



Prospect Energy, LLC

January 8, 2024

RE: ECMC Vegetative Assessment Report
4th Quarter 2023
MSSU 19-5 Injection Flowline Spill
Remediation #27199
SENW Sec19 T8N R68W 6th PM
Prospect Energy LLC (Operator: 10312)

Dear Mr. Binchus,

Prospect Energy, LLC (Prospect) has started interim reclamation of the above referenced site. This report documents the progress of the interim reclamation for the 4th quarter of 2023.

Should you have any questions, or require further information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Mary C Griggs". The signature is written in a cursive, flowing style.

Mary C Griggs, P.E.
Consultant for Prospect Energy LLC
303-912-8292
griggs.mary@comcast.net

1.0 Location Description

1.1 Site Characterization

On October 22, 2022, a produced water flowline leak was discovered from the MSSU 19-5 injection well flowline, Facility ID #483137. The flowline was buried at approximately 4 feet of depth. Produced water daylighted in the field east of the leak. Impacted soil was removed and documented under Remediation Project Number 27199.

According to the Natural Resources Conservation Service (NRCS), the site location soil is Satana loam, with a one to three percent slope. The topographic map indicates a 1.5 percent slope to the east, which corresponds to observed site conditions. The site is non-irrigated grassland, with scattered volunteer wheat. The site has not been disturbed in recent years but was disturbed at the time of the communications tower construction.

The surrounding property is vacant land occupied by the communications tower property to the north, east and west, and a small cattle operation to the south. Access to the site is provided by the nearby Kiix #1 well access road to the west (05-060-06332). A produced water flowline (4" diameter) runs east to west near the eastern edge of the site. It is buried at about 4 feet of depth. The level of groundwater is approximately 15 to 16 feet of depth, from recent on-site monitoring well measurements. Subsurface soil consists of clays and silty sands to a depth of 23.7 feet (information taken from the monitoring well installation log).

1.2 Reference Area Characterization

The site location is at the SENW Sec 19 T8N R68W, of the 6th meridian, with latitude and longitude of approximately 40.648722, -105.049226. Topsoil and vegetation were removed at the end of October 2022, to remediate the effects of the produced water spill. Vegetation on the site was re-growing during the 2023 growing season, but has since been tilled under.

The site soil surface is a sandy loam. The topography of the site appears flat. There is no apparent run-on or run-off of rainwater. A review of the USGS topographic map indicates a 1.5 percent slope to the east.

1.3 Timing

Completed and planned and reclamation activities:

1. Weed Spraying: The area was sprayed for weeds on Oct. 20, 2023.
2. Topsoil was spread, recontoured, de-compacted, and tilled on location

Oct. 24, 2023.

3. Seeding: Prospect was referred to Pawnee Buttes Seed by Colorado State University (CSU) Small Acreage Management. Pawnee Buttes Seed recommended the Native Prairie Mix. The area was drill seeded at ¼-1/2 inch depth with Pawnee Buttes Native Prairie Mix at 30 lbs/acre on Oct 26, 2023.
4. Soil Amendments: Prospect applied gypsum at a rate of 0.8 tons/acre. As an additional nutrient, phosphate, in the form of bone meal fertilizer was spread at a rate of 40 lbs/acre on Oct 26, 2023.
5. Seedbed stabilization: Clean straw mulch was spread, crimped, and tackified on Oct. 30, 2023.

2.0 Soil Properties

2.1 Soil description

The NRCS describes the soil as Satanta loam, with one to three percent slopes. It is described as prime farmland if irrigated; parent material is eolian sands; landform is paleo-terraces. According to the report, a typical profile is 0-9 inches loam; 9-18 inches clay loam; and 18 to 79 inches loam. It is described as well drained without restrictive features, a low runoff potential, a moderately high capacity to transmit water, no frequency of flooding or ponding, calcium carbonate maximum content of 10 percent, non-saline to slightly saline soils.

The remediated area was contoured to match the nearly flat existing grade.

3.0 Seed Mixture Consultation

Prospect was referred to Pawnee Buttes Seed by CSU Small Acreage Management. The seed mixture:

3.1 Seed Mixture

PBSI NATIVE PRAIRIE MIX

Blue Grama	Bouteloua gracilis	1.5 PLS/Acre
Buffalograss	Bouteloua dactyloides	2.4 PLS/Acre
Sideoats Grama	Bouteloua curtipendula	2.7 PLS/Acre
Western Wheatgrass	Pascopyrum smithii	5.2 PLS/Acre
Green Needlegrass	Nassella viridula	3.0 PLS/Acre
Sand Dropseed	Sporobolus cryptandrus	0.18 PLS/Acre

Prospect has consulted CSU about the project details. The seed mix has both warm season and cool season grasses in the mix.

<https://www.fcgov.com/natureinthecity/files/native-lawn-fact-sheet-2020.pdf>

Site Stabilization and Stormwater Erosion

4.0 Site Stabilization Methods

Soil contouring has been effective so far in mitigating surface water flow. No run-on or runoff of surface water has been observed.

Stormwater Controls

Upon inspection of the site area, there is no evidence of run-on or runoff due to the level topography and the fact that the soil has a moderately high capacity to accept water, according to the NRCS report and field observation. Due to the small size (under one acre), the level topography, and the soil characteristics, no additional BMPs will be initially applied. The site will be inspected monthly. BMPs such as fiber logs will be installed to control run-on or runoff if conditions warrant.

5.0 **Weeds**

5.1 Weed Management for Vegetation Establishment

Because seeding was delayed until Fall, Prospect over-sprayed the area with an herbicide, using a licensed contractor.

5.2 Weed Management

No noxious weeds have been observed adjacent to the site area. Once seedlings are established, noxious weeds, if present, will be sprayed with herbicide using a hand applicator.

6.0 **Fencing**

No fencing is planned currently.

7.0 **Monitoring**

Prospect has developed a monthly monitoring plan to track compliance. During the growing months, revegetation will be monitored, and the presence of weeds. For all months, site stabilization, wind and water erosion will be assessed. Deficiencies will be noted, and corrections scheduled and tracked.

Additional monitoring will take place after adverse weather events and after weed treatment.

COGCC Rule Evaluation	Prospect Energy's Compliance
1002. SITE PREPARATION AND STABILIZATION	
a. (1) Fencing of drill sites and access roads on crop lands.	NA
a. (2) Fencing of reserve pit when livestock is present.	NA
a. (3) Fencing of well sites.	NA
b. Soil removal and segregation.	
b. (1) Soil removal and segregation on crop land	NA
b. (2) Soil removal and segregation on non crop-land.	Removed soil was taken for disposal at a permitted waste facility.
b. (3) Horizons too rocky or too thin	Removed soil was taken for disposal at a permitted waste facility.
c. Protection of soils	Removed soil was taken for disposal at a permitted waste facility.
d. Drill pad location	NA
e. Surface disturbance minimization.	
e. (1) ... well sites, production facilities, gathering pipelines, and access roads shall be located, adequately sized, constructed, and maintained so as to reasonably control dust and minimize erosion, alteration of natural features, removal of surface materials, and degradation due to contamination.	NA
e. (2) Operators shall avoid or minimize impacts to wetlands and riparian habitats to the degree practicable.	Impacted area is not in a riparian or wetland zone.
e. (3) Where practicable, operators shall consolidate facilities and pipeline rights-of-way in order to minimize adverse impacts to wildlife resources, including fragmentation of wildlife habitat, as well as cumulative impacts.	NA
(4) Access roads.	Site is accessed using the Kiix #1 access road, which is not being reclaimed.
f. Stormwater management	
f. (1) All oil and gas locations are subject to the Best Management Practices requirements of Rule 1002.f.(2). In addition, upon the termination of a construction stormwater permit issued by the Colorado Department of Public Health and Environment for an oil and gas location, such oil and gas location is subject to the Post-Construction Stormwater Program requirements of Rule 1002.f.(3), except that such requirements are not applicable to Tier 1 Oil and Gas Locations.	Best Management Practices are being implemented according to Prospect's Post-Construction Stormwater Management Plan dated March 2019. As the affected site is less than one acre, there is no Construction Stormwater Permit.

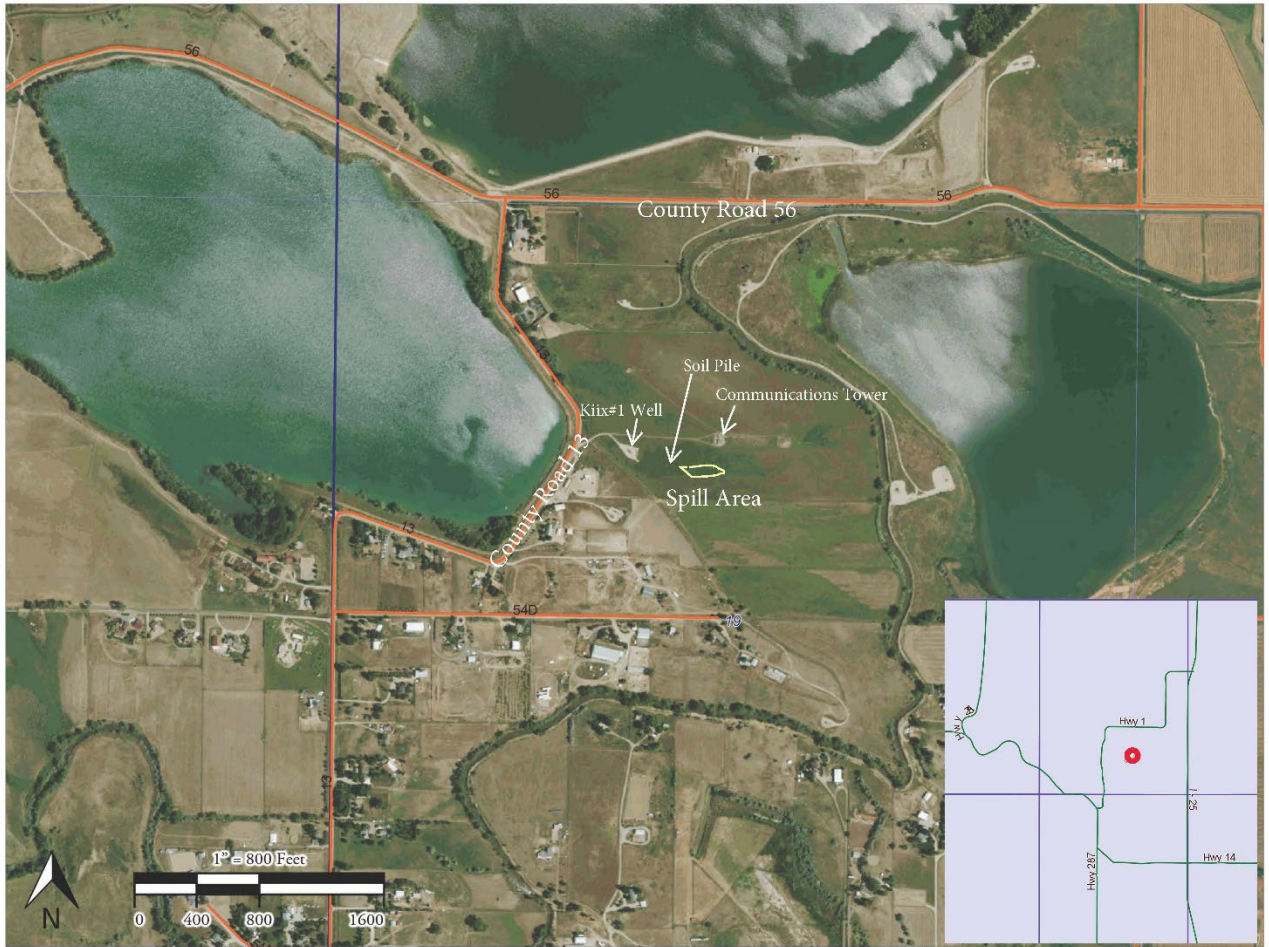
<p>f. (2) Oil and gas operators shall implement and maintain Best Management Practices (BMPs) at all oil and gas locations to control stormwater runoff in a manner that minimizes erosion, transport of sediment offsite, and site degradation....</p>	<p>Upon inspection of the site area, there is no evidence of run-on or runoff due to the level topography and the fact that the soil accepts water. Due to the small size (under one acre) and the level topography, and the soil characteristics no additional BMPs will be initially applied. The site will be inspected monthly. BMPs such as fiber logs will be installed to control run-on or runoff if conditions warrant.</p>
<p>f. (2) A. Covering materials and activities and stormwater diversion to minimize contact of precipitation and stormwater runoff with materials, wastes, equipment, and activities with potential to result in discharges causing pollution of surface waters.</p>	<p>The backfill soil has sufficient clay content to make it resistant to wind erosion. The backfill soil pile has been applied to the site. The site has very low run-on and run-off.</p>
<p>f. (2) B. Materials handling and spill prevention procedures and practices implemented for material handling and spill prevention of materials used, stored, or disposed of that could result in discharges causing pollution of surface waters.</p>	<p>NA</p>
<p>f. (2) C. Erosion controls designed to minimize erosion from unpaved areas, including operational well pads, road surfaces and associated culverts, stream crossings, and cut/fill slopes.</p>	<p>The spread topsoil was contoured, leveled, and blended with the surrounding ground.</p>
<p>f. (2) D. Self-inspection, maintenance, and good housekeeping procedures and schedules to facilitate identification of conditions that could cause breakdowns or failures of BMPs. These procedures shall include measures for maintaining clean, orderly operations and facilities and shall address cleaning and maintenance schedules and waste disposal practices. In conducting inspections and maintenance relative to stormwater runoff, operators shall consider seasonal factors, such as winter snow cover and spring runoff from snowmelt, to ensure site conditions and controls are adequate and in place to effectively manage stormwater.</p>	<p>The operator has implemented a monthly inspection of the site area.</p>
<p>f. (2) E. Spill response procedures for responding to and cleaning up spills. The necessary equipment for spill cleanup shall be readily available to personnel. Spill Prevention, Control, and Countermeasure plans incorporated by reference must be identified in the Post-Construction Stormwater Management Program specified in Rule 1002.f.(3).</p>	<p>NA</p>
<p>f. (2) F. Vehicle tracking control practices to control potential sediment discharges from operational roads, well pads, and other unpaved surfaces. Practices could include road and pad design and maintenance to minimize rutting and tracking, controlling site access, street sweeping or scraping, tracking pads, wash racks, education, or other sediment controls.</p>	<p>The site is accessed through the Kiix #1 lease road, which is gravel surfaced and designed to minimize rutting and tracking.</p>

<p>f. (3)(A through C) Operators of oil and gas facilities shall develop a Post-Construction Stormwater Program in compliance with this section no later than the time of termination of stormwater permits issued by the Colorado Department of Public Health and Environment for construction of oil and gas facilities.</p>	<p>Prospect's Post-Construction Stormwater Management Plan is dated March 2019. Prospect will follow the guidance in said plan. As the affected site is less than one acre, there is no Construction Stormwater Permit.</p>
<p>1003. INTERIM RECLAMATION</p>	
<p>a. General. Debris and waste materials other than de minimis amounts, including, but not limited to, concrete, sack bentonite and other drilling mud additives, sand plastic, pipe and cable, as well as equipment associated with the drilling, re-entry, or completion operations shall be removed. All E&P waste shall be handled according to the 900 Series rules...</p>	<p>Part a is generally NA except for the section citing E&P Waste. Soil impacted by produced water was segregated and removed. The soil was disposed at an approved waste facility. Residual impacted soil can't be further removed due to the nearby communication tower's ground plane, which is close to the ground surface.</p>
<p>b. Interim reclamation of areas no longer in use.</p>	<p>Reclamation was started in October 2023.</p>
<p>c. Compaction alleviation. All areas compacted by drilling and subsequent oil and gas operations which are no longer needed following completion of such operations shall be cross-ripped. On crop land, such compaction alleviation operations shall be undertaken when the soil moisture at the time of ripping is below thirty-five percent (35%) of field capacity. Ripping shall be undertaken to a depth of eighteen (18) inches unless and to the extent bed rock is encountered at a shallower depth.</p>	<p>Ripping was done to the depth of applied new topsoil and no deeper due to the presence of a ground plane. The ground plan is used in operation/support of the communications tower.</p>
<p>d. Drilling pit closure. (All sections)</p>	<p>NA</p>
<p>e. Restoration and revegetation.</p>	<p>Prospect contacted the Larimer County Extension Service and was referred to the Colorado State University Small Acreage Management office. Prospect developed a reclamation plan in conjunction with their expertise.</p>
<p>e. (1) Revegetation of crop lands.</p>	<p>NA</p>

<p>e. (2) Revegetation of non-crop lands. All segregated soil horizons removed from non-crop lands shall be replaced to their original relative positions and contour as near as practicable to achieve erosion control and long-term stability, and shall be tilled adequately in order to establish a proper seedbed. The disturbed area then shall be reseeded in the first favorable season following rig demobilization. Reseeding with species consistent with the adjacent plant community is encouraged. In the absence of an agreement between the operator and the affected surface owner as to what seed mix should be used, the operator shall consult with a representative of the local soil conservation district to determine the proper seed mix to use in revegetating the disturbed area. In an area where an operator has drilled or plans to drill multiple wells, in the absence of an agreement between the operator and the affected surface owner, the operator may rely upon previous advice given by the local soil conservation district in determining the proper seed mixes to be used in revegetating each type of terrain upon which operations are to be conducted. Interim 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 all disturbed areas have been either built on, compacted, covered, paved, or otherwise stabilized in such a way as to minimize erosion to the extent practicable, or a uniform vegetative cover has been established that reflects pre-disturbance or reference area forbs, shrubs, and grasses with total percent plant cover of at least eighty percent (80%) of pre-disturbance levels or reference areas, excluding noxious weeds. Re-seeding alone is not sufficient.</p>	<p>Prospect contacted the Larimer County Extension Service and was referred to the Colorado State University Small Acreage Management office. Prospect developed a reclamation plan in conjunction with their expertise.</p>
<p>(3) Interim reclamation completion notice, Form 4.</p>	<p>This Form 4 will be submitted on a Form 4 as an interim report.</p>
<p>f. Weed control. During drilling, production, and reclamation operations, all disturbed areas shall be kept as free of all undesirable plant species designated to be noxious weeds as practicable. Weed control measures shall be conducted in compliance with the Colorado Noxious Weed Act, C.R.S. §35-5.5-115 and the current rules pertaining to the administration and enforcement of the Colorado Noxious Weed Act. It is recommended that the operator consult with the local weed control agency or other weed control authority when weed infestation occurs. It is the responsibility of the operator to monitor affected and reclaimed lands for noxious weed infestations. If applicable, the Director may require a weed control plan.</p>	<p>Seeding and mulching activities are completed. Prospect will inspect and document the site for weeds on a monthly basis during the growing season (May-Oct). If significant noxious weeds are present, the weeds will be sprayed using herbicide from a licensed company, or spot sprayed using a hand applicator.</p>
<p>1004. FINAL RECLAMATION OF WELL SITES AND ASSOCIATED PRODUCTION FACILITIES</p>	

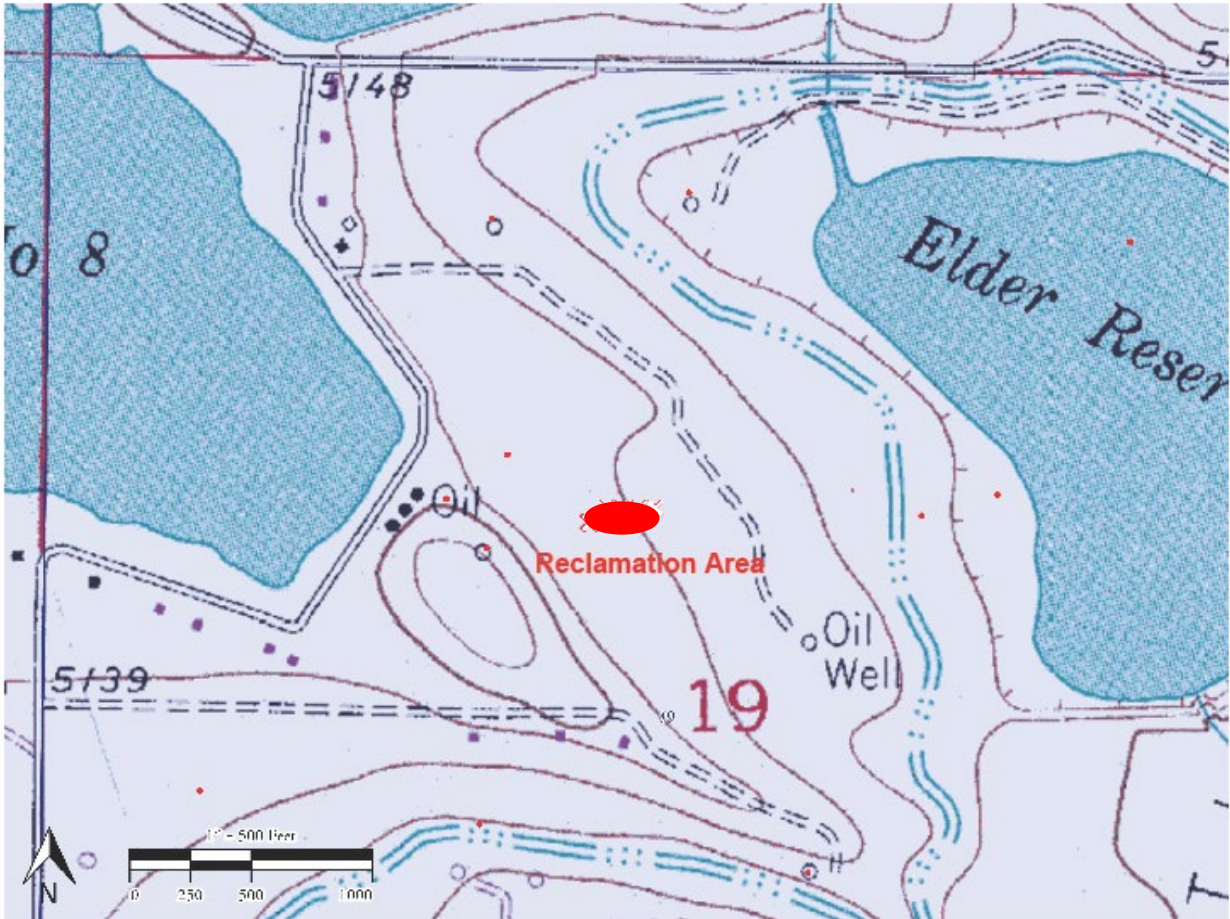
a. Well sites and associated production facilities.	NA except for: As applicable, compaction alleviation, restoration, and revegetation of well sites, associated production facilities, and access roads shall be performed to the same standards as established for interim reclamation under Rule 1003.
b. Production and special purpose pit closure.	NA
c. Final reclamation threshold for release of financial assurance. (All sections)	NA
d. Final reclamation of all disturbed areas shall be considered complete when all activities disturbing the ground have been completed, and all disturbed areas have been either built upon, compacted, covered, paved, or otherwise stabilized in such a way as to minimize erosion, or a uniform vegetative cover has been established that reflects pre- disturbance or reference area forbs, shrubs, and grasses with total percent plant cover of at least eighty percent (80%) of pre-disturbance or reference area levels, excluding noxious weeds, or equivalent permanent, physical erosion reduction methods have been employed. Re-seeding alone is not sufficient.	See 1003 e. (2)
e. Weed control. All areas being reclaimed shall be kept as free as practicable of all undesirable plant species designated to be noxious weeds. Weed control measures shall be conducted in compliance with the Colorado Noxious Weed Act, C.R.S. §35-5.5-115 and the current rules pertaining to the administration and enforcement of the Colorado Noxious Weed Act. It is recommended that the operator consult with the local weed control agency or other weed control authority when weed infestation occurs. It is the responsibility of the operator to monitor affected and reclaimed lands for noxious weed infestations. If applicable, the Director may require a weed control plan.	See 1003 f.

Reclamation Figures



Spill Area Location

Topographic Map



Spill Area Topographic Map

PHOTOS



View of the Site from a Rise Off-Location Looking ENE



West Side of Site Looking East



South Side of Site Looking North



North Side of Site Looking South



East Side of Site Looking West

Monthly Site Inspection Checklist

Stormwater Management Plan Compliance Inspection Form

Site ID/Name: Remediation #29199

Inspection Date: 11/02/2023

Location: MSSU 19-5 Spill

Inspector: M Griggs

Inspection Type: Monthly Site Type Flowline

Status: Compliant Phase Reclamation

Land Use: Grassland 100%

Current Weather: Sunny,
50's

Receiving Body of water/Distance/Direction:

Elder Reservoir, 1,200 feet west

Stormwater Runoff Risk: Low Prior Veg Cover (0%):

In the past 24 hours, has there been overland runoff due to a storm event? No

Best Management Practice (BMP) Checklist

BMP	In Use Y/N	Req'd Y/N	Required Action or Maintenance	Location	Done
Berm	No	No	N/A		
Surface Grading	Yes	Yes	None		
Straw Mulch	Yes	Yes	None		

GENERAL CONDITIONS

General	Y/N/NA	Comments
Have repairs/additional BMP issues been addressed since last inspection?	NA	
Are there signs of sediment leaving the site?	No	
Are there signs of offsite tracking at access point?	No	
Are surface waters being impacted by site runoff?	No	
Have simple repairs been made today at this site by the Inspector?	No	
Is access road graveled (offsite soil tracking control)?	Yes	Leads to Kiix #1 well

Vegetation Checklist (Erosion Reduction Control)

Has the site achieved 70% or prior vegetation coverage for stabilization?	No	
Are there signs of vegetation regrowth?	No	
Is reseeding needed?	No	

Comments: Area was recently seeded and mulched. No growth evident – not in growing season.

Corrective Action Required?

Yes No If checked No, this site has no incidents requiring corrective action.

This site is in compliance with reclamation efforts to the best of the signer's knowledge and belief.

Signature: MG

Stormwater Management Plan Compliance Inspection Form

Site ID/Name: Remediation #29199

Inspection Date: 12/08/2023

Location: MSSU 19-5 Spill

Inspector: M Griggs

Inspection Type: Monthly Site Type Flowline

Status: Compliant Phase Reclamation

Land Use: Grassland 100%

Current Weather: Sunny,
50's

Receiving Body of water/Distance/Direction:

Elder Reservoir, 1,200 feet west

Stormwater Runoff Risk: Low Prior Veg Cover (0%):

In the past 24 hours, has there been overland runoff due to a storm event? No

Best Management Practice (BMP) Checklist

BMP	In Use Y/N	Req'd Y/N	Required Action or Maintenance	Location	Done
Berm	No	No	N/A		
Surface Grading	Yes	Yes	None		
Straw Mulch	Yes	Yes	None		

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