



LONESOME CREEK GAS PLANT PROJECT (PU-14-218)

Permit Compliance - Addendum to the Final Inspection Report





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1 COMPLIANCE SUMMARY

This Final Inspection Report (Report) serves as an addendum to the December 21, 2016 *Permit Compliance Final Inspection Report* for the Lonesome Creek Gas Plant (Project). As a result of the final construction inspection it was determined that the site was not in compliance with the provisions set forth by the North Dakota Public Service Commission (Commission) due to the incomplete site restoration. This Report provides information from a site visit conducted on October 25, 2019 and includes a recommendation on final compliance for the Project.

1.1 PURPOSE OF THIS REPORT

The North Dakota Energy Conversion and Transmission Facility Act (North Dakota Century Code (NDCC) Chapter 49-22) authorizes the Commission to determine that the location, construction, and operation of jurisdictional energy conversion and transmission facilities will produce minimal adverse effects on the environment and the welfare of citizens of North Dakota. Post-construction inspections ensure that projects are constructed in compliance with the siting laws (NDCC, Chapter 49-22) and rules (North Dakota Administrative Code (NDAC) Article 69-06) and the applicable Commission Findings of Fact, Conclusions of Law, and Order (Order).

HEI identified project provisions in the order and verified compliance through written documentation from observations recorded during on-site inspections and from a review of the Project record, case file no. PU-14-218. The Project *Findings of Fact, Conclusions of Law and Order and the Certification Relating to Order Provisions for Transmission Facility Siting* (July 10, 2014) provides the project provisions (Docket No. 27).

1.2 PROJECT HISTORY

The Commission retained Houston Engineering, Inc. (HEI) to provide a construction inspection services of the Lonesome Creek Gas Plant (Project), an energy conversion facility located approximately 13 miles southwest of Watford City in McKenzie County, North Dakota. The plant will process up to 200 million standard cubic feet of gas per day. The Project is owned and operated by ONEOK Rockies Midstream, L.L.C. (ONEOK). The Plant construction was completed in November 2015 (Docket No. 89) and start-up activities began at that time. The last weekly construction progress report was submitted June 13, 2016 for the week ending May 16, 2016 (Docket No. 94) whereby the plant production was steady, ONEOK was continuing to work on warranty items, and the company was working with local USDA to identify suitable areas for tree plantings. At that time, it was noted that full restoration and planting of trees would occur in spring 2016.

HEI reviewed all project documents to identify those aspects of the Project that required compliance. Visual inspection of the project was conducted April 2, 2015 and November 14, 2016. The focus of the first site visit in April 2015 was to assess compliance with the North Dakota Pollutant Discharge Elimination System (NDPDES) Construction Stormwater permit, and Spill Prevention, Control and Countermeasure (SPCC) regulations. Erosion controls and other best management practices were reviewed at that time and no major issues were identified at that time. The focus of the most recent and additional field inspection was to assess the site for reclamation and revegetation compliance.

During the final 2016 inspection, HEI concluded that the affected areas have not been restored to *as near as is practicable to the condition as it existed prior to the beginning of construction* (Certification Relating to Order provisions, paragraph 25). Erosion and seeding issues were identified as the majority of the site had not



been reseeded and was bare ground. In addition, the southwest portion of the site, south of the retention pond was still being graded by the contractor. All disturbed areas inside the access road, in the western portion of the site were not restored and no voluntary vegetation existed. In contrast, the fenced area on the eastern portion of the site had been restored and no notable problems observed except a couple bare, low spots, possibly due to previous standing water.

The site is divided by a north-south natural drainageway. At that time, scour was observed in this channel, most notably in areas of concentrated flow and where the channel makes a 90-degree turn. At the entrance to the site, the areas were not restored resulting in considerable erosion and damage to the silt fence. Sediment had been removed from behind the silt fence as it prevented sediment from leaving the site. During the 2016 field visit, ONEOK representatives indicated that they were in the process of restoring the disturbed areas, although with gas equipment, there are some risks associated with having a mower operating in the area. ONEOK personnel expressed that they were in the process of determining best course of action to finish these areas.

As reported in the December 21, 2016, Permit Compliance Final Inspection Report, the Project was not in compliance with all the provisions set forth by the Commission due to the incomplete site restoration. At that time, it was concluded that the Commission should require ONEOK to complete restoration activities followed by field verification to document establishment of sustainable vegetation at the Project site.

1.3 COMPLIANCE INSPECTION UPDATE

The Commission retained HEI to perform a final compliance site visit to ensure site reclamation / restoration activities were complete. HEI staff (Emma McFall) visited the gas plant on October 24th -25th, 2019 to observe/confirm that reclamation and revegetation of the site had been completed. Ms. McFall was accompanied by Casey Clausen, Environmental Specialist from ONEOK. Photographs documenting the site visit along with a map showing locations of photographs are included in **Appendix A**. The grounds at the gas plant facility was observed during the site visit; no buildings or pipeline portions were toured.

A comparison of the existing conditions and the previous 2016 site visit was conducted. Based on the compliance inspection, it is concluded that erosion and sedimentation issues still exist on the site, and the site has not been restored to *as near as is practicable to the condition as it existed prior to the beginning of construction* (Certification Relating to Order provisions, paragraph 25). **Photographs 1-3 and 27** show slope failure along the northwestern corner of the facility. This area has not been fully restored and considerable erosion issues were evident. Another location of slope failure is on the southcentral extents of the site as shown in **Photograph 34**. Stormwater flow from the site shows rill formation off the northwestern portion of the facility (**Photograph 6**). The entrance of the facility appeared to be well kept and no reclamation evident (**Photograph 7**), However, along the entrance is an area needing revegetation to prevent further erosion and sedimentation (**Photograph 9-10**,). **Photograph 24** shows how stormwater has been directed on site. Rill erosion is evident throughout the site, within the facility campus (**Photographs 13-15, 17, 36**) and gully/rill erosion on the border extents of the facility (**Photographs 5-6, 21-22, 42**). Significant sedimentation and need for vegetative cover was evident (**Photographs 18-20**). The silt fence observed in disrepair during the 2016 inspection still remains and revegetation in this area is encouraged (**Photographs 37-38**). It is recommended that the facility slopes and fencelines be checked for erosion and sedimentation control (**Photographs 39-45**).



1.4 FINAL CONCLUSIONS

Overall, HEI concludes that the ONEOK Rockies Midstream, L.L.C., Lonesome Creek Gas Plant Project construction is complete and have been constructed as designed and permitted, **except for site reclamation / restoration activities**. Erosion and seeding issues still remain, as observed throughout the site and presented in the **Appendix B**. ONEOK should complete the restoration activities in accordance with Order Provisions, paragraph 17 and Order Provision, paragraph 25 as soon as practicable as ordered by the North Dakota Public Service Commission.

2 SIGNATURES

The services provided by HEI scientists and engineers for this Project have been conducted in a manner consistent with the degree of care and technical skill appropriately exercised by professionals currently practicing in this area under similar time and budget constraints. Recommendations and findings contained in this report represent our professional judgement and are based upon available information, our compliance inspections, and technically accepted practices. Other than this, no warranty is implied or expressed.


Barton Schultz, Project Manager

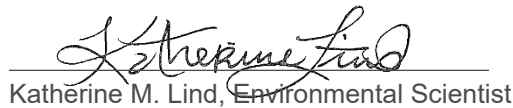
11/07/2019

Date


Emmy Baskerville, Environmental Scientist

11/06/2019

Date


Katherine M. Lind, Environmental Scientist

10/31/2019

Date



3 REFERENCES

North Dakota Public Service Commission (NDPSC) 2016. Online Case Search. Available from: <http://psc.nd.gov/public/casearch/>. Accessed December 4, 2016.



APPENDIX A: SITE MAP

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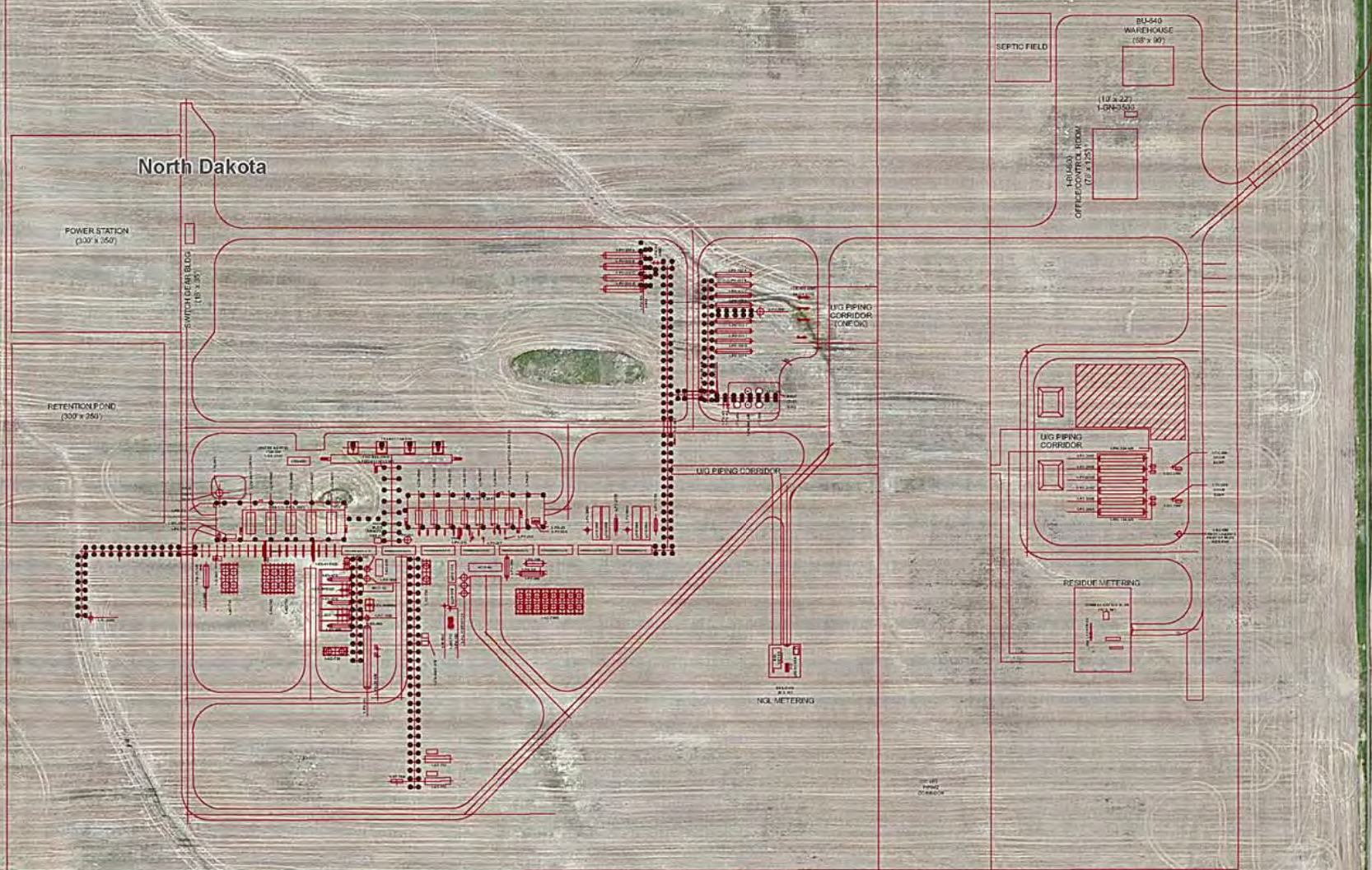




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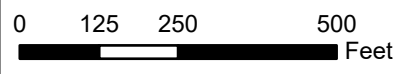
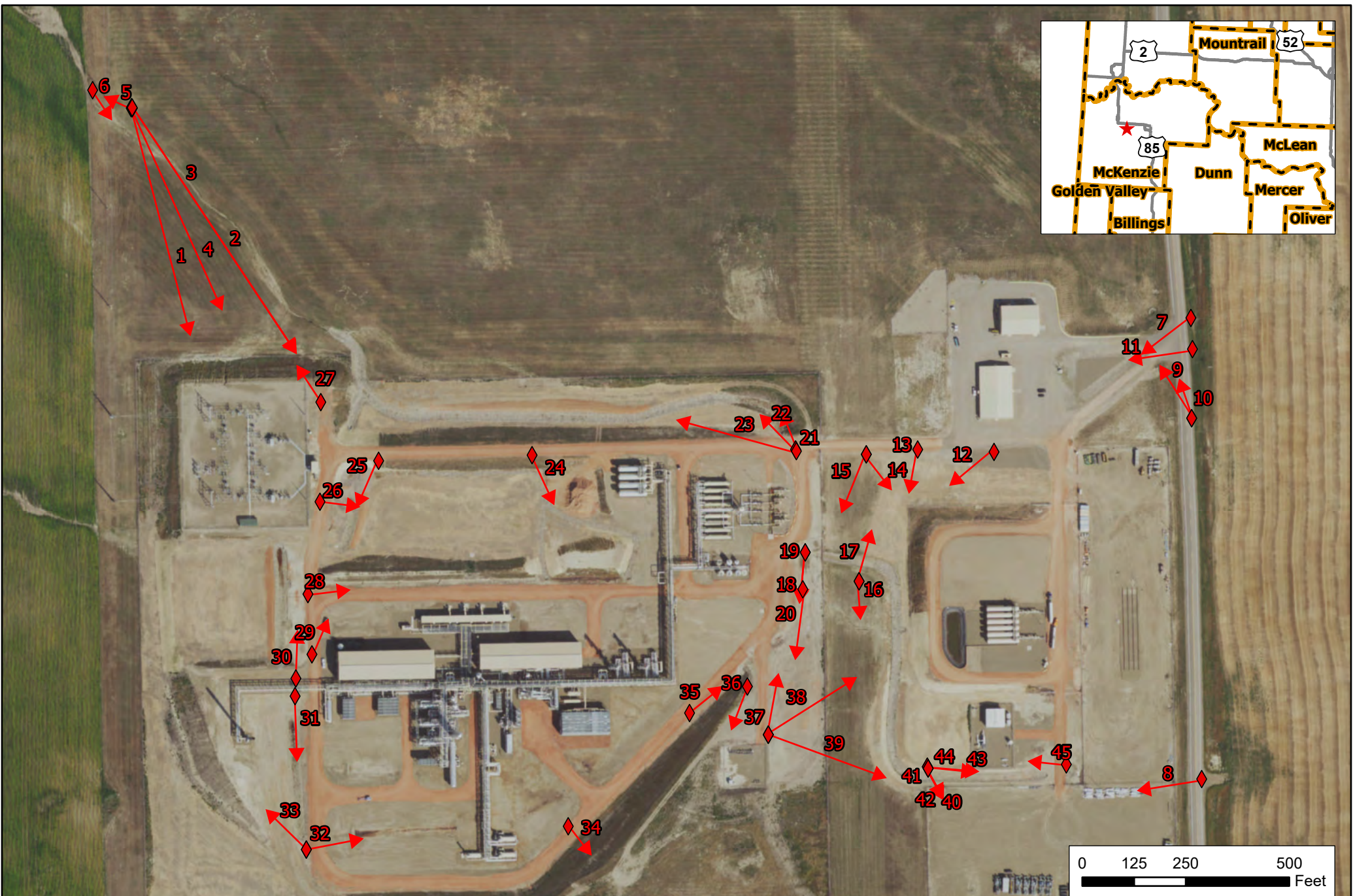
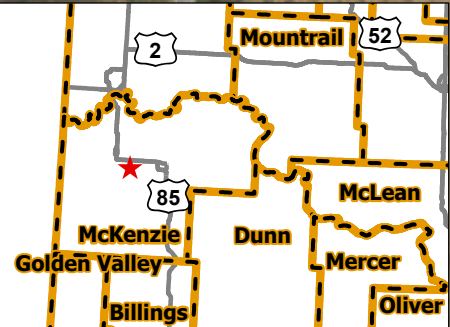
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Lonesome Creek Plant





Lonesome Creek Gas Plant - October Site Visit Photos

Scale: AS SHOWN	Drawn by: TWM	Checked by:	Project No.: 6077-0008	Date: 10/31/2019	Sheet: 1 of 1
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- ◆ Picture Locations
- ➔ Picture Direction

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APPENDIX B: PERMIT COMPLIANCE ADDENDUM - PHOTOGRAPHY

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Photo 1:

Viewing BMPs on slopes and assessing reestablishment of vegetation.

10-24-2019



Photo 2:

View of slope failure and need for reestablishing and/or enhancing BMPs

10-24-2019



Photo 3:
Slope failure.
10-24-2019



Photo 4:
Facing south, view of the
northwest corner of the
facility.
10-24-2019



Photo 5:
Gully formation at northwest
portion of site.

10-24-2019



Photo 6:
Gully formation at northwest
portion of site.

10-24-2019



Photo 7:
Lonesome Creek Gas Plant
facility entrance
10-24-2019



Photo 8:
BMPs on slopes, east side of
project site looking west
10-24-2019



Photo 9:

View of facility along the eastern side of the site facility along 138th Ave. NW

10-24-2019



Photo 10:

Utility box along 138th Ave. NW

10-24-2019



Photo 11:
Lonesome Creek Gas Plant
facility entrance

10-24-2019



Photo 12:
Inside the north portion of the
facility.

10-25-2019



Photo 13:
View of surface water
drainage gully formation

10-25-2019



Photo 14:
View of surface water
drainage gully formation

10-25-2019



Photo 15:
View of surface water
drainage gully formation

10-25-2019



Photo 16:
Stormwater drainage within
the eastern extents of the
facility

10-25-2019



Photo 17:
Stormwater flow path and
gully formation along eastern
portion of facility site

10-25-2019



Photo 18:
Facing south, view of the
facility.

10-25-2019



Photo 19:
Stormwater flow paths and
Sediment draining to culvert
within eastern portion of
facility site
10-25-2019



Photo 20:
Facing south, view of the
facility.
10-25-2019



Photo 21:
Gully erosion in northern
extents of the facility

10-25-2019



Photo 22:
Gully erosion in northern
extents of the facility

10-25-2019



Photo 23:

Unvegetated areas directly on northern extents of facility site

10-25-2019



Photo 24:

Sparsely vegetated areas, flow paths and sedimentation from the northern portion of the facility site

10-25-2019



Photo 25:
Facility road along northern
extents of site

10-25-2019



Photo 26:
Facility road along northern
extents of site, view of
stormwater culvert

10-25-2019



Photo 27:
Slope failure. Top of hill view
of photos 1-3

10-25-2019



Photo 28:
Along facility gravel road
looking east

10-25-2019



Photo 29:
Along facility gravel road,
looking northeast

10-25-2019



Photo 30:
Southcentral portion of facility
site.

10-25-2019





Photo 31:
Stormwater conveyance ditch
along southcentral portion of
facility site
10-25-2019



Photo 32:
Southern extents of facility
site, looking east at
stormwater conveyance ditch
10-25-2019



Photo 33:
Southcentral side of the
facility site looking northwest

10-25-2019



Photo 34:
Slope failure along the
southcentral extents of the
facility boundary

10-25-2019



Photo 35:
Facility road along
southcentral portion of site
10-25-2019



Photo 36:
Facility road and ditch along
southcentral portion of site
10-25-2019



Photo 37:
Silt fence and sparse
vegetation at southeast
portion of facility site
10-25-2019



Photo 38:
Facing south, view of the
facility.
10-25-2019



Photo 39:

Southern extents of facility site showing site fence and ditch

10-25-2019



Photo 40:

Stormwater conveyance path off southeastern fence line

10-25-2019



Photo 40:
Stormwater conveyance path
off southeastern fence line

10-25-2019



Photo 42:
Stormwater conveyance path
off southeastern fence line

10-25-2019



Photo 43:
Sparse vegetation along
southeastern extents of
facility fence line

10-25-2019



Photo 44:
Southeastern extents of
facility fence line

10-25-2019



Photo 45:
Stormwater impacts near the
facility's eastern fence line

10-25-2019