

## **Response to Inspector's Report**

### **Water Licence # NWB 0409 Renewal Application for the Municipality of Pond Inlet**

#### **Seepage from the Sewage Lagoon:**

This is a single cell sewage lined lagoon with gravity decanting system. This was designed to function as a containment retention structure. The facility has been in operation since 2005.



Fig. 1

After heavy rainfall during summer each year, there was a sign of leakage water next to the East berm. Water used to bubble out from the ground. It was observed during the event since the lagoon started operation. In 2007, samples were collected and tested in the accredited lab in Ottawa and the results are attached. The results does not proof that this bubble was leaking out from inside of the lagoon. It means this might not be sewage water coming out from the Lagoon. After few days of the rain, the bubble does not continue. This water might come from the upper hill nearby which penetrated during the heavy rainfall and leaked to the down slope and ran along the Eastern berm of the lagoon as shown in the Picture below.

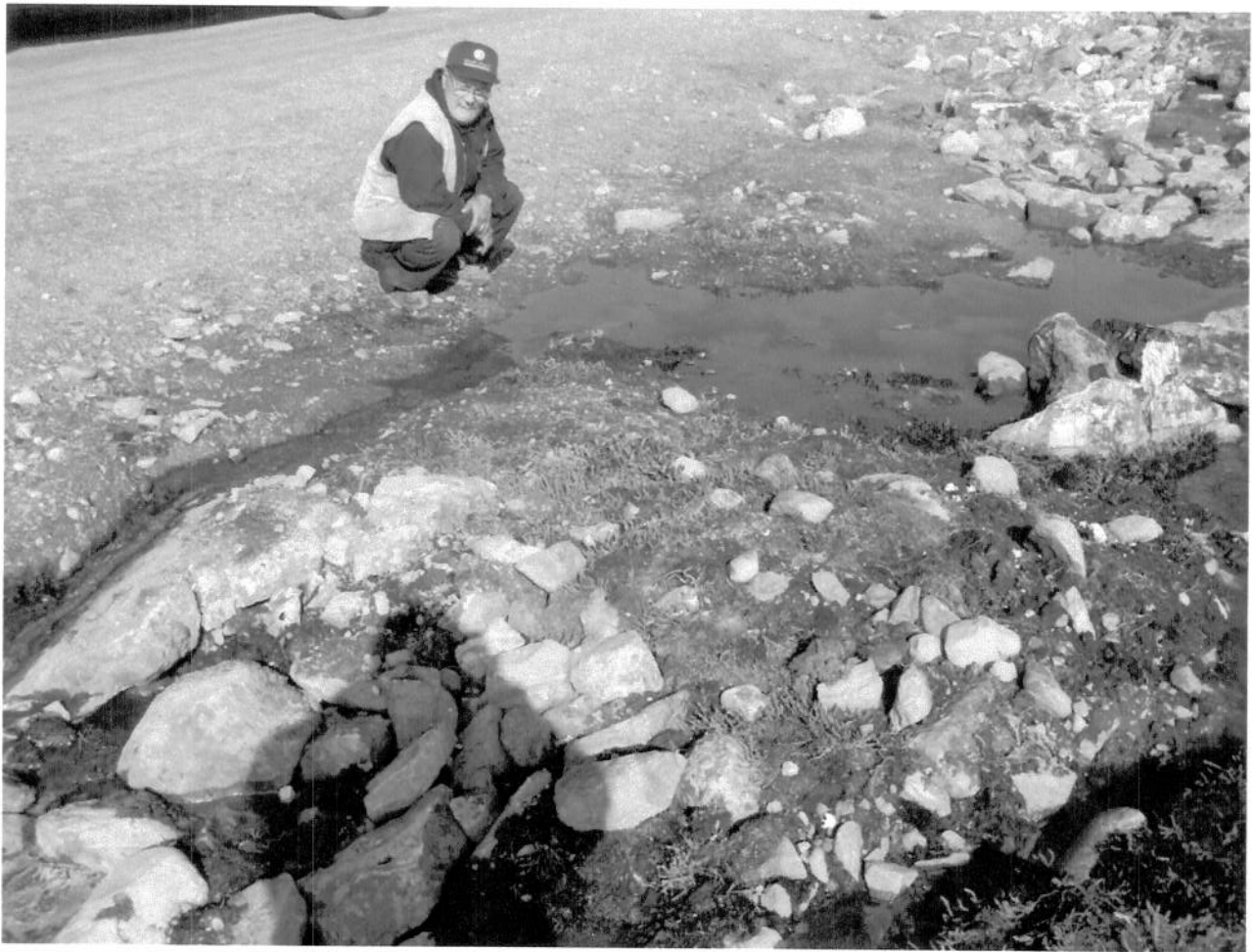


Fig. 2



Fig. 3

At the end of the Easter berm slope of the Lagoon, the ground elevation is lower and acts like a shallow ditch. This allows accommodating surface runoff from the surroundings. At the same time, the rain water penetrated in the upper hill during the rainfall try to bubble out at this ditch shown in this picture.

Last summer 2009 there was a sign of berm failure at the northern part of this lagoon as shown in the pictures below.



Fig. 4

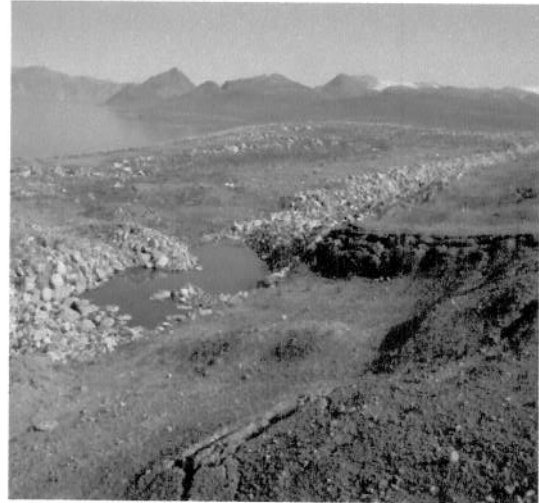


Fig. 5

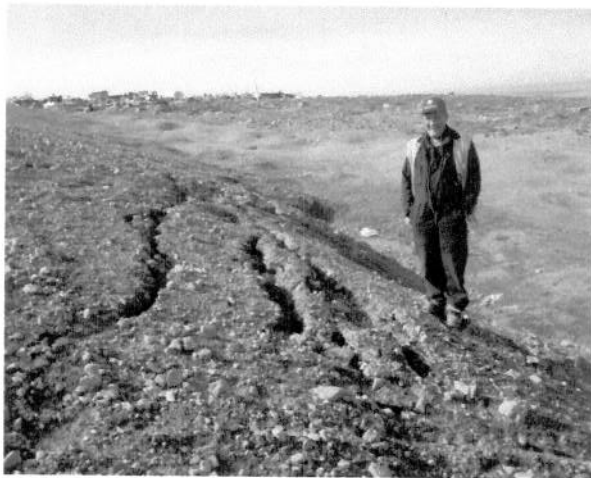


Fig. 6



Fig.7

We have recognized that there might be some geotechnical concerns inside the berms and their surroundings.

We are planning to hire a geotechnical consultant this summer 2010 to thoroughly investigate the structural stability and integrity of the berms of this facility. We are also conducting a technical assessment on the containment nature of this facility.

At the same time we will continue sampling and testing water from inside of the lagoon and surroundings from the lagoon during decanting of the lagoon and also during rainfall.

Caduceon Environmental Laboratories of Ottawa is assigned conducting all the testing and quality analysis of these water samples.

**Waste oils leaching**  
**Improper storage of barrels**  
**Segregation of bulk metals and**  
**Segregation of hazardous wastes**

These all fall under waste management policy of the hamlet.



Fig. 8





Fig. 9



**Fig. 10**

## **Compliance Plan:**

**Short term action Plan:** Hamlet will hire a consultant/contractor for managing waste oils leaching of the site and proper storage of barrels this summer 2010. CGS will be providing technical support where necessary to implement this action plan.

**Medium term action Plan:** CGS is hiring an Environmental consultant to assist GN in developing a long term strategy for managing community solid wastes site accommodating all different wastes. It is in the RFP stage and going to be advertised at the end of March, 2010. The outcome of the strategy will determine the future designs for the community solid wastes site.

**Long Term action Plan:** Following this technical assessment, a future consultant will be hired for detail design and construction of a new facility. As-built drawings and a Standard O&M manual satisfying the guidelines of NWB will be developed to operate and manage the new waste management facility once commissioned. This project is in substantiation stage and expected GAS TAX funding in 2011. This is scheduled for design and built by 2012.

The consultant's scope of works will accommodate decommissioning of the old lagoon.

**Land farm:** This facility was constructed in 2009 and currently is in operation. This will be fenced in 2010. As-built drawings and a standard O&M manual have been developed and submitted already to NWB.