



WATER USE INSPECTION REPORT

Date: Aug 7-8th, 2009	Licensee Rep. (Name/Title): Merrill Boudreau (SAO)
Licensee: Municipality of Kugaaruk (Hamlet)	Licence No.: 3BM-PEL0712

WATER SUPPLY

Source(s): Kugajuk River	Quantity used: NI
Owner:/Operator: Hamlet	

Indicate: A - Acceptable U - Unacceptable NA - Not Applicable NI - Not Inspected

Intake Facilities: NI (inside)	Storage Structure: NA	Treatment Systems: NI	Chemical Storage: NI
Flow Meas. Device: NI	Conveyance Lines: A	Pumping Station: A	Screen : NI

Comments: Water Intake Facility (WIF) and water truck fill station is the only treatment area. WIF was locked on inspection; licensee is to confirm whether issues identified last year have been addressed (i.e.: corrosion and poor housekeeping). Garbage can was present near WIF. Note: extremely windy during inspection and sampling at the WIF; water on surface was being pushed upriver.

- Licensee is to confirm availability and locations of appropriate spill response equipment and protective equipment (for chemical and hydrocarbons spills).
- Licensee is to address lack of contingency plans/planning and related training.
- Potable water signage needs replacement.
- Some debris observed in water near intake area

Other: Hamlet has designated one person to manage drinking water treatment, but no operator is present (i.e.: no chlorine testing done) on weekends when casual truck delivery drivers are used.

WASTE DISPOSAL

Sewage: Sewage Treatment System: Single cell lagoon with small exfiltration cell for decanting

Natural Water Body: No	Continuous Discharge (land or water): no	
Seasonal Discharge: Summer/Fall	Wetlands Treatment: no; effluent flow path is vegetated	Trench: wetland contained by rocky outcroppings on each side

Indicate: A - Acceptable U - Unacceptable NA - Not Applicable NI - Not Inspected

Discharge Quality: To be confirmed	Decant Structure: A	Erosion: A
Discharge Meas. Device: NA	Dyke Inspection: NA	Seepages: A
Dams, Dykes: A	Freeboard: A	Spills: A
Construction: completed	O&M Plan: No (draft)	A&R Plan: No
Discharge: seasonal decant	Effluent Discharge Rate: not measured	

Comments: Newly constructed lagoon. Lagoon was decanted within the week prior to inspection -- effluent is discharged into the decant cell, flows through the “wetland” area and into the ocean. Area is well vegetated at top of slope where old lagoon seeped continuously; weakly vegetated at lower end of current effluent flow path. A thick sludge (green and black) is also present in many areas

- Plastic garbage and debris are extensive throughout lagoon and wetland ponding areas.

Hamlet SAO identified a concern with the current sewage disposal chute in winter: effluent freezes and builds up along chute, ricocheting effluent during delivery from trucks. As backsplashing occurs, the truck delivery platform becomes quite icy and unsafe. Large rocks located at the bottom of the chute seem to contribute to the problem.

Licensee is advised to look into modifying delivery practices for prevention of effluent spills; communications should be established with GN CGS and HSS (Health & Social Services) departments to identify possible solutions.

Solid Waste:

Owner/Operator: Hamlet Note: Kudlik Construction (GN CGS contractor) managing solid waste areas during construction of improved facilities.

Landfill: A	Burn & Landfill: yes	Other: Metals Dump -A
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Comments: Area is newly cleaned up and organized by GN contractor (Kudlik). Perimeter fence is in place, waste cells constructed and site currently under the management of Kudlik.

- Signage for segregation of wastes and designated drop off points was not yet in place at time of inspection.
- A lot of garbage outside fenced area: Licensee needs to conduct a clean up of the area.

The Licensee (Hamlet) has not yet designated a person to manage the solid waste facility; they are currently relying on Kudlik to provide this service. Currently Hamlet drops off garbage only and has no further role in waste management activities; Hamlet believes that Kudlik will be available to manage solid waste sites once a year for them in future.

- Concern regarding transition of waste management responsibilities to the Licensee (i.e.: appropriate training and ongoing management).
- Lack of approved Operations and Maintenance manuals at this time
- Licensee is reminded that it is their responsibility to effectively manage solid waste facilities under the water licence. Any delegation of activities to contractors or other agencies should be confirmed in writing to avoid any potential misunderstandings.

Metals Dump:

- Area has been cleaned up and organized by Kudlik (Contractor)
- Waste oil was being burned off at time of inspection; no burnable liquid waste products are set to be removed for disposal via barge

Discussion with Hamlet has indicated that the access road to the metals/bulky wastes dump area is not maintained during the winter, resulting in abandonment of wastes alongside the road.

- Licensee is reminded that they have a responsibility to manage this waste under the water license, and to ensure the safety of the public.
- If access clearance is not practical during winter months, the Hamlet is expected to designate a temporary waste management point, with the approval of the NWB, and manage wastes appropriately. Licensee is to indicate their intentions, in writing, to the Inspector and NWB upon receipt of this report.

Other: Diamonds North (mining exploration company) waste drums that were deposited in the metals dump area have been removed for disposal via barge.

Other: Hamlet garage area seems to be an unofficial area for stockpiling of old batteries and some waste products. If this is an acceptable short-term drop-off point within the community, then appropriate signage should indicate this.

The Licensee is strongly advised to implement measures which encourage responsible disposal practices and management by Hamlet operators and contractors/businesses within the community.

FUEL STORAGE:

Waste Oil Storage: Open area near metals dump **Owner/Operator:** Hamlet
Indicate: **A** - Acceptable **U** - Unacceptable **NA** - Not Applicable **NI** - Not Inspected

Berms & Liners: U –requires maintenance	Water within Berms: U	Evidence of Leaks: U
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Comments: There is currently an area where waste oil/waste liquids are dropped off; area is not lined or bermed.

Waste Oil/Waste Liquid processing area: Waste oils/fuels are currently being “burned off” by Kudlik contractor; barrels are crushed and placed in lined cells; any unknown liquid products will be sent out on barge for disposal.

- It was observed that some barrels were not being drained properly before being crushed, resulting in spilled substances (most notably a red/pink liquid product) pooling inside newly constructed cells.
- Proper maintenance of this area is to be confirmed via submission of the required Operations and Maintenance manuals.

Other: Contaminated soils area (uphill of metals dump) –more info is required on this facility’s operation, maintenance and utilization within the community.

Tank Farm and other fuel storage areas: **Owner/Operator:** GN (Contractor: Arctic Coop)
Indicate: **A** - Acceptable **U** - Unacceptable **NA** - Not Applicable **NI** - Not Inspected

Berms & Liners: A	Water within Berms: yes	Evidence of Leaks: U
Drainage Pipes: NA	Pump Station & Catchments Berm: A	
Pipeline Condition: NI	Condition of Tanks: see comments below	

Comments: Arctic Coop manages the Tank farm; fuel delivery services are provided by a local contractor.

Tank farm: Some water accumulated inside containment berm; hoses and pump were set up for direct discharge to the environment.

Fenced and bermed area exists near refuelling station, for storage of drummed fuel product. Licensee is to provide clarification regarding the use of the sight –i.e.: is this area strictly for use by refuelling station/Tank farm contractor, or was this area intended as the initial waste oil/fuel storage point?

- Lack of signage

Refuelling station: Better housekeeping is required in this area. A stream flows behind and around fuel station to a culvert that directs flow toward the ocean; high potential for fuel product to enter water.

- Various drums of product, jerry cans, waste products and fuel staining around refuelling station; lack of secondary containment.
- Lack of spill kit(s) and identifiable spill-clean up materials

- Soiled absorbent materials, garbage and debris strewn throughout immediate area
- Concrete slabs (x3) at refuelling areas have a “grate”. Is this grate connected to anything or does it allow direct drainage to the ground/receiving environment?
- Lack of signage

It is highly recommended that the Owner ensures their contractor(s) tests for BTEX and Oil and Grease (HEM) in water collected within the tank farms next spring, prior to discharge to the environment. This is confirmatory sampling to ensure compliance. Owner is also encouraged to review responsible fuel handling practices and spill prevention and contingency practices with their contractor.

Licensee is advised to take measures that will encourage better fuel handling and storage practices by business operations and contractors on Commissioner’s Lands.

Other areas:

Kudlik Laydown Area: near Tank farm

- Messy area with multiple spills around shop area that have not been cleaned up.
- Unreported spills and poor management of petroleum-based products: lack of spill prevention measures, such as drip trays and secondary containment
- Heavy equipment with stained soil underneath; one machine actively leaking fluid onto ground

Quarry area: Pond beside quarry is known as “contaminated” by members of the community

- Small fish were observed in this pond (unconfirmed as 9-spined Sticklebacks)
- Sampling results show some elevated metals results and **3.3 mg/L** total Oil and Grease (hexane extractable material).
- Garbage debris and petroleum-product containers littered the area.

Hamlet Garage Area (near Airport Apron B, within community): Very poor management of this area by the Licensee (Note: Conservation Officer Rob Harmer was informed same day on his arrival at local airport).

- Very messy area and several fuel spills were found, including an actively leaking barrel and fuel tank
- Fuel tank requires replacement; spill needs to be reported and cleaned up appropriately.
- Several open pails of petroleum-based products were found (left unattended, exposed to the elements) as well as leaking vehicles, heavy equipment and damaged fuel barrels (containing product).

Airport Apron B: Second airstrip within community, used for smaller aircraft

- Often used as a staging area and storage point by exploration companies, primarily by Diamonds North at this time, for fuel, drilling products (i.e.: Rimguard), Calcium chloride, waste stored in barrels, etc.

Airport (behind building, across from parking area): Debris from various exploration camps (empty barrels, pallets, etc) are being cached here.

SURVEILLANCE NETWORK PROGRAM (SNP)

Samples Collected		Owner /Operator: No	
4 water samples; 1 unknown substance		INAC: . Potable water supply, Effluent discharge point (before ocean at PEL-4), Barrow Lake (recreational area), “Contaminated” pond near old quarry site, culvert downstream of refuelling station (BTEX and HEM); Unknown substance found in metals dump (red powder).	
Signs Posted	SNP: Yes. Note: PEL-4 and PEL-5 signs are only 10ft apart (approximate)	Warning: No; one sign observed at entrance to dump	
Records & Reporting: U –lack of record keeping by the Hamlet			
Geotechnical Inspection: NA			

Non-Compliance of Act or Licence: With the exception of current waste management activities by the GN contractor (Kudlik), the Licensee has not yet met the requirements set out in the terms and conditions of the water licence.

- Lack of signage (as noted in report), monitoring and reporting requirements
- Lack of operations and maintenance manuals, spill contingency plans and related training
- Unmonitored withdrawals from Water Lake; potable source lacks management by the Hamlet
- Hamlet garage area (near Apron B) requires immediate cleanup due to spills; fuel tanks require immediate repair.

M. Joy

Inspector’s Name

Original signed by M.Joy

Inspector’s Signature