

PSC April 13, 2015 Inspection Report

(9 Pages)



Public Service Commission

State of North Dakota

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INSPECTION REPORT

DATE OF INSPECTION: April 13, 2015

TYPE OF INSPECTION: Partial

PERMITTEE - MINE: Coyote Creek Mining Company, L.L.C. - Coyote Creek Mine

PERMITS INSPECTED: NACC-1301 and NACC-1302

PERSONS ACCOMPANYING INSPECTORS: Donn Steffen and Brenden Brinkman (Coyote Creek Mining Company, L.L.C.) and Casey Voigt (landowner)

INSPECTION CONDITIONS: The inspection was conducted between 10:00 a.m. and 1:10 p.m. CDT. Sky conditions were clear. The wind was from the west-northwest at 15 to 25 miles per hour and the temperature ranged from the mid 40's to the mid 50's° F as recorded at the Hazen NDAWN weather station. Access was unrestricted to areas of interest.

SUITABLE PLANT GROWTH MATERIAL REMOVAL/RESPREAD

This inspection was conducted in response to landowner concerns with suitable plant growth material (SPGM) care and removal within permits NACC-1301 and NACC-1302 at the Coyote Creek Mine. Casey and Julie Voigt (landowners) met Reclamation Division inspectors at the mine's security check-in station shortly after 10:00 a.m. CDT to relate their concerns to the inspectors prior to joining Coyote Creek Mining Company, L.L.C. (CCMC) personnel for the mine inspection. Casey and Julie Voigt own the W½ and the W½E½ of Section 30, and all of Section 31, T143N, R88W that includes a small portion of the mine office-shop facility that has been under construction since mid-2014 (Permit NACC-1301), and where mine development is beginning in the spring of 2015 with construction of access and haul roads, and sedimentation ponds (Permit NACC-1302). The Voigt farmstead is located near the center of Section 31 adjacent Coyote Creek as pictured in Figure 5. Although Julie Voigt planned to attend the inspection, she chose not to because of CCMC vehicle space limitations.

The inspection began by reviewing an area in the NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 31 in Permit NACC-1301 where SPGM had not been removed but it was being used for contractor and equipment parking, and also for equipment and material storage as pictured in Figure 1 and outlined on Figure 5. Mr. Voigt expressed his concerns with possible topsoil degradation and erosion caused by vehicle and equipment traffic in the area. Although accelerated erosion or rutting was not evident in the area, the native rangeland vegetation was worn bare in the main traffic path, and it appeared that topsoil degradation and erosion would likely occur if current use of the area continued. SPGM removed from the E $\frac{1}{2}$ SE $\frac{1}{4}$ of Section 30 in Permit NACC-1301 in 2014 for the mine office-shop facility and access road was stockpiled north of the facility as depicted on Figure 5, as was SPGM removed from the N $\frac{1}{2}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 31 for contractor and equipment parking. Additional SPGM was removed from the contractor and equipment parking area in 2014 and 2015 when expansion became necessary. The August 7, 2014 and October 30, 2014 Coyote Creek Mine inspection reports noted that idle equipment could be stored on areas where SPGM was not removed, but SPGM should be removed from areas where traffic could cause SPGM degradation. Mr. Steffen explained that SPGM removal had not progressed eastward to the area of concern inspected on April 13, 2015 because CCMC desired to minimize disturbance, but he agreed that SPGM should be removed from the area to accommodate the need for expanded parking and equipment and material storage areas. SPGM removal from 0.3 acres in the area was viewed during an April 16, 2015 Coyote Creek Mine inspection and approved on April 20, 2015. Topsoil from the area is stored in a temporary stockpile west and adjacent 65 $\frac{1}{2}$ th AVE SW where it is expected to be used for road ditch revegetation of the reconfigured intersection of 65 $\frac{1}{2}$ th AVE SW and 17th ST SW to be constructed this year. Existing SPGM stockpiles located in NACC-1301 as depicted on Figure 5 are currently inaccessible for additional SPGM storage. Subsoil from the area was stored in a temporary stockpile south of pond P30-01.

SPGM removal for a four acre segment of the Shop Access Road on both sides of Coyote Creek for which construction has just begun was viewed and approved during the inspection. As depicted on Figure 5, the Shop Access Road will extend westward from the mine office-shop facility to a haul road. CCMC had received prior approval to stockpile topsoil and subsoil in the Shop Access Road corridor until SPGM stockpile locations could be developed on the west side of the North-South Haul Road to be constructed in the W $\frac{1}{2}$ of Section 30. An overview of the SPGM removal area is pictured in Figure 3. SPGM removal monuments retained in the removal area indicated that subsoil had been removed to the depths indicated on the detailed soil survey map (Section 2.5.6 in Permit NACC-1302). The SPGM removal area included some prime farmland acreage on the west side of Coyote Creek but segregation of the prime and non-prime farmland topsoil and subsoil is not required because the access road corridor constitutes associated disturbance rather than actual mining disturbance. Runoff from the temporary stockpiles that are not located within the watershed of pond P30-01 will be managed with SPGM stripping edges, sumps, silt fences, shallow berms or ditches, or a combination thereof.

STOCKPILES

SPGM stockpiles located north of the mine office-shop facility in Permit NACC-1301 as depicted in Figure 5 were viewed near the close of the inspection after Casey Voigt had departed. These stockpiles and the surrounding associated disturbance had been seeded and mulched in the late summer and early fall of 2014 but it was evident that maintenance is required to repair and stabilize erosional rilling that had developed on the piles and disturbed areas as pictured in Figure 2. Mr. Steffen indicated that seeding and mulching equipment had been ordered and was expected to be delivered shortly whereupon CCMC personnel would repair the erosion and stabilize the stockpiles by reseeding or mulching.

SURFACE WATER MANAGEMENT

Pond P30-01 was four feet below permanent pool elevation.

Culvert installation for the Shop Access Road Coyote Creek crossings was also viewed while viewing SPGM removal for a four acre segment of the Shop Access Road on both sides of Coyote Creek as previously described. At the time of inspection, the 36 inch low flow steel culvert was being installed as pictured in Figure 4. It should be noted that the approved design for the 36 inch culvert depicts a slight angle near the culvert's midpoint. The design was revised to depict a straight culvert with the application of Revision No. 1 to Permit NACC-1302 that is under review. The proposed design change was approved by the commission via email correspondence on March 19, 2015 and it received U.S. Army Corps of Engineers concurrence on March 20, 2015. Please refer to Figure 5 for the culvert types and locations for the Shop Access Road Coyote Creek crossings. Installation of the 36 inch low flow steel culvert would need to be completed no later than April 14th because CCMC's Regional General Permit from the U.S. Army Corps of Engineers does not allow regulated activity in Coyote Creek from April 15th to June 1st. Installation of the four 10 foot by 10 foot box culverts will follow but it appears that they will not be installed to divert Coyote Creek flow until after June 1st. Mr. Steffen indicated SPGM removal will proceed westward along the Shop Access Road corridor toward the location for pond P31-01 after the 36 inch low flow steel culvert installation is complete. Overburden from pond P31-01 excavation will provide the fill necessary to achieve grade for the Shop Access Road.

Upon returning to the mine office-shop facility near the close of the inspection the Reclamation Division inspectors informed CCMC personnel that the sequence of Shop Access Road Coyote Creek crossing culvert installations appears to be the reverse order of that approved in Permit NACC-1302. As described in the permit, the culvert crossings would proceed eastward in conjunction with excavation of pond P31-01 with installation of the four 10 foot by 10 foot box culverts first followed by installation of the 36 inch low flow steel culvert. Excerpts from Permit NACC-1302 relevant to the Shop Access Road Coyote Creek crossing culvert installations are as follows:

“Section 3.2.3 - Shop Access Road

... This haulroad will be constructed of overburden removed from the basin of pond P31-01. Because pond P31-01 is the first construction project to begin minesite development and furnishes the majority of the Shop Access Haulroad fill, Coyote Creek Mine plans to use the existing Coyote Creek crossing nearby the Casey Voigt farmstead for access to the haulroad and pond until the installation of the box culvert across Coyote Creek has been completed.

... Four 10' by 10' box culverts will be installed adjacent to Coyote Creek. The creek will then temporarily be diverted through the culverts until the road is removed. A diversion channel will need to be excavated to the box culverts on the upstream and down stream sides of the Access Haulroad to connect the creek and allow it to flow freely. A 36" culvert will be placed in the original stream bed location for low flow situations as well as to minimize disruption to the ecosystem in this location. The 36" culvert is not scheduled to be installed until after the concrete box culverts structure is installed. Construction in this manner should minimize adverse impacts to water quality of the stream during construction.

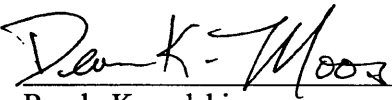
Section 3.2.5 - Haulroad Box Culvert - Diversion Channel

... The original streambed will flow under the Shop Access Road at approximately Station 6+00. This streambed will remain intact and will be used in low flow situations. The original streambed will have a 36" culvert installation to allow flow under the Shop Access Road. The 36" culvert is not scheduled to be installed until after the concrete box culverts structure is installed. Construction in this manner should minimize adverse impacts to water quality of the stream during construction. The contributing watersheds were modeled with the HEC-HMS to provide peak flow rates to size the culverts. The 36 inch culvert was not included when modeling the safe passage of Coyote Creek under the haulroad. The box culverts are sized to safely pass the peak flow from the 50-year/6-hour precipitation event using available head and storage without the 36 inch culvert being installed. The 36 inch culvert is being installed mainly to keep the original stream channel as unaltered as possible and pass nominal flows.”

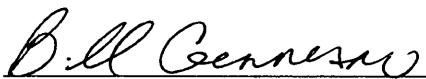
Based on the foregoing permit excerpts and observations from the April 13, 2015 inspection, it appears that CCMC is conducting operations for the Shop Access Road Coyote Creek culvert installations in reverse order of that approved in Permit NACC-1302. CCMC should have requested commission approval to revise culvert installation plans and provided adequate justification for doing so. Furthermore, it appears that potentially serious environmental risks are posed by installing the low flow culvert prior to diverting Coyote Creek flow through the box culverts. The Coyote Creek stream flow is now restricted through the low flow culvert until the box culverts are installed to divert the stream presumably after June 1st. High stream flow resulting from a heavy precipitation event may overtop the low flow culvert and cut through culvert backfill and the Shop Access Road corridor causing downstream sediment deposition. CCMC is advised to expedite box culvert installation so Coyote Creek flow can be diverted through the box culverts immediately after the U.S. Army Corps of Engineers spring restriction of regulated activity expires. CCMC is also advised to refrain from building any segment of the Shop Access Road near Coyote Creek that could function as an embankment and cause upstream flooding if stream flow is restricted by the low flow culvert.

WASTE DISPOSAL

Mr. Voigt also expressed his concern with waste that had been blowing off of the mine office-shop facility construction site in Permit NACC-1301 and littering adjacent land. Mr. Steffen agreed that the construction contractors should improve their litter control and recover any litter that is blown off of the site. He added that he would instruct the contractors to improve their litter control. The March 31, 2015 Coyote Creek Mine inspection report noted that three people were observed recovering litter around the mine office-shop facility. It should also be noted that several people were observed recovering litter adjacent the NACC-1301 southeast permit boundary following the April 13, 2015 inspection.

for 

Randy Kowalski
Environmental Scientist



Bill Gunnerson
Environmental Scientist

cc: Donn Steffen
OSM Casper Area Office
Mercer County Auditor
Casey Voigt



Figure 1. Area in the NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 31 in Permit NACC-1301 where SPGM had not been removed but is being used for contractor and equipment parking, and also for equipment and material storage - facing west with 65 $\frac{1}{2}$ th AVE SW in foreground, and scoria capped parking in background - refer to Figure 5 for area location



Figure 2. Erosional rilling requiring repair on SPGM stockpiles and the surrounding associated disturbance areas in Section 30 in Permit NACC-1301 - facing southeast toward stockpile TS-3 with the mine office-shop building frame in background – refer to Figure 5 for location

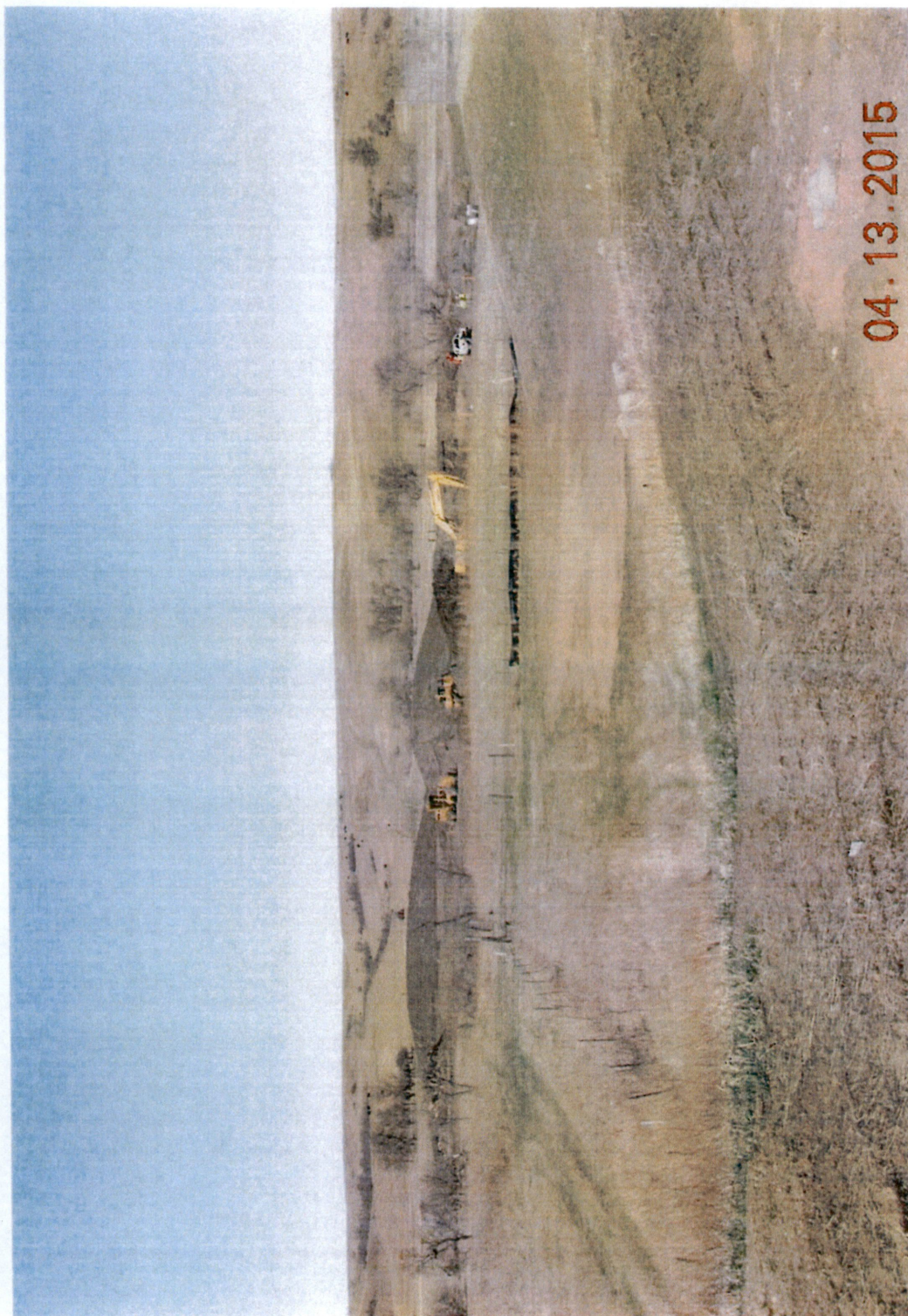


Figure 3. SPGM removal for a four acre segment of the Shop Access Road on both sides of Coyote Creek with a temporary topsoil stockpile in left background and a temporary subsoil stockpile in middle background – facing west with fence line in center-west marking the section line common to Section 30 on right (north) and Section 31 on left (south) – photograph taken south of large white hoop building pictured in right background in Figure 1



Figure 4. Panorama of 36 inch low flow steel culvert installation in Coyote Creek for the Shop Access Road Coyote Creek crossing - facing west on left and rotating to face north on right with temporary culvert in place on center-right for equipment crossing – refer to Figure 5 for culvert location – note temporary topsoil stockpile in left background and a temporary subsoil stockpile in middle background – also note that dozer was in motion when photographs were taken

