.1	V
	GRO+DRO	EPA SW-846	1,000 mg/kg
>100 feet		Method 8015M	N 322 322
	BTEX	EPA SW-846	50 mg/kg
		8021B or 8260B	
	Benzene	EPA SW-846	10 mg/kg
		8021B or 8260B	

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

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

Action 79779

### **CONDITIONS**

Operator:	OGRID:
Harvest Four Corners, LLC	373888
1111 Travis Street	Action Number:
Houston, TX 77002	79779
	Action Type:
	[C-144] Below Grade Tank Plan (C-144B)

### CONDITIONS

С	reated By		Condition Date
,	vvenegas	None	3/11/2022

# **Lany Cupps**

From: Auto-Receipt <noreply@mail.authorize.net>

Sent: Tuesday, February 08, 2022 2:25 PM

**To:** Lany Cupps

**Subject:** Transaction Receipt from EMNRD OCD for \$150.00 (USD)

Order Informatior

Description: Goods or Services

PO Number S9TRY-220208-C-144B

**Shipping Information** 

**Billing Information** 

Karen Lupton PO Box 8

Farmington, NM 87499

US

lcupps@animasenvironmental.com

5055642281

Total: \$150.00 (USD)

Payment Information

Date/Time: 8-Feb-2022 14:25:25 MST

Transaction ID: 43208291958
Payment Method: Visa xxxx5169
Transaction Type: Purchase
Auth Code: 005615

Merchant Contact Information

EMNRD OCD Santa Fe, NM 87505

US

ocdfees@state.nm.us

# Monica Smith

From: Monica Smith

Sent: Thursday, March 24, 2022 11:43 AM

To: Joyner, Ryan N; Victoria.Venegas@state.nm.us; OCD.Enviro@state.nm.us

Cc: Powell, Brandon, EMNRD

Subject: RE: Harvest Four Corners, LLC - Notice of Scheduled BGT Removal - Richardson 11

Harvest Four Corners, LLC hereby provides notice of intent to remove the following below grade tank (BGT) located on Federal Land:

Location Name: Richardson 11 API Number: 30-045-12178

Tank Description: 45 BBL Produced Water BGT

Legal Description: Qtr/Qtr NWNW (D) Section 22, Township 31N, Range 12W

GPS Coordinates: 36.888632, -108.089858

Closure plan Approved: March 11, 2022

Landowner: Federal

Scheduled Start Date/Time: Monday March 28, 2022 between 10:00 am – 11:00 am

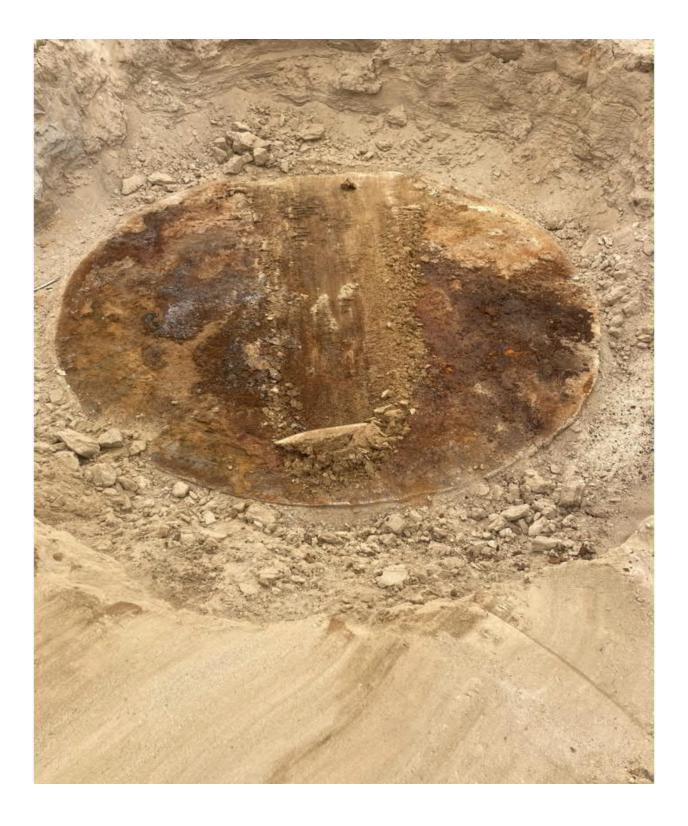
Please let me know if there you need any additional information.

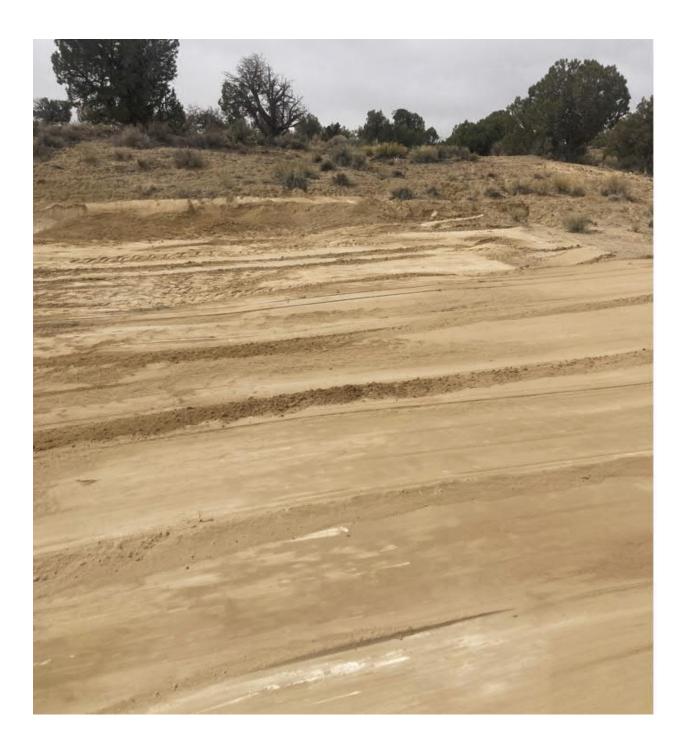
Thank You,
Monica Smith
Harvest Four Corners, LLC
msmith@harvestmidstream.com
(505) 632-4625 - office
(505) 947-1852 - cell











	Reme	diation Excavation an	d Sampling Form	
Site Name	Richardson	# 11		
	Dimensions (feet			
		9'0"	Width 4/a"	Denth
	iagram and Sam		vvidin	Бериі
		ion extents, visual observati	ons, sample locations, n	orth arrow, etc.)
			The said	
	./	41 #2		
		9 2		
		# <		
		#5		
		#5 #3 44		
ample Inform				
ample Inform	nation	#3 44		
CD Witness S		#3 44		
OCD Witness S gency(s) Repr	nation Sampling Yes or resentative(s)	#3 44	Location	
OCD Witness S gency(s) Repr Sample ID	nation Sampling Yes or resentative(s)	Type (Composite, Grab)	Location (Floor, Sidewall)	Comments
OCD Witness S gency(s) Repr	nation Sampling Yes or resentative(s)	₩3 ₩ 4		Comments
OCD Witness S gency(s) Repr Sample ID	nation Sampling Yes or resentative(s)	Type (Composite, Grab)	(Floor, Sidewall)	Comments
OCD Witness S gency(s) Repr Sample ID	nation Sampling Yes or resentative(s)	Type (Composite, Grab)	(Floor, Sidewall)	Comments
OCD Witness S gency(s) Repr Sample ID	nation Sampling Yes or resentative(s)	Type (Composite, Grab)	(Floor, Sidewall)	Comments



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

April 14, 2022

Stanley Dean

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413 TEL: (505) 632-4475

FAX:

RE: Richardson 11 OrderNo.: 2203F63

### Dear Stanley Dean:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/30/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

and st

4901 Hawkins NE

Albuquerque, NM 87109

# **Analytical Report**

Lab Order **2203F63**Date Reported: **4/14/2022** 

# Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest Client Sample ID: Bottom

 Project:
 Richardson 11
 Collection Date: 3/28/2022 11:00:00 AM

 Lab ID:
 2203F63-001
 Matrix: SOIL
 Received Date: 3/30/2022 7:55:00 AM

Analyses	Result	RL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analyst:	LRN
Chloride	ND	60	mg/Kg	20	4/2/2022 6:23:24 AM	66584
EPA METHOD 8015M/D: DIESEL RANGE ORG	ANICS				Analyst	SB
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	4/1/2022 1:04:33 AM	66507
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	4/1/2022 1:04:33 AM	66507
Surr: DNOP	95.6	51.1-141	%Rec	1	4/1/2022 1:04:33 AM	66507
EPA METHOD 8015D: GASOLINE RANGE					Analyst	BRM
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	3/31/2022 1:39:29 PM	66501
Surr: BFB	93.0	37.7-212	%Rec	1	3/31/2022 1:39:29 PM	66501
EPA METHOD 8021B: VOLATILES					Analyst:	BRM
Benzene	ND	0.024	mg/Kg	1	3/31/2022 1:39:29 PM	66501
Toluene	ND	0.049	mg/Kg	1	3/31/2022 1:39:29 PM	66501
Ethylbenzene	ND	0.049	mg/Kg	1	3/31/2022 1:39:29 PM	66501
Xylenes, Total	ND	0.098	mg/Kg	1	3/31/2022 1:39:29 PM	66501
Surr: 4-Bromofluorobenzene	95.8	70-130	%Rec	1	3/31/2022 1:39:29 PM	66501

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 5

# **QC SUMMARY REPORT**

# Hall Environmental Analysis Laboratory, Inc.

WO#: 2203F63 14-Apr-22

**Client:** Harvest

Chloride

**Project:** Richardson 11

Sample ID: MB-66584 SampType: mblk TestCode: EPA Method 300.0: Anions

Client ID: PBS Batch ID: 66584 RunNo: 86923

Prep Date: 4/1/2022 Analysis Date: 4/2/2022 SeqNo: 3072196 Units: mg/Kg

Analyte SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual

Chloride ND 1.5

Sample ID: LCS-66584 SampType: Ics TestCode: EPA Method 300.0: Anions

Client ID: LCSS Batch ID: 66584 RunNo: 86923

Analysis Date: 4/2/2022 Prep Date: 4/1/2022 SeqNo: 3072197 Units: mg/Kg

15.00

SPK value SPK Ref Val %REC LowLimit %RPD **RPDLimit** PQL HighLimit Qual Analyte 0

93.2

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix interference

Analyte detected in the associated Method Blank

Analyte detected below quantitation limits

Sample pH Not In Range

Reporting Limit

Page 2 of 5

# **OC SUMMARY REPORT**

# Hall Environmental Analysis Laboratory, Inc.

SampType: MBLK

WO#: **2203F63** 

14-Apr-22

Client: Harvest
Project: Richardson 11

Sample ID: MB-66507

Sample ID: LCS-66507 SampType: LCS TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: LCSS Batch ID: 66507 RunNo: 86887 Prep Date: 3/30/2022 Analysis Date: 3/31/2022 SeqNo: 3069715 Units: mg/Kg Analyte SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) 45 68.9 50.00 90.1 135 Surr: DNOP 3.8 5.000 75.1 51.1 141

TestCode: EPA Method 8015M/D: Diesel Range Organics

Client ID: PBS Batch ID: 66507 RunNo: 86887 Prep Date: 3/30/2022 Analysis Date: 3/31/2022 SeqNo: 3069718 Units: mg/Kg Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Diesel Range Organics (DRO) ND 10 Motor Oil Range Organics (MRO) ND 50 Surr: DNOP 8.9 10.00 88.8 51.1 141

Sample ID: 2203F63-001AMS SampType: MS TestCode: EPA Method 8015M/D: Diesel Range Organics Batch ID: 66507 RunNo: 86887 Client ID: **Bottom** Prep Date: 3/30/2022 Analysis Date: 4/1/2022 SeqNo: 3070122 Units: mg/Kg %RPD **RPDLimit PQL** SPK value SPK Ref Val %REC HighLimit Qual Analyte Result LowLimit Diesel Range Organics (DRO) 9.9 48 49.46 5.049 87.1 36.1 154 Surr: DNOP 82.3 51.1 141 4.1 4.946

Sample ID: 2203F63-001AMSD SampType: MSD TestCode: EPA Method 8015M/D: Diesel Range Organics Client ID: Bottom Batch ID: 66507 RunNo: 86887 Prep Date: 3/30/2022 Analysis Date: 4/1/2022 SeqNo: 3070123 Units: mg/Kg SPK value SPK Ref Val %REC %RPD **RPDLimit** Qual Analyte Result LowLimit HighLimit 5.049 Diesel Range Organics (DRO) 63 50.30 114 36.1 154 26.0 33.9

5.030

4.5

### Qualifiers:

Surr: DNOP

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank

89.1

51.1

141

0

0

- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 3 of 5

# **OC SUMMARY REPORT**

# Hall Environmental Analysis Laboratory, Inc.

WO#: **2203F63** 

14-Apr-22

Client: Harvest
Project: Richardson 11

Sample ID: 2203f63-001ams SampType: MS TestCode: EPA Method 8015D: Gasoline Range Client ID: Bottom Batch ID: 66501 RunNo: 86898 Prep Date: 3/30/2022 Analysis Date: 3/31/2022 SeqNo: 3070009 Units: mg/Kg Analyte **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) 29 4.9 118 70 24.70 130 Surr: BFB 2200 988.1 222 37.7 212 S

Sample ID: 2203f63-001amsd SampType: MSD TestCode: EPA Method 8015D: Gasoline Range Client ID: Bottom Batch ID: 66501 RunNo: 86898 3/30/2022 SeqNo: 3070010 Prep Date: Analysis Date: 3/31/2022 Units: mg/Kg Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 70 Gasoline Range Organics (GRO) 31 4.8 24.22 128 130 6.10 20 Surr: BFB 2300 232 37.7 S 969.0 212 0

Sample ID: Ics-66501 SampType: LCS TestCode: EPA Method 8015D: Gasoline Range Client ID: LCSS Batch ID: 66501 RunNo: 86898 Analysis Date: 3/31/2022 Prep Date: 3/30/2022 SeqNo: 3070030 Units: mg/Kg SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Result **PQL** Gasoline Range Organics (GRO) 27 0 72.3 5.0 25.00 107 137 Surr: BFB 2100 1000 212 37.7 212

Sample ID: mb-66501 SampType: MBLK TestCode: EPA Method 8015D: Gasoline Range Client ID: PBS Batch ID: 66501 RunNo: 86898 Prep Date: 3/30/2022 Analysis Date: 3/31/2022 SeqNo: 3070031 Units: mq/Kq SPK value SPK Ref Val %REC **PQL** LowLimit HighLimit %RPD **RPDLimit** Qual Gasoline Range Organics (GRO) ND 5.0 970 97.1 Surr: BFB 1000 37.7 212

### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 4 of 5

# **QC SUMMARY REPORT**

# Hall Environmental Analysis Laboratory, Inc.

WO#: **2203F63** 

14-Apr-22

Client: Harvest
Project: Richardson 11

Sample ID: LCS-66501	SampT	ype: <b>LC</b>	s	Tes	tCode: El	PA Method	8021B: Volat	iles		
Client ID: LCSS	Batch ID: 66501			RunNo: 86898						
Prep Date: 3/30/2022	Analysis D	oate: <b>3/</b> 3	31/2022	SeqNo: <b>3070054</b>			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.88	0.025	1.000	0	88.4	80	120			
Toluene	0.90	0.050	1.000	0	90.4	80	120			
Ethylbenzene	0.90	0.050	1.000	0	90.1	80	120			
Xylenes, Total	2.7	0.10	3.000	0	91.5	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	70	130			

Sample ID: <b>mb-66501</b>	Sampl	SampType: <b>MBLK</b> Batch ID: <b>66501</b>			TestCode: EPA Method 8021B: Volatiles					
Client ID: PBS	Batcl				RunNo: 86898					
Prep Date: 3/30/2022	Analysis Date: 3/31/2022			SeqNo: <b>3070055</b>			Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.97		1 000		97.0	70	130			

### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 5 of 5



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109

TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com

# Sample Log-In Check List

Client Name: Harvest	Work Order Num	ber: 2203F63		RcptNo: 1	
Received By: Tracy Casarrubias	3/30/2022 7:55:00	АМ			
Completed By: Tracy Casarrubias	3/30/2022 8:52:00	АМ			
Reviewed By: DAD 3/30/22					
Chain of Custody					
1. Is Chain of Custody complete?		Yes 🗸	No 🗌	Not Present	
2. How was the sample delivered?		Courier			
<u>Log In</u>					
3. Was an attempt made to cool the sam	nples?	Yes 🗸	No 🗌	NA 🗆	
4. Were all samples received at a temper	rature of >0° C to 6.0°C	Yes 🗸	No 🗌	NA 🗌	
5. Sample(s) in proper container(s)?		Yes 🗸	No 🗌		
6. Sufficient sample volume for indicated	test(s)?	Yes 🗸	No 🗌		
7. Are samples (except VOA and ONG) p	roperly preserved?	Yes 🗸	No 🗌		
8. Was preservative added to bottles?		Yes	No 🗸	NA 🗆	
9. Received at least 1 vial with headspace	e <1/4" for AQ VOA?	Yes	No 🗌	NA 🔽	
10. Were any sample containers received	broken?	Yes	No 🗸		
11. Does paperwork match bottle labels?		Yes 🗸	1	# of preserved pottles checked for pH:	
(Note discrepancies on chain of custod 12. Are matrices correctly identified on Cha	• •	V		(<2 or >12 unl Adjusted?	ess noted)
3. Is it clear what analyses were requested		Yes 🗸	No □ No □	Adjusted?	
14. Were all holding times able to be met? (If no, notify customer for authorization.		Yes 🗹	No 🗆	Checked by: 5/2	3/30/22
Special Handling (if applicable)	,				
15. Was client notified of all discrepancies	with this order?	Yes	No 🗌	NA 🗹	
Person Notified:	Date:	Marie and the second se	COACH STREET,		
By Whom:	Via:	eMail P	hone  Fax	In Person	
Regarding:	THE STATE STATE OF THE STATE OF				
Client Instructions:		A STATE OF THE PARTY OF THE PARTY OF THE PARTY.	The set of property and the states of property and	ewoment reservoirement for transmir and trades.	
16. Additional remarks:					
Cooler Information         Condition           Cooler No         Temp °C         Condition           1         0.9         Good	Seal Intact Seal No Yes	Seal Date	Signed By		

Received b 0CD: 5/23/2022	(N no Y) səldduð niv	/				Page 32 of 33
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Chain-of Client: Harvest Mailing Address: 1755 Arro- Phone #: 505-6	Accreditation  Date Time Matrix	5-28-22				3-27-229,004m Date: Time: 3/29/72   1863
O     <b>E</b>     <u>E</u>   b		2				3-29-22 Date:

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

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

Action 109294

### **CONDITIONS**

Operator:	OGRID:
Harvest Four Corners, LLC	373888
1111 Travis Street	Action Number:
Houston, TX 77002	109294
	Action Type:
	[C-144] Below Grade Tank Plan (C-144B)

### CONDITIONS

Created By		Condition Date
jburdine	None	7/26/2022