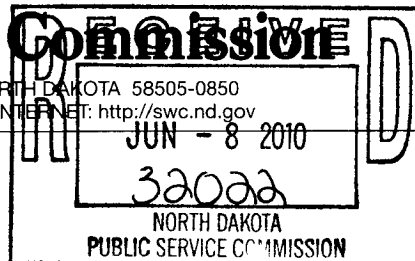


North Dakota State Water Commission

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WATER APPROPRIATION DIVISION
(701) 328-2754

June 4, 2010

FROM DIRECTOR - RECLAMATION DIV.

Mr. James R. Deutsch, Director
Reclamation Division
Public Service Commission
State Capitol Building
Bismarck, North Dakota 58505

Date: _____

Action: _____

Info. Only: _____

Dear Mr. Deutsch:

Info & File: _____

In an April 20, 2010 letter you requested a review of Application No. NAO-0802, submitted by North American Coal and its subsidiary, the Otter Creek Mining Company, for a new mine about three to six miles northwest of Center. The Otter Creek Mine is located in a highland area between Square Butte Creek and its tributaries to the south and southwest and the Missouri breaks to the northeast. An area about 3.5 miles (east-northeast to west-southwest) by 2 miles is to be mined over the next 45 years, working north-northwest from the cropline of the Kinneman Creek and Hagel beds.

The proposed area to be mined is bordered on three sides by glaciofluvial features, on the south and southwest by Square Butte Creek and its tributaries, including one underlain by a glaciofluvial aquifer, and on the northeast by the Square Butte Creek aquifer, which diverges from its namesake creek in the southeastern part of the proposed mine area. The direction of groundwater movement in the Kinneman Creek and Hagel beds is to the east and northeast, except in the southeastern part of the proposed mine area where flow diverges to the southeast, in the downstream direction of Square Butte Creek. The long axes of the proposed mine pits approximately parallel the premining direction of groundwater movement in the coal beds, except in the southeast part of the mine.

The description of the geohydrology, geology and alluvial valley floors near the proposed mine is informative. An inventory of wells and springs in the mine area is included. The proposal to locate settling and infiltration ponds along the margins of the Square Butte Creek aquifer and Square Butte Creek is expected to help recharge the aquifer and provide creek base flow.

Ninety-four monitoring wells are listed for the proposed Otter Creek mine area; however, many of the wells that were installed in the 1980's are located one to four miles north of the planned mine. Apparently a larger mine was previously envisioned. The alluvial/glaciofluvial features bounding the area to be mined appear to have sufficient monitoring wells. However, the land to be mined and the area to its immediate north are sparsely monitored (Section 2.2.17). The potentiometric surface maps do not include the control points from which they were drawn. By including the control points on the map, the density and distribution of information used to make the map can be seen, as well as the location of monitoring wells installed in a particular zone.

Alan Wanek, Hydrologist Manager

AW:sc/1687-25

16 RC-08-940 Filed 06/08/2010 Pages: 1
Comments filed on the permit application
State Water Commission
Alan Wanek