

PUBLIC SERVICE COMMISSION

Reclamation Division

Memorandum

TO: Commissioners Kalk, Christmann and Fedorchak
FROM: *GW DKM* Guy Welch, Dean Moos and Jim Deutsch
DATE: November 26, 2013
SUBJECT: Bond Release No. 5 to Surface Coal Mining Permit NAFK-8705 held by the Falkirk Mining Company, Case No. RC-12-793

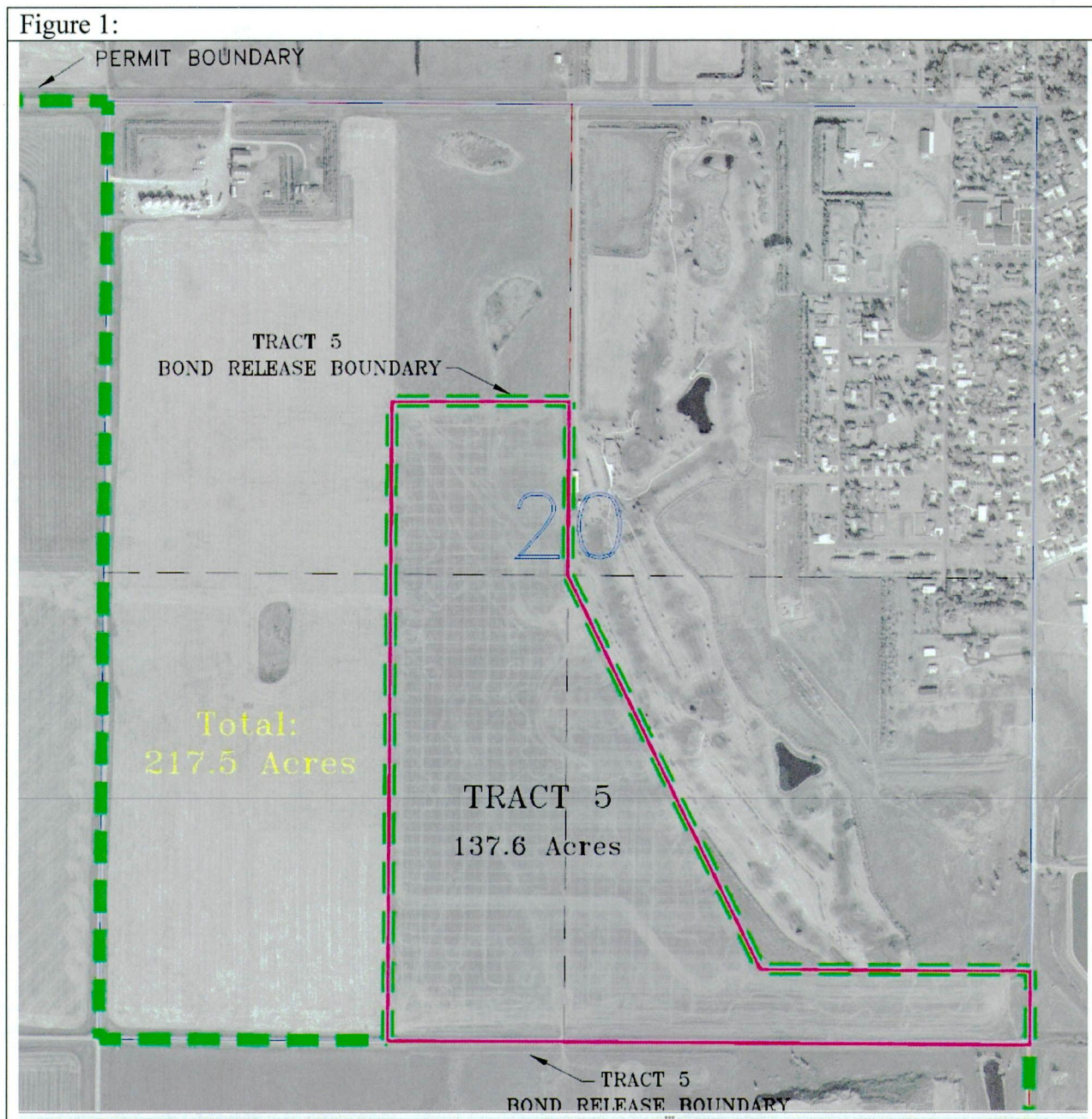
Summary

On October 31, 2012, The Falkirk Mining Company filed the application for Bond Release Application No. 5 to Surface Coal Mining Permit NAFK-8705 requesting release of all reclamation liabilities on 137.6 acres of land at the Falkirk Mine. This Bond Release Application contains 130.7 acres of reclaimed cropland and 6.9 acres of reclaimed public roads (including 0.7 acre of a road that was not disturbed by mining activities). The land included in this bond release is subject to the current reclamation law and rules and Falkirk has demonstrated that all applicable bond release standards have been met. The Reclamation Division recommends approval of this bond release application based on the findings discussed below.

Discussion

Bond Release Application No. 5 to NAFK-8705 contains 137.6 acres of land located in a portion of Section 20, T146N, R82W, McLean County. This property is owned by Laurance and Nancy Heger and is farmed by their son Steve. All but 0.7 acre of a township road included in this bond release was affected by Falkirk's mining activities. The postmining land uses consist of 130.7 acres of cropland and 6.9 acres of township roads. Coal was mined from this tract beginning in 1982 and was completed in 1985. Backfilling and grading was completed in 1993. Soil respreading was completed in 1986 with topsoil at thickness ranging from 10.5 to 18 inches and the subsoil respread thickness ranged from 13 to 42 inches. A pre-cropland perennial grass and alfalfa seed mix was planted on the reclaimed land and these areas were initially managed as hayland. Strips of hayland were broken and cropped beginning in 1996 through 2004. The reclaimed cropland was planted to wheat and sunflowers during the revegetation responsibility period. A grass waterway was constructed through a portion of the field in 2008 to improve drainage. There have been no previous bond releases on this tract of land. Therefore, first (backfilling and grading), second, (soil respread) third (vegetation establishment) and fourth stage (demonstration of restoration of pre-mine productivity) bond release is being requested for all reclaimed cropland acreage.

Figure 1 below shows the acreage included in Bond Release No. 5.



Falkirk has demonstrated that the revegetation performance standards have been achieved for the reclaimed cropland included in this bond release application as discussed below and described in the bond release application. Under revegetation success standards in PSC rules, mine operators must demonstrate reclaimed cropland yields are equal to or greater than the approved standard with ninety percent statistical confidence for any two years after year six of the minimum 10-year revegetation responsibility period. The revegetation responsibility period begins when the last area was initially seeded. The last seeding to initiate the responsibility period on areas in Bond Release No. 5 occurred in 1996. Therefore, cropland yield data beginning in year 2002

can be used to demonstrate revegetation success for final bond release and all areas in this bond release did not become eligible for final bond release until 2006.

This tract of land is located immediately southwest of the City of Underwood. The bond release tract borders the Underwood Golf Course which was mined and reclaimed and bond released many years ago for recreational land use. The remainder of the reclaimed land in Section 20 was also previously bond released. A farmstead was partially constructed on land affected by mining in the northwest corner of this section but is not part of Bond Release No. 5.

Reclaimed Cropland

All of the reclaimed cropland in the bond release application is being managed with annually seeded crops. The cropland productivity standard is based on the productivity potential of the pre-mine soils that were present prior to mining. The unadjusted yield standard was climatically adjusted through the use of annual county yield data published by National Agricultural Statistics Services in conjunction with average county yield calculated using data from the McLean County Soil Survey published by USDA's Natural Resource Conservation Service. Falkirk included data in the bond release application demonstrating that the actual yields exceeded the climatically adjusted standard for two years beginning no sooner than year six of the responsibility period. The adjusted yield standards and actual yield values for the reclaimed cropland is summarized in the table below.

Bond Release No. 5 to NAFK-8705			
Sample Year	Crop Grown	Adjusted Yield Standard	Reclaimed Actual Yield
2006	Wheat	28.2 bushels/acre	40.0 bushels/acre
2010	Wheat	46.6 bushels/acre	53.0 bushels/acre

Reclamation success was demonstrated by whole field harvest. Falkirk included GPS combine yield monitor data showing how various portions of the reclaimed cropland yielded during the years for those years used to demonstrate revegetation success.

The bond release application also contains correspondence from the McLean County Superintendent of Highways, Ronald F. Wagner, indicating the County's satisfaction with the reconstructed township road located on the south side of this tract.

Wildlife use of the reclaimed cropland is discussed in the bond release application and is included in Falkirk's biennial wildlife report. Falkirk completed a surface and ground water postmine 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 tract will be retained for continued observations as part of the mine-wide ground water monitoring plan.

General Information

Since the bond release application wasn't submitted until late 2012, the formal bond release inspection was postponed until June 25, 2013 when field and weather conditions were more suitable to visually evaluate the area. Mr. Steve Heger, the son of the surface owners, Laurance and Nancy Heger, participated in this inspection and he did not express any concerns regarding this reclaimed land. Mr. Heger has farmed this reclaimed land during the revegetation period and he indicated that the yields and quality of the reclaimed land have improved in recent years and that, generally, yields are now comparable to undisturbed lands in the area. Mr. Heger lives about ½ mile from the bond release tract and he said that this area received about 14 inches of rain in late May and June of 2013. There were several areas on the reclaimed cropland where water was ponding but Mr. Heger said he was not overly concerned with these features. He thought this tract of land was similar to the undisturbed cropland in the area where he was not able to seed about 6% of his land this year due to wet conditions.

The Reclamation Division normally requires mining companies to repair settling features that pond water on reclaimed cropland unless they are considered replacement temporary wetlands. However, the surface owner, Mr. Laurance Heger, sent us a follow-up letter on July 23, 2013 stating that he did not feel that we should require Falkirk to repair these features.

The reclaimed cropland in Bond Release No. 5 was growing corn at the time of the bond release inspection. The corn was about 10 inches tall on June 25th and no apparent differences were noted between the various ages of reclaimed land within the field. A dozen or so spots in the field were ponding water at a shallow depth. In most instances it appeared that the corn crop was planted on these spots prior to the water ponding on them, but the excessive rainfall drowned out the corn crop in these areas and in other areas where the ground was saturated. The topography of this cropland is such that it would be difficult to repair these low areas where water was ponding. In most instances, the water ponding sites were small in size generally, less than one-tenth of an acre in size.

A grassed waterway was constructed in 2008 to better facilitate drainage in this area and several small settling features were repaired at that time. This waterway appeared to be functioning as intended but some water was ponding adjacent to this grassed waterway. A hand held Dickey-john soil compaction tester was used to check for soil compaction at various locations throughout the reclaimed tract. No significant compaction was noted and the entire soil profile was moist, at or near field capacity. The reclaimed township road located along the south side of this bond release tract appeared to be in good condition.

Since Bond Release No. 5 contains some federal coal that was mined, OSM concurrence is required prior to final bond release approval. Mr. Harv Gloe, OSM Casper Field Office participated in the inspection and he did not express any concerns with the reclamation on either tract. We received OSM concurrence regarding this bond release on November 4, 2013.

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, Underwood News and Washburn Leader-News for four consecutive weeks, June 13, 20, 27 and July 3, 2013.

No objections or concerns were received regarding this bond release application. The Reclamation Division requested written concurrence from the surface owner regarding the features ponding water on reclaimed cropland and the surface owner, as noted above, Laurence Heger responded with a letter requesting that we not require Falkirk to repair these features. No other concerns were identified during the bond release inspection that required additional follow-up or that would prevent final bond release approval.

The reclaimed areas were probed to verify topsoil and subsoil respread thickness by Dean Moos in August of 2000. The actual topsoil and subsoil respread thicknesses verified by the soil probing were similar to the approved respread thicknesses and variations were within acceptable limits.

Falkirk did not request any reduction in the bond amount since this area is currently covered by a worst-case reclamation condition that still exists at the mine. This area is part of a consolidated bond area that includes most permits at the Falkirk Mine. If Bond Release No. 5 to Permit NAFK-8705 is approved, Falkirk will be released of all reclamation liabilities on these 137.6 acres. The bond release will become effective January 6, 2014, unless a formal hearing is requested. Our jurisdiction over the 137.6 acres will end once the release becomes effective.

Attached are a motion and award form for consideration at the December 4, 2013 Commission meeting.