Environment Canada | Environnement Canada

# Memorandum - Note de service

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| ***To/À*** | Nunavut Water Board | ***Prepared by/ Préparé par:*** | |
| | | ***Security/ Sécurité:*** | UNCLASSIFIED |
| ***From/ De*** | Anne Wilson<br>Environmental Protection Operations<br>Yellowknife, NT | ***File/ Dossier:*** | |
| | | ***Date:*** | 2007-08-13 |

***Subject/ Objet:*** **CCME guidelines re: effluent quality criteria**

As discussed during the question period with the proponent, use of the Canadian Council of Ministers of the Environment (CCME) as standards for licence criteria has some (limited) precedent. There are several cases where levels have been set below the CCME criteria (see attached table) for zinc, and for pH values based on site-specific conditions.

The Colomac mine licence (attached) provides precedent for the regulation of parameters in the receiving environment. It is the only such case I am aware of in the NWT or NU, and involves effluent from an abandoned gold mine tailings impoundment area which will discharge to a wetland, then into L-shaped Lake; licence limits must be met at the outflow of L-shaped Lake (SNP 1563-1). The initial intent of the Mackenzie Valley Land and Water Board on the licence limits contemplated having them meet CCME guidelines as well as effluent quality predictions (see page 32 of the attached licence in the reasons for decision); however, limits were actually set at higher levels, with the exception of zinc.

Other recent mine licences have generally used the approach of setting end-of-pipe discharge criteria based on meeting CCME or site-specific objectives at the edge of a mixing zone. Miramar Hope Bay Ltd.'s proposed approach of using dual compliance points is a new one in this jurisdiction, and with some caveats which are included in Environment Canada's submission, will provide for stringent regulation of mine effluents in the receiving environment.