JWE

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INSPECTION REPORT

DATE OF INSPECTION: September 8, 2021

TYPE OF INSPECTION: Partial

PERMITTEE - MINE: Falkirk Mining Company - Falkirk Mine

PERMITS INSPECTED: NAFK-8405

PERSONS ACCOMPANYING INSPECTORS: Jason Frye, Luke Gilbert, Steve Cottingham, and Tanner Jochim from Falkirk; Daniel Halstead from North Dakota Game and Fish

INSPECTION CONDITIONS: The inspection was conducted between 10:00 a.m. and 12:00 p.m. CDT. Skies were partly cloudy and the wind was from the northwest at 13 mph. The temperature was 72° F. Access was unrestricted.

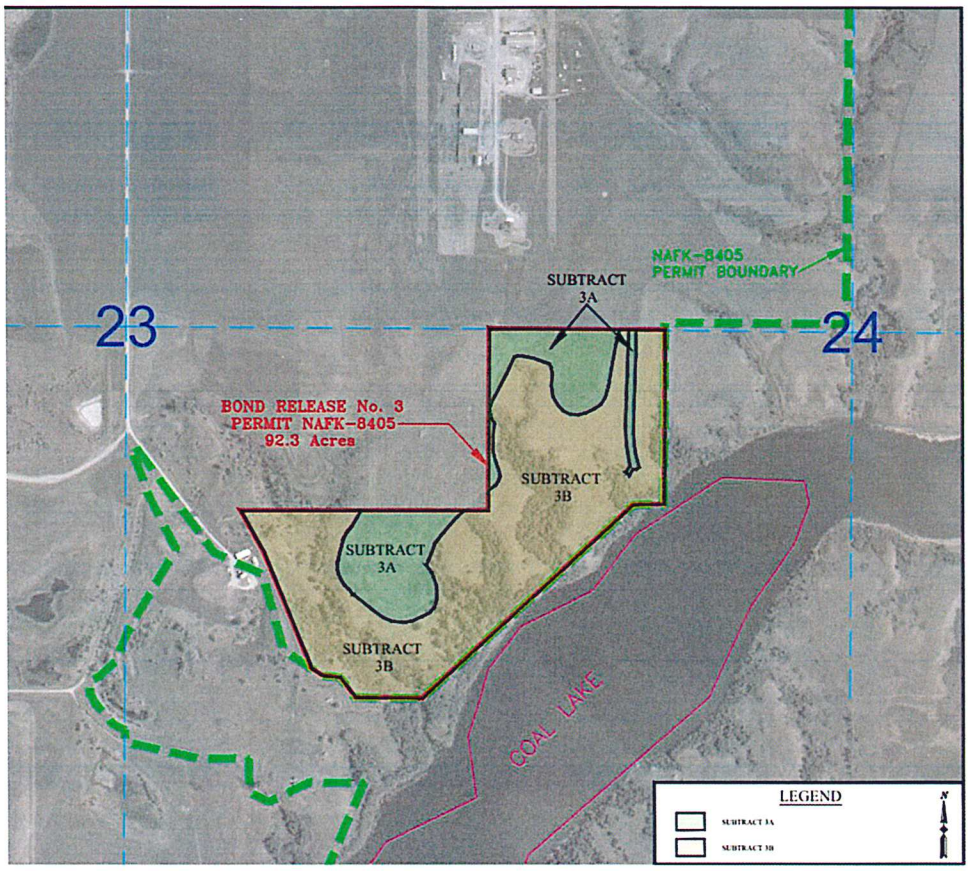
GENERAL

The purpose of the inspection was to field review the tract of land included in the application for Final Bond Release No. 3 to Permit NAFK-8405 in accordance with NDCC 38-14.1-17(3). The bond release includes 92.3 acres located in portions of Sections 23 and 24, T146N, R82W of McLean County. Approximately 22.3 acres (~24%) of the area was disturbed by mining or associated disturbances and 70.0 acres is undisturbed. The North Dakota Department of Transportation (surface owner), McLean County Commission, NDSU extension Service, and the North Dakota Game and Fish Department were invited to participate in this bond release inspection.

On September 18, 2014, Falkirk entered into a warranty deed with the State of North Dakota by and through the North Dakota Department of Transportation (NDDOT). This agreement facilitated the transfer of some 729.4 acres of land surrounding Coal Lake in McLean County, North Dakota to the NDDOT for the purpose of establishing the Coal Lake Wildlife Management Area (CLWMA) on those lands. The CLWMA is open to public recreational use and completes the mitigation for the elimination of all no-mow/managed mow acres in the highway rights of way of the State Highway System in McLean County. Bond Release No. 3 includes the remaining 92.3 acres of land within the CLWMA.

Bond Release No. 3 is divided into two subtracts owned by the State of North Dakota through the North Dakota Department of Transportation (NDDOT) and are part of the CLWMA. Subtract 3A includes 22.3 acres of reclaimed land designated as recreational; subtract 3B consists of 70.0 acres that were not disturbed by mining. **Figure 1** depicts Final Bond Release No. 3 to Permit NAFK-8405.

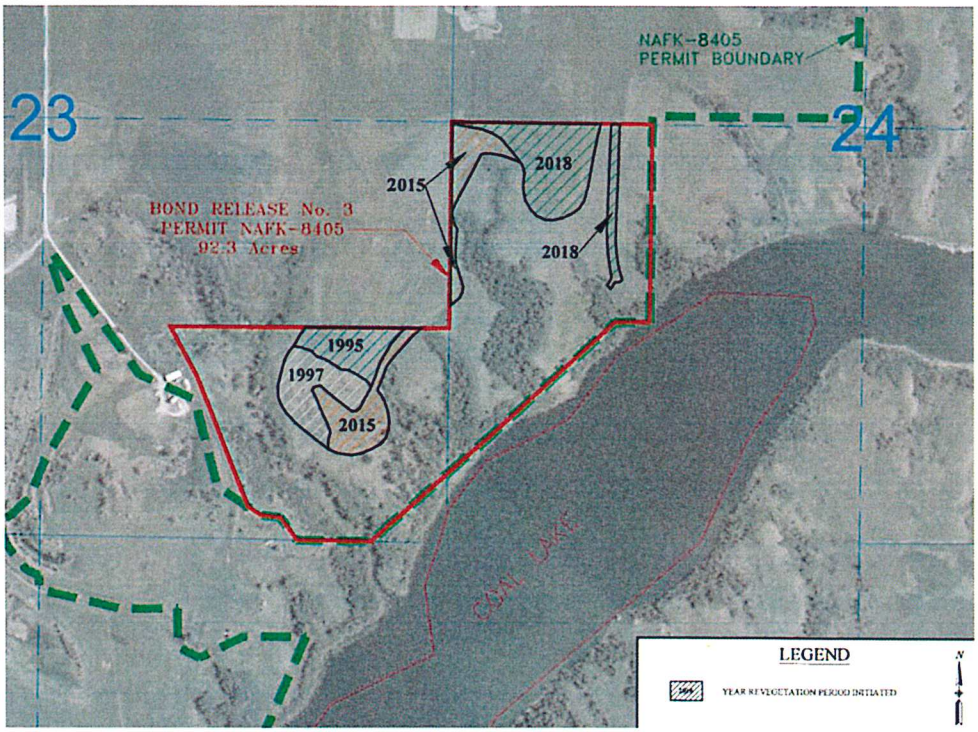
Figure 1. Final Bond Release No. 3 to Permit NAFK-8405.



Land affected by mining or associated disturbance in subtract 3A was reclaimed to the approved post-mine land use of recreational and is subject to the vegetation performance standard for recreational land use. A revegetation liability period of less than ten years for recreational areas is allowed by North Dakota Administrative Code 69-05.2-12-09. The revegetation success performance standard for recreation land is ground cover not less than that required to control erosion, which is defined as at least 73% total cover (live + litter) based on basal hits or 83% total cover (live + litter) based on first hits. The visual assessment of vegetative cover during the field inspection of subtract 3A was consistent with the ground cover assessment included in the bond release application; 96.5% for Section 23 and 91.8% for Section 24. Numerous areas in both sections were inspected and ground cover appeared excellent.

The reclaimed recreation land consists of cropland, native grassland, and re-disturbed orphan spoil. Three seed mixtures consisting of native and introduced perennial grasses were planted on the reclaimed land use subcategories in 1995, 1997, 2015, and 2018 (**Figure 2**).

Figure 2. Revegetation Period Initiation Map



The reclaimed native grassland and re-disturbed orphan spoil are supporting a dense stand of native and introduced species and there was no evidence of any erosion. The principal species established on the reclaimed grassland and orphan spoil were western wheatgrass, sideoats grama, Kentucky bluegrass, smooth bromegrass, big bluestem and switchgrass (**Figure 3**). Native and introduced forbs, such as Missouri goldenrod, cicer milkvetch, and buckbrush were also observed. The reclaimed pond site and diversion that was seeded in 2015 in Section 23 is dominated with pubescent wheatgrass, western wheatgrasses, and quackgrass while the 2015 and 2018 seedings in Section 24 are dominated with native grasses, primarily western wheatgrass, sideoats grama, green needlegrass, big bluestem, and smooth bromegrass. The reclaimed cropland in Section 24 that was seeded in 2018 (**Figure 4**) is becoming established with perennial grasses but annual weeds continue to persist in places. It appears this reclaimed cropland was seeded to the native grassland seed mixture rather than the temporary seed mixture since sideoats grama, green needlegrass, blue grama and switchgrass were observed along with smooth bromegrass. This 2018 seeding was recently hayed (**Figure 5**) and is sufficiently established with perennial species to protect the soil from erosion.

There was evidence that Canada thistle and Absinth wormwood had been treated with herbicide on reclaimed and undisturbed lands, but a few scattered plants were noticed that had not been treated. Remnants of an old silt fence were observed where a sediment pond had been removed and Falkirk representatives stated the materials would be removed.

Topography of subtract 3A is consistent with the approved post mine topography in Permit NAFK-8405.

Subtract 3A includes portions of three different grade approval areas and associated disturbance. The total soil respread thickness for the grade approved areas and associated disturbance within subtract 3A

was 24 inches (10 inches of topsoil and 14 inches of subsoil). The topsoil respread depth was verified on each grade approved area with a 15-inch tile spade and/or a 10-inch soil-sampling probe. Topsoil respread depths observed in the field averaged over 10 inches. **Table 1** identifies the topsoil respread depths and the locations where depths were verified. Two locations of topsoil respread depth are shown in **Figures 6 and 7**. Topsoil depth-check locations and the GPS point track log of the inspection route are depicted in **Figure 8.**

Table 1. Topsoil respread thickness was checked at the following locations with a 15-inch tile spade during the final bond release inspection.

Topsoil check location	Thickness est.(inch)	Date - time	Latitude	Longitude	Elevation (ft.)	Grade Approval
1	10	9/8/21 10:20 AM	47.447401	-101.081333	1996.0	E23B
2	10	9/8/2021 10:25 AM	47.447206	-101.081004	1992.0	E23B
3	10	9/8/2021 10:38 AM	47.448364	-101.078215	2000.0	Associated disturbance
4	9	9/8/2021 10:48 AM	47.450880	-101.078123	2004.0	E23J
5	10	9/8/2021 11:03 AM	47.450765	-101.075614	2008.0	E23D
6	10	9/8/2021 11:15 AM	47.450319	-101.074210	NA	Associated disturbance

Note: Accuracy on the ground is within 15 feet and elevation is within 9 feet.

Three white-tailed does were observed exiting the wooded draw in the NW¼SW¼ of Section 24. Additional photographs taken during the inspection and the GPS point track log are on file with the Reclamation Division.

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Figure 3. 1995 native grassland seeding in the SE¼SE¼ of Section 23. Area is well established with native and introduced perennial vegetation.

Figure 4. 2015 seeding in the NW¼SW¼ of Section 24 is well established with native and introduced perennial vegetation.

Figure 5. Recently hayed portion of the 2018 seeding area in the NW¼SW¼ of Section 24.

Figure 6. Topsoil respread depth checked with a 15-inch tile spade at location No. 1 in the SE¼SE¼ of Section 23.

Figure 7. Topsoil respread depth checked with a 10-inch soil probe at location No. 1 in the SE¼SE¼ of Section 23.

Figure 8. Final Bond Release No. 3 to Permit NAFK-8405 is outlined in fuchsia. The locations in subtract 3A where topsoil depths were verified are numbered 1-6. The GPS point tracklog of the inspection route is depicted in black. The background photo used to illustrate location is NAIP2019 imagery (Not to Scale).