

WATER USE INSPECTION FORM

Date: November 1, 2011	Licensee Rep. (Name/Title): Chris Morton (VP- Operations), Christine Seitz – Administrative Manager
Licensee: Shear Diamonds Ltd.	Licence No.: 2AM-JER0412 (1 year extension)

Shear Diamonds Ltd (Shear) was granted a one year license extension until March 1st, 2012 on the Type A Water Licence (2AM-JER0412). Shear Minerals has applied for a Type A renewal licence from the Nunavut Water Board (NWB). Public meetings took place at the end of November 2011.

There were, at the time of the Inspection, 7 Shear staff onsite to take care of the day to day operations and maintenance. The site, at this time is in “Care and Maintenance” with no processing or exploration work underway.

A number of the required Plans have been submitted to the NWB by EBA on behalf of Shear Diamonds Ltd. in support of the License renewal application. None of these plans to date have been approved by the Nunavut Water Board.

WATER SUPPLY

Source(s): Carat Lake	Quantity used: 26,817, 929.8 US Gal. or approximately 101, 505.86 M³ to date
Owner:/Operator: Shear Minerals Ltd.	

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

Intake Facilities: A	Storage Structure: A	Treatment System: A	Chemical Storage: A
Flow Meas. Device: NI	Conveyance Lines: A	Pumping Stations: A	Screen: NI

Comments: During the Inspection of the Water Treatment Plant and on site storage tanks the Inspector noted the following;

- All required records for the Chlorine Testing and Biological sampling were on site and available for review
- UV treatment systems (3) were found in good order.
- Piping for the water in-take is heat traced and not a recirculation system. Water use is on demand only.
- Potable Water holding tanks (5), (1 out of service) were full.
- The pump house was not inspected at this time.
- Water for the fire suppression system is stored in a large tank in the Main Plant, and is included in the total volume for usage.

WASTE DISPOSAL

Sewage: Sewage Treatment System (Prim./Sec/Ter.): RBC Unit

Natural Water Body: No	Continuous Discharge (land or water): Yes – PKCA	
Seasonal Discharge: NA	Wetlands Treatment: unknown	Trench: None

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

Discharge Quality: A	Decant Structure: NI	Erosion: A
Discharge Meas. Device: A	Dyke Inspection: NI	Seepages: None
Dams, Dykes: A	Freeboard: A	Spills: NI
Construction: NA	O&M Plan: Not approved by NWB as yet	A&R Plan: Not yet approved
Periods of Discharge: Cont.	Effluent Discharge Rate: Unknown	

Comments: During the Inspection of the Waste Water Treatment Facility the Inspector noted the following;

Waste Water Treatment

- Sewage is treated by a RBC unit onsite.
- 350 cubic meters of treated sewage has been discharged to the PKCA area since operations began in Late August.
- No sludge has been removed since the period of the last Inspection.
- Because of reduced flow rates the system is unable to operate without the addition of extra food sources for the bacteria. As a result Puppy Chow is added to the influent to ensure the maintenance of the system and continued treatment.

PKCA

- Shear has discharged a total of 17,194,277.22 gallons of water over the West dam to the C-3 stream location to date. Pumping had stopped by the date of Inspection due to freezing conditions.
- Samples were collected and to be submitted with the Monthly monitoring report. Sampling results were not available for review at the time of the inspection.
- No environmental staff members were on site at the time of the Inspection.

Pit Dewatering

- Shear has discharged 9,623,625.58 gallons of water from the pit to the west cell of the PKCA. Pumping from the pit was slowed due to pump malfunctions and onset of freezing conditions. No pumping is on-going at this time.
- There remains an estimated 240,000 plus cubic meters of water within the pit (on-site estimate provided by Licensee). Samples and analysis collected during the dewater process are to be submitted to the NWB and Inspector with the monthly sampling results.

SOLID WASTE: Waste management area **Owner/Operator: Shear Minerals Ltd.**

Landfill: Not in operation	Burn & Landfill: None	Other: Incinerator
-----------------------------------	----------------------------------	---------------------------

Comments: During the Inspection the Inspector noted the following;

- Waste from the kitchen and other areas is consolidated, weighted and burned in the on-site incinerator.
- As the facility is in care and maintenance mode with only 7 persons on site waste production has greatly reduced.
- The licensee is also reminded that hazardous wastes are not to be burned in the incinerator.
- An inspection of the Historic Waste Management area revealed that the site had been covered over earlier in the year.

FUEL STORAGE: **Owner/Operator: Shear Minerals Ltd.**

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

Herms & Liners: A	Water within Berms: None	Evidence of Leaks: A
Drainage Pipes: NI	Pump Station & Catchment Berm: NI	
Pipeline Condition: A	Condition of Tanks: A	

Comments: During the Inspection of the Fuel Storage Tanks the inspector noted the following;

- There remains approximately 1,000,000 litres of fuel contained in three of the large storage tanks on site. It is possible that this fuel will remain in sufficient condition to be used for the remainder of the winter season. A Fuel management plan needs to be in place to deal with old fuel in the tank farm and the replacement/ retrofitting of tanks within the facility prior to undertaking any mining or milling Operations.
- There are numerous drums of fuel stored in the Hazardous wastes management Area (Area 1).
- Water pumped off from the Secondary Containment Area was tested prior to discharge. The Licensee has committed to submitting these records in the Monthly report for September for review.
- No new work on the construction of a land farm to deal with contaminated soils from spills on this site as well as that of the old musk ox Camp have been undertaken by the licensee.
- A plan to address the accumulation of waste oils and cross contaminated fuels contained in storage tanks within Area 1 (Hazardous wastes management area) is to be submitted before freshet.

SURVEILLANCE NETWORK PROGRAM (SNP)

Samples Collected		Owner /Operator: Results from sampling by the licensee have been submitted with monthly reporting	
0		AANDC: None during this Inspection	
Signs Posted	SNP: Not inspected		Warning: Not Inspected
Records & Reporting: Plans are to be submitted to the Nunavut water Board and reviewed during the application process.			
Geotechnical Inspection: Submitted by Licensee.			

Non-Compliance of Act or Licence: No instances of obvious non-conformity were noted during the Inspection. The Licensee was found to be working actively on achieving and maintaining compliance with the current license.

During the period of Inspection the site was found to be Care and Maintenance with little to no activity other than snow clearing being undertaken by the Licensee. 7 staff members of the Licensee were present on site at the time of the Inspection. None of these were Environmental staff.

The Licensee is required to submit the following;

- The submission of Acute Lethality testing results as required by the license and requested during the Inspection by the Inspector. (if submitted and not posted at the time of the Inspection then acknowledgement of receipt by the Nunavut Water Board will suffice).
- A Fuel Management / Tank Farm Management Plan are to be submitted to the Nunavut Water Board and the Inspector prior to undertaking mining activities.

- Submission of a plan to address the accumulated hazardous wastes and contaminated fuels on site is to be submitted within six months of receipt of this Inspection Report. The Plan is to be submitted to the Inspector and the Nunavut Water Board.

<u>A.Keim</u>	<u>Sent by E-mail (Original signed and on file)</u>
Inspector’s Name	Inspector’s Signature

Cc:
Kevin Robertson – A/Manager – Field Operations
Phyllis Beaulieu – Manager Licensing- Nunavut Water Board

Contact Information:

Andrew Keim
Water Resources Officer
Aboriginal Affairs and Northern Development Canada
Building 918 – Box 100
Iqaluit, Nunavut XOA OHO
867-975-4289 Ph
867-979-6445 Fx
Andrew.Keim@ainc-inac.gc.ca