Indian and Northern Affairs Canada
Affaires indiennes et du Nord Canada

Nunavut District Office
P.O. Box 100
Iqaluit, NU, X0A 0H0
Tel: (867) 975-4289
Fax:(867) 979-6445

Your file - Votre reference

Our file - Notre référence
NWB3CAP0207

Art Stewart
Senior Administrative Officer
Hamlet of Cape Dorset
Box 30,
Cape Dorset, NU
X0A 0C0

Government of Nunavut
c/o Tom Rich
Deputy Minister
Community Government and Services
Iqaluit, NU
X0A 0H0

May 27, 2004

Re: Cape Dorset Lagoon/ Sewage Spill Follow up, May 5, 2004

The issue of sewage treatment in Cape Dorset is ongoing. The design and construction of a 3-celled lagoon that was supposed to address the communities lack of capacity for sewage treatment has only added to the communities problems. The inadequate level of sewage treatment has resulted in an Inspector's Direction from Sid Bruinsma with Environment Canada. As a new lagoon is at least two years away, the Municipality of Cape Dorset and Community Government and Services (CG&S) must make the best of the inadequate lagoon systems to minimize the environmental impact of it's sewage effluent.

On March 5, 2004 the Hamlet of Cape Dorset reverted from using the recently repaired 3-celled sewage lagoon to the old lagoon to prevent a catastrophic failure of the 3-celled lagoon. The 3-celled lagoon was very close to overflowing the berms in cells one and two. The situation resulted because of the poor design of the lagoon and cold temperatures that prevented the Hamlet from effectively decanting the lagoon.

The site was visited on May 5, 2004 to attempt to evaluate the current situation and ensure that the Hamlet is taking all necessary steps to prevent a catastrophic failure of the 3-celled lagoon and minimize the seepage out of the old lagoon. The visit revealed

that the 3-celled lagoon is in imminent danger of overflowing and washing out as soon as the spring melt begins. The first cell is close to the level of the overflow culvert (Figure 1) while the second cell is full above the overflow culvert and has surpassed the surface of the berm in one area (Figure 2 and Figure 3). The sewage that has overflown from cell one is flowing along the diversion channel on the mountain side of cell two. This overflow from cell one has produced a large build up of ice that is moving down the side of cell two (Figure 4). It appears that this sewage shall both erode the side of cell two and possibly flow along the mountain side, by-passing the third cell entirely. The situation could potentially result in a catastrophic failure of cells two and three of the lagoon.

The original lagoon (Figure 5), which has been brought back into service does not have sufficient capacity to treat the communities sewage and the lagoon discharges continuously with minimal retention time. Additional retention berms put in place last summer to increase the retention time of the lagoon have been ineffective (Figure 6). The sewage effluent has surpassed the level of the additional berms and it flows virtually unimpeded into Telik Inlet. Consequently, there is a deposit of minimally treated sewage effluent visible on the ice in Telik Inlet.

The current state of treatment has resulted in an Inspector's Direction issued by Sid Bruinsma with Environment Canada. If CG&S and the Municipality of Cape Dorset do not make every reasonable attempt to prevent a catastrophic failure of the 3-celled lagoon and reduce the output of raw sewage from the original lagoon, further enforcement action will be necessary.

If you have any questions or concerns please contact me.

Sincerely,

Scott Stewart

Scott Stewart
Water Resource Officer
Field Operations
Nunavut District Office
Iqaluit, NU X0A 0H0
Ph: (867) 975-4289
Fax: (867) 979-6445
stewarts@inac.gc.ca

cc.-Nunavut Water Board (D. Filiatrault)
-Environment Canada (Sid Bruinsma, Anne Wilson)
-Public Health (Baffin Region)

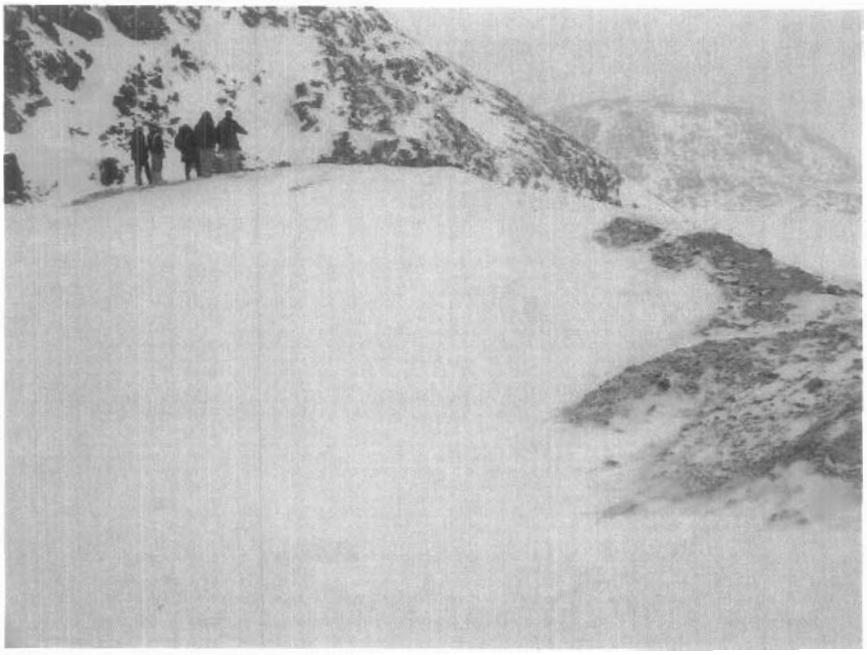

Figure 1. The berm in the first cell of the new Sewage Lagoon in Cape Dorset.

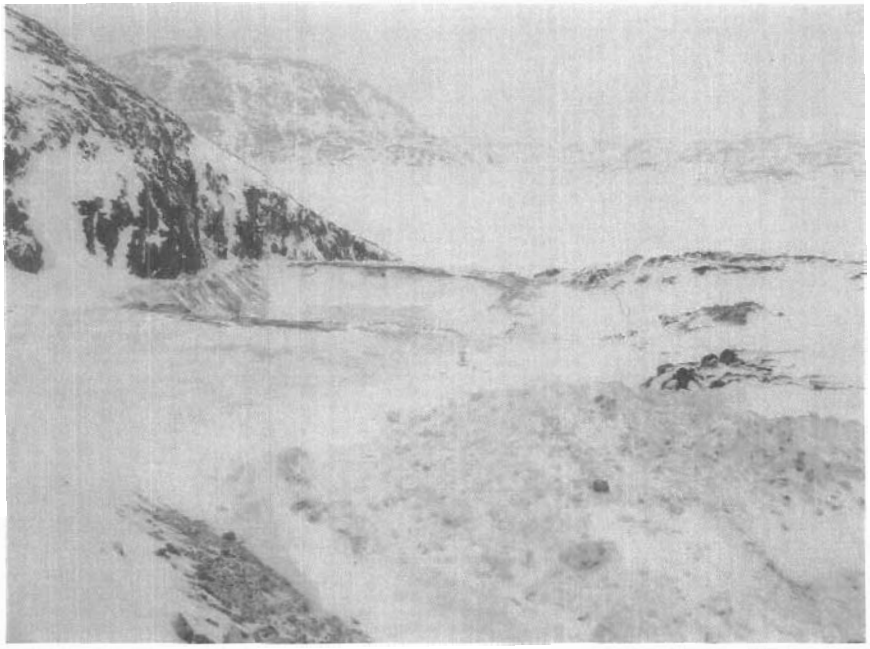

Figure 2. The second and third cells of the Cape Dorset Sewage Lagoon with the second cell full to overflowing.

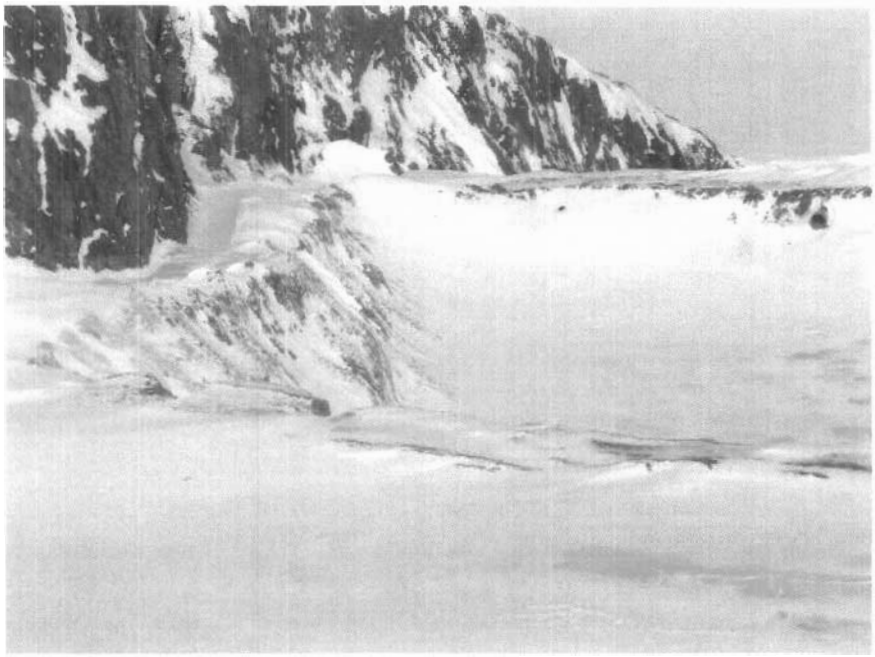

Figure 3. Visible erosion of the berm between the second and third cells of the Cape Dorset Sewage Lagoon.

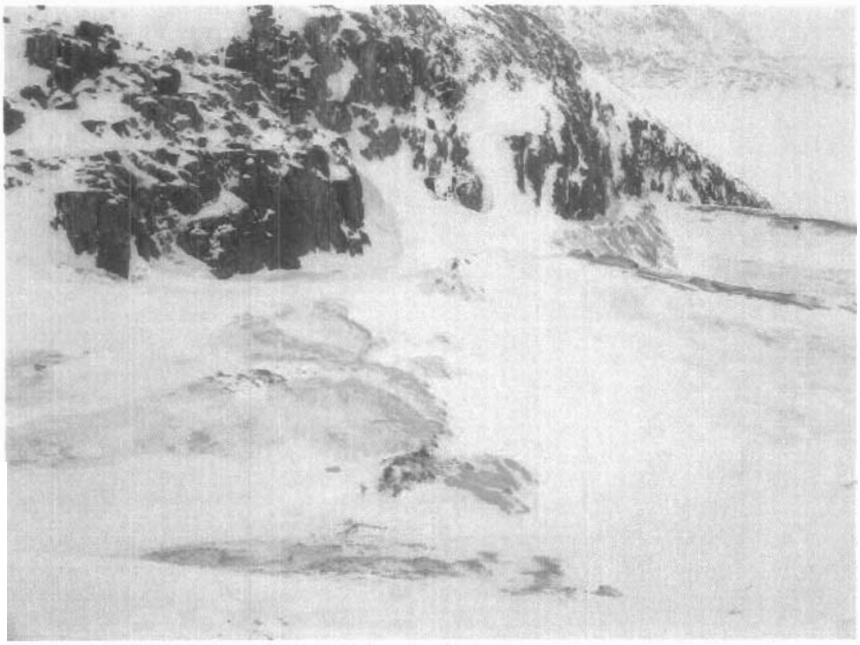

Figure 4. Build up of ice along the mountain side of cell two of the new Cape Dorset Lagoon with the eroding second berm visible in the upper right quadrant of the photo.

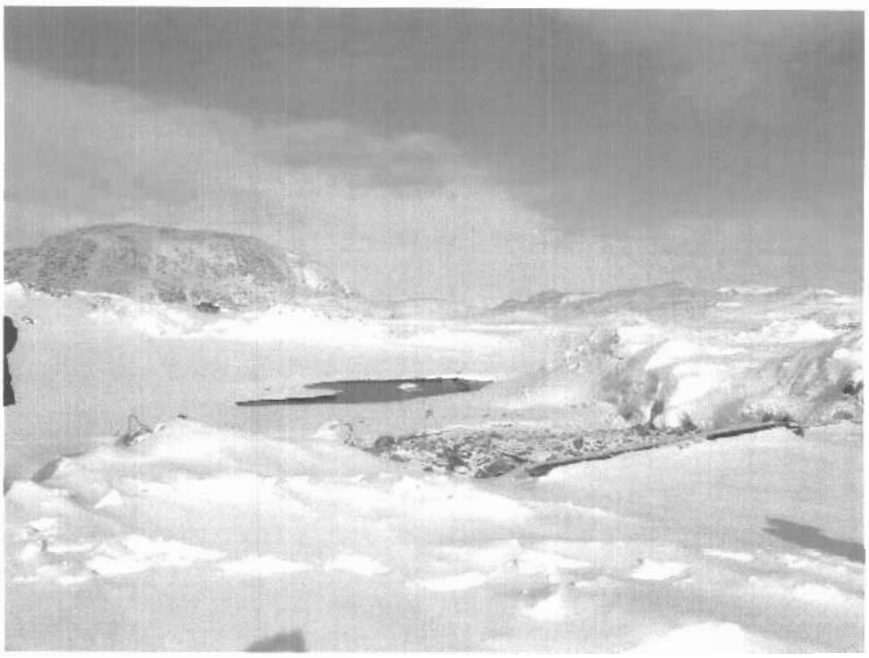

Figure 5. The original Sewage Lagoon in Cape Dorset with the truck discharge point visible in the foreground.

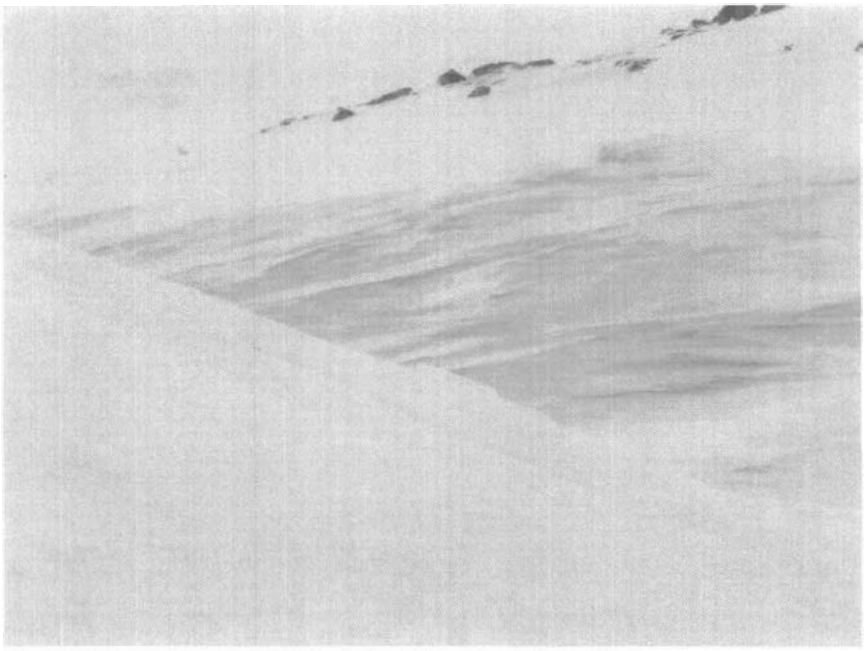

Figure 6. Frozen sewage build up flowing to Telik Inlet below the original Cape Dorset Sewage Lagoon.