

PUBLIC SERVICE COMMISSION

Reclamation Division

Memorandum

TO: Commissioners Kroshus, Christmann and Fedorchak
Steve Kahl, Interim Executive Secretary
John Schuh, General Council

FROM: *DKM* Dean Moos, *ZAB* Zanna Brinkman and *RK* Randy Kowalski

DATE: June 5, 2019

SUBJECT: Bond Release No. 5 to Surface Coal Mining Permit NAFK-9601 held by the Falkirk Mining Company, Case No. RC-18-367

Summary

On October 10, 2018, the Falkirk Mining Company filed the application for Final Bond Release No. 5 to Surface Coal Mining Permit NAFK-9601, requesting release of all reclamation liabilities on 307.7 acres of land located in portions of the E1/2 of Section 30 and the NE1/4 of Section 31, T146N, R81W at the Falkirk Mine. The bond release tract contains approximately 177.8 acres of land that was affected by current law mining activities and 129.9 acres of land that was not disturbed by mining activities. The reclaimed lands are subject to our current reclamation law and rules and Falkirk has demonstrated that the reclaimed lands have met all applicable bond release performance standards. The Reclamation Division recommends approval of this bond release application based on the findings discussed below.

Discussion

The bond release area includes approximately 80.5 acres of land owned by James H. Sheldon that were not disturbed by Falkirk's mining activities (N1/2NE1/4 of Section 30, T146N, R81W). The remainder of the bond release area (227.2 acres) is owned by the Falkirk Mining Company and includes a mix of undisturbed land and reclaimed mine land. The ND Hwy 200A right-of-way located on the east side of the bond release tract was not disturbed. The reclaimed mine area contains approximately 168.5 acres of cropland, a 6.7-acre seasonal wetland and 2.6 acres of section-line trails.

Coal removal occurred from 1998 to 2004 within this tract and the backfilling, grading and soil respread was completed on the area in 2005/2006. Seeding was completed on the mined area in 2007. Partial bond release was granted on this portion of the tract for backfilling and soil respread (first and second stage bond release) as part of Bond Releases 2 and 3 to NAFK-9601. Falkirk is requesting third and fourth stage bond release for this portion of the tract. There have been no other bond releases for the remainder of this tract. An area of associated disturbance

used for a sediment pond was reclaimed in 2011 and seeded in 2012 and Falkirk is requesting first (backfilling and grading), second, (soil respread), third, (vegetation establishment), and fourth stage (demonstration of revegetation success) bond release for this area and other associated disturbance areas. Prior to submitting this bond release application, Falkirk requested and was granted a variance from the 10-year liability period for the approximately 26.3 acres of land associated with the sedimentation pond (Case No. RC-18-304 approved September 26, 2018) as allowed by Policy Memo No. 20. The variance allows this tract to be considered for final bond release about three years sooner than would have been required.

The reclaimed areas in Bond Release 5 to NAFK-9601 were probed to verify topsoil and subsoil respread thickness for partial Bond Release 2 and partial Bond Release 3 to NAFK-9601 that were approved on January 26, 2005 and December 10, 2009, respectively. The associated disturbance areas in Bond Release 5 to NAFK-9601 that were not part of a previous partial bond release were checked with a tile spade during the bond release inspection to verify the topsoil respread thickness. The topsoil respread depths were in general agreement with the approved respread thickness.

Reclaimed Cropland

All of the reclaimed cropland in the bond release application is being managed with annually seeded crops. Most of the reclaimed cropland within the bond release area was initially planted to an alfalfa and grass pre-crop seed mixture and managed as hayland prior to beginning annual crop production. The reclaimed land has been continuously cropped since 2007 and has been primarily used for wheat production. The area associated with the former sedimentation pond was combined with the adjacent cropland following reclamation and cropped annually since 2012.

The revegetation performance standards for third and fourth stage bond release of cropland is simply yield or productivity. The cropland productivity or yield standard is developed from the pre-mine productivity values of the soils that existed prior to mining. The annual yield obtained from a control area or the annual county yield data published in *North Dakota Agricultural Statistics* (NDAS) is used to adjust the yield standard to account for annual climatic variability. The prime farmland standards do not apply to this bond release tract since there was no pre-mining prime farmland, thus only two years of yield data are needed to demonstrate success. The yield data used to demonstrate revegetation success must be obtained after year six of the 10-year revegetation responsibility period.

The yield data provided by Falkirk to demonstrate success was obtained after year six of the responsibility period applicable to the reclaimed mine land not covered by the variance granted for the associated disturbance area reclaimed in 2012. The variance area is represented in the yield data but with data from year six or earlier in the responsibility period. Falkirk developed separate unadjusted yield standards for the reclaimed cropland located in Section 30 and Section 31 within Permit NAFK-9601. The unadjusted productivity standards were calculated using Natural Resource Conservation Service (NRCS) productivity indices (PI) based on the pre-mine soil types. The unadjusted standard for cropland in Section 30 is 34.0 bushels/acre of wheat based on the pre-mine weighted average soil PI of 82.9%. The unadjusted standard for cropland

in Section 31 is 33.5 bushels/acre of wheat based on the pre-mine weighted average soil PI of 81.7%. The yield data demonstrating reclamation success is summarized in Tables 1a and 1b.

Sample Year	Crop Grown	NDAS County Average (bu/ac)	Adjusted Yield Standard (bu/ac)	Reclaimed Actual Yield (bu/ac)
2014	Wheat	51.0	55.1	58.8
2017	Wheat	31.2	30.9	31.6

Sample Year	Crop Grown	NDAS County Average (bu/ac)	Adjusted Yield Standard (bu/ac)	Reclaimed Actual Yield (bu/ac)
2013	Wheat	45.3	47.2	50.4
2017	Wheat	31.2	30.5	34.5

The adjusted yield standards for this bond release include an adjustment step for continuous cropping in calculation of the annual climatic corrections as allowed in our current revegetation guideline document, *Standards for Evaluation of Revegetation Success and Recommended Procedures for Pre- and Post-Mining Vegetation Assessments (July 2003)*. The Reclamation Division is in the final stages of releasing an updated revegetation standards document. The pending revised document does not include a correction step for continuous cropping because the factors used in the calculation are out of date and the summer fallow practice has not been widely used in our area during last 20 years. Separate summer fallow and continuous cropping yield estimates have not been provided in *North Dakota Agricultural Statistics* since 1995. Staff calculated adjusted yield standards without the continuous cropping adjustment using the method outlined in the pending revised revegetation guideline document and found that the standard would increase for each yield data set presented for this bond release application. The reported reclaimed yield would meet the standard determined using the updated method in all cases except for the 2017 sample from Section 30. Using the method outlined in the pending update to our revegetation document, the adjusted yield standards for Section 30 would equal 55.8 bu/ac for 2014 and 34.1 bu/ac for 2017.

Reclaimed Wetlands and Water Resources

The 6.7 acre reclaimed seasonal wetland (LW-NE31-1) is located in the SE1/4 of Section 31. The wetland was initially designed and graded to be 4.9 acres in size but increased in size during the revegetation period possibly as a result of differential settling. An updated wetland design to increase the size of this reclaimed wetland was approved in Revision 16 to NAFK-9601. The bond release application contains three years of wetland data including aerial photography showing the size and vegetation zones, a complete species list of the vegetation established and water quality test results. The wetland areas meet the performance standards for reclaimed wetland habitat.

Although not identified as a separate land use, the SE1/4 of Section 31 contains about 0.24 acres of temporary wetlands that may be the result of differential settling. These features are small in

size and hold water during the early part of the growing season. There are no wetland acres located within the bond release areas located within Section 30.

Falkirk completed a surface and ground water post-mine hydrologic assessment for this bond release request. No pre-mine water supplies were affected by mining related activities and the Reclamation Division concludes that there was not material damage to the hydrologic balance off-permit due to the mining and reclamation activities on these tracts. A number of existing ground water monitoring wells located within or adjacent to the bond release tracts will be retained for continued observations as part of the mine-wide ground water monitoring plan for the Falkirk Mine.

General Information

The formal bond release inspection was conducted on November 14, 2018. The surface owners, McLean County Commissioners, and several state and federal agencies were invited to participate in the bond release inspection. Accompanying several Reclamation staff on the inspection were John Sieving from the Office of Surface Mining; Jerry Reinisch from the U.S. Fish and Wildlife Service; Jeremy Eckroth, Luke Gilbert, and Steve Cottingham from the Falkirk Mine. The persons participating did not express any concerns with this bond release application.

Since Bond Release No. 5 contains some federal coal that was mined in the S1/2S1/2 of Section 30, OSM concurrence is required prior to final bond release approval. Mr. Jon Sieving, OSM Casper Field Office, participated in the inspection and he did not express any concerns with the reclamation on the tract. We received OSM concurrence regarding this bond release on May 20, 2019.

The bond release application also contains correspondence from the McLean County Superintendent of Highways, James A. Grey, indicating the section line trail between Section 30 and 31, T146N, R81W was reconstructed to a township road standard to provide for public travel and agricultural use.

The public notice for this bond release application was published in the official county newspaper, the McLean County Independent, as well as the Bismarck Tribune for four consecutive weeks on November 8, 15, 22 and 29, 2018. No objections or concerns were received regarding this bond release application. No other concerns were identified during the bond release inspection that required additional follow-up or that would prevent final bond release approval.

Permit NAFK-9601 is covered by a surety bond specific to the reclamation liabilities for land within this permit area. Falkirk is requesting a reduction in the bond amount for Bond Release No. 5 to NAFK-9601 in the amount of \$ 319,989.78. An adequate amount of bond will remain to cover any liabilities for the remaining acreage in this permit area. If approved, the bond release will become effective July 12, 2019 unless a formal hearing is requested.

Attached for your consideration are the proposed motion and award forms.

