Dakota Westmoreland Corporation

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August 17, 2009

FROM DIRECTOR - RECLAMATION DIV.

Date:_____

Action:_____

Info. Only:_____

Info & File:_____

Mr. James R. Deutsch
Director, Reclamation Division
Public Service Commission
600 E Boulevard Ave, Dept. 408
Bismarck ND 58505-0480

Dear Mr. Deutsch:

Re: Revision No. 22
KRSB-8603

The following information is submitted in response to the technical questions dated July 10, 2009. Individual comments are set forth below followed by Dakota Westmoreland's responses and a listing of revised information. Three CDs containing the revised information are enclosed.

Section 1.1 – Application and Support Documents

1. The links to the exhibits in the narratives in many sections (e.g. 2.6, 2.7, 3.2, 3.7 etc.) do not work. These exhibits cannot be accessed even when the "allow" button is used. Please fix these links so that the exhibits can be viewed.

   - The links have been fixed, and as previously stated in our June 3rd response; a security warning message pops up with the links in the table of contents. We believe this is a software glitch with Adobe Acrobat 9. We have talked to technical support at Adobe and they don't know how to fix it either. The only way to get around this message is to just press the "Allow" icon, when it asks if you trust this site, and it will take you to the correct exhibit. We also added an additional Table of Contents in the form of a word document. All the links work in the word document without the security message pop-up. The disadvantage of the word document is that you loose the ability to easily move forward and backward when checking exhibits.

2. Follow-up to deficiency #24. Page 2 of 3 of the Listing of Revised Information (which is located on page 25 of Section 1.1) has not been changed to reflect the addition of revised Exhibits 2.3.6, 2.3.7, and 2.3.10. Please update the Listing to accurately document updates associated with this revision. (BEB)

   - The recommended changes have been made Section 1.1.

Section 2.1 – Geological Inventory

3. Follow-up to deficiency #84: We accept the explanation given for the number of test holes that provide overburden analysis for acreage added in Section 20 for Revision 22 and the suitable plant growth material redistribution depths shown on Exhibit 3.4.1 which are based on the overburden analysis. It appears, however, that changes that were made to the February 2009 version of Exhibit 2.1.3 in response to deficiency #84 have created additional inconsistencies between the overburden test holes shown on Exhibit 3.4.1 and the test holes listed as providing overburden analysis on page 1 of the June 2009 version of Exhibit 2.1.3. For example, the nine overburden test holes used to calculate SPGM respread depths in Sections 19 and 20 were removed from the June 2009 version list, while the eight test holes that lie outside the proposed permit boundary in the S½ of Section 22 (17-08 through 24-08) and the three test holes (25-08 through 27-08) that are also outside the permit boundary elsewhere, remain on the list. According to our interpretation, the following 19 test holes should be listed on page 1 of Exhibit 2.1.3 as those providing overburden analysis for the acreage added in Revision 22 to make the list consistent with the Table 3.4.1 Dataset 3 of Section 3.4 - Suitable Plant Growth Material Handling Plan. Please also make the necessary changes to the overburden test hole analysis included in Exhibit 2.1.3. (WTG)

38-04	43-04	10-08	15-08	39-04
44-04	11-08	16-08	40-04	1-07
12-08	1022	41-04	2-07	13-08
1023	42-04	3-07	14-08	

   - The recommended changes have been made to Exhibit 2.1.3.

Section 2.2 – Surface Water Hydrology Inventory and Monitoring

4. The stream monitoring locations table on page 2.2.10 lists the monitoring period of site 13CCC-W/ST, one of the new sites for Coyote Creek monitoring, as starting on 1/1/09, while the monitoring period for the other new site for Coyote Creek (31DBD-W/ST) is listed as starting on 6/1/09. It appears that the monitoring period for site 13CCC-W/ST should also start on 6/1/09. Please review the dates, and correct them as necessary. (WTG)

   - The date was changed from 1/1/09 to 6/1/09.

5. In the Surface Water PHC, please include a comparison table of pre-mine watersheds versus post-mining watersheds, including the acres, runoff quantity, and percent of change of both. If the runoff quantity changes more than 5% for any affected watershed, please discuss these watersheds in the narrative to address any possible downstream consequences from these changes, such as overland flooding, lack of water for stockponds, etc. (MDB)

   - Table 2.3.4 has been added to the surface water PHC of narrative 2.3. All changes greater than 5% are also discussed in narrative 2.3.

Section 2.3 – Groundwater Hydrology

6. Follow-up to deficiency #21. Please eliminate ground water monitoring well 2006 from the narrative on page 2.3.26 in which this well is described to document the effects of mining on the Beulah-Zap bed and is still listed as being a current active well. (BEB)

   - Well 2006 has been eliminated from the list describing the effects of mining on the Beulah-Zap bed.

7. Follow-up to deficiency #25. Please correct the spelling of landowner Voigt in the newly created Table of Contents in Exhibit 2.3.8. (BEB)

   - The spelling has been corrected to Voigt.

8. The undeveloped spring/seep located in the woodland in the NE¼ of Section 22 does not appear to be identified on Exhibit 2.3.7. Please address. (GAW)

   - The undeveloped seeps located in the woodland in the NE¼ have been identified on Exhibit 2.3.7 as Schmidt Seep #1 and Schmidt Seep #2. They are also addressed in narrative 2.3.

Section 2.4 – Soils Inventory

9. Follow-up to deficiency #36. If it is the intent of Exhibit 2.4.9 to compare NRCS delineated areas of "prime soils" with the soil units as delineated nonprime in the detailed soil survey, this should be explained on page 2.4.4 for clarity of purpose. Please clarify the narrative on page 2.4.4 accordingly. (SAS)

   - The source of the delineation areas is now provided in the narrative.

Section 2.6 – Pre-Mining Vegetation Inventory

10. Follow-up to deficiency #57. Please explain why only some of the road corridors are listed as industrial and commercial and others are not. The footnote for Exhibit 2.6.11 doesn't do a good job of explaining this. (SAS)

    - We changed the way road corridors were categorized in revision 22 and the footnote to Exhibit 2.6.11 has been expanded in an attempt to clarify this.

11. Follow-up to deficiency #51. In the Table of Contents, Exhibit 2.6.15 is still labeled Historic Reference Area Data (Shelterbelt Data). This is very misleading as the exhibit does not contain Historic Reference Area data. Please update the Table of Contents to accurately reflect the title of Exhibit 2.6.15. (GAW)

    - The table of contents has been updated with the revised exhibit title.

12. Follow-up to deficiency #48. The woodland discussion on page 2.6.40, for Section 15, Revision 22 Addition area, states that the second sampling point contained 25 low shrubs which equates to 14,370 plants per acre. However, Exhibit 2.6.16 does not list any low shrub species being present in sample site MD2. Please identify the low shrub species or species in the sampling point. (GAW)

    - Exhibit 2.6.16 has been revised to include the low shrub species for site MD2.

Section 2.7 – Land Use

13. Follow-up to deficiency #60: In the second sentence in the first paragraph in Section 2.7, please refer to the section in the permit containing a discussion that addresses whether or not the pre-mine land uses have or have not been in place for the previous 5 years. This information should be clearly discussed in Section 2.7, Land Use. (GAW)

    - The narrative of Section 2.7 has been revised as suggested. The table footnote is intended to serve as the source of information for the recent land use changes.

14. Follow-up to deficiency #63: Please update page 2.7.3 to discuss plans for replacing the springs (a livestock water source) that will be affected by mining near the Pleasant Valley Farmstead in Section 20. A sentence has been added on page 2.7.3 of Section 2.7 that states that the springs west of the Pleasant Valley Farmstead will be affected but are expected to re-establish after completion of mining because the springs originate from the Beulah-Zap sands rather than the coal seam (page 14 of Section 2.3). Section 2.3 further states that the impacts will be minimal simply because the downstream stock pond is the major source of water for livestock in the area. However, it appears this section of the PHC was not updated to reflect the additional mining being proposed by Revision 22. We believe it is very unlikely that these springs will re-establish after they are mined through (the Beulah-Zap bed is approximately 30 feet below the surface elevation of the springs). Therefore, Section 2.3 also needs to be updated to address replacement plans for these springs. The requirements of NDAC 69-05.2-16-17 must be fulfilled even if DWC is the current surface owner of the property. (GAW)

    - Page 2.7.3 has been modified to address the potential loss of the springs near the Pleasant Valley farmstead.

15. Follow-up to deficiency #64: Please revise the first paragraph on page 2.7.4 to clarify that 100% of the reclaimed field shelterbelt is a replacement planting and not just certain rows within the shelterbelt. Remove the language that mentions this is a "combination" shelterbelt in the narratives and on the Post-Mine Land Use Map, Exhibit 2.7.1. (GAW)

    - The narrative and exhibit have been changed to explain that separate replacement and conservation shelterbelts will be established.

16. The land use table on Page 2.7.1 indicates that an additional 2.4 acres of shelterbelts will be will be replaced in Section 20 on DWC owned land. However, the shelterbelt post-mine planting design plans indicate that 4.5 acres of trees will be replaced and Exhibit 2.6.11

shows that there were 4.0 acres of trees in Section 20 prior to mining. Please review and update as necessary to clarify the plans. (GAW)

- The replacement and conservation plantings encompass an area of 4.5 acres. The net acreage changes in the table on page 2.7.1 show that 4.1 acres will be converted to shelterbelt use from other uses – 2.4 acres from cropland and 1.7 acres from native grassland. The net acreage change from native grassland to shelterbelt takes into account a 0.4-acre change in the other direction, from shelterbelt to native grassland.

Section 3.1 – General Mining Plan

17. Follow-up to deficiency #70. Sections 25 and 30 are still listed as part of the extended mine plan area on page 3.1.2. Please remove them from the narrative if they are no longer included in the extended mining plan. (SAS)

- Sections 25 and 30 have been removed from Narrative 3.1.

Section 3.2 – Water Management Plan

18. Please revise Exhibit 3.2.28 to clarify the exact locations of the diversions. Please include stationing on the drawings as well. (MDB)

- The recommended changes have been made to Exhibit 3.2.38 (versus 3.2.28). The diversions are cross-hatched in green with a green boundary line. The station intervals are 100 feet apart and are designated with a magenta perpendicular line to the diversion.

19. Please include the necessary calculations and design plans for Sumps 99E and 99W. Even though they are considered sumps, they are still required to meet the design standards that apply to other sedimentation ponds. Also, considering the topography in the areas where these sumps are located, please provide the appropriate drawings and calculations showing that the overflow locations can safely pass flows from a 25-year 6-hour event when the sumps are full as required by NDAC 69-05.2-16-09(9). Also, since these impoundments are now called sumps rather than ponds, please update the surface water management narratives and other exhibits to identify them as Sumps 99E and 99W, rather than Ponds 99E and 99W. (MDB)

- The necessary calculations for Sumps 99E and 99W are now included within the narrative and Table 3.2.38. These sumps are overdesigned by a factor of 2, thus overflow is not applicable. The factor of 2 covers both the 10-year 24-hour storm event as well as the 25-year 6-hour storm event. When a water sample is taken and the sample meets discharge specifications, the sumps will be de-watered down to the drainage bottom to prevent erosion. The narrative has been corrected to list these as sumps rather than ponds.

20. Please indicate the status or provide documentation from the State Water Commission that Permits to Construct have been issued for any impoundments with a design capacity over 12.5 acre-feet of water, such as for Sumps 99E and 99W. (MDB)

- Sumps 99E and 99W are not permanent structures and therefore Permits to Construct are not needed. This was discussed with Mike Berg during a field inspection.

21. It appears that several watershed boundaries are incorrect on the Water Management Plan Map, Exhibit 3.2.1:

A) On the topographic map for Pond 95 it appears that the northwest corner of the watershed south of the road drains to the west-northwest, and not into the pond.

- The correction has been made. The Pond 95 watershed changed from 61.9 acres to 51.4 acres. For obvious reasons the overall design of Pond 95 did not change, it will now have more than needed capacity to handle the runoff from the watershed.

B) The watershed break for Sumps 99E and 99W along the eastern edge is a straight line running nearly parallel with the topographic contours, instead of perpendicular.

- The correction has been made to Exhibit 3.2.1 and Exhibit 3.2.38. The watershed decreased in size from 141.8 acres to 90.5 acres. The sump design will stay the same as it has adequate capacity to handle the watershed change.

C) It appears runoff from an area between Ponds 100 and 101 will flow to the east and go off-permit without being captured by either pond. A diversion may need to be installed on the south side of Pond 100 to ensure the water is captured. Placing a diversion on the north side of Pond 101 would create a short circuit with the emergency spillway.

- Diversion ditch #100S has been added to Exhibit 3.2.38 to capture all of the runoff that would flow between Pond 100 and Pond 101. The narrative has also been updated to include this diversion ditch.

22. It appears that a ditch block may be needed along the haul road by Pond 100 to ensure that water is diverted into the pond and not otherwise continue down the haul road ditch. It may not be needed at this time, but may be needed as mining progresses. No response is required at this time and this item is presented for your consideration only. (MDB)

- BMP's will be installed as needed along the Gold Pit haulroad fill section.

Section 3.4 – Suitable Plant Growth Material Handling Plan

23. The area being added to the permit contains 2.8 acres of prime farmland and DWC is proposing to mix prime and nonprime topsoil and subsoil due to the similarity of the prime and nonprime soil materials. We agree that mixing of the prime and nonprime subsoil is warranted; however, we do have some concerns about mixing of prime and nonprime topsoil. At this point we are unlikely to approve mixing of prime and nonprime topsoil. Significant differences (nearly 10%) in productivity indices for the prime and nonprime areas based on the figures you provided in your justification to mix the prime and nonprime topsoil. If the request to mix prime and nonprime topsoil is not removed from the pending revision, a

special condition will be attached to the revision approval indicating the proposal to allow mixing of the prime and nonprime topsoil is not approved. (DKM)

- We ask that you reconsider your decision on the mixing of prime and nonprime topsoil. We believe that any difference in yield potential between the prime and nonprime topsoil is largely due to the influence of topographic location. We refer to several studies conducted in the early 1980's, including Schroeder and Doll (1984), who found that the yield advantages of prime soils over nonprime soils resulted from a more favorable moisture regime established by run-on water contributed by areas upslope. The authors did not believe that the higher productivity of the prime soils was attributable to any inherent soil properties. Later work by Halvorson (1996) provided corroboration, noting that prime and nonprime soils could be mixed without significantly affecting crop yields. The spring wheat yields for the prime and nonprime soils presented in revision 22 are 29.2 and 26.6 bu/ac respectively. When we factor out the influence of topographic gradient by reducing all nonprime slopes that exceed a "B" slope to a B slope and recalculate yields, the nonprime yields increase to 28.3, a difference of less than 1 bu/ac.

  Prime soils as mapped by the detailed soil survey comprise 1.0 acres of the 2.8-acre prime farmland tract identified on Exhibit 2.4.7. Even if the soils of this tract are segregated from non-prime soils as identified by the NRCS during soil handling operations, mixing of prime and non-prime soils as identified by the detailed soil survey will occur as the 1.1 acre of prime soils is mixed with the 1.7 acres of nonprime.

Literature Cited

Halvorson, G.A. 1996. Comparative Evaluation of Productivity of Prime and Nonprime Land. North Dakota State University, Land Reclamation Research Center, Mandan, ND.

Schroeder, S.A., and E.C. Doll. 1984. Productivity of Prime, Nonprime, and Reclaimed Soils in Western North Dakota. North Dakota Farm Research, Vol. 41, No. 5, pp. 3-6, 31.

Section 3.5 – Backfilling and Grading

24. In the Silver Pits mine area (Sections 17, 18, 19 and 20), The Post-Mining Topography Map, Exhibit 3.5.3, should be revised to show reaches of secondary drainages where natural drainages meet the mining disturbance boundary. (GAW)

- Exhibit 3.5.3 has been revised to show reaches of secondary drainages.

25. Please revise the Area Slope Maps, Pre- and Post-Mining Slopes, Exhibits 3.5.4 (a) and 3.5.4 (b) so that the information is presented clearly and concisely as required by NDAC 69-05.2-05-02 (1). As currently presented the information on the maps is difficult to read and interpret. Identifying the various slope ranges by color code as done in the past will meet the requirements of NDAC 69-05.2. (GAW)

- Exhibits 3.5.4(a) and 3.5.4(b) have been changed so the slopes ranges are identified by a color code.

Section 3.7 – Revegetation Plan

26. Follow-up to deficiency #95. The added sentences on page 3.7.11 dealing with prime farmlands under Subsection (1a) is somewhat misleading. We suggest rephrasing the statement in the following manner, "If the prime farmland in the NE¼ of Section 22 is disturbed, a single cropland yield standard will be used to demonstrate that the post-mining productivity requirements are met for the entire tract as allowed under NDAC 69-05.2-22-07(1)(4). Otherwise, the cropland yield standard will be calculated using the nonprime soils that are disturbed. Calculations for the single yield standard are presented in Exhibit 3.7.4." (SAS)

    - Language similar to that suggested has replaced the previous wording on page 3.7.11.

27. Follow-up to deficiency #64: Please edit the last paragraph on page 3.7.6 to clarify that 100% of the reclaimed field shelterbelt is a replacement planting and not just certain rows within the shelterbelt and that the planting details are more than just preliminary plans. NDAC 69-05.2-09-11 requires more details than currently provided. Also, modifications to the plans cannot be made without prior approval from this office. Please revise accordingly. (GAW)

    - Narrative relating to the shelterbelt plantings has been modified as suggested.

Section 3.9 – Reclamation Cost Estimates and Performance Bond

28. In Table 3.9.6, please adjust the hourly production rates for the dozer similar to what was done in Table 3.9.2. However, if the cubic yard volumes are bank cubic yards and not loose cubic yards then a production rate of 995 BCY/hr. should be used according to the Cat Handbook for 10% swell. BCY/HR = LCY/HR * Load Factor (0.909 for 10% Swell). (MDB)

    - The production rate for Table 3.9.6 has been adjusted to 995 BCY/hr for dozers. Also, costs have been updated using the July 20, 2009 edition of Policy Memo 16. Equipment and seed costs have changed within the tables of Section 3.9 to match the update. Further, Table 3.9.4 has been corrected to show only those stockpiles within the KRSB-8603 permit area.

If you have any questions, please contact me at extension 208 or Paula Gores at extension 226.

Sincerely,

Jeff P. Frohlich
Manager,
Engineering and Environmental

Encl/