



Public Service Commission

State of North Dakota

COMMISSIONERS

Kevin Cramer
Tony Clark
Brian P. Kalk

Executive Secretary
Darrell Nitschke

600 E. Boulevard Ave. Dept 408
Bismarck, North Dakota 58505-0480
Web: www.nd.gov/psc
E-mail: ndpsc@nd.gov
TDD 800-366-6888 or 711
Fax 701-328-2410
Phone 701-328-2400

April 30, 2009

Mr. Jesse Noel, P.E.
Manager, Engineering & Environment
Dakota Westmoreland Corporation
Beulah Mine
P.O. Box 39
Beulah, ND 58523-0039

Dear Mr. Noel:

The Reclamation Division has completed a technical review of the application of Revision No. 22 to Surface Coal Mining Permit KRSB-8603 for the Beulah Mine. The following items must be adequately addressed before any further action can be taken on the revision application.

Section 1.4 – Business Entity Information

1. Landowner(s) Voigt is incorrectly spelled in Exhibit 1.4.2, as well as throughout other areas of the revision application. Please revise. (BEB)
2. Please update information presented in Item A of Section 1.4 concerning Identification of Interests under the Business Entity Information section. As of January 27, 2009 Westmoreland Coal Co. President and Chief Executive Officer Delbert Lobb has resigned and has been replaced with former President and CEO Keith Alessi. Please revise the Officers and Shareholders, Managers, Directors and all other relevant subsections to reflect this change in company officers and directors pursuant to NDAC 69-05.2-06-01(e). (BEB)
3. Please check on the land ownership records for the NE $\frac{1}{4}$ of Section 22, T143N, R88W. Recent personal communication with Terence Schmidt indicates that Tammy Schmidt should no longer be listed as a surface owner of record for the NE $\frac{1}{4}$ of Section 22. If indeed this is the case, please eliminate any reference to Tammy Schmidt in the Land Use narrative of Section 2.7, the Surface and Mineral Ownership Map of Exhibit 1.4.1, and any other sections of the permit in which her name is associated with the NE $\frac{1}{4}$ of Section 22. (BEB)

4. The Surface and Mineral Ownership Map of Exhibit 1.4.1 lists Unruh as the sole surface owner in the SW¹/₄ of Section 14, T143N, R88W, while the Apparent Surface and Coal Owners of Record – Adjacent Area, under Item B – Property Interests of Section 1.4 of the Business Entity Information lists Terence and Tammy Schmidt in addition to Kenny and Kim Unruh. Please correct this conflicting information. (BEB)
5. Page 2 of Exhibit 1.4.2 indicates that the federal coal lease for the NE¹/₄NE¹/₄ and the S¹/₂NE¹/₄ of Section 20 is pending. According to the information on Federal Coal Lease NDM 041765 on page 230, these areas are already leased. Please correct as needed. (SAS)
6. We are unable to locate an assignment of the lease for the NE¹/₄ of Section 19 from North American Coal to Knife River Coal Corporation. This document is needed in addition to the Warranty Deed showing the sale of the coal to DWC. (SAS)
7. The “modified” copy of NDM 041765 was signed on January 8, 2001 but there is no indication that it was ever recorded at the county auditor’s office. Please indicate if this was recorded or if there is any page or pages missing. It appears the modification to the permit may have been associated with the term of the lease. Please explain. (SAS)
8. The federal coal lease for the N¹/₂ of Section 22 is not certified (recorded at the county office). Please provide a certified copy. (SAS)
9. It appears there are 2 road closures for the N¹/₂ of Section 22 as listed for items #1 and #9 on page 1 of 18 of Exhibit 1.4.4. Also, it appears there is no road closure for the area between the NE¹/₄ of Section 19 and NW¹/₄ of Section 20 even though this section line will be mined through. Please include plans for obtaining the necessary section line closure for this area. (SAS)
10. Subsection G of Section 1.4.4 indicates that all buildings within ½ mile of the proposed permit area have been identified and are located on Exhibit 3.3.1. The Schmidt and Pleasant Valley Farm farmsteads are not depicted on Exhibit 3.3.1 or any other exhibit. Please depict the locations of these farmsteads/buildings on the appropriate map and indicate if any occupied dwelling is located within 500 feet of the proposed mining operations pursuant to NDCC 38-14.1-07(5). (DKM)
11. Please consider changing the color scheme of the legend of the Preliminary County Road Relocation Plan Map in Exhibit 1.4.4. The colors of several of the line types (e.g. County Road Closure and Rev. 22 Boundary and the Existing County Road and Permit 8603 Boundary) are similar and only differ in line weight and in some cases appear to have been reversed from the legend to the map. (DKM)

Section 1.5 – Compliance Information

12. Please update the information for NOV-0804 to show the violation has been terminated and show the penalty amount that was assessed. NDAC 69-05.2-06-02(5). (MDB)

Section 1.6 – Relationship of Proposed Permit Area

13. Please update Section 1.6 to clearly state whether or not mining is prohibited on the lands being added with Revision 22. NDCC 38-14.1-07. (GAW)

Section 2.1 – Geological Inventory

14. Please change the font size of the numbers representing elevation and location stationing of Exhibit 2.1.5A so that they're legible. Currently, we're unable to view the numbers at any scale in the electronic format. A similar font as provided on Exhibit 2.1.5B is appropriate. (BEB)
15. Unless there's a specific reason for it, please eliminate the cyan-colored line from Exhibit 2.1.7 that runs for a distance of approximately 3 miles from the SE¼ of Section 18 to the SE¼ of Section 20, T143N, R88W. (BEB)
16. Two different sets of borehole numbers are superimposed on each other in the N½ of Section 20 on the Geologic Cross Section and Drill Hole Location Map of Exhibit 2.1.7. Please separate the numbers so that they're legible. (BEB)

Section 2.2 – Surface Water Hydrology Inventory and Monitoring

17. Revision No. 11 to Permit KRSB-8603 (May 18, 2001) approved annual sampling frequency for surface water sites. Although we believe that annual sampling is adequate for the remaining pond, spring, or intermittent stream sites within the permit area, we have reconsidered the adequacy of annual sampling for perennial streams such as Brush Creek and Coyote Creek that receive, or will receive, drainage from the permit area. With Revision No. 22 we have therefore determined that the following changes are necessary to the streams portion of the Surface Water Monitoring Plan to comply with NDAC 69-05.2-16-05(1)(a)(1) (please refer to attached Figure 1 for site locations): (1) Increase the sampling frequency to three times per year during ice-free conditions in the second, third, and fourth quarters for existing Sites 09ACC-W/ST (downstream) and 23BBB-W/ST (formerly upstream) located on Brush Creek. During the past five years, these sites have been sampled in November or December, and sometimes more than a month apart, thereby providing limited data for assessing mining impacts to water quality; (2) Add existing Site 25DCC-E/ST located on Brush Creek to the monitoring plan for sampling three times per year during ice-free conditions in the second, third, and fourth quarters. This site has been part of the Permit KRSB-8802 Surface Water Monitoring Plan, but with the additional acreage in Section 22 it will now become the upstream monitoring site for Brush Creek; (3) Establish upstream and downstream sampling sites on Coyote Creek because of the additional acreage in Sections 19 and 20 (**refer to attached Figure 1 at the end of the letter**). These sites should be sampled three times per year during ice-free conditions in the second, third, and fourth quarters; and, (4) Submit separate surface water monitoring reports on quarterly intervals. In recent years, the surface water monitoring report has been submitted annually as part of the fourth quarter NDPDES report. The quarterly reports should include copies of the laboratory analysis reports. (WTG)

18. Please make the following changes to Exhibit 2.2.4 - Water Quality Data: (1) Sort the sampling date for the sites chronologically in ascending order. There are about five sites for which the dates are not in chronological order, thereby making it difficult to track water quality changes over time; and, (2) Add the sampling data for stream sampling Site 25DCC-E/ST to the table because this site will become the upstream stream sampling site on Brush Creek for Permit KRSB-8603 with the approval of Revision 22. (WTG)
19. Please add the location of surface water sampling Site 25DCC-E/ST to Exhibit 2.2.7, the Surface Water Monitoring Plan. Also, please add the upstream and downstream Coyote Creek sampling locations that will be established with Revision 22. (WTG)

Section 2.3 – Groundwater Hydrology

20. Pursuant to NDAC 69-05.2-08-06 please provide a narrative discussion of Voigt Springs No. 1 and No. 2 in the *Known Uses of Water* subsection of Section 2.3, Groundwater Hydrology. Discuss the anticipated effects to the springs from proposed adjacent mining operations and water replacement if required. NDCC 38-14.1-14(1)(k). (BEB)
21. Please convert the Beulah-Zap Coal Seam groundwater monitoring Well No. 2006 from active to inactive/destroyed on the Groundwater Monitoring Sites Map of Exhibit 2.3.1 and update the well completion summary page of Exhibit 2.3.2 to reflect the conversion. This well appears to have been destroyed by mining operations sometime after the 1st quarter 2007 measurement was obtained. Please check the two exhibits for any other updates or changes that need to be reflected. (BEB)
22. Please eliminate from the map or explain the intended use of the black and white north-south trending gridlines in Exhibit 2.3.1. (BEB)
23. As an organizational formatting issue, please consider moving the Spaer Lignite Potentiometric Surface Map from its current location in Exhibit 2.3.10 to Exhibit 2.3.5, which would place it sequentially in order with the other potentiometric surface maps that are provided in the permit. (BEB)
24. Please correct the Listing of Revised Information describing updates to Section 2.3, in which Exhibit 2.3.1 is listed as being revised four times. Please replace the Exhibit numbers of the bottom three Exhibits with the corrected subsection numbers (it appears the revised Exhibits that should be listed are 2.3.6, 2.3.7, and 2.3.10). (BEB)
25. Please provide a linked listing of the name, number, and location of each well and spring certification of Exhibit 2.3.8. Scrolling through each certification document in an effort to locate information for a particular well or spring is time-consuming. At a minimum, please provide a Table of Contents at the beginning of the exhibit (similar to Exhibits 2.1.1 through 2.1.4 in the Geological Inventory) that lists the naming convention of the well or spring certification and show the page number or a range of page numbers for each certification. (BEB)

26. Information in Table 2.3.3 states that the Fetch No. 1 Well is probably screened in the Beulah-Zap Coal Seam and further narrative on page 2.3.12 states that all of the Fetch sites are located up-gradient of the permit area and are not anticipated to be affected by mining. At the location of the Fetch No. 1 Well in the NE $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 21, the potentiometric surface map for the Beulah-Zap Lignite in Exhibit 2.3.4 seems to indicate the well to be in a location that is positioned hydraulically downgradient of proposed mining activities in the S $\frac{1}{2}$ of Section 17 due to an area of high potential (recharge area) in the SW $\frac{1}{4}$ of Section 17 and extending into the N $\frac{1}{2}$ of Section 20 with continuing reduction in hydraulic gradient extending east/southeast across Section 21. Please review your information and update the application as needed. (BEB)
27. In the discussion of the PVF No. 1 and No. 2 Wells on page 2.3.12, the last sentence of the first paragraph states that mining will not impact the use of Wells No. 1 and No.2. Earlier narrative indicates the wells will be removed. Please eliminate the last ten or so words from the paragraph and replace with different narrative because of the fact that removal of the wells is an impact that will be realized because of proposed mining activities. (BEB)
28. Please provide a definitive statement as required in the Probable Hydrologic Consequences narrative of Section 2.3 that any water supply diminished, interrupted or quality-affected will be replaced with a water source of equal or better quantity and quality. NDAC 69-05.2-01-02(90). (BEB)
29. In reference to original completeness item #13, please add to the Beulah-Zap Bed narrative in Section 2.3 by specifically naming the sandstone aquifer over the Beulah-Zap Bed as the *Beulah-Zap Sand*, because this specific hydrostratigraphic reference is used in Table 2.3.3, and perhaps within other narrative sections of the permit. (BEB)
30. In addition to the geological, elevation, and other informational narrative provided for spoils monitoring Well No. 2029 in the Groundwater Hydrology Section on page 2.3.10, please provide the location of monitoring Well No. 2029 that has replaced pre-mine Well No. 1373 in the narrative. (BEB)
31. Please update the Groundwater Monitoring Sites Map (Exhibit 2.3.1) by depicting and labeling the locations of the 9 new groundwater monitoring wells and the spoils well that were installed in October, 2008 (Well No.'s 2020-2029). (BEB)
32. Please revise the narrative in the Groundwater Hydrology Section on page 2.3.10 that discusses spoils Well No. 2029 to state that the well was screened in the spoil, as opposed to saying that it was screened in the overburden. (BEB)
33. As a matter of current professional practice in determination of information related to groundwater PHC predictive documentation and hydrologic protection performance standards (water level rebound and water quality data for the next lowest aquifer) most mines in North Dakota have been installing a nest or cluster of two post-mining reclamation wells on reclaimed lands – one well screened in the base of spoils and the other well screened in the next lowest significant aquifer below the base of spoils (in your case, the Spaer Bed). Please make a commitment to doing the same in the future by

adding to the spoils narrative in the Groundwater Hydrology, Section 2.3, that this practice will be adopted by DWC for future post-mining monitoring well installations. (BEB)

Section 2.4 – Soils Inventory

34. The narrative above Table 2.4.1 on page 2 indicates that the "...sum of ownership acres may differ slightly from permit acres due to rounding." The new total of acres in the permit (with the addition of this acreage) will be 2666.1 acres as indicated on the revision application form which is 84.5 acres more than the total listed in Table 2.4.1. This is not a slightly different number. Please correct this table to more fully account for the acres within the permit. (SAS)
35. Please indicate the approximate acreage of prime farmlands in the NE $\frac{1}{4}$ of Section 22 that have been identified and will be treated as prime farmlands. This information should be included in the second paragraph on page 4 of Section 2.4. (SAS)
36. Exhibit 2.4.9 indicates that the NRCS prime soil was represented by a Flaxton 57B soil (Site No. 141). Flaxton is not considered a prime soil in Mercer County thus using this comparison would be erroneous. Why was the Arnegard Site No. 98 not used instead? Please explain. (SAS)
37. Please label the township and range on the Composite Soil Survey Map, Exhibit 2.4.7. (WTG)
38. Kenneth Thompson proposed an unofficial series, Flaxbar (page 16 of Exhibit 2.4.8), and map unit 70B - Flaxbar loamy sand, 3 to 6 percent slopes (page 12 of Exhibit 2.4.8), to describe soils formed in wind-blown loamy sand overlying bedrock. The map unit description states in part: "This unit differs from Krem in having a shale substratum rather than glacial till. Agronomically, they are the same." After reviewing the series and map unit descriptions, and the sample analysis, we have concluded that the productivity index for Krem lfs on Slope Group B (48) should be applied to the 70B map unit for revegetation success standards, rather than the Flaxton lfs as suggested. Please reword the italics on page 16 to state the following: "Since Flaxbar is not an official soil series, use the Krem lfs productivity index for revegetation success standards for map unit 70B." In addition, please remove the NRCS Flaxton official series description from pages 21 and 22. Finally, please correct the legend footnote on Exhibit 2.4.7 to indicate the change, and correct the 70B map unit on the legend to read "Flaxbar loamy sand". Only a small acreage of map unit 70B was identified in the permit area in the NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 20. Another area of 70B was also mapped in the NE $\frac{1}{4}$ of Section 18, but that area is unlikely to be permitted. (WTG)
39. Please change the orientation of Exhibit 2.4.7 (Composite Soil Survey) so that it is properly oriented. It needs to be rotated 90 degrees counterclockwise. (DKM)

Section 2.5 – Wildlife Inventory and Plan

40. Please check the acreage figures for the area being added to the permit as broken down by habitat type with Revision 22 as presented in Table 2.5.1. Total acreage added to the permit with Revision 22 is shown to be 890.3 acres and all other documentation submitted with the revision application reflects a total of 890.4 acres. Also, acreage for all habitat types listed with the addition of Revision 22 adds up to 1178.8 acres. Please revise or explain. (BEB & GAW)
41. The fourth sentence on page 1 of Section 2.5, Wildlife Inventory Plan, implies that the habitat types and acreages for Revision 19 are listed in a separate column in Table 2.5.1. Please review and clarify as necessary. Perhaps the acreage of each habitat type on the Revision 19 area should be summarized in narrative form in the paragraph to retain historical information. (GAW)
42. Please identify the boundaries of the Wildlife Study Areas on Exhibit 2.5.1A, Classification of Habitat Types Map. The original study area was increased by 1580.5 acres in 2005. (GAW)
43. Please eliminate or explain and identify the black and white north-south trending gridlines in Exhibits 2.5.1A and 2.5.4A. (BEB)

Section 2.6 – Pre-Mining Vegetation Inventory

44. Please clarify if the range site species composition percentages listed in Exhibit 2.6.13 for the Revision 22 areas are from 2007 or 2008 or a cumulative value from both years. A sentence at the bottom of page 2.6-27 indicates the range condition was assessed in 2007 and 2008. Please update the tables in Exhibit 2.6-13 to clarify. (GAW)
45. Please update Exhibit 2.6.1, Vascular Plant Species List, to document which species were present on each land use in the Revision 22 addition area as required by NDAC 69-05.2-08-08(1)(b). (GAW)
46. Exhibit 2.6.12a, Wetland Plant Species List, only identifies a half dozen species present at the wetland sampling point(s) but a complete species list for the wetlands are required. Please include a comprehensive species list for the wetland communities as required by NDAC 69-05.2-08-08(1)(b). Also, in the wetland narrative of Section 2.6 please discuss how the sampling points capture the variability of the vegetation within these drainageways that obviously consist of seeps, channels and pools. (GAW)
47. In the appropriate narratives for each land use, please mention the dates that plant species surveys were conducted to ensure all species present were realized. (GAW)
48. In Section 2.6, please include copies of the woodland sampling data, and include detailed woodland plant community assemblages (species composition) information for **each** of the tall shrub and mixed deciduous woodlands in the Revision 22 area. The woodland plant species assemblages can be listed as an insert in a map depicting the woodland communities. The information presented to date does not provide a detailed description

of the woodland communities, or show the variability of the species composition of the woodland communities as required by NDAC 69-05.2-08-08(1)(c)(4). It does not appear that any tall shrub communities were sampled to estimate species density. If any of these communities are going to be disturbed by mining, detailed characteristics of the communities is required. (GAW)

49. Pursuant to NDAC 69-05.2-08-08(1)(a)(4) please discuss if there are any low shrub communities within the native grassland areas and if so, why these communities were not considered woodland. If the low shrub communities are being classified as native grassland, discuss its relative percent composition of the grassland community and provide an estimate of its spatial distribution or depict the communities on the Pre-Mine Land Use Map. In addition, discuss the value of the low shrub communities for wildlife and how its value will be replaced. (GAW)
50. Please update Exhibit 2.6.9, Pre-Mining Land Uses and Vegetation Map Units, to show the thin upland native grassland reference area. (GAW)
51. Exhibit 2.6.15 is labeled Historic Reference Area Data (Shelterbelt Data). This is very misleading as this exhibit has nothing to do with Historic Reference Area Data. Update the name of Exhibit 2.6.15 accordingly so that the information is presented clearly and concisely as required by NDAC 69-05.2-02(1). (GAW)
52. Please label the shelterbelts on Exhibit 2.6.9 according to the naming convention listed in Exhibit 2.6.15. (GAW)
53. A magenta colored polygon is depicted in the N½ of the NE¼ of Section 16 on the Pre-Mining Land Uses and Vegetation Map Units, Section 2.6.9. According to the map legend this would be a Developed Water Resource, but that appears to be an error. Please review and update as necessary. (GAW)
54. Please update the Pre-Mining Land Uses and Vegetation Map Units, Exhibit 2.6.9, to show the location where the water samples were taken for the linear Wetlands 20-1 and 22-1, and the location where the line drawings were taken along representative segments of the linear wetlands. (GAW)
55. Please identify the Revision 16, Revision 19 and Revision 22 areas on Exhibit 2.6.9 since these areas are commonly referenced in the narratives in Section 2.6. (GAW)
56. The trees near the Pleasant Valley Farm must be identified as either woodlands or shelterbelts; shelterbelts if the volunteer tree and shrub species are not native. DWC's response to item No. 23 of our completeness review letter (December 23, 2008) is not considered a valid argument for not classifying the trees and shrubs as woodland or shelterbelt. Please update Section 2.6 to meet the requirements of NDAC 69-05.2-08-08(1)(a)(6), and Sections 2.7 and 3.7 of the permit as necessary. (GAW)
57. Subsection D indicates 55 acres (gravel pit plus roads) of Industrial and Commercial but Exhibit 2.6.11 only lists 17.6 acres, yet the total acreage listed exceeds the new total for the permit. Please correct this anomaly. (SAS)

58. The total land uses in Exhibit 2.6.11 (2667.3 acres) exceed the new total acreage in the permit (2666.1 acres) by 1.2 acres. Please indicate if this is due to rounding of numbers and if this is the case, then state that in the narrative. (SAS)

Section 2.7 – Land Use

59. Please fix the hyperlinks to Exhibit 2.7.1 and Exhibit 2.7.2 within the narrative of Section 2.7, Land Use, and all others within this section that do not work properly. (GAW & WTG)
60. The second sentence of Section 2.7 states that the pre-mining land uses have been in place for a minimum of five years; but according to Section 2.6, the hayland in the northwest corner of Section 20 was converted from hayland to cropland in 2008. Please clarify. (GAW)
61. Please include any landowner post-mine land use preference statements for the Revision 22 area that have been received by DWC but not included in the application. If changes are made to this section, then please also organize the preference statements chronologically or by revision area or in some manner that allows one to find the information in a logical fashion. Presently, the Revision 22 preference statements range from the first to the last page of the 25 pages in Section 2.7.2. (GAW)
62. DWC's proposal to convert 50.2 acres of DWC-owned land from native grassland to hayland in Section 20 is not acceptable. The native grassland is important habitat for wildlife. In addition, the conservation shelterbelts must be planted on cropland or hayland area rather than on areas that should be returned to native grassland. Please revise the table on page 1 of Section 2.7 and Exhibit 2.7.1 accordingly. NDAC 69-05.2-09-17(1)(d). (GAW)
63. On page 2.7.3, please discuss plans for replacing the spring seep area and developed water resource that will be mined through in the drainageway near the Pleasant Valley Farmstead. (GAW)
64. The pre-mine field windbreaks and the trees and shrubs near the Pleasant Valley Farmstead in Section 20 must be replaced and the shelterbelt revegetation standards must be applied. Please include language in the shelterbelt narrative on page 2.7.3 that discusses these replacement plans and show where an equivalent acreage of shelterbelts will be planted on the Post-Mine Land Use Map, Exhibit 2.7.1. (GAW)
65. In Section 2.7, Land Use, please discuss the fish and wildlife enhancement measures that will be applied to each surface owner's property. Simply replacing the pre-mine land uses is not adequate compliance with NDAC 69-05.2-09-17(1)(d). (GAW)

Section 2.9 – Alluvial Valley Floor Inventory

66. Pursuant to NDAC 69-05.2-08-13 please provide an alluvial valley floor investigation of the area being added to the permit and adjacent areas. (BEB)

Section 2.10 – Cultural Resources Inventory & Protection Plan

67. The Cultural Resources Inventory Summary Table on page 2.10.4 does not include Site 32ME2237 in Section 20, but does list Site 32ME223 in Section 20. A review of the cultural resource report does not indicate a Site 32ME223 in Section 20. It appears this should be Site 32ME2237. Please make the necessary corrections. It also appears that the significance determination correspondence regarding the sites within the area to be added to the permit (see November 17 and 20, 2008 letters in Exhibit 2. 10.7)) also refer to Site 32ME223 which does not exist. It is recommended that the SHPO clarify that Site 32ME2237 has been deemed not significant and the appropriate documentation be included in Exhibit 2.10.7. If necessary, the appropriate letters in Exhibit 2.10.7 should be footnoted to indicate that Site 223 does not exist in the permit area and that it actually refers to Site 32ME2237. Regardless, documentation must be provided from the SHPO indicating the significance status of Site 32ME2237. (DKM)
68. Exhibits 2.10.8 and 2.10.9 are marked “review draft report” indicating these reports are drafts rather than the final version of these reports. If these reports are in final version, please replace these exhibits with the final version. (DKM)

Section 3.1 – General Mining Plan

69. Please update the Facilities Area Map, Exhibit 3.1.6, so that the map is legible when printed. The scale values and residence owners are not legible even when zoomed to a larger size. Please update the map using a paper size commensurate with the size of the permit area and labeling font. (GAW)
70. Page 2 indicates that the lands included within the Extended Mine Plan, Exhibit 3.1.1, includes Sections 25 and 30, T143N, R87W. These sections are not shown on the map for future mining. Please correct. (SAS & WTG)
71. Page 3.1.2 indicates that 240 acres of federal coal has been added to lease NDM 041765; however, Exhibit 1.4.2 on page 2 indicates that the 240 acres is pending and the lease shown on page 230 of 236 doesn't show any new areas other than those listed in an old copy of the lease in Permit KRSB-8802 on page 120 in Section 1.4 of that permit. Please explain. (SAS)
72. Please place the section numbers on Exhibit 3.1.1 to make it easier to locate and identify the sections. In addition, the map should contain an appropriate contour interval and the estimated crop and recovery lines as required by NDAC 69-05.2-07-03. (SAS)

Section 3.2 – Water Management Plan

73. Please provide design plans for the emergency spillways of Ponds 95, 96, 97 and 99 to include cross-sectional views, velocities of the flow and erosion control measures which will be taken if necessary. Ponds 101 and 102 include most of this information; however, flow velocities are also needed for these ponds as well. NDAC 69-05.2-16-09. (MDB)

74. It appears that Pond 99 may meet the MSHA size requirements. Per 30 CFR 77.216 (MSHA Impoundments) if a structure impounds water, sediment, or slurry to an elevation of five feet or more above the upstream toe of the structure and has a storage volume of 20 acre feet or more, the design plans must be submitted to MSHA for approval. Please provide the MSHA approval of the design plans for this pond. (MDB)
75. Table 3.2.36 – indicates that Pond 101 has a ten-year sediment storage of 1.308 acre-feet; however, the calculations indicate a sediment yield of 0.80 acre-feet. Please make the necessary corrections. (MDB)
76. Please include the final slopes of Diversions 95N, 98E, and 99W as they are not provided on the plan drawings. Also, please include the cross-sectional views, velocities of the final slope as well as any erosion control material which will be used. (MDB)
77. Diversion 101S indicates an overall depth of 1.5 feet with a flow depth of 1.3 feet. NDAC 69-05.2-16-06(6)(b) states a minimum of 0.3 feet of freeboard is required. Please revise the plans to provide the necessary freeboard. (MDB)
78. Please delete the annual yield calculations for Pond 86 as it is no longer a permanent structure. (MDB)

Section 3.3 – Blasting Plan

79. Please indicate in the Listing of Revised Information for the blasting section that Exhibit 3.3.1 was updated. Currently, the listing incorrectly indicates that Exhibit 3.1.1 was updated to show the new permit boundary on the blasting map. (BEB)
80. Please update the Blasting Notice of Exhibit 3.3.2, as currently the blasting schedule indicates May 14, 2007 to be the notice deadline. (BEB)

Section 3.4 – Suitable Plant Growth Material Handling Plan

81. For clarity, please reference and hyperlink Exhibit 2.4.7, the Composite Soil Survey Map, in the first sentence of subsection 6 (Prime Farmland) on the bottom of page 3.4.5 to show the prime farmland location. (WTG)
82. Please review the calculations for estimated spring wheat production, and correct if necessary, for the comparison of prime and non-prime farmland on the top of page 3.4.6. Our calculations resulted in a comparison of 35 bushels per acre for the prime farmland versus 28 bushels per acre for non-prime farmland. (WTG)
83. Please correct the spelling for “spoil” in the first paragraph of page 3.4.7. (WTG)
84. Page 3.4.7 states that SPGM respread depths shown on Exhibit 3.4.1 (Suitable Plant Growth Material Redistribution Depths) are based on the complete set of overburden analysis data found in Exhibit 2.1.3. NDAC 69-05.2-08-05(2) requires a minimum density of one test boring per 40 acres for overburden analysis, but only two test boring locations are shown in the NW¼ of Section 20 on Exhibit 3.4.1 (one boring per 80 acres).

Exhibit 2.1.7 (Geologic Cross Section and Drill Hole Locations Map); however, shows that eight additional test borings (labeled 1 through 8-08) were completed in the N½ of Section 20 in 2008. Please plot the location of test borings 1-08 and 5-08 in the NW¼ of Section 20 on Exhibit 3.4.1, and provide the overburden analysis of the eight test borings in Exhibit 2.1.3. Please also add test borings 1-08 and 5-08 to Table 3.4.1, determine the projected respread depths for the boring locations, and revise the SPGM respread depths for the NW¼ of Section 20, if necessary. (WTG)

85. DWC has proposed to not sample the regraded spoil in the NE¼ of Section 19 and the W½NW¼ of Section 20 because of the good quality of the overburden materials in these areas. The Reclamation Division will require graded spoil sampling of all final graded spoil areas before soil respreading begins. Please make the necessary corrections. (WTG)
86. Please specify the factor that will be used to account for compaction of SPGM. Although a compaction factor is discussed on pages 3.4.12-13, the factor is not clearly stated. (WTG)
87. Please either remove the paragraph referencing NDAC 69-05.2-15-06 on page 3.4.13, or cite the entire section. As written, the paragraph conveys the impression the only rills and gullies deeper than 9 inches require stabilization. (WTG)

Section 3.5 – Backfilling and Grading

88. Please extend cross section #2 of map 3.5.1b to the north to include the spoil laydown/valley fill area in order to represent the topography of this area. (MDB)

Section 3.7 – Revegetation Plan

89. Please update Section 3.7 to show shelterbelt replacement plans for the pre-mine field windbreaks and the shelterbelts located near the Pleasant Valley Farmstead that are going to be destroyed in Section 20. These field windbreaks and shelterbelts provide fish and wildlife habitat and their value must be replaced. (GAW)
90. Please provide detailed reclamation plans for re-creating the wetlands that will be disturbed in the drainages in Sections 20 and 22 and discuss how seasonal or more permanent wetlands will be created if the groundwater that supported the pre-mine wetland is altered by mining. (GAW)
91. Please update the woodland narrative on page 3.7.12 to address replacing the pre-mine woodlands that will be disturbed by mining activities. (GAW)
92. Please consider including a few desirable forbs in the native grassland seed mixture or discuss how native grassland soils will be respread on areas to be reclaimed to native grassland. NDAC 69-05.2-13-08(6) requires the use of the best technology currently available to minimize impacts to wildlife and the USFWS recommends that forbs be included in native grassland seed mixtures. (GAW)

93. The Straw, channeled soil in Exhibit 3.7.2 is currently listed as NR (not rated) for cropland productivity. For non-rated soils a PI value of 20 should be assigned as denoted in the revegetation guidelines manual on page II-C-7. Please correct this exhibit accordingly. (SAS)
94. Two errors were discovered in Exhibit 3.7.3. The Zahl soil (38E) should have an estimated yield of 8.9 bu/ac (37 X 0.24) and the Cabba soil (81E) should have an estimated yield of 5.9 bu/ac (37 X 0.16). This will cause some minor changes in the weighted yield column and the estimated yields. Please adjust the table accordingly. (SAS)
95. Please include a prime farmland reclamation plan in accordance with NDAC 69-05.2-26-04 and 69-05.2-26-05. Although the permit states on page 3.4.6 that soil removal within the prime farmland units is not planned, the Extended Mine Plan Map indicates that the prime farmland area will be disturbed between the years of 2015-2017 and therefore, any prime farmland disturbed by mining activities would be subject to the special prime farmland handling provisions. (SAS & WTG)

Section 3.8 – Time Schedules

96. Please eliminate or explain the black and white north-south trending gridlines in the Special Variance Zones Map of Exhibit 3.8.2. (BEB)
97. Please update the language in the second paragraph on page 3.8.3 to reflect the current status of Pond 86 and replacement well for the State owned land. (SAS)
98. It appears that a variance from the contemporaneous reclamation schedule will be necessary along the north edge of the NW $\frac{1}{4}$ of Section 22 and S $\frac{1}{2}$ of Section 15 where the diagonal pits will tie into the north/south pits. If a variance is not requested for this area, then plans for the disposal of initial pit spoil must be included as required by NDAC 69-05.2-09-14. Please review and update as necessary. (GAW)
99. Please provide an estimated reclamation schedule for special variance Zone No. 3 and any new variance areas that are being requested. (DKM)
100. Exhibit 3.8.2, Special Variance Zones, does not include all of the permit area. Although no variances are currently requested in the area not included on the exhibit, variances may be necessary in this area in the future. Please include the entire permit area on this exhibit. (DKM)


Section 3.9 – Reclamation Cost Estimate and Performance Bond

101. On Plate 3.9.1 cross section B shows a spoil peak of 27,000 square feet. When compared to the area of adjacent spoil peaks, this area measurement appears to be in error. Please correct as necessary. (MDB)

102. Please review and update the net production used for dozer pushes, since the production rate appears higher than what we have calculated. For instance, gross production of a D11 with a universal blade for a 200 foot push is approximately 1500 LCY/hr. With an efficiency factor of 0.71, the dozer is capable of pushing 1080 LCY/hr. Your calculations show a production rate of 1520 CY/hr. in this instance. Please review and update accordingly. (MDB)
103. A subsoil respread depth of 2.15 feet was used throughout Table 3.9.5; however, Plate 3.4.1 indicates total respread depths of 2, 3, and 4 feet. Please update as necessary. (MDB)
104. Page 3.9.10 states that except for ponds where the embankment also serves as a subsoil stockpile, the embankment will be dozed into the pool area. This statement indicates the pond embankments will be treated as spoil material, except for the embankments which are noted as being constructed out of subsoil. Plate 3.9.2 does not indicate that any of the embankments are constructed out of subsoil; however, no subsoil respread volumes are included for ponds on Table 3.9.5, only topsoil is included for these areas. Please include the volumes and hours required to respread the ponds with subsoil. (MDB)
105. Shelterbelts in Section 20 will be removed in support of mining; however, no costs are included in the bond amount to replace them. Please update bond costs accordingly to include replacement costs for trees that are to be replaced as part of the reclamation plan. (MDB)
106. Values from the January 2009 update of the variable cost of Policy Memo 16 can be used if Dakota Westmoreland so chooses. (MDB)

If you have any questions, please contact this office.

Sincerely,



for James R. Deutsch
Director
Reclamation Division

Figure 1.

