



Public Service Commission

State of North Dakota

COMMISSIONERS

Brian P. Kalk
Randy Christmann
Julie Fedorchak

Executive Secretary
Darrell Nitschke

600 East Boulevard, Dept. 408
Bismarck, North Dakota 58505-0480
Web: www.psc.nd.gov
E-mail: ndpsc@nd.gov
Phone: 701-328-2400
ND Toll Free: 1-877-245-6685
Fax: 701-328-2410
TDD: 800-366-6888 or 711

August 12, 2014

Mr. Eugene Hay
Western Regional Coordinating Center
Office of Surface Mining
1999 Broadway, Suite 3320
Denver, CO 80202-3050

RE: Amended Supplemental Report for the Mine Plan Modification associated with Dakota Westmoreland's Revision No. 27 to Permit KRSB-8603

Dear Mr. Hay:

In follow-up to our telephone discussion yesterday, enclosed is the amended Supplemental Report for OSM's use in processing the mine plan modification associated with Dakota Westmoreland Corporation's application for Revision No. 27 to Surface Coal Mining Permit No. KRSB-8603. This revision application added 892.2 acres to the permit that includes 390 acres of additional leased federal coal. The earlier supplemental report was revised to augment the Air Quality discussion and the Wildlife sections were amended to add a reference to the letter we received from the U.S. Fish and Wildlife Service concurring with our permit finding on threatened and endangered species. Some of the related T & E discussions were also updated in that section. A copy of the USFWS letter is also being attached to the supplemental report. No other sections were changed.

Also, Dakota Westmoreland has stated that approval of the Mine Plan Modification is needed by late September for mining operations to proceed as planned. If you have any questions, please contact me or Guy Welch.

Sincerely,

James R. Deutsch
Director
Reclamation Division

Enclosures

cc: Bob Postle, OSM-Denver
Jeffrey Fleischman, OSM-Casper
Jeff Frohlich, Dakota Westmoreland Corporation

Minedata/Beulah/Permits/KRSB-8603/Revisions/No.27/Rev27_Cover_itr_amended_Supp_Report_8-12-14

SUPPLEMENTAL REPORT

Dakota Westmoreland Corporation BEULAH MINE

Surface Coal Mining and Reclamation Operations Permit No. KRSB-8603 Application for Revision No. 27

**Prepared By
North Dakota Public Service Commission
Reclamation Division
August 12, 2014**

I. DESCRIPTION OF PROPOSED MINING AND RECLAMATION OPERATIONS

A. Proposed Operations, Location, and History

The Knife River Coal Mining Company (Knife River) originally submitted Permit Application No. KRSB-8603 to the North Dakota Public Service Commission (Commission) on January 28, 1986. On August 7, 1986, the Commission issued Permit KRSB-8603 with a five-year permit term and the permit has since been renewed several times. The current five-year permit term expires on August 7, 2016. On June 27, 2001, the Commission approved a permit transfer application that transferred Permit KRSB-8603 from Knife River to the Dakota Westmoreland Corporation (DWC). DWC is a subsidiary of the Westmoreland Coal Corporation and they purchased the Beulah Mine from Knife River, including all leasehold interests formerly held by Knife River. Additional acreage was added to Permit KRSB-8603 with Revisions 16, 19 and 22.

On January 31, 2013, DWC filed the application for Revision No. 27 to Permit KRSB-8603 to add 892.2 acres to the permit area. With the additional area being added with Revision No. 27, the total acreage of Permit KRSB-8603 is 3,558.3 acres. The area added to the permit with Revision 27 includes Federal coal tracts in the N $\frac{1}{2}$ S $\frac{1}{2}$ of Section 20 and S $\frac{1}{2}$ of Section 22, T143N, R88W, which total approximately 390 acres. Approximately 70 acres of federal coal area located in N $\frac{1}{2}$ S $\frac{1}{2}$ of Section 20 and 320 acres are in the S $\frac{1}{2}$ of Section 22.

The Bureau of Land Management (BLM) issued Lease Number NDM 041765 to Knife River in 1961 and tracts in the original lease included the N $\frac{1}{2}$ of Section 22, T143N, R88W, and the NE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$ and S $\frac{1}{2}$ NE $\frac{1}{4}$ of Section 20, T143N, R88W, that are within Permit KRSB-8603. Other tracts are located in Permit KRSB-8802 at the Beulah Mine. This federal coal lease was later transferred from Knife River to DWC. In late 2008, DWC applied for a lease modification to add 240 acres of federal coal located in the NW $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, and NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 20, T143N, R88W. BLM approved that lease modification on December 1, 2009. Another amendment to Lease NDM 041765 was issued by BLM on December 1, 2013 to add the 320 acres in the S $\frac{1}{2}$ of Section 22.

The Beulah Mine is an existing surface coal mine located in all or portions of Sections 7, 8, 17, 18, 19 and 20, T143N, R87W, Oliver County and Sections 10, 11, 12, 13, 14, 15 and 24, T143N, R88W, Mercer County (Permit KRSB-8802) and all or portions of Sections 14, 15, 16, 17, 18, 19, 20, 21, 22 and 23, T143N, R88W, Mercer County (Permit KRSB-8603 or otherwise referred to as the West Brush Creek Area). There is approximately 8,464.2 acres

permitted at the Beulah Mine. The mine office and shop is located about three miles southwest of the city of Beulah and about 75 miles northwest of Bismarck, North Dakota.

Knife River owned and operated the Beulah Mine from 1963 to 2001. Dakota Westmoreland Corporation became the owner and operator of the mine in June of 2001. The production history at the mine ranges from about 94,024 tons in 1963 to 3.4 million tons in 1983. Production over the past few years has been approximately 2.5 million tons per year.

For many years coal was removed from two distinct mine areas at the Beulah Mine, the West Brush Creek Area (Permit KRSB-8603) and the East Permit Area (Permit KRSB-8802). Coal from both mine areas was hauled directly to the coal handling facility in Section 11. From there, most of the coal conveyed to the Coyote Power Station just west of the mine office and shop and some is shipped by rail to the Heskett Station near Mandan, North Dakota. However, DWC's contract with the Coyote Station for around 2 million tons of coal per year ends in May 2016, but they are working on a contract extension to continue supplying coal to the Heskett Station for many years. Also, coal removal from Permit KRSB-8802 was discontinued in 2010 and since that time all coal production has come from Permit KRSB-8603, otherwise called the West Brush Creek Permit Area.

As noted above, DWC filed the application for Revision No. 27 to Permit KRSB-8603 with the Commission on January 31, 2013 to add the additional acreage (including additional Federal coal acreage in Sections 20 and 22) to the permit, including the required baseline environmental information and revised mining and reclamation plans. After the revision application was deemed complete in late January 2014, the Commission sent copies of the application to OSM's Denver and Casper offices and BLM offices in Billings and Dickinson.

The area being added to Permit KRSB-8603 adjoins the southern boundary of the existing permit area in Sections 20, 21, 22 and 23 of T143N, R88W, Mercer County. The area covered by Permit KRSB-8603 is located several miles southwest of Beulah and west of State Highway 49. Surface ownership in this permit area is private ownership, with some being owned by DWC. The coal ownership in the permit area is split between private parties, state and Federal.

The Federal coal acreage being added to Permit KRSB-8603 will be mined during the remainder of this permit term which is scheduled to expire August 7, 2016. According to the current mine plan, only 126 acres of additional federal coal will be mined in the area added to the permit with Revision 27. Additional surface disturbance will occur for sedimentation ponds, haul roads and other associated disturbances. Mining is proposed to progress from the northern portion of the area being added to the permit to the south, with all coal removal anticipated to be completed on the added Federal coal tracts by 2016.

DWC previously had an approved Resource Recovery and Protection Plan (R2P2) for most of the Federal coal tracts in Permit KRSB-8603. This approval was based on the R2P2 that had been prepared for mining federal coal tracts in Permit KRSB-8802. DWC filed an updated R2P2 for the Beulah Mine with the BLM's Billings office in March 2009 to include the additional Federal coal tracts in Section 20 that were added to Lease NDM 041765 in 2009. Following the 2013 lease amendment, DWC updated the Logical Mining Unit for the Beulah Mine and they also submitted another amendment to the R2P2 to BLM in April 2014. BLM approved that amendment on May 5, 2014. OSM's Western Regional Coordinating Center determined that the mining of additional federal coal as proposed by Revision 27 constitutes a mine plan modification requiring approval by the Department of the Interior.

The Department of the Interior will need to approve a mine plan modification pursuant to 30 CFR 746.11. A special condition was attached to the Commission's May 28, 2014 approval of Revision 27 prohibiting any overburden or coal removal from the added Federal coal acreage in the S $\frac{1}{2}$ of Section 22 and the N $\frac{1}{2}$ SW $\frac{1}{4}$ and NW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 20 until mine plan approval is granted by the Department of the Interior. However, DWC will be allowed to conduct surface disturbance on these tracts to the extent necessary for mining on the adjoining non-federal coal tracts and on previously permitted federal coal tracts.

A chronology of events for the Commission's processing of the application for Revision No. 27 to Permit KRSB-8603 is attached.

B. Summary Description of the Surface Mining and Reclamation Operations

DWC mined about 2.5 million tons of coal from the existing permit areas at the Beulah Mine in 2012 and 2013, and plans on mining between 2.5 to 3 million tons of coal per year in 2014 and 2015 from Permit KRSB-8603. Coal production in 2016 is estimated at 1.3 million tons and is expected to drop to around 450,000 tons in 2017. The Federal coal tracts in Section 20 are part of the Silver and Iron Pit sequences and the Federal coal tract in Section 22 is part of the Gold Pit sequence. Mining in the Silver Pit area has progressed southward from Section 17 towards a large east-west drainageway in Section 20. No coal removal is planned for the drainageway and only a few pits remain to be mined north of it. The Iron Pit Area will be opened south of this drainageway in Section 20, with coal removal starting in 2014. The Gold Pit sequence will continue advancing southeastward from the N $\frac{1}{2}$ of Section 22 into the S $\frac{1}{2}$ of Section 22 through 2016. Overburden removal and actual mining of the Federal coal tract in the S $\frac{1}{2}$ of Section 22 is expected to begin soon after the mine plan modification is approved by the Department of the Interior. The proposed mining sequence and schedule is shown in the permit on the Extended Mine Plan and 5 Year Subareas Map, Exhibit 3.1.1.

Of the approximately 390 acres of federal coal being added with Revision 27, approximately 126 acres will be mined. Mining on these federal coal tracts is scheduled to be completed by 2016. The estimated recoverable coal from the tract being added in Section 20 is estimated to be approximately 445,000 tons and total recoverable coal from the tract in Section 22 is estimated to be approximately 1,650,000 tons. Only the Beulah-Zap coal seam, and the Schoolhouse Bed where present, is planned to be mined on the federal coal tracts.

Facilities to be constructed in the area being added to the permit area include sedimentation ponds, diversions, haul and access roads, pit ramps and a scoria storage area. Existing structures located in other parts of Permit KRSB-8603 will also support mining operations in the proposed added area as well as part of the mine haul road, access roads, coal handling facilities, and the office/shop complex in Permit KRSB-8802. Some of the box cut spoil from the Iron Pit area will be hauled to fill the final pit area of the Silver Pit sequence. Facility features are shown on Exhibit 3.1.2, Pit Layout and Facilities Map, in the application.

The West Brush Creek Permit Area (Permit KRSB-8603) of the Beulah Mine has been designed as a single-seam stripping operation. The Schoolhouse, or upper bed, is a thin discontinuous seam located 6 to 74 feet below the surface that ranges from 2 to 5 feet thick. This seam of coal is not considered a commercial by itself. The Beulah-Zap Bed is about 12.1 feet thick and is approximately 50 feet below the Schoolhouse Bed. Total overburden depths to the top of the Beulah-Zap Bed within the permit area range from 50 to 120 feet.

Once the necessary surface water control structures are in place, mining and reclamation operations typically occur in a sequence of seven events: suitable plant growth material (SPGM) removal, overburden removal, coal removal, spoil placement in mined-out pits, final grading, SPGM replacement, and revegetation. SPGM removal is accomplished in two separate lifts. Topsoil and subsoil are either stockpiled for future respreading or directly respread on areas ready to receive these materials. Once suitable plant growth material is removed a walking dragline is utilized to remove overburden material. In areas where the overburden thickness is the greatest, the Beulah Mine's truck/shovel fleet may be used to remove some of the overburden to create a dragline bench. After the coal is removed, the next pit is stripped and this material is cast into the empty pit. The resulting spoil piles are leveled to post-mining topography elevations. Once grade approval is obtained for these leveled areas, suitable plant growth material is respread, and the area is tilled, seeded, and mulched. Sufficient topsoil and subsoil is available to adequately reclaim all areas.

II. DESCRIPTION OF THE AFFECTED ENVIRONMENT WITHIN ITS RESOURCE SETTING

The following information is provided for the entire area included in Permit KRSB-8603. The added federal coal tracts located in Sections 20 and 22, T143N, R88W, have environmental resources that are similar to the remainder of the permit area.

A. Topography

The mine site is located on a glacially modified upland of relatively low relief. Some steep areas occur along some of the drainages located along all sides of the permit area.

Maximum relief across the permit area is about 200 feet. Elevations range from about 1870 feet along the haul road crossing of the Brush Creek drainage in the northeastern portion of the permit area in the SE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 15 to about 2075 feet in the SE $\frac{1}{4}$ of Section 22, T143N, R88W. About 42% of the permitted area has slopes of 3% or less; about 31% of the permitted area has slopes of 3 to 6%; and, about 5% of the permit area has slopes of 15% or greater.

There are no important fragile lands as defined by 30 CFR 762.5 containing natural, ecologic, scientific and aesthetic resources or natural systems in the permit and adjacent areas.

B. Geology

The geologic units to be disturbed by mining include the Coleharbor and Sentinel Butte Formations. The Coleharbor Formation of Pleistocene Age occurs as a thin veneer of overburden generally less than 20 feet thick within the permit area. Lithologically the Coleharbor Formation within the mine plan area is a glacial pebble-loam (till) or poorly stratified clastic sediments filling glaciofluvial channels.

The geologic formations of significance to the study area are the Coleharbor Formation and the Sentinel Butte Formation. The lithology of the Coleharbor Formation includes Quaternary age till, gravel, and sand. The Sentinel Butte Formation is Paleocene in age and consists of interbedded silts, clays, sands, and lignites. There are four hydrostratigraphic units of concern in the general mine area, all are lignite beds. The uppermost aquifer in the area is the Schoolhouse Lignite Bed and where present is a thin

and discontinuous aquifer of limited aerial extent occurring on topographic highs. The Beulah-Zap Lignite Bed is the next, lower hydrologic unit and is the deepest unit mined at Beulah Mine. Below the Beulah-Zap Lignite is the Spaer Lignite Bed which averages about three feet in thickness and occurs about 20-40 feet below the base of the Beulah-Zap Lignite. The Beulah-Zap and Spaer Lignite aquifers are continuous over the area except where dissected by larger drainages or removed by mining. The Hazen "B" Lignite occurs throughout the permit area at a depth of between 80 and 150 feet below the Spaer Lignite and several wells within the permit area monitor this unit as well as the Spaer Lignite to assess potential groundwater impacts from mining.

There are no areas of unstable geology in the permit and adjacent areas.

C. Climate

The climate of west-central North Dakota is typically a semi-arid continental type with temperatures having a wide range of values. Cold and dry air masses from the Polar Regions intensify winters in the area. Warm and moist air masses from the Gulf of Mexico dictate most precipitation characteristics. The temperature extremes for the area can range from -40°F to over 100°F. January daily minimums are about -3°F with daily maximum temperatures near 19°F. July daily low temperatures average 55°F with highs near 85°F. A change of 50°F within a 24-hour period can be noted with the passage of arctic cold fronts in winter or with the sudden development of warm, strong westerly winds generally occurring in late winter or spring. The length of the growing season also varies from year to year; however, the average length is near 120 days for the region. Average precipitation is about 16 inches/year at Beulah, with the greatest amounts occurring in the form of showers and thunderstorms in the months of April through July. The prevailing winds are northwesterly and average about 10 mph.

D. Hydrology

The surface and ground water resources of the permit and adjacent areas are discussed in the Commission's cumulative hydrologic impact assessment and it is also included under Section III(C) of this report. The total area of possible impact surveyed in this assessment includes that portion of Mercer and Oliver Counties, North Dakota within the drainage basin of the Knife River from Coyote Creek downstream to the mouth of Antelope Creek east of Hazen. This area includes all existing and foreseeable operations of the Beulah Mine and all groundwater and surface water systems which may be logically impacted by the cumulative effects of Permit KRSB-8603 and other mining operations.

An Alluvial Valley Floor (AVF) investigation was completed for the Revision 27 addition area in 2012. Two previous AVF investigations had been completed in areas within and contiguous to this area. The Revision 27 study area contained streams of ephemeral or intermittent classification, but no perennial streams. None of the areas within or adjacent to the Revision 27 addition area were determined to be surface irrigated, sub-irrigated, naturally flood irrigated or potentially irrigable. The Commission completed a review of Dakota Westmoreland Corporation's Alluvial Valley Floor investigation and based on this review, as well as information obtained during field investigations, determined that all stream channels and drainages located within the investigation area do not constitute an alluvial valley floor as defined by NDCC 38-14.1-02(1) and as further detailed under NDAC 69-05.2-08-13.

E. Soils

The soils of the permit area formed in calcareous glacial till, eolian sediments over glacial till, glacial outwash, local alluvium, and in-situ weathered bedrock. The majority of the soils are in the Mollisol order and represent the following great groups: Haploborolls (Amor, Arnegard, Lihen, Parshall, and Zahl soils), Argiborolls (Flaxton, Krem, and Williams soils), and Natriborolls (Belfield, Daglum, and Rhoades soils). Other soils in the proposed permit area include Entisols in the Ustorthent great group (Cabba soils).

The soils within the proposed permit area exhibit a wide range of chemical and physical characteristics. A Professional Soil Classifier has identified the location and extent of topsoil and subsoil quality materials based on the chemical and physical characteristics pursuant to NDAC 69-05.2-08-10(1)(a) and (b). The majority of the soils on 0 to 9 percent slopes are suited to agricultural production. The steeper soils are best suited to hayland, pastureland, or native grassland. Most of the soils have an agricultural capability subclass classification of "s" or "e", indicating the main limitation is the shallow, stony and/or sodic conditions or the risk of erosion. Except for saline or sodic soils and the soils with gravelly, channery or soft sedimentary bedrock materials within five feet, the majority of the soils within the proposed permit area have five feet of suitable plant growth material available.

In all areas of the permit area, the amount of topsoil and subsoil available to a depth of five feet will be sufficient to meet the required respread thicknesses that are projected. All landowners within this permit area have adequate topsoil and subsoil volumes to respread the projected required depth. Unless mixing agreements are secured, the soil material will be segregated by landowner.

With respect to prime farmland, the Revision 27 addition area contains a total of 23.6 acres of prime farmland soils, of which 2.1 acres are located in the S $\frac{1}{2}$ of Section 22 over federal coal. All of this acreage is to be disturbed by mining activities. The majority of the prime farmland acreage being added with Revision 27, 21.5 acres, is located in the S $\frac{1}{2}$ S $\frac{1}{2}$ of Section 21 (a non-federal coal tract) and will not be mined or otherwise affected by mining activities. The 2.1 acres that is projected to be affected consists of two small tracts located in the SE $\frac{1}{4}$ of Section 22 and SW $\frac{1}{4}$ of Section 22. The surface of these two tracts is owned by separate individuals and the prime farmland acreage will be reclaimed by surface ownership accordingly. Special prime soils handling and reclamation plans are provided in the permit for that acreage that is projected to be disturbed by mining activities. The only other prime farmland in Permit KRSB-8603 is 2.8 acres located in the N $\frac{1}{2}$ of Section 22.

F. Land Use and Vegetation

The prevailing land uses in the proposed permit area are cropland, native grassland, tame pastureland, wetlands, woodlands, shelterbelts and industrial/commercial (county roads and a gravel pit). For the permit area in Mercer County, the lands are zoned for agricultural and industrial/commercial use. Conditional land use permits have been issued by the Mercer County Commission for the coal mining activities. Pre-mining land uses and approximate acreages in the entire permit area (including the area added by Revision No. 27) are as follows:

<u>Land Use</u>	<u>Acreage</u>	<u>% of Area</u>
Cropland	1205	33.9
Hayland	84	2.4
Native Grassland	2,047	57.5
Tame Pastureland	74	2.1
Fish & Wildlife Habitat (Wetland)	15	0.4
Woodlands	26	0.7
Shelterbelts	4	0.1
Developed Water Resources	5	0.1
Industrial/Commercial	98	2.8
Total	3,558	100.0

Primary crops grown within the permit area have been wheat and other cereal crops with approximately 84 acres of the cropland being managed for the production of hay. The dominant range (ecological) sites are sandy, silty (loamy), sands, shallow (shallow clayey), thin claypan and thin upland (thin loamy). NRCS production estimates for the dominant sites vary from 1,400 lbs/ac (shallow) to 2,000 lbs/ac (silty). The wetlands in this permit are associated with natural drainageways and springs/seeps within tracts of native grassland. These wetlands are linear in nature and are also referred to as riparian wetlands. Pools of water may pond in the drainages but the drainages tend to be ephemeral in nature. Most of the wetland acreage is located outside of coal removal areas but some of the wetland acreage (NW¼ of Section 22) will be affected by mining activities and the permit includes plans to replace affected wetlands. The woodlands are comprised of naturally occurring shrub and tree communities along the sideslopes and bottoms of the ephemeral draws. The shelterbelts are associated with abandoned farmsteads and there are field windbreaks located on tracts of cropland.

Several potentially poisonous plant species (based on North Dakota State University's Cooperative Extension Bulletin A-471, Plants Which May Be Poisonous) including chokecherry and sweetclover were identified on the proposed permit area. State-listed noxious weeds (NDCC 63-01.1) found include absinthe wormwood (*Artemisia absinthum*), leafy spurge (*Euphorbia esula*), and Canada thistle (*Cirsium arvense*).

G. Wildlife

Habitat types which are found within and adjacent to the permit include grassland, woodlands, wetland areas, cultivated land, disturbed areas and physical features. The ditches alongside section line trails and county roads also provide habitat for wildlife.

Cropland and grasslands are the major habitat types within and adjacent to the permit area. The majority of grassland habitat type within the permit area was historically managed with livestock grazing but use has been limited in recent years on areas being added with Revision 27. Past periodically heavily grazed and non-use can reduce the value of this habitat type by decreasing native grassland species diversity. Native woodland communities and wetlands are the most important wildlife habitats in the permit area and these habitats constitute only a minor portion of the permit area. Livestock grazing has reduced the value of some of the woodland communities and the wetland sites tend to be riparian areas associated with ephemeral drainages and springs/seeps. Annually cultivated cropland provides relatively little value to wildlife during the spring and early summer but may receive extensive use during the other times of the year. Harvesting of the hayland acreages also reduces the value of this land use to wildlife. The shelterbelt and field windbreak tree plantings in the permit area are quite

old. These plantings make up only a small percent of the habitat acreage, but their value to wildlife is important.

No federally listed threatened or endangered species or designated critical habitats for these species were identified on the permit area. The permit area is located in the primary whooping crane (a listed species) migration corridor, but the likelihood of whooping cranes occurring in the permit area is very low because desirable habitat does not exist. There are linear wetlands present in drainages within the area but these types of wetlands are not desirable whooping crane habitat.

Sprague's pipit is listed as a Candidate species to the Endangered Species Act and it was documented to occur in the area during the original wildlife survey in 1981. This species utilizes large tracts of native grassland and may occasionally be present on native grassland in the permit area but it was not observed during more recent wildlife inventory monitoring. The Dakota Skipper butterfly is also listed as a Candidate species to the Endangered Species Act and specific surveys were completed in the permit area in 2006. The permit area does contain potential habitat for this species but it was not observed during the survey. It is unlikely that this species exists in the permit area. The Regal fritillary (*Speyeria idalia*) butterfly was identified in 2006 in the permit area and is considered as being rare or uncommon in its range globally (G3 Global Rank) and has an S2 State rank which means it is very rare and imperiled within the state. There are no caves, underground mines, or woodlands in the permit area that may be suitable habitat for the Northern Long-Eared Bat, but it could be a transient visitor through the area. The permit areas does not contain habitat for the other Candidate species to the Endangered Species Act, including Sage Grouse, Poweshiek Skipperling and Rufa Red Knot.

H. Cultural Resources

The prehistoric cultural milieu of the mine plan area can be divided into four major periods: Paleo-Indian (11,500 years B.P. (before present) to 8,000 B.P.); Archaic or Foraging (8,000 B.P. to about 1 A.D.); Plains Woodland (1 A.D. to 900 A.D.); and, Plains Village (900 A.D. to 1860 A.D.). A period known as the Plains Nomadic is also linked to the period from 1 A.D. to the Historic.

The historic occupation of the mine area vicinity (Euro-American) is characterized by four major developments: 1) exploration and development of the fur trade; 2) development of a military frontier; 3) homesteading and development of agriculture; and, 4) development of the coal industry.

The areas being added to the permit with Revision 27 were included in several cultural resource surveys and inventories that were completed by UNDAR-WEST and other cultural resource contractors between 1980 and 2014. Several cultural resource sites were identified within the addition area, but only two were deemed 'insignificant' in terms of National Register Criteria by the North Dakota State Historic Preservation Officer (SHPO). One site was deemed potentially significant by the SHPO. It is identified as cultural resource site 32ME2232 and is located in the SE $\frac{1}{4}$ of Section 20. This site location will be appropriately fenced with a minimum 75-foot setback to ensure avoidance and protection. The other cultural resource site, 32ME2522 has not yet been evaluated for significance and is located on an area that will not be affected by mining activities. The applicant made a commitment to not disturb this site prior to the SHPO making a significance determination. Neither of these sites is located on the federal coal tracts that were added to the permit with Revision 27. All of the cultural resource sites

identified on the federal coal tracts have been determined to be insignificant by the SHPO and cleared for disturbance.

The Emmaus Cemetery is located adjacent to the south boundary of the area added with Revision 27 and it will be avoided.

I. Transportation

Several county roads and section line road right-of-ways are located within the permit area. County Road 12 has been closed and a new road, 16th Street Southwest, that routes traffic around the southwest corner of the permit area has been constructed. A portion of this road passes through the permit outside the planned disturbance boundary. The appropriate approvals were granted by the Mercer County Commission to close the county road and section lines that will be mined through. DWC will not conduct mining activities within 100 feet of other public roads without approval of the appropriate road authority. The Mercer County approval processes include public notice and opportunity for public hearing. The section line between Sections 22 and 23 was closed by the County in January of 2014. A list of the county approvals is included in Exhibits 1.4.4 and 1.4.5 of Permit KRSB-8603.

J. Esthetics

The permit area and adjacent area have no unusual scenic qualities and are similar to surrounding areas. The topography varies from flat to rolling, with several steep drainages. Another existing mining operation is located several miles north of the permit area as well as several small gravel and scoria pits, and pre-law mine spoils in the nearby area, in addition to farming and ranching activities. Sounds are from mining and coal utilization activities, gravel and scoria removal activities, traffic on the county roads, airplanes, railroad traffic, agricultural activities, wildlife and wind.

K. Socioeconomics

The City of Beulah (population 3,142) is located about three miles north of the permit area. This city serves as the local agricultural and commercial center for the area in and around the Beulah Mine. Hazen (population 2,420) is located about ten miles east of Permit KRSB-8603. Stanton is the county seat but Beulah is the largest city in Mercer County.

III. ENVIRONMENTAL IMPACTS OF THE PROPOSED OPERATIONS

Environmental impacts of mining operations on the federal coal tracts proposed by Revision No. 27 will involve disturbing much of the 892.2 acres added to the permit. However, only 126 acres of the added federal coal will actually be mined. In addition, about 20 acres in Section 20 (over federal coal) that were added to the permit with Revision 22 will be mined. This proposed disturbance and DWC's plans for reclamation are similar to those for the entire permit area. Therefore, the following discussion outlines the environmental impacts to the entire 3,558.3 acres now covered by Permit KRSB-8603.

A. Topography and Geomorphology

No significant long-term impacts should occur on the topography and geomorphology of the permit area. DWC's mine plan will create a post-mining topography that is similar to the original contour of the area. Sharp peaks, outcroppings of gravel, clay or stony hills

with little or no topsoil will be eliminated and the pre-mining drainage patterns will be reconstructed during the reclamation of the permit area. DWC's reclamation plan will result in an increase in the number of acres of land with slopes less than 3% and decrease the number of acres with slopes of greater than 3%. The general reduction in gradient will help to minimize the short- and long-term effects that erosion will have on reclaimed areas and drainageways.

Short-term impacts will occur on the topography and geomorphology of the permit area during mining activities. Erosion may occur until the disturbed areas are revegetated. Until vegetation can be successfully established on reclaimed areas to bring erosion rates down to pre-mining levels, DWC will control runoff from the disturbed areas. A system of sedimentation ponds and diversions, and the use of Best Management Practices (BMP) will be instituted to control erosion of sedimentation off the permit area. This surface water management plan will be in effect until successful revegetation of all the reclaimed areas is achieved.

B. Air Quality

The applicant employs fugitive dust control measures as an integral part of its current operations. Fugitive dust generated from operations in this permit area is not expected to result in any adverse air quality impacts. The primary sources of fugitive dust will result from windblown sources and from traffic on haul roads. The primary methods to be used to reduce dust emissions include:

1. Controlling dust from access and haul roads by watering and use of dust control amendments;
2. Minimizing the area of disturbance by restricting operations to that acreage necessary to accommodate production needs; and,
3. Stabilizing disturbed areas as soon as possible after operations are completed through replacement of suitable plant growth material, seeding and mulching.

The Beulah Mine has not experienced any issues or concerns about nitric oxide emissions due to the use of explosives, primarily for fracturing the coal before loading operations. In addition to regular coal blasting, the applicant occasionally uses explosives to break up rocks and overburden. The PSC's Reclamation Division has not received any reports of red-orange clouds or fumes due to the release of nitric oxides gases from the use of explosives at the coal mines in North Dakota.

The applicant has an Air Pollution Control Minor Source Permit to Operate as required by the North Dakota State Department of Health. The current permit term will expire May 22, 2016 and a copy of Permit No. O81011 is attached.

Also, the BLM conducted an air quality assessment during as part of its review of Dakota Westmoreland's application to modify the federal coal lease to add federal coal tracts being permitted with Revision No. 27 to Permit KRSB-8603. The BLM assessment noted that the U.S. Environmental Protection Agency (EPA) delegated Clean Air Act implementation authority to the North Dakota Department of Health, Environmental Health Section, which has the primary responsibility to regulate air quality in North Dakota. The state implements programs to ensure compliance with National Ambient Air Quality Standards (NAAQS) and North Dakota Ambient Air Quality Standards

(NDAAQS), and also limits air quality degradation under the Prevention of Significant Deterioration (PSD) Program.

The BLM noted that the nearest ambient air quality monitor known as the Beulah North monitor is located approximately 4 miles north of the mine. This monitor is operated by the North Dakota Department of Health. Based on quality-assured data from 2008 through 2010, the monitor indicates compliance with each criteria air pollutant monitored at the site. Based on calculations from data included in the North Dakota Department of Health's North Dakota Air Quality Data Summary report (2011), ambient concentrations as a percentage of the NAAQS and NDAAQS are summarized below:

- Ozone: 79%, based on the three-year average of the 4th highest daily maximum 8-hour values;
- Nitrogen dioxide: 24% of the 1-hour standard, based on the three-year average of 98th percentile values;
- Particulate matter with a diameter of less than or equal to 10 microns (PM₁₀): 29% of the 24-hour standard, based on the second highest value in 2010;
- Particulate matter with a diameter of less than or equal to 2.5 microns (PM_{2.5}): 40% of the 24-hour standard and 42% of the annual standard, based on three-year averages of the 98th percentile and the annual averages, respectively; and
- Sulfur dioxide (SO₂): 48% of the 1-hour standard, based on the three-year average of 99th percentile values.

Coal at the Beulah Mine will be mined at the rate of approximately 3 million tons per year until May 2016 and it may continue at a rate of around 400,000 tons per years for a number of years. The applicant will follow the same mining practices they currently employ and the applicant's mining operations are not expected to cause any exceedances of air quality standards if current mining practices are maintained.

C. Hydrology

A Cumulative Hydrologic Impact Assessment (CHIA) for mining within the existing and proposed permit areas was prepared for the original permit application with subsequent modifications as deemed necessary and is discussed below.

Reclamation Division staff made an assessment of the probable cumulative hydrologic impacts of all anticipated mining in the area as required by NDCC 38-14.1-14(1)(o). The Commission finds that operations proposed in the areas covered by Permit KRSB-8603, including the acreage added with Revision 27, have been designed to maintain the quantity, quality and hydrologic regime of surface and ground water systems in the area. The cumulative effects of all existing and proposed mining operations should not damage the hydrologic balance and water availability within or near the permit area.

Permit KRSB-8603 was submitted in January 1986 and approved in August 1986. The original permit covered 1030.2 acres. Additional acreage was added with Revisions 16, 19, and 22 as well as the 892.2 acres being added by Revision No. 27. Monitoring data was collected over an extended period of mine operations to support conclusions reached in the applicant's assessment of probable hydrologic consequences. The neighboring active mine, Freedom Mine, and the reclaimed Indian Head Mine have made assessments of probable hydrologic consequences which serve to confirm DWC's findings and the Reclamation Division's conclusions concerning cumulative impacts.

The total area of possible impact surveyed in this assessment includes that portion of Mercer and Oliver Counties, North Dakota within the drainage basin of the Knife River from Coyote Creek to downstream of the mouth of Antelope Creek east of Hazen. This area includes all existing and foreseeable operations of the Beulah Mine and all groundwater and surface water systems which may be logically impacted by the cumulative effects of Permit KRSB-8603 and other mining operations. Possible impacts are more logically limited to the drainages within the permits and adjacent areas, and these are Coyote Creek, Brush Creek, Otter Creek and several smaller tributaries of the Knife River between and near these streams. Much of the assessment focuses on potential impacts in the permit and adjacent area.

The permit is within the Missouri Slope physiographic area which is characterized by glaciated terrain of moderate relief, stream dissected bedrock and ephemeral and intermittent streams. Over much of this portion of the Knife River drainage, ground moraine is thin, glacial features are few and bedrock topography controls landforms away from larger stream channels.

The assessment area is an established lignite mining district that includes abandoned surface and underground mines as well as active, large scale surface mines. Beulah Mine operations are covered by Permits KRSB-8802 and KRSB-8603, and these represent the only active mining within the assessment area south of Knife River with the exception of pending Coyote Creek Mining Company Permit NACC-1302, which is expected to begin coal removal and reclamation operations in 2016. The Revision No. 27 area and all of Permit KRSB-8603 at Beulah Mine is located east of Coyote Creek while mining operations proposed at Coyote Creek Mine will be limited to those areas within the NACC-1302 permit area west of Coyote Creek. The Freedom Mine is currently the only active surface mining operation located north of the Knife River and is located about 8 miles north of the KRSB-8603 permit area.

The Commission's Abandoned Mine Lands Division lists 24 inactive lignite mines in the assessment area. All but 5 of these were very small mines that operated for local use prior to 1950 and had maximum production of less than 1,000 tons per year. At the larger old sites with underground workings, collapse has caused localized safety problems. The Dakota Collieries Mine was a surface mine started in 1922 and the predecessor to Indian Head Mine. The Dakota Star, later Truax-Traer, Mine operated entirely as a strip mine from 1940 to 1967, and this old mine is included in or adjacent to the area under permit for Freedom Mine. Evidence from over 10 years of hydrologic analysis and monitoring by mines and power plants in the assessment area indicates that effects of these old mine sites on surface and ground water are localized and not significant factors in the hydrologic regime.

The geologic formations of significance to this cumulative assessment area are the Coleharbor Group and the Sentinel Butte Formation. The lithology of the Pleistocene, Coleharbor Group includes Quaternary age till, gravel, and sand. The Sentinel Butte Formation is Paleocene in age and consists of interbedded silts, clays, sands, and lignites. There are four hydrostratigraphic units of concern in the general mine area, three lignite beds and a silty sand unit. The uppermost aquifer in the area is the Twin Buttes Sand/Lignite, a small unconfined aquifer occurring on topographic highs. The Schoolhouse Lignite Bed where present, is the next, lower hydrologic unit and below it occurs the Beulah-Zap Lignite, the deepest unit mined at Beulah Mine. Below the

Beulah-Zap Lignite is the Spaer Lignite Bed. These lignite aquifers are continuous over the area except where dissected by larger drainages or removed by mining.

All four shallow aquifers and the deeper Hazen B Lignite are recharged by infiltration of precipitation or snowmelt and downward movement of water from overlying units, and they discharge at outcrop or subcrop areas and by downward movement of water through aquitards. All have been utilized as private water supplies with the exception of the Spaer Lignite which is the next water-bearing unit below depth of mining in the Beulah Mine area and is 2 to 6 feet thick, split over some of its extent and is not an economically viable coal reserve or water supply.

Agriculture is a significant activity in the assessment area in terms of economic importance and hydrologic impact, but it is a historically established cultural activity and its environmental effects are considered part of the baseline state of the area. The Major Land Resource Area 54 in which Mercer and Oliver Counties are grouped within the 2002 USDA-NRCS inventory system has water erosion of soil from cropland averaging 3.6 tons/acre/year while statewide losses average 2.1 tons/acre/year; however, losses to wind erosion are less than the statewide average.

In 1977-1980, the U.S. Geological Survey gaging stations on Spring Creek at Zap and Knife River at Hazen reported mean Total Suspended Solids values of 90.87 and 144.05 mg/l and average sediment discharge loads of 0.26 and 0.19 tons/acre/year, reflecting the acreage under cultivation in the contributing drainages. Extensive soil conservation and water quality preservation practices are permit requirements, and all surface water leaving the Beulah Mine and other mining permits in the assessment area must meet NDPDES daily average and maximum total suspended solids values of 35 mg/l and 70 mg/l, respectively.

Mining operations within the general mine plan area will remove the Schoolhouse bed where present and the Beulah-Zap Bed. In mined-through areas, these two lignite aquifers will be replaced with a single pit-bottom spoils saturated zone which is inadvertently created by the dragline during overburden removal. The water quality in this saturated zone has typically shown levels of mineralization about 1.5-3 times higher than in the undisturbed lignites. Given the low transmissivity of the spoil material and the low degree of deterioration of water quality, no diminution of ground water quality is anticipated and no deterioration has been recorded by the monitoring program.

Groundwater movement through shallow silts and clays in the Beulah Mine area is generally downward and serves to recharge lignite and sand aquifers. Water movement in the lignites and sands is predominantly lateral flow. Recharge in western North Dakota is infrequent and only occurs during spring runoff and intense precipitation events since potential evaporation exceeds precipitation over most of the year. Groundwater recharge after mining should approximate the pre-mining recharge rate since land use, runoff, retention and infiltration on the postmining topography should approximate that of the pre-mine topography.

Several water wells, along with natural and developed springs, in the assessment area have been mined through and replaced and adjacent domestic wells may experience a lowering of static water levels. Other wells and developed springs exist in the vicinity and mining related activities may potentially affect their water quality or quantity. Dakota Westmoreland has an existing groundwater monitoring plan that should detect

any changes in groundwater quality or quantity which occur as the result of mining. The permit presents monitoring data from operations to date that show water levels in the shallow aquifers have not been affected as close as 1000 feet from active pits. Should any adverse effects occur, Dakota Westmoreland is committed to replacing water supplies. Adequate replacement sources do exist and are discussed in the permit.

The Knife River has its headwaters in west-central North Dakota near Fairfield and drains predominantly agricultural lands throughout its length over a drainage basin of 2,240 square miles, as measured at Hazen, ND. Seasonal variations in flow for the Knife River and its tributaries are primarily influenced by snowmelt runoff and summer thunderstorms. Base flows are generally very low and periods of no flow occur on most streams, including Coyote Creek and the Knife River. There are no large bodies of standing water in the assessment area, and surface water use is largely ponds or stock dams on smaller drainages for livestock watering. The Beulah Mine has had no impact on these uses to date but Dakota Westmoreland is committed to replacing or supplementing any supplies that are diminished by mining.

Cities in the assessment area along the Knife River obtain their municipal water supplies from wells completed in the Knife River alluvial aquifer system as well as from piped rural water supplies. Water wells serving the communities of Golden Valley and Zap are up-gradient from any potential hydrologic impacts of mining in the assessment area. The Beulah Mine has a surface water monitoring program within and adjacent to its permit areas to detect any changes which might occur in water quantity or quality as a result of mining activity. Their summary data shows that the average electrical conductivity of Beulah Mine NDPDES discharges is about the same as that reported for water in Otter Creek, which is located east of Dakota Westmoreland Permit KRSB-8802, but the mine contributes less than 1% of the flow to this stream.

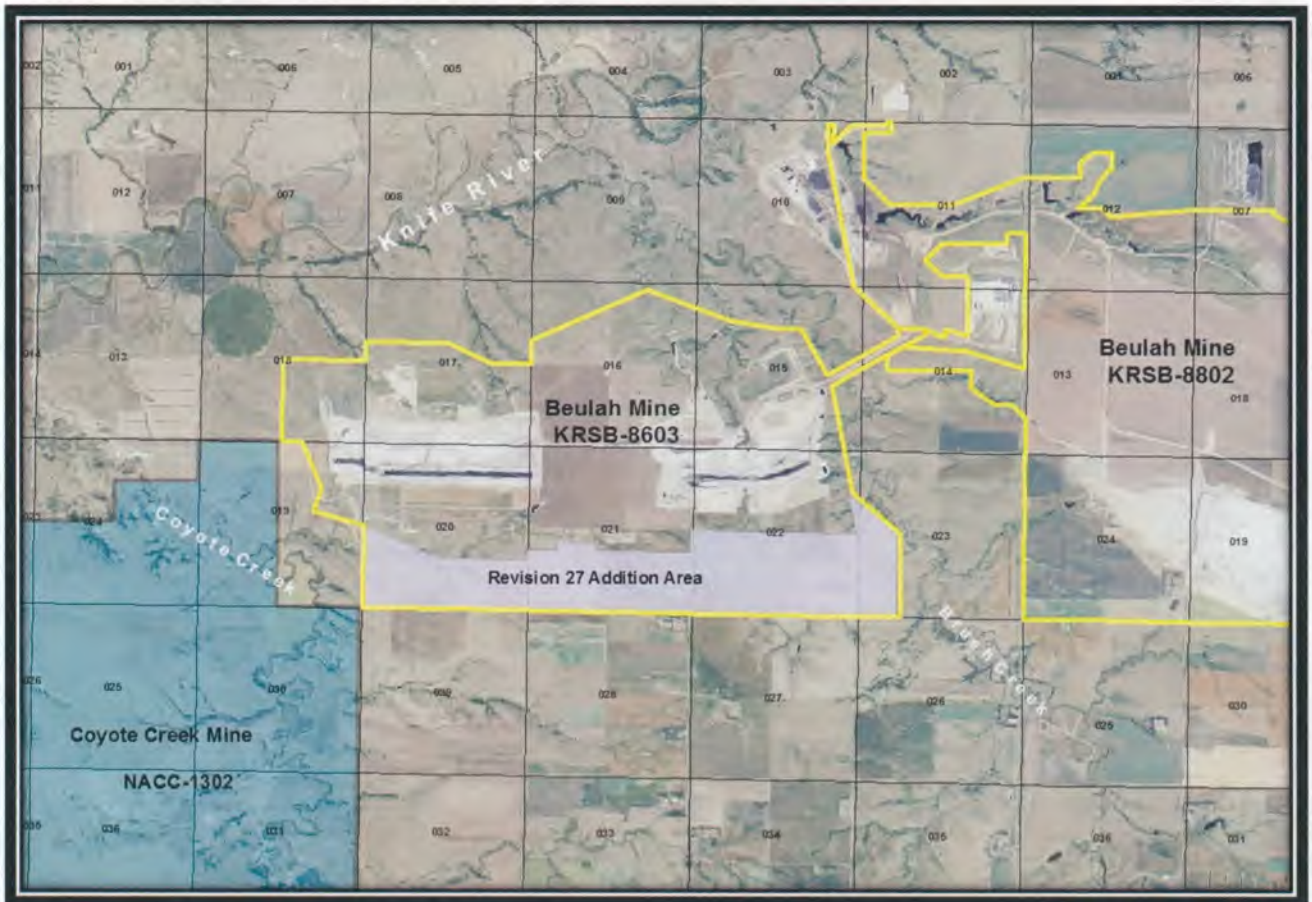
All surface water flows from the mine are less than 1% of the annual flow of the Knife River at Hazen, ND. NDPDES discharge reports show about 176 acre feet of water discharged from Beulah Mine in 1989. Municipal and industrial discharges average about 160 acre feet per year in the assessment area, while the Knife River flowed 44,830 acre feet at Hazen in the year ending in September, 1989. For 2013 reporting year, the total discharge from the Beulah Mine was 1128 acre feet while the annual flow in the Knife River at Hazen was 141,000 acre feet. Over the past six years there have been no adverse impacts detected in the permit or adjacent areas, as monitored by routinely-collected water quality samples.

Livestock watering ponds and dugouts in the permit area that may be destroyed by mining will be replaced with ponds or wells if needed to support the post-mining land uses. Several sedimentation ponds and other Developed Water Resources are proposed to be left as permanent structures after mining and they will probably make a small contribution to ground water recharge and slightly reduced peak flows on Otter Creek, Coyote Creek, Brush Creek, and ultimately the Knife River. They will not significantly divert water from surface or ground water flow systems in the area. Interception of storm runoff and ground water discharged from mining pits by the total surface water management system will result in a net reduction in peak flows from controlled drainage areas. Changes in peak flows on Otter, Coyote, and Brush Creeks and the Knife River immediately below Beulah Mine will be insignificant since only a small percentage of the contributing area of these drainages is controlled by mine sedimentation ponds. In general, a net increase in surface water bodies in the post-mining environment within

permitted areas can be anticipated due to retention of sedimentation ponds and other constructed Developed Water Resources as permanent impoundments. Ground water produced from active pits will make a very small addition to the volume of surface water flows. The shallow aquifers dewatered by pit operations are, under natural conditions, hydrologically connected to the channels of Otter, Coyote, and Brush Creeks and provide a small amount of spring flow and ground water recharge to them. Beulah Mine operations will produce no significant diversion of water from the surface or ground water flow systems of Otter, Coyote, and Brush Creeks.

There are no large permanent wetlands in the immediate vicinity of the permit. Impacts to springs, wells or stock dams are not anticipated other than to those in or adjacent to the permit area discussed in the permit. The Beulah Mine permits review in detail such features as may be destroyed or affected by mining and give plans for appropriate mitigation or replacement. Alternate water sources and appropriate courses of action are available, and Dakota Westmoreland is committed to taking remedial or corrective action if unforeseen impacts occur.

Permit KRSB-8603, including the Revision No. 27 addition area



D. Soils and Overburden

The methods used to identify suitable plant growth material (topsoil and subsoil) and soil handling plans are provided in the permit. DWC has committed to salvage all available topsoil and a sufficient amount of subsoil to adequately respread all disturbed areas.

The total amount of suitable plant growth material to be replaced will be based on the quality of the graded spoil surface pursuant to NDAC 69-05.2-15-04(4)(a)(2). The total suitable plant growth material respread thickness will either be 24, 36, or 48 inches depending on the spoil characteristics as determined by graded spoil sampling. A sufficient amount of suitable plant growth material is available for respreading all areas projected to be disturbed. Topsoil respread thicknesses will be based on the average amount removed by land ownership. The same volume of topsoil and subsoil that was removed from areas of associated disturbance will be evenly respread on these areas. DWC submits an annual soils handling plan to the Commission for review and approval. This annual plan includes a current and projected soil inventory as well as the annual soil removal plans.

An examination of the overburden drill hole data indicates that the spoil material should be non-toxic. If any toxic spoil areas occur after spoil grading, the areas will be identified by sampling the graded spoil and a sufficient non-toxic cover will be provided.

A total of 23.6 acres of prime farmland has been identified within the areas being added to the permit with Revision 27. Of this, 2.1 acres located in the S½ of Section 22 (over federal coal) will be disturbed by mining activities. The 21.5 acres of prime farmland located in Section 21 will not be disturbed by mining activities. The prime farmland soils handling and reclamation plans are addressed in the Section 3.4 of the permit. Prime topsoil will be segregated from nonprime topsoil and prime subsoil will be mixed with nonprime subsoil. Reclaimed prime areas will be respread with a total of 48 inches of SPGM. The Natural Resources Conservation Service reviewed the prime farmland reclamation plan and determined it is adequate for restoring the pre-mine productivity.

Scarification with a disc or a chisel plow may be used to promote adhesion between graded spoil and subsoil in steep or shallow respread areas. This serves to minimize slippage and promote water infiltration. The respread of suitable plant growth material will be of uniform thickness with a topography that promotes effective surface drainage.

E. Vegetation

Seeding will be performed during the first normal period for favorable planting conditions. Prior to seeding, a firm seedbed will be established. Post-mining land use seed mixtures utilized are dependent on post-mining land use. The following mixtures will be used at rates expressed in pounds of pure live seed (PLS) per acre:

1. Native Grassland

<u>Species/Variety</u>	<u>PLS #/acre</u>
Western Wheatgrass	2.0
Green Needlegrass	2.0
Slender Wheatgrass	1.2
Blue Grama	1.2
Sideoats Grama	2.5

Prairie Sandreed	1.0
Little Bluestem	1.0
Switchgrass	1.2
Big Bluestem	<u>1.5</u>
Total PLS #/acre	13.6

**2. Pre-Cropland, Hayland, Industrial/Commercial
Tame Pastureland, Fish & Wildlife Habitat**

<u>Species/Variety</u>	<u>PLS #/acre</u>
Western Wheatgrass	2.0
Pubescent/Intermediate Wheatgrass	4.0
Tall Wheatgrass	2.0
Alfalfa	<u>7.0 *</u>
Total PLS #/acre	15.0

* For Tame Pastureland alfalfa will be seeded at 2.0 PLS #/acre

The appropriate post-mining land use seed mixture will be planted after the topsoil is respread. Seeding will be conducted during times of the year when favorable growing conditions are likely to occur. If conditions are not favorable, a temporary cover crop may be planted for erosion control purposes. Mulch may also be used to control erosion during periods of the year outside of the growing season. Herbicides will be used to control weeds if necessary.

The mining and reclamation operations will not result in a substantial loss or reduction of long range productivity of the lands producing food and fiber products since reclamation practices proposed by the applicant are designed to restore the level of productivity to that which existed prior to mining.

F. Wildlife

Mining will disturb all habitat types occurring in the permit area prior to mining. Any temporary loss of habitat will be partially mitigated by creation of stockpiles with dense cover to provide topographic relief and a food source. Sediment ponds will provide water sources during mining and reclamation. The reclamation plan has been designed to ensure no net loss of wetland acreage. The wetlands that are to be disturbed will generally be replaced in areas where they existed prior to mining, although wetland formed from ground water seeps will be replaced as features that collect and store surface runoff. Shelterbelts and woodlands will be planted to offset the habitat loss associated with old shelterbelts and field windbreaks that existed prior to mining. Establishing perennial vegetation on reclaimed croplands and managing these lands as hayland during the liability period improves the wildlife habitat value of these lands. Favorable wildlife habitat should exist during the vegetation establishment periods of the reclamation phase. Proper management during the liability period should benefit wildlife populations.

Mining and reclamation operations will not create any barriers to wildlife migration routes. No ponds containing toxic material will be created in the permit area. Herbicides may be used to control weeds, but use of insecticides has not been proposed.

No habitat of unusually high value will be disturbed during mining and reclamation activities. Mining activities as proposed in Revision 27 will not affect the continued existence of any threatened or endangered species or result in the destruction or adverse modification of their critical habitats. Attached is a letter from the U.S. Fish and Wildlife Service concurring with the Public Service Commission's finding that mining operations may affect, but are not likely to adversely affect, the endangered whooping crane which may migrate through the area. The permit and adjacent area do not contain habitat for other listed species.

Three Candidate species to the endangered species act could potentially exist in the Revision 27 addition area. Sprague's pipit has been observed on nearby lands in recent years and this species was detected in the area during the original wildlife baseline surveys for the permit area. Dakota skipper butterfly surveys for this species were conducted in the area and it was not found. The surveyor, Ronald Royer, concluded that insufficient intact habitat existed for prairie specialist butterflies. The Northern Long Ear Bat could be a visitor to the mine area but the permit area does not contain any suitable habitat in the form of caves or abandoned underground mines. Mining is not expected to have any long-term adverse impacts on wildlife populations. Annual wildlife monitoring will document changes in wildlife populations.

G. Cultural Resources

Cultural resource surveys and inventories and the necessary testing and evaluations of the area added to Permit KR5B-8603 with Revision 27 have been completed. A substantial number of sites, both archeological and historic, were identified within the permit area. One site, 32ME2232, located on the SE¼ of Section 20 (off federal coal) was deemed potentially significant by the State Historical Preservation Officer and this site will be avoided by all mining activities. Site 32ME2522 has not been evaluated for significance and mining activities will also avoid this site. All remaining sites were determined to be not significant in terms of national register criteria (36 CFR 60.4) and have been approved for disturbance or will be avoided. DWC has committed to inform the proper authorities in the event that any previously unrecorded archeological, cultural, or historic materials are discovered.

The proposed surface coal mining operations will not adversely affect any significant historic, archaeological, or paleontological sites. Correspondence received to date from the State Historical Preservation Officer (SHPO) regarding cultural resource sites in Permit KR5B-8603 is attached.

H. Land Use

After the land has been mined and reclaimed, it will again be used primarily as agricultural land. In the Revision 27 addition area approximately 54 acres of cropland is being converted to perennial hayland and the other land uses are essentially the same with only minor differences. No unusual environmental impacts are anticipated from the proposed mining operations. Permit wide there is a reduction of about 220 acres of native grassland because surface owners have requested pre-mine native grassland be converted to post-mine cropland and hayland. Overall in the permit there is an increase of about 2 acres of wetlands and an additional 7 acres of developed water resources (stockponds) which essentially functions as wetland habitat and should improve grazing distribution. The woodland acreage remains the same and there is a decrease of about 4 acres of tame pastureland. Disturbed drainages with linear/riparian wetlands will be

recreated near their pre-mine locations but coal removal may affect ground water seeps so recreated wetlands will depend on surface water runoff.

<u>Land Use</u>	<u>Acreage</u>	<u>% of Area</u>
Cropland	1008	28%
Hayland	496	14%
Native Grassland	1827	51%
Tame Pastureland	71	2%
Woodlands	26	1%
Wetlands	17	<1%
Shelterbelts	6	<1%
Developed Water Resources	12	<1%
Industrial & Commercial	95	<3%
Total	3558	100.0

I. Transportation

No long-term impacts will occur to the transportation system in the permit area. However, short-term impacts will occur to section line trails and county roads. Several section line trails and one county road have been closed by the Mercer County Commission. A detour route has been constructed to temporarily re-route traffic around the active mining area. If other section line trails or roads are closed in the future, DWC will follow county road closure procedures that include public notice with opportunity for hearing.

J. Noise, Esthetics, and Safety

Noise associated with operations within this permit area should be similar to that currently occurring with other permitted areas.

Visually, the proposed mining operation will temporarily intrude upon the landscape normally viewed by the people in the surrounding area. However, after mining operations are completed, the topography will be restored to conditions similar to the pre-mine landscape.

DWC will post the necessary signs as needed to minimize the possibility of unauthorized persons entering the mine area. They have also committed to providing safe access to landowners and local farmers in or near the permit area.

K. Socioeconomics

As of May 2014 there are 146 full time employees at the Beulah Mine. The operations proposed by Revision No. 27 are not expected to affect employment levels.

IV. MAJOR ISSUES INVOLVING THE REVISION APPLICATION

No significant issues were raised during the review of the revision application.



United States Department of the Interior



FISH AND WILDLIFE SERVICE
North Dakota Ecological Services Field Office
3425 Miriam Avenue
Bismarck, North Dakota 58501
(701) 250-4481, ndfieldoffice@fws.gov

JUN 12 2014

In reply, please refer to: TAILS #: 2014-CPA-0221

James R. Deutsch, Director
Reclamation Division
Public Service Commission
600 East Boulevard, Dept. 408
Bismarck, North Dakota 58505-0480

Dear Mr. Deutsch:

This is in response to your April 16, 2014, letter requesting informal consultation on Revision 27 to Surface Coal Mining Permit KRSB-8603 in Mercer County, North Dakota. The action involves the addition of 892.2 acres of land to the existing permit area, which is leased by Dakota Westmoreland Corporation (Project). The letter and accompanying Biological Assessment (BA) were received on April 21, 2014, from the North Dakota Public Service Commission (PSC) on behalf of the Office of Surface Mining (OSM), the responsible federal agency. The Service is responding to the PSC as the State regulatory authority, in accordance with the Surface Mining Control and Reclamation Act of 1977, P.L. 95-87 (SMCRA) and the 1996 biological opinion and conference report regarding the continuation and approval of surface coal mining and reclamation operations under State and Federal regulatory programs.

In accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act), you requested U.S. Fish and Wildlife Service (Service) concurrence with your determination that the Project “may affect, is not likely to adversely affect” the endangered whooping crane (*Grus americana*). Based upon the project description and analysis of potential effects included in the BA, the Service has concluded that the effects to the whooping crane are either insignificant or discountable. Thus, the Service **concurs** with your determination.

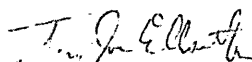
The BA also includes “no effect” determinations for the interior least tern (*Sternula antillarum*), pallid sturgeon (*Scaphirhynchus albus*), piping plover (*Charadrius melodius*), black-footed ferret (*Mustela nigripes*), gray wolf (*Canis lupus*), western prairie fringed orchid (*Platanthera praeclara*), Dakota skipper (*Hesperia dacotae*), rufa red knot (*Calidris canutus*), northern long-eared bat (*Myotis septentrionalis*), Sprague’s pipit (*Anthus spragueii*), greater sage grouse (*Centrocercus urophasianus*) and proposed critical habitat for the Dakota skipper. There is no requirement under the implementing regulations of the Act (50 CFR Part 402) for action agencies to receive Service concurrence with “no effect” determinations, therefore the

responsibility for "no effect" determinations remains with the OSM. Accordingly, we recommend the federal action agency retain the documentation for these listed resources in the decisional record for this federal action.

The Service's concurrence is based on the information contained within the April 2014 biological assessment. Pursuant to the implementing regulations of the Act (50 CFR 402.13), this letter concludes informal consultation on the subject action. This action should be re-analyzed if: (1) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not considered in this consultation; (2) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this consultation; or (3) a new species is listed or critical habitat is designated that may be affected by this project.

We appreciate your efforts to insure the conservation of listed species as part of our joint responsibilities under the Act. For further information, please have your staff contact Heidi Riddle of my staff at (701) 355-8503, or contact me at (701) 355-8512 or at the letterhead address.

Sincerely,



for Kevin J. Shelley
Acting Assistant Field Supervisor
North Dakota Field Office

cc: USFWS, South Dakota Field Office, Pierre, SD (Attn: S. Larson)