



Public Service Commission

State of North Dakota

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December 14, 2016

Mr. Troy Leingang
Environmental Manager
Coteau Properties Company
204 County Rd. 15
Beulah, ND 58523

Dear Mr. Leingang:

The Reclamation Division has completed a technical review of Final Bond Release No. 6 to Surface Coal Mining Permit NACT-9101. The following items must be addressed prior to this office recommending Commission action.

Printable List of Attachments

1. Please update the Printable List of Attachments because the listing shows "*Attachment IX – Other Approvals*" and there is no Attachment IX associated with this bond release submittal. (BEB)

Attachment VI – Contour and Revegetation Map

2. Please attempt to un-clutter the contour elevations specific to the orphan spoils on this map. Perhaps using 4-foot or even 10-foot elevation contours in the spoils as opposed to the 2-foot elevation contours provided would be a viable fix. Currently, the contour lines and elevations are basically illegible to the point that one cannot discern the spoil peaks from the spoil valleys. Please attempt to clean up this map so that it is legible and useful. (BEB)

Attachment VII – General Information

3. Please supplement the water level and water quality table provided in the Ground Water Hydrology subsection by summarizing that beginning year-end 2006, water levels appear to have increased in all of the surrounding ground water monitoring wells and concentrations of TDS have generally increased, albeit slightly in most cases. A few sentences to summarize the data provided is all that is required. (BEB)
4. The Ground Water Hydrology subsection of this attachment dedicates several paragraphs of narrative to the large wetland basin in Sections 9, 10, 15, and 16 and its effect on ground water recharge. Please supplement this narrative with a short summary of the work conducted on the Section 9 drain/outlet by the Mercer County Water Resources Board and why that project was

undertaken. We understand that additional work on the Section 9 outlet is being considered by the MCWRB and if Coteau has knowledge of the details of this proposal, please update the discussion with that information as well. (BEB)

5. The fourth paragraph on page 4 of Attachment VII, refers to North Dakota Department of Health effluent limitations but it is not clear why effluent limitations would be applicable to this bond release since to our knowledge there are no impoundments or other treatment facilities in the bond release tract that are being used to manage wastewater or runoff from a regulated point source of pollutants. The effluent limitations specified in NDPDES permits must be considered under NDAC 69-05.2-16-04 if an impoundment were to be retained for an industrial purpose or to provide ongoing treatment for a particular discharge or drainage from the mining activity. The performance standards outlined in NDAC 69-05.2-16-04 must be reviewed as part of a request for third stage bond release after vegetation has been established as required by NDAC 69-05.2-12-12(7). Also, as specified in NDAC 69-05.2-16-04(b) sedimentation ponds and other sediment control measures may be removed when established vegetation is effectively controlling erosion. The revegetation performance standard for areas developed for recreation use after mining described in NDAC 69-05.2-22-07(4)(j) requires the vegetative ground cover on these areas not be less than that required to control erosion. Perhaps a description and reference to the vegetation measurements for this tract would be more relevant to document that the areas are not contributing suspended solids to streamflow or runoff outside the permit area in accordance with NDAC 69-05.2-12-12(7)(b). While constructed wetlands are sometimes used in wastewater treatment and regulated as point sources with effluent limitations expressed in an NDPDES permit, it is our understanding that the constructed wetlands in the bond release tract are intended for wildlife habitat and are not being chemically treated or being used for wastewater treatment. Please clarify as appropriate. (RLK)
6. The surface water narrative in Attachment VII states that TSS data associated with monitoring site MS-21 demonstrates that lands in the assessment area are not contributing suspended solids to stream flow or runoff outside the permit area. This statement does not appear to be supported by the information or determinations made in the Surface Water Assessment for Bond Release #6 to Permit NACT-9101 added to the CSWMP with Revision 32 to NACT-0401. Please revise to provide additional information or narrative relating monitoring data from monitoring site MS-21 to runoff from the bond release tract as appropriate. (RLK)
7. The narrative in the fourth paragraph on page 4 of Attachment VII, referring to the removal of treatment structures is somewhat confusing since the preceding paragraphs in the narrative discuss the analysis of the post-mine reclaimed landscape and ground cover with hydrologic modeling and surface water sampling. The removal of settling ponds is allowed (and expected) when the reclaimed drainage area is adequately revegetated as provided in NDCC 38-14.1-24(8)(d) or for permanent water impoundments as provided in NDCC 38-14.1-24(7). Perhaps the background information related to the NDPDES discharge points and attendant data summary could be moved to earlier in the section or left to the discussion in the post mine hydrologic assessment. The qualifications for removal of sediment ponds and the accompanying effluent limits coincide with the requirements outlined for third stage bond release for vegetation establishment. A reference to the vegetative parameters measured for the purpose of demonstrating revegetation success at this time may be more relevant and better support a determination that runoff should not result in the additional contribution of suspended solids to streamflow or runoff from the bond release area. (RLK)

8. Please include a copy of the Surface Water Assessment for Bond Release #6 to Permit NACT-9101 in this document or provide a detailed summary with relevant data, maps and figures with the final bond release application. The information contained in the assessment is particularly applicable to the water features located in the bond release tract and the adjacent surface water bodies. (RLK)
9. Please revise the Wildlife subsection to clarify the acreage associated with each reclaimed vegetation type or subcategory land uses that comprise the Recreational land included in this bond release application. In addition, the table in this subsection currently uses the terminology "previously mined" but attachment V, Surface Ownership, Land use and Soils Depths Map, does not identify "previously mined" areas. Please revise to provide clarity by using consistent terminology. (GAW)
10. Please revise Attachment VII, General Information, to mention that the outlet end of the Harmony Lake's principal spillway is located in this bond release application and include a discussion about the suitability of this feature and whether it is functioning as intended. (GAW)

Attachment VIIIa – Vegetation Management and Production

11. As previously requested in our initial review, please revise the first or second paragraphs on page 1 of Attachment VIIIa, Vegetation Management and Production, to include specific reclamation information for the disturbed areas in the bond release tract. This should include a discussion about grade approvals, topsoil and subsoil respread depths and the seed mixtures used on the various types of recreation land in the bond release area. It is currently not clear which areas were seeded to the two different grassland seed mixtures. These reclaimed vegetation types need to be discussed and depicted on a map in this bond release application. (GAW)
12. Please revise the second paragraph on page 1 of Attachment VIIIa, Vegetation Management and Production, to include a discussion about vegetation types (subcategory land uses) of the reclaimed recreation land and the corresponding acreage. (GAW)
13. As previously requested in our initial review, please include a postmining topography map which delineates the entire watershed of each recreated or constructed wetland included in this bond release application as required by Item no. 5 on page II-H-9 of our revegetation success standards document. (GAW)
14. The third paragraph of Attachment VIIIa, Vegetation Management and Production, references Attachment VIIIIf but this attachment currently does not exist in the application. Please update as necessary. (GAW)
15. The last sentence on page 2 of Attachment VIIIa appears to be unnecessary and distracts from the narrative regarding the wetland water quality and sample results provided in this attachment. Please revise for clarity. (RLK)
16. Please revise the wetland narratives to include a more complete comparison with Stewart and Kantrud's classification system as required by our Revegetation Success Standards Document. Please include wetland subclasses or discuss if the wetlands are fresh water or brackish, discuss the cover types of the wetland basins and compare the species established in each vegetation zone

with Stewart and Kantrud's species lists. It is not clear how the shallow marsh zone can be dominated with species typically associated with an open water zone. Stewart and Kantrud's classification system indicates the central zones of seasonal wetlands should be dominated with coarse grasses, sedges and associated forbs while the central zone of a semi-permanent wetland should contain a deep marsh zone. It appears that the central zone of reclaimed wetlands CW-D17-03 and CW-D16-02 are dominated with submerged aquatic species associated with a deep marsh or open water zone rather than seasonal wetlands. Please revise the discussion to more clearly characterize each reclaimed wetland and discuss how precipitation trends during the monitoring period may have affected vegetation zonation establishment. (GAW)

17. The wetland discussion for CW-D17-03 states that the shallow marsh zone consists mostly of American milfoil with some sago pondweed present, which is inconsistent with Stewart and Kantrud's characterization of the shallow-marsh zone, and the last sentence incorrectly states that the presence of these species (rather than vegetation zones) and hydrology validate that this wetland is a seasonal class III according to Stewart and Kantrud. Please revise to accurately characterize the wetland according to Stewart and Kantrud's classification system. (GAW)
18. The wetland discussion for CW-D17-04 states that it often functions as a semi-permanent wetland because of its depth (6.1 feet) but it is listed as having only three vegetation zones with the central zone being dominated with submerged aquatic species rather than emergent vegetation. These statements are inconsistent and the final sentence states that the wetlands plant species, depth and water quality validate that it is a seasonal wetland. Please revise to clarify what is intended with the conflicting statements. (GAW)
19. Please revise the reclaimed wetland narratives to discuss if the reclaimed wetlands have species diversity, seasonal variety and regenerative capacity similar to that listed by Stewart and Kantrud and pre-mining species list as required by our Revegetation Success Standards document, page II-H-10. Please also state whether the ground cover adjacent to each wetland basin is adequate to prevent sedimentation of the wetland basin. (GAW)
20. Please revise the last paragraph on page 2 of Attachment VIIIa, to actually characterize the results of the water quality of the reclaimed wetlands as requested in our initial review letter. The pH should be discussed in terms of acidic or alkaline, the EC should be evaluated in terms of fresh water or salinity and the TDS/TSS values should be discussed in terms of suitability for wildlife. The major cations and anions values should be compared to pre-mine or undisturbed wetlands in similar landscapes or to values established by relevant sources. This discussion should also thoroughly explain why high sulfate values of wetlands WD16-02 and CW-D17-03 and if these values are detrimental to wetland habitat value or downstream water users. (GAW)
21. Please revise Attachment VIIIa, Vegetation Management and Production, to discuss why three years of water quality sampling data is not being submitted for reclaimed wetland CW-D16-02, as required with our Revegetation Success Standards document, page II-H-8, and justify why in this instance the Reclamation Division should not require three years of data for this replacement wetland acreage. (GAW)
22. Please revise the Revegetation Success subsection of Attachment VIIIa to clarify if two years of cover data is needed to bond release this Recreation Land and explain how the Section 17 - Orphan Spoil (E) cover data is relevant since it is included in the application. (GAW)

23. The Revegetation Success subsection of Attachment VIIIa, Vegetation Management and Production, implies that cover data was stratified by revegetation date but it does not appear that any cover data was taken on the area that was reclaimed in 2013. Please revise the statement and include information that demonstrates revegetation success on all revegetation initiation dates. This can be in narrative form if no visible differences in vegetation species composition were noted on areas that were seeded at different times. (GAW)
24. The Revegetation Success subsection of Attachment VIIIa, Vegetation Management and Production, contains no information about the reclaimed wetlands and their meeting the applicable performance standards. Please review and revise accordingly. (GAW)
25. The Revegetation Success subsection of Attachment VIIIa, Vegetation Management and Production, includes the statement “The average total cover of native species based on basal hits for the area included in this bond release was 91.5 percent, which exceeds the requirement of 73 percent. The standard does not require at least 73 percent “native species” but rather is simply a ground cover standard that includes live cover and litter, and please clarify how this 91.5 percent native value was determined given that the 2016 data does not separate the grass cover by species, and the 2015 data shows that native species comprise only an average of 24.5 percent of the relative live cover composition. Please review and revise to provide clarity. (GAW)
26. Please consider adding a simple table to Attachment VIIIa that summarizes the percent cover values determined for the each of the sampling sites (areas) identified in Attachment VIIIb. (RLK)
27. Please include a copy of the wetland as-built designs with the bond release document since the topography within the basins are not properly or accurately depicted on Attachment V. The information may be helpful to personnel that will operate and maintain the wetland structures in the future. The bond release document is basically the technical specifications for the land included in the bond release. The wetlands in this tract have features similar to other impoundments and/or are closely associated with other water features being managed for recreation. (RLK)
28. Please revise Attachment VIIIa, Vegetation Management and Production, to include a discussion about whether or not there are any temporary wetlands on the reclaimed land in this bond release application that Coteau will count as replacement acreage. Please also discuss if there were any temporary wetlands on the affected acreage prior to mining activities. (GAW)

Attachment VIIIb – Vegetation Cover Data

29. Please revise the data in Attachment VIIIb, Vegetation Cover Data, so that the information is understandable and relevant. As currently presented it is not possible to tie the sampling data in Attachment VIIIb with the information listed on the map, Attachment VIIIc. It is not clear which area on the map is being represented by the various bookmarked subsections nor is it clear what the difference is between “Section 16-17 Orphan Spoil – Redisturbed (A)” and “Section 17 – Redisturbed Orphan Spoil North (C)” since both contain 2016 cover data for Sections 16 and 17 according to labels at the top of the pages. (GAW)

30. Please revise the data in Attachment VIIIb, Vegetation Cover Data, so that the bookmarked titles are labeled the same as that listed on the corresponding data sheet. For example, the 2016 Section 17 data is labeled "Section 17 Redisturbed Orphan Spoil – North (C)" in the bookmark but the heading at the top of the sheet is labeled "Section 16 17 Orphan Spoil Disturbed" and the bookmark for Section 17 – Orphan Spoil (E) is labeled "Section 17 Spoil Reference" at the top of the corresponding page. (GAW)
31. Please revise Attachments VIIIb, Vegetation Cover Data, to include the actual sampling date (month, day and year) and include the names of the people and the organization(s) who actually collected the data. (GAW)
32. Please review the absolute cover values listed for bookmarked subsections A and C, Section 16-17 Orphan Spoil – Redisturbed (A) and Section 17 – Redisturbed Orphan Spoil – North (C) respectively. The values listed cannot be recalculated. Please also clarify if any perennial species were considered detrimental to the land use. (GAW)
33. The 2016 cover data, bookmarked subsections A and C, Section 16-17 Orphan Spoil – Redisturbed (A) and Section 17 – Redisturbed Orphan Spoil – North (C), respectively, includes all species of grass in a column labeled "grass". Please explain the validity of this data given that ground cover data must be recorded by plant species, according to Page III-D-4, of our Revegetation Success Standards document, and explain how this information is relevant if one cannot determine if the group contains any annual grass species or species detrimental to the land use. (GAW)

Attachment VIIIId – Wetland Vegetation Data

34. Please review Attachment VIIIId, Wetland Vegetation Data, to clarify if submerged aquatic species should be associated with a shallow-marsh vegetation zone. It appears that perhaps these species should be associated with an open water or a deep-marsh vegetative zone rather than a zone that should be dominated with emergent vegetation. This needs to be explained or the species association zones need to be revised. (GAW)
35. Please revise Attachments VIIIId, Wetland Vegetation Data, to include the names of the people and the organization(s) who actually collected the wetland vegetation data included in this bond release application. (GAW)

Attachment VIIIe – Wetland Maps and Photos

36. Please include bookmarks in Attachment VIIIe, Wetland Maps and Photos, so that one can easily find information in this 18-page pdf. (GAW)
37. Please review Attachment VIIIe, Wetland Maps and Photos, to clarify if submerged aquatic species should be associated with a shallow-marsh vegetation zone. It appears that perhaps these species should be associated with an open water or a deep-marsh vegetative zone rather than a zone that should be dominated with emergent vegetation. This needs to be explained or the species association zones need to be revised. (GAW)

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38. Please review the imagery associated with wetland CW-D17-04 to ensure it is correct. The image for 2014 is labeled 2013 on the photo and it appears to be identical to the 2015 image. (GAW)

If you have any questions, please contact this office.

Sincerely,



Dean K. Moos
Director
Reclamation Division