

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-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: MORNINGSTAR OPERATING, LLC	OGRID: 330132
Contact Name: MIKE HOWE	Contact Telephone: (505) 330-3058
Contact email: mhowe@ctfieldsvcs.com	Incident #: nAPP2227139978
Contact mailing address: 400 W 7 th St., Fort Worth, TX 76102	

Location of Release Source

Latitude 36.970000 Longitude -107.336111
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: CARRACAS 23A #004	Site Type: WELL
Date Release Discovered: 09/27/2022	API# (if applicable): 30-039-27550

Unit Letter	Section	Township	Range	County
D	23	32N	5W	RIO ARRIBA

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (Name: _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input checked="" type="checkbox"/> Produced Water	Volume Released (bbls): 45	Volume Recovered (bbls): 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:

The Rig consultant (Pete McNeil) reported that the drying pad filled with fresh water based drilling fluid mixed with coal cuttings overflowed when ground gave way under the outward containment berm and lost 6" of height.

Form C-141

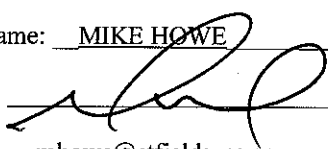
Page 2

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release? Estimated volume (based on length, width, and depth of drilling solids containment berm and sluff height is 44.5 bbl.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Notice of Release submitted to OCD on 9/28/2022.	

Initial Response*The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury*

<input checked="" type="checkbox"/> The source of the release has been stopped. <input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment. <input checked="" type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. <input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>MIKE HOWE</u>	Title: <u>PRODUCTION FOREMAN</u>
Signature: 	Date: <u>12-30-22</u>
email: <u>mhowe@ctfieldsvcs.com</u>	Telephone: <u>(505) 330-3058</u>
OCD Only	
Received by: <u>Nelson Velez</u> - Nelson Velez	Date: <u>01/05/2023</u>

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>>100</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☐ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☐ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141

Page 4

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Mike Howe Title: Production ForemanSignature:  Date: 12-30-22email: mhowe@ctfieldsvcs.com Telephone: (505) 330-3058**OCD Only**Received by: Nelson Velez - Nelson Velez Date: 01/05/2023

MorningStar Operating, LLC's Carracas 23A #004 Soil Sampling Plan

December 2022

Prepared for



***MorningStar Operating, LLC
400 W 7th St
Fort Worth, Texas 76102
Phone: (505) 330-3058***

Developed by



***EIS Environmental & Permitting Solutions, LLC.
479 Wolverine Drive #9
Bayfield, Colorado 81122
Phone: (970) 884-4080***

TABLE OF CONTENTS

1.0 Project Description2

1.1 Project Introduction 2

1.1.1 Spill Site Photos..... 3

1.1.2 Initial Remediation Site Photos 6

2.0 Proposed Soil Sampling for Site.....12

3.0 Remediation and Closure.....12

Attachment I – Table I Closure Criteria for Soils Impacted by a Release13

Attachment II – Maps14

LIST OF TABLES

Table 1-1. Spill and Reclamation Area Data 2

Soil Sampling Plan

Operator	MorningStar Operating, LLC (MorningStar)
Location Name	Carracas 23A #004
Legal Location	Section 23, Township 32 North, Range 5 West
API	30-039-27550
Incident ID	nAPP2227139978

This soil sampling plan has been prepared by EIS Environmental & Permitting Solutions, LLC. (EIS Environmental) for MorningStar Operating, LLC (MorningStar) to meet the requirements and guidelines of the New Mexico Oil Conservation Division (NMOCD) NMAC 19.15.29. This plan describes the spill, the extent of the spill, cleanup that has occurred thus far, and proposed soil sampling plan.

The MorningStar contact person for this soil sampling plan is:

Mike Howe
 Production Foreman
 MorningStar Operating, LLC
 400 W 7th St
 Fort Worth, Texas 76102
 505-330-3058

1.0 Project Description

1.1 Project Introduction

The Carracas 23A #004 well is located in Section 23, Township 32 North, Range 5 West within the Carson National Forest in New Mexico. The vegetative community consists of a mature ponderosa pine canopy with a gambles oak shrub understory. The natural topography of this location consists of a southeast aspect with approximately 0.092 slope (10% grade) prior to the disturbance. The well pad itself has a southeast aspect and approximately a 0.014 slope (1% grade).

Table 1-1. Spill and Reclamation Area Disturbance Acreage

Spill/Release Area	0.18 ac
Total Initial Remediation Area	0.28 ac

The release occurred on September 27, 2022, during the drilling of a new well, when the cuttings pit became overfilled, and the pit berm collapsed. The overfilling and berm failure resulted in a spill releasing approximately 45 BBL of freshwater and coal cuttings down gradient. The release made its way down gradient of the site for a distance of approximately 890 linear feet. After discovering the spill, MorningStar contacted the OCD and Carson National Forest Service, and began initial cleanup of the affected area. Hand crews and a skid-steer were utilized to clean up the soils in the area that had staining and odor within the flow path. Approximately 60 cubic yards of contaminated soil were removed. A Notice of Release (NOR) was filed with the NMOCD when the spill occurred by Samanntha Avarello with MorningStar on September 28, 2022. A site inspection following the initial clean-up efforts for the spill was conducted on December 2, 2022, with Mike Howe of MorningStar, Tanner Paulek and Greg Riley of EIS Environmental. During the inspection, an inventory of existing site conditions was conducted; mapping of the spill flow path; a discussion of the clean-up efforts that had occurred, including contaminated soil removed and general impacts of the spill.

1.1.1 Spill Site Photos



Figure 1. Pit with Produced Water and Coal Cuttings



Figure 2. Point of Spill



Figure 3. Flow Path of Spill



Figure 4. Flow Path of Spill



Figure 5. Flow Path of Spill



Figure 6. Flow Path of Spill

1.1.2 Initial Remediation Site Photos



Figure 7. Start of Spill After Cleanup



Figure 8. Flow Path After Cleanup



Figure 9. Flow Path After Cleanup



Figure 10. Flow Path After Cleanup



Figure 11. Flow Path After Cleanup



Figure 12. Flow Path After Cleanup



Figure 13. Flow Path After Cleanup



Figure 14. Flow Path After Cleanup



Figure 15. Flow Path After Cleanup



Figure 16. Flow Path After Cleanup



Figure 17. Flow Path After Cleanup



Figure 18. Flow Path After Cleanup

01/05/2023 - NV

the applicable reclamation standards
per 19.15.29.13D (1) - see also
**Procedures for Implementation
of the Spill Rule (19.15.29
NMAC)** document dated
September 6, 2019

2.0 Proposed Soil Sampling for Site

EIS Environmental, on behalf of MorningStar, proposes a sampling methodology of collecting a discreet sample every 400 square feet within the release flow path (22 samples in total) along with four background samples upgradient of the impacted area (See Attachment II) utilizing ~~NMAC Table I~~ **Closure Criteria for Soils Impacted by a Release** (See Attachment I). All samples will be hand augured to a depth of 1 foot or to a restrictive layer. All samples will be transported via ice and analyzed utilizing EPA 300 approved series.

The nearest Point of Diversion (POD) indicating a domestic water well is approximately 14,500' to the east and is at a depth of 800'. Looking at the NMOCD's data on the Carracas 23A #004, the top of the Ojo Alamo formation is 3,264 feet. Looking at a cathodic well that was drilled near the Carracas 18B #003 well, which is approximately 2.12 miles to the NE, water was found at a depth of 230'. As a result, we have concluded that depth to groundwater (DTGW) is estimated to be greater than 100 feet. As such, the closure criteria of soils in Table I >100 feet will be utilized.

01/05/2023 - NV

the applicable reclamation
standards per 19.15.29.13D (1)

3.0 Remediation and Closure

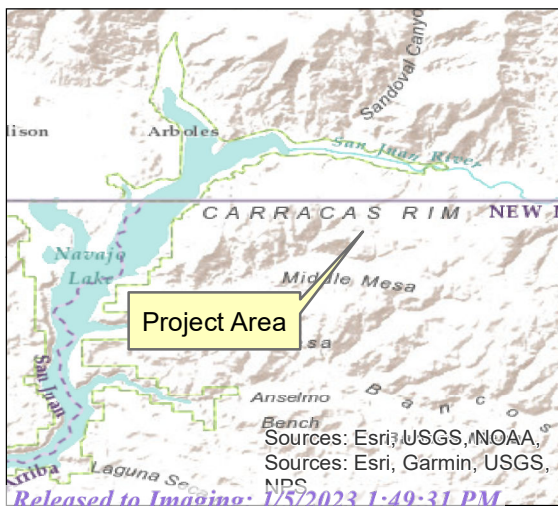
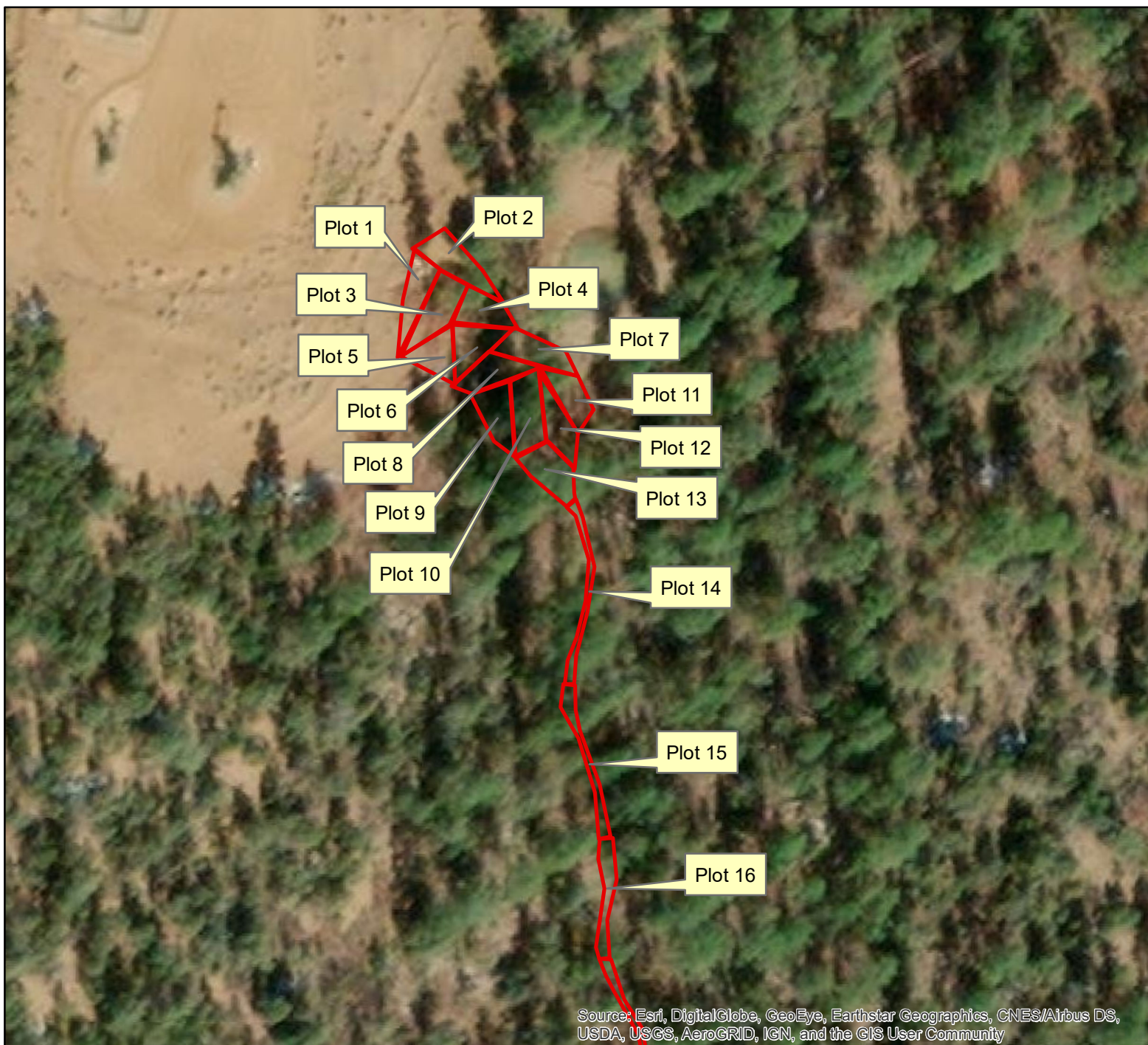
As mentioned above, initial cleanup and remediation occurred immediately after the release. Based on sampling results from this proposed plan, if levels of contaminants exceed ~~Table 1 (ground water greater the 100 feet)~~, MorningStar will submit a remediation plan to further remediate and reclaim the impacted area. If the samples come back clean and levels of contaminants are below ~~the Table 1 (ground water greater the 100 feet)~~, MorningStar will pursue the closure of the incident with NMOCD via a C-141 based on the remediation and reclamation that has already occurred. The Carson National Forest will be consulted for any required reclamation of the area to meet their reclamation standards.

Attachment I – Table I Closure Criteria for Soils Impacted by a Release

Table I Closure Criteria for Soils Impacted by a Release			
Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/l TDS	Constituent	Method*	Limit**
≤ 50 feet	Chloride***	EPA 300.0 or SM4500 Cl B	600 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	100 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg
51 feet-100 feet	Chloride***	EPA 300.0 or SM4500 Cl B	10,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg
>100 feet	Chloride***	EPA 300.0 or SM4500 Cl B	20,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

Attachment II – Maps

Carracus 23A #004 Soil Sampling Plots



Legend

Flow Path with 400 sq. ft Sampling Sections

Operator:



MORNINGSTAR PARTNERS

Contractor:



1:1,000

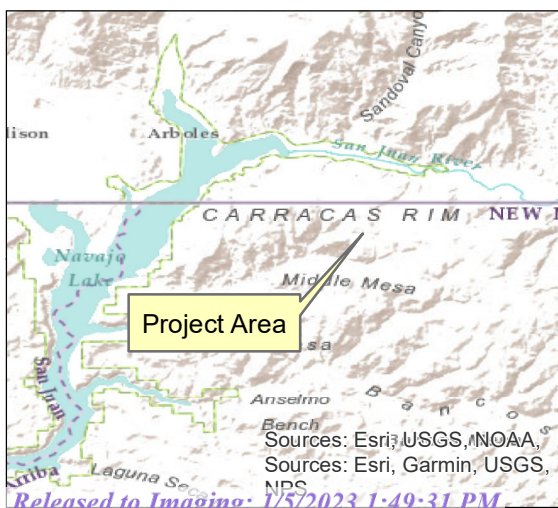
0 30 60 120 180 Feet

NAD 1983 UTM Zone 13N

Author: TP (EIS - LLC)

Date: 12/8/2022

Carracus 23A #004 Soil Sampling Plots



Legend

Flow Path with 400 sq. ft. Sampling Sections

Operator:



MORNINGSTAR
PARTNERS

Contractor:



1:1,000

0 30 60 120 180 Feet

NAD 1983 UTM Zone 13N

Author: TP (EIS - LLC)

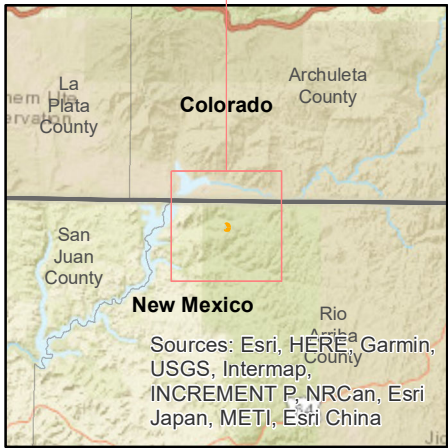
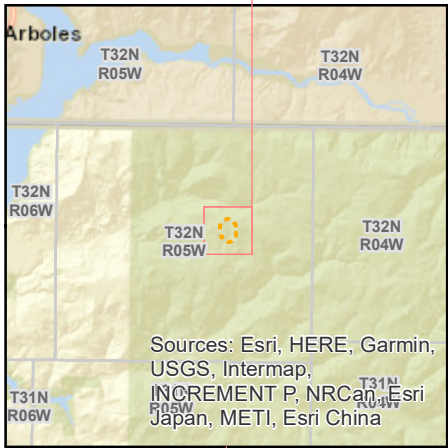
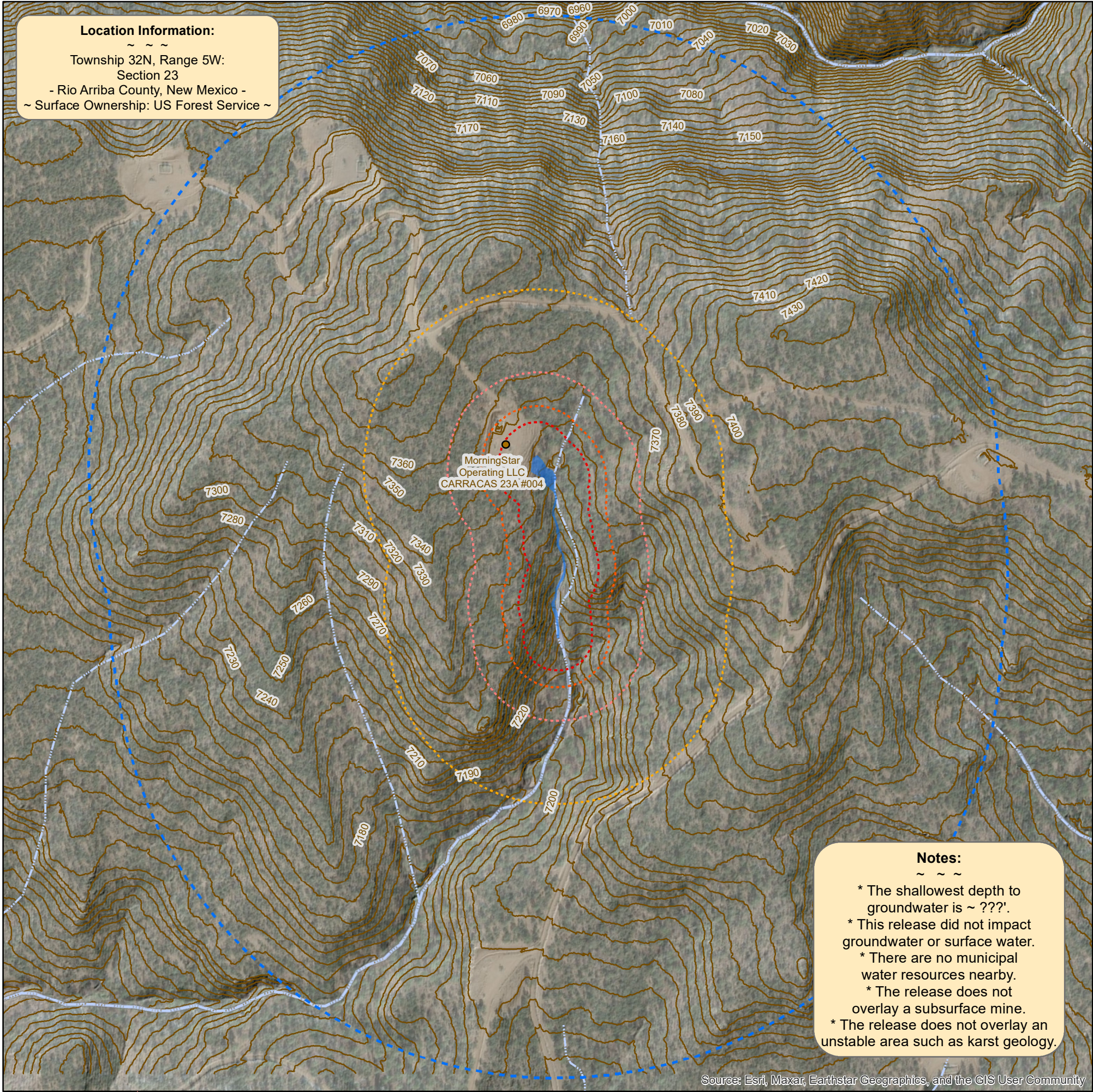
Date: 12/8/2022



Morningstar Operating LLC

-- Spill Area Map --

Carracas 23A #004 Well



Morningstar Carracas 23A #004 Well:

- @ 36.970097, -107.336662
- Carracas 23A #004 Spill Flow Path
- ~ Ephemeral Stream (NHD)

Watercourse (NHD):

- ~ None Within 300'

Waterbody (NHD):

- ~ None Within 200'
- Riverine Area (NWI)

100-year Flood Zone (FEMA):

- ~ None Within Spill Area

Water "Point of Diversion":

- None Within 500'

Water Well:

- None Within 1000'

Structure:

- None Within 300'
- 10' Contour
- ~ 1/2 Mile Flow Path Buffer
- ~ 1000' Flow Path Buffer
- ~ 500' Flow Path Buffer
- ~ 300' Flow Path Buffer
- ~ 200' Flow Path Buffer



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
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 169128

CONDITIONS

Operator: MorningStar Operating LLC 400 W 7th St Fort Worth, TX 76102	OGRID: 330132
	Action Number: 169128
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	MorningStar must use the applicable reclamation standards per 19.15.29.13D (1) for the impacted area 0-4 feet below grade. Please refer to "Procedures for Implementation of the Spill Rule (19.15.29 NMAC)", dated September 6, 2019 for further guidance.	1/5/2023