

Section B-1 - Mine Area 4 North Conveyor Haulroad

* In the fall and winter of 2008-2009, the overland coal conveyor located at the Freedom Mine was taken out-of-service and removed. At its western end, a new haulroad will be constructed so that coal can be hauled by truck from the East Mine Area and Mine Area 2 North to the new truck dump located in Section 24, T145N, R88W. The new haulroad will begin at the truck dump loop in Section 24 in Permit NACT-8102, run north and east through Sections 19, 18, and 17, T145N, R87W in Permit NACT-8203, and end at an intersection with the existing East Mine Area Haulroad in Section 8, T145N, R87W, in Permit NACT-8401. The location of the new haulroad is shown on the Pit Layout and Facilities Map of Section B-2. Design details of the new haulroad are shown on plan and profile drawings in Section B-3. A typical haulroad cross-section is also shown on the plans. The new haulroad will save as much as 2.6 miles per truck cycle from the eastern mine areas to the new truck dump facility. It will be used primarily for coal haulage and the movement of large mining equipment. Construction of this haulroad is scheduled for the spring of 2009.

Along the section line between Sections 8 and 17, the haulroad will pass through an existing utility easement owned by West River Telecom for a fiber optic cable. The fiber optic cable, which is presently buried along the north edge of Section 17, will be cased and lowered across the proposed haulroad corridor.

* The intersection of the centerline of the proposed new haulroad with the existing new truck dump loop will be the beginning of construction, station 0+00, and will run northeast for a distance of 12,590 feet and end at the intersection with the existing East Mine Area haulroad centerline west of the County Road 21 overpass. The haulroad will be constructed of subsoil and overburden. As the new haulroad corridor will be wider than the existing conveyor corridor, the additional width will, for the most part, be added north of the existing conveyor corridor across reclaimed lands. Therefore, topsoil removal during construction will occur primarily on the north side of the existing conveyor corridor. Topsoil stripped for the new haulroad corridor will be stockpiled on existing piles located on the south side of this corridor. The topsoil will be distributed among several existing topsoil stockpiles. Therefore, it is not anticipated that any particular stockpile will increase significantly in size. In addition, existing topsoil stockpile TS-155 will be relocated to one of the nearby topsoil stockpiles. An estimated 19 acres of reclaimed land, located primarily on the north side of the existing conveyor corridor, will be redisturbed by the construction of the new haulroad.

The top three feet of the haulroad will be stabilized with fly ash procured from the nearby Antelope Valley Station, as described in Section D-1 of Revision 46 to Permit NACT-8102.

Four culvert installations will be constructed to accommodate the drainage of surface water from and across the proposed haulroad corridor. Culvert design data for the four installations are presented on the following pages. A culvert installation summary table comprises the first page of the culvert design data. The second table summarizes hydrologic parameters associated with the four contributing watersheds that were analyzed for the culvert installations. Peak flow determinations for the design of each culvert installation were calculated from a hydrology model created using TR-20 software. Culvert installations are sized to pass the peak flow from the 10-year/6-hour precipitation event using available head.

At the outlets of the four culvert installations, outfall treatments will be installed to prevent channel scour and erosion, and to dissipate energy associated with erosive water velocities. Outfall treatments will consist of either a rock rip-rapped stilling basin, or a segment of channel lined with articulated concrete mats. The rock rip-rap or concrete mats will be placed on a layer of non-woven engineering fabric. Should site-specific conditions warrant, the segment of downstream channel into which the outfall treatment discharges will be protected with erosion control blanket subsequent to grading and seeding. Upon completion of haulroad construction, the inslopes, backslopes, and ditch bottoms will be scarified, seeded, and mulched.

The majority of the proposed new haulroad lies outside of those watersheds controlled by the mine's sedimentation ponds. Due to this condition, two of the four culvert installations, namely culverts 9+30 and 47+00, will be added to the list of storm water outfalls under the Freedom Mine's general storm water permit. These culvert installations will also be equipped with best management practice controls. Structures and materials utilized for this purpose include straw bale dikes, silt fences, geo-ridge installations, shallow sumps, erosion control blankets, rock rip-rap, and articulated concrete mats. These structures and materials may be used individually, or may be used in combination at each outfall.

+ As previously stated, approximately 19 acres of reclaimed lands will be redisturbed in order to construct the new conveyor haulroad. Another segment of new haulroad, designated as the West Bypass, will also disturb an additional three acres of reclaimed lands in the NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 24, T145N, R88W. A map illustrating the extent of the area over which construction of the haulroads will occur, as well as the area of reclaimed lands that will be

redisturbed, is presented in Section B-4, Reclaimed SPGM Disturbance - Conveyor Haulroad and West Bypass. Specific regrade tracts are also shown on this map, along with the associated respread depths of prime topsoil, non-prime topsoil, and subsoil. Given the area of disturbance and the depth of respread suitable plant growth material (SPGM), an estimate of topsoil and subsoil quantities affected by haulroad construction can be determined.

+ The map in Section B-4 also contains two tables that summarize those quantities of prime topsoil, non-prime topsoil, and subsoil that will be affected by the construction of the new haulroads. One table contains the quantities of SPGM affected by the construction of the conveyor haulroad, and the second table contains the same information for the West Bypass haulroad. Prime and non-prime topsoil redisturbed for the construction of the conveyor haulroad amounts to approximately 35,300 cubic yards. Again, this topsoil will be stockpiled on various topsoil stockpiles existing along the haulroad corridor. These stockpile locations are shown on the map in Section B-4. Subsoil that is redisturbed or affected by construction of the conveyor haulroad totals approximately 96,600 cubic yards.

+ Construction of the West Bypass will redisturb approximately 5,900 cubic yards of non-prime topsoil. This topsoil will also be stored on nearby existing topsoil stockpiles. In addition, approximately 14,300 cubic yards of subsoil will be redisturbed or affected by the construction of the West Bypass.

+ The total quantity of subsoil disturbed or affected by the construction of the haulroads amounts to approximately 110,900 cubic yards. The 2008 Soils Handling Plan for the Freedom Mine projected 40,000 cubic yards of excess subsoil stockpiled for Mine Area 4. Within the proposed conveyor haulroad corridor, from station 62+00 to station 103+00, subsoil was not salvaged from the existing conveyor corridor. This subsoil, estimated to cover an area of 7.8 acres, will be waived to accommodate haulroad construction. Approximately 37,800 cubic yards of subsoil would be needed to respread the 7.8 acres to a depth of 36 inches. Therefore, the 40,000 cubic yards of subsoil currently in inventory will be used to offset the waived subsoil. Accordingly, all subsoil will be salvaged during haulroad construction from the redisturbed area. Salvaged subsoil will be stockpiled on nearby stockpiles SS-2, SS-30 and/or SS-32. Subsoil to reclaim the haulroad corridor will also come from these stockpiles. However, the volume of subsoil currently in inventory may change when the amount of excess subsoil in Mine Area 4 is updated for the 2009 Soils Handling Plan. Any changes to the subsoil salvage plan for this project will be submitted with the annual soils plan.

+ Cut and fill volumes associated with the design of the conveyor haulroad indicate that approximately 87,500 cubic yards of fill material will have to be transported to the corridor and incorporated into the haulroad fill. Specific topsoil, subsoil, fly ash and overburden volumes are listed on Sheet 1 of 4 in Section B-3, Mine Area 4 North Conveyor Haulroad Plan, Profile, and Cross-Section. The overburden fill will be borrowed from overburden stockpiles located north of the DGC landfill, north of pond P-J30-02R, or from the SE¼ Section 10, T145N, R87W. If needed to reclaim the haulroad corridor, any additional fill material will be borrowed from these existing overburden stockpiles.

* When the haulroads are no longer needed for mining and reclamation operations, they will be removed and the corridor reclaimed. In areas where the haulroad is four feet or more below reclamation grade, the roadbed containing fly ash will be left in place. In areas where the haulroad is less than four feet below reclamation grade, or areas where the haulroad crosses pronounced drainages, the top three feet of roadbed that contains fly ash will be removed and disposed of in accordance with Section D-1 of Revision 46 to Permit NACT-8102, and current practices developed by the North Dakota Department of Health. Potential sites for the disposal of roadbed containing fly ash lie between conveyor haulroad stations 17+00 and 35+00, and stations 64+00 and 68+00.

+ Construction of the conveyor haulroad will disturb the south end of several existing shelterbelts. Upon final reclamation of the haulroad corridor, the disturbed segments of shelterbelts will be replanted with similar species of trees and shrubs.