Indian and Northern Affairs Canada | Affaires indiennes et du Nord Canada

Indian and Northern Affairs Canada
Nunavut District Office
Box 100
Iqaluit, Nunavut
XOA OHO

Your file - Votre reference
Our file - Notre référence
Unlicenced

January 11, 2008

Senior Administrative Officer
Hamlet of Taloyoak
Taloyoak, Nunavut
General Delivery
XOE IBO

Re: Hamlet of Taloyoak Water Licence Inspection September 11, 2007.

The following report deals with the Water Licence Inspection conducted on September 11, 2007. I would like to thank the acting SAO for his time and assistance which allowed me to perform the Inspection. In the course of the Inspection, concerns were identified with respect to; waste handling at the landfill and metal dump, hazardous waste storage.

Potable/Raw Water

The Hamlet of Taloyoak obtains their water from Water Lake. The water treatment equipment in the pumphouse is reasonably well maintained with total and free chlorine levels recorded daily. The pumphouse and water treatment and distribution facilities in Taloyoak do not meet the community's requirements for fresh water. The Hamlet is looking into a new drinking water source for the community. Samples were taken from Water Lake.

Landfill

The landfill is poorly operated and wastes are not segregated. The landfill is not fenced and signs do not identify the site. Garbage is widely distributed. Hazardous waste, such as waste fuel/oil, batteries, propane or pressurized gas bottles, solvents and paint, are not segregated from the general waste stream and stored in a separate location until they can be transported to a licenced facility for disposal.

Metal Dump

The metal dump is does not have a surrounding fence and wastes are not segregated.

Sewage Lagoon

The sewage lagoon is a natural pond that appears to be achieving some level of treatment, but I am unsure about the retention time and the success in removal of

solids. Ammonia concentrations from the downsteam sample were extremely high and unacceptable. High ammonia concentrations may be from lack of sewage retention and further treatment is needed to lower the concentrations of ammonia.

Waste Oil/Contaminated Soils

Waste oils storage was not expected at this time. Contaminated soils are stored in a lined bermed facility which is completely fenced in. However, a substantial amount standing water was inside of the bermed facility which shouldn't happen. This water, which will be contaminated with hydrocarbons, may unacceptably seep or flow over the berms in time.

Results:

Table 1. Parameters that exceeded Guidelines for the Discharge of Treated Municipal Wastewater in the Northwest Territories (1992), and CCME Guidelines for Drinking Water and Protection of Aquatic Life (2003).

Client Sample ID	Sample Type	Sample Collect Date	Parameter Name	Result Flag	Reported Result	Guidelines	Units	Calc MDL
Water Intake	Freshwater	9/11/2007	Ammonia as Nitrogen		0.028	0.019	mg/L	0.005
Water Intake	Freshwater	9/11/2007	Cadmium	<	0.05	0.017	µg/L	0.05
Water Intake	Freshwater	9/11/2007	Silver	<	0.1	0.1	µg/L	0.1
Water Outlet	Freshwater	9/11/2007	Ammonia as Nitrogen		0.019	0.019	mg/L	0.005
Water Outlet	Freshwater	9/11/2007	Cadmium	<	0.05	0.017	µg/L	0.05
Dump	Wastewater	9/11/2007	Ammonia as Nitrogen		3.54	0.019	mg/L	0.005
Dump	Wastewater	9/11/2007	Cadmium		0.1	0.017	µg/L	0.1
Dump	Wastewater	9/11/2007	Iron		8100	300	µg/L	50
Dump	Wastewater	9/11/2007	Manganese		1160	50	µg/L	0.1
Dump	Wastewater	9/11/2007	Silver	<	0.1	0.1	µg/L	0.1
Lagoon	Sewage	9/11/2007	Ammonia as Nitrogen		5.08	0.019	mg/L	0.005
Lagoon	Sewage	9/11/2007	Nitrate+Nitrite as Nitrogen		0.24	0.06	mg/L	0.01
Lagoon	Sewage	9/11/2007	Nitrate as Nitrogen		0.08	0.06	mg/L	0.01
Lagoon	Sewage	9/11/2007	Nitrite as Nitrogen		0.16	0.06	mg/L	0.01
Lagoon	Sewage	9/11/2007	Aluminum		101	5.0	µg/L	30
Lagoon	Sewage	9/11/2007	Cadmium	<	0.1	0.017	µg/L	0.1
Lagoon	Sewage	9/11/2007	Silver		0.2	0.01	µg/L	0.1

Non-compliance of the Act or Licence

1) The Hamlet of Taloyoak is strongly encouraged to apply for a water licence. An application has not been received by the Nunavut Water Board. Under the Act, a water licence is required for all water use and disposal of waste into water activities in Nunavut.

2) The capacity of the sewage lagoon needs to be increased in order to increase retention time and improve treatment. Ammonia levels are extremely high and need to be lowered before being released. Berms and a downstream could be used to increase available storage and retention times.
3) Fencing needs to be put around the landfill site and better segregation is needed for general and metal wastes.
4) A solution is needed to the standing water in the contaminated soil facility.

Should you have any questions or concerns please do not hesitate to contact me.

Sincerely,

Ian Rumbolt
Water Resources Technician
INAC, Nunavut Region

cc. Nunavut Water Board

Photos

Photo 1. Standing water in the contaminated soil containment area.

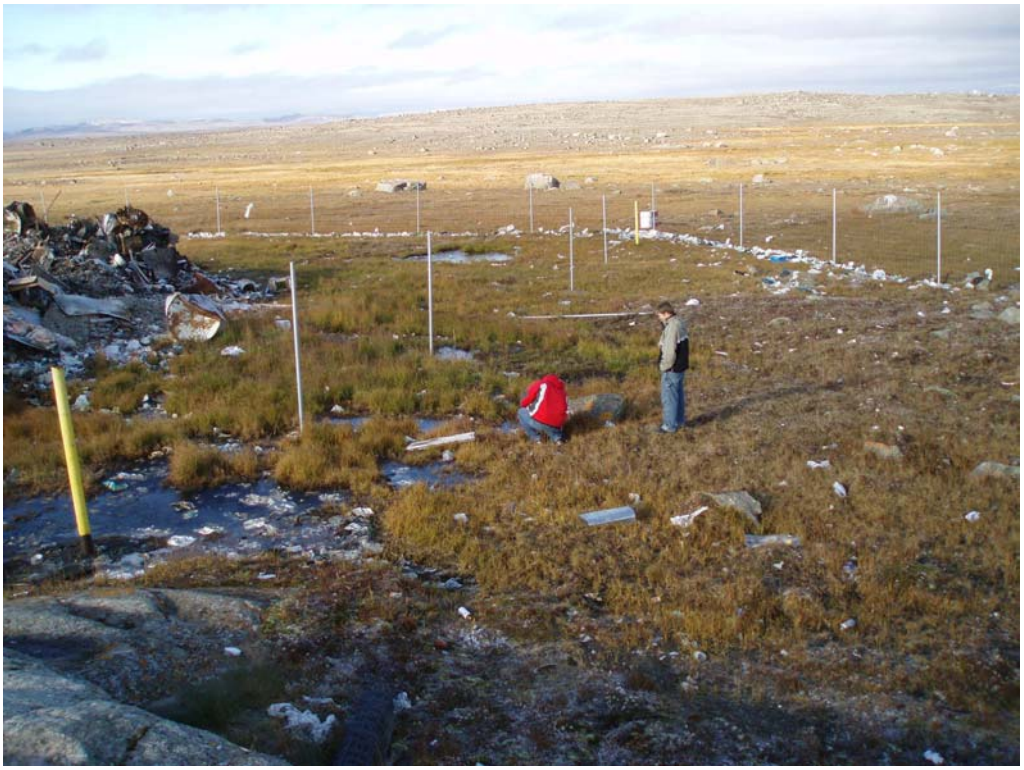

Photo 2. No fencing surrounding the landfill; windblown garbage all over.

Photo 3. No berms surrounding the lagoon creating very little retention time.