



Fisheries  
and Oceans

Pêches  
et Océans

Fish Habitat Management  
Suite 101, 5204-50<sup>th</sup> Avenue  
Yellowknife, Northwest  
Territories  
X1A 1E2

Your file *None reference*

Our file *None reference*

**Mackenzie Valley Land  
& Water Board**

June 1, 2001

File \_\_\_\_\_

BHP Diamonds Inc.  
1102 4920-52<sup>nd</sup> St., Yellowknife, NT X1A 3T1

JUN 01 2001

Application # MV2001L2-0004  
MV2001F0032  
Copied To MS/UB/Reg

Attention: Derek Chubb

**RE: Land Use Permit/Water License Application, BHP Diamonds Inc.,  
MV2001L2-0004/MV2001F0032, Sable Road Construction, Ekati Minesite**

Dear Mr. Chubb:

The Department of Fisheries and Oceans, Fish Habitat Management – Western Arctic Area (DFO) received a land use permit and water license application submitted on your behalf by the Mackenzie Valley Land and Water Board. DFO has reviewed the plans for the proposed work and provides the following comments.

Under Section 34 of the *Fisheries Act*, fish habitat is defined as *spawning grounds and nursery, rearing, food supply and migration areas on which fish depend directly or indirectly in order to carry out their life processes*. It is with this definition of fish habitat that DFO offers the following comments.

On page 10 and 11 of the proposal it states that fish passage needs to be maintained where Sable Road crosses waterbodies at locations SR1 (Pigeon Stream), SR3 and SR6. DFO requires more information on flow volumes (1 in 100 year models) and substrate type to provide an adequate review of the crossings structures required.

With reference to the SR2 crossing. On page 11 of the proposal it is stated that the stream connects a wetland area to Pigeon Stream via seasonal flow and therefore no fish passage is required. DFO considers even seasonal flow that provides food or migration to be fish habitat, particularly when connected to fish bearing water such as Pigeon Stream. As such, a fish passage structure needs to be installed.

With reference to the SR4 crossing. On page 11 of the proposal it states that during fish surveys low water was observed at this location therefore it was assumed that this channel is not used by fish. It does not mention if fish were seen during the survey, how long and often the survey was conducted, what methods were used to find fish, or if invertebrates of any kind were found. As this stream is connected to Exeter Lake there is a potential for fish to access this stream or for

this stream to contribute water and food to Exeter. This stream therefore should be treated as fish habitat and fish passage should be provided.

SR5 - It states that since Big Pond is shallow it would not likely support a year-round fishery, therefore no fish passage will be provided. It also states that grayling and possibly other species use this stream to migrate to Big Pond. Since fish use this stream as a migration route, DFO considers it fish habitat and fish passage should be maintained at this location.

SR7 - BHP states that this watercourse does not drain any lakes or ponds, therefore does not support fish. However, the downstream side of the watercourse is connected to Ursula Lake and could be used by fish directly or indirectly by providing water and food, spawning, or rearing habitat. As such, fish passage should be maintained at this location.

In order for DFO to provide a thorough review, pictures of crossing locations during spring and fall should be provided as well as information on aquatic substrate type, flow volumes, riparian vegetation, and stream width. In addition, information on culvert sizing, orientation, placement, and installation timing should be provided. DFO discourages the use of 'fill construction' for watercourse crossings since ponding may cause erosion of the permafrost and release of sediments.

In conclusion, the Mackenzie Valley Land and Water Board may wish to issue a land use permit to BHP based on the current application. However, BHP should provide construction details and the information mentioned above to ensure that all watercourse crossings are constructed to the satisfaction of DFO.

If you have any questions concerning this letter please contact the undersigned at (867) 669-4912, FAX (867) 669-4940, or Julie Dahl at (867) 669-4911.



Marc Lange  
Area Habitat Biologist  
Fish Habitat Management  
Department of Fisheries and Oceans- Western Arctic Area

Copy: Julie Dahl, Area Chief, Habitat – DFO  
Laurie Bruno - MVLWB  
Independent Environmental Monitoring Agency - Yellowknife