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*By Manager of Licensing at 11:52 am, Jul 15, 2011*

# PLAN FOR COMPLIANCE

LICENCE NO. NWB3GJO0409

HAMLET OF GJOA HAVEN

DATE OF ISSUANCE: January 8th, 2004

DATE OF EXPIRY: January 31st, 2009

AMENDMENTS ISSUED: 3BM-GJO0409 - Amendment No.1

DATE: September 4th, 2008

REASON:

DATE OF PREPARATION: June 2011

PREPARED BY:

PRINTED

SIGNATURE

DATE OF SUBMISSION: \_\_\_\_\_

## PLAN FOR COMPLIANCE LICENCE NO. 3BM-GJO0409

### GJOA HAVEN PLAN FOR COMPLIANCE

Licence Condition		Status of Compliance	Short Term Plan for Compliance	Schedule for Implementation of Short Term Plan for Compliance (including funding status where applicable to municipal developments)	Long Term Plan for Compliance	Schedule for Implementation of Long Term Plan for Compliance (including funding status where applicable to municipal developments)
<b>Part B: General Conditions</b>						
B - 1	The Licensee shall file an Annual Report with the Board not later than March 31st of the year following the calendar year reported which shall contain the following information: i) tabular summaries of all data generated under the "Monitoring Program"; ii) the monthly and annual quantities in cubic metres of fresh water obtained from all sources; iii) the monthly and annual quantities in cubic metres of each and all waste discharged; iv) a summary of modifications and/or major maintenance work carried out on the Water Supply and Waste Disposal Facilities, including all associated structures and facilities; v) a list of unauthorized discharges and summary of follow-up action taken vii) a summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year; viii) any other details on water use or waste disposal requested by the Board by November 1st of the year being reported ix) A written summary and photographs of the culvert's installation and creek alignment shall be included in a 3BM-GJO0409 annual report for	Not in compliance. The Licensee has failed to submit Annual Reports since 2001.			The Licensee will be responsible for completing the Annual Report each year. The Report will include all requirements listed in Part B-1.	Annual Reports will be submitted to the Board by March 31st of each year.
B - 2	The Licensee shall comply with the "Monitoring Program" described in this Licence, and any amendments to the "Monitoring Program" as may be made from time to time, pursuant to the conditions of this Licence.	Not in compliance. Please refer to Part H for specific compliance issues.			Design and construction of a new lagoon for Gjoa Haven is estimated to be complete by 2013. Once the facility has been commissioned a monitoring program will be developed and maintained by the Licensee.	Monitoring program will be developed and maintained by the Licensee starting in 2013.
B - 4	Meters, devices or other such methods used for measuring the volumes of water used and waste discharged shall be installed, operated and maintained by the Licensee to the satisfaction of the Inspector.	Not in compliance. As per 2009 INAC Inspection Report, unmonitored water withdrawals occur from the Water Lake (near WTP) for various purposes - Airport truck was observed extracting water at the time of inspection.			Licensee will measure all withdrawals of water from the Water Lake as of January 1st, 2011 and submit the data to the Board as part of the subsequent Annual Reports (Part B, Item1).	The Licensee will measure all water withdrawals from Water Lake as of January 1st, 2011. This data will be submitted to the Board as part of the subsequent Annual Reports.
B - 5	The Licensee shall within 90 days after the first visit of the Inspector, post the necessary signs where possible to identify the stations of the "Monitoring Program". All postings shall be in the Official Languages of Nunavut, and shall be locate and maintained to the satisfaction of the Inspector.	Not in compliance. As per 2009 INAC Inspection Report, signs have not been posted.			Once construction of the new lagoon is complete, the Licensee will identify and install the signs in appropriate locations, as required by the Licence. Signs will be posted in Official Languages of Nunavut.	Construction of the new lagoon is expected to be complete by 2013.
B - 9	The Licensee shall submit one paper copy and one electronic copy of all reports, studies, and plans to the Board. Reports or studies submitted to the Board by the Licensee shall include a detailed executive summary in Inuktitut.	Not in compliance. The Licensee did not submit an Executive Summary as part of their 2010 Water Licence Application.			The Licensee will complete an Executive Summary, both in English and Inuktituk, which will be submitted to the Board with this Plan of Compliance.	The Executive Summary will be submitted in conjunction with this Plan for Compliance.
<b>Part C: Conditions Applying to Water Use</b>						
C - 2	The annual quantity of water, used for all purposes, shall not exceed 62,000 cubic metres.	Unknown. As per 2009 INAC Inspection Report, unmonitored water withdrawals occur from the Water Lake (near WTP) for various purposes - Airport truck was observed extracting water at the time of inspection.			Licensee will measure all withdrawals of water from the Water Lake as of January 1st, 2011 and submit the data to the Board as part of the subsequent Annual Reports (Part B, Item1).	The Licensee will measure all water withdrawals from Water Lake as of January 1st, 2011. This data will be submitted to the Board as part of the subsequent Annual Reports.

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C - 3	The Licensee shall maintain the Water Supply Facilities to the satisfaction of the Inspector.	Not in compliance. As per 2009 INAC Inspection Report, the intake facilities are in unacceptable condition and need repairs. Unmeasured water withdrawals are occurring for various purposes. There is a lack of operator training and support. At the time of the inspection, the WTP was not operation due to operator error.			The transmission line has been thawed.	Recommissioning of the water treatment plant was scheduled to occur in mid-October.
Part D: <u>Conditions Applying to Waste Disposal</u>						
D-2	All Effluent discharged from the Sewage Disposal Facility at Monitoring Program Station GJO-4 shall not exceed the following effluent quality limits: (see licence)	Not in compliance. As per 2009 INAC Inspection Report, the Licensee is not meeting monitoring and reporting requirements of the Licence. As per 2008 INAC Inspection Report, sewage effluent released to the environment did not meet the Guidelines for the Discharge of Treated Municipal Waste Water in the Northwest Territories.			A contract has been awarded for the design and construction of a new lagoon facility. The new lagoon will be constructed to control collection and discharge of wastewater effluent.	The lagoon is expected to be completed in 2013.
D - 3	A Freeboard limit of 1.0 meter, or as recommended by a qualified geotechnical Engineer and as approved by the Board, shall be maintained at all dams, dykes, or structures intended to contain, withhold, divert or retain water or wastes.	Not in compliance. As per 2009 INAC Inspection Report, the existing freeboard is unacceptable.			A contract has been awarded for the design and construction of a new lagoon facility. The lagoon will be designed to accommodate at least 1m of freeboard.	The lagoon is expected to be completed in 2013.
D - 5	The Sewage Disposal Facility shall be maintained and operated, to the satisfaction of an Inspector in such a manner as to prevent structural failure.	Not in compliance. As per 2009 INAC Inspection Report, the lagoon is seeping continuously; decant area is overflowing due to seepage and breached in several places. The ground surrounding lagoon is saturated in effluent; there is serious potential for complete structural failure; erosion issues at truck delivery point, chute needs replacement; former honey bag area beside lagoon requires clean-up.			A contract has been awarded for the design and construction of a new lagoon facility. An abandonment and restoration plan will be developed for closure of the current lagoon.	The lagoon is expected to be completed in 2013.
D - 6	The Licensee shall dispose of and contain all solid wastes at the Solid Waste Disposal Facilities or as otherwise approved by the Board.	Not in compliance. As per 2009 INAC Inspection Report, capacity at the landfill is an issue and debris/dumping extends well outside of dump boundaries.			The Department of Community and Government Services has commissioned a study to assess Nunavut waste management facilities, and identify what upgrades/improvements are necessary to manage waste appropriately. Based on the study's recommendations, the Department of Community and Government Services will carry out any required upgrades.	As the scope of required upgrades is unknown at this time, it is not possible to identify a timeline for implementation. Facility upgrades will depend on the availability of capital funding, with the intent to carry out any repairs/upgrades as capital funding becomes available.
D - 7	The Licensee shall implement measures to ensure hazardous materials and/or leachate from the Solid Waste Disposal Facility does not enter the water.	Not in compliance. As per 2009 INAC Inspection Reports, sewage effluent flows past metals dump and into marine environment. As per 2008 INAC Inspection Report, some mixing of sewage and landfill effluent occurs.			The Department of Community and Government Services has commissioned a study to assess Nunavut waste management facilities, and identify what upgrades/improvements are necessary to manage waste appropriately. Based on the study's recommendations, the Department of Community and Government Services will carry out any required upgrades.	As the scope of required upgrades is unknown at this time, it is not possible to identify a timeline for implementation. Facility upgrades will depend on the availability of capital funding, with the intent to carry out any repairs/upgrades as capital funding becomes available.

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D - 8	The Licensee shall submit to the Board for review within six months of the issuance of this license a report identifying each Final Discharge Point. The report shall at least include a) Plans, specifications and a general description of each Final Discharge Point together with its specific geo-referenced location b) a description of how each Final Discharge Point is designed and maintained.	Not in compliance. As per the Board's Assessment of Administrative Compliance (May 6, 2009) this condition has not been met.			Please refer to report by Dillon Consulting Limited titled Gjoa Haven Waste Management Assessment included with the original Water Licence Application Report submitted March 2010.	The Final Discharge Point will be selected as the point where sewage effluent discharges from the wetland to final receiving water body upon the Board's approval.
Part E:	<u>Conditions Applying to Modification and Construction</u>					
E - 1	The Licensee shall submit to the Board for approval, design drawings stamped and signed by a qualified engineer registered in Nunavut, prior to the construction of any dams, dykes or structures intended to contain, withhold, divert or retain waste.	Not in compliance. As per the Board's Assessment of Administrative Compliance (May 6, 2009) this condition has not been met. Specifically, as built drawings were not received for a water intake modification which was approved on June 7th, 2004. In addition, the written request for summary and photographs of the culvert's installation and creek alignment to be included in an annual report, were also not met.	The Department of Community and Government Services will provide the as built drawings of the water intake modification. As well, the Department of Community and Government Services will provide a summary and photographs of the culvert's installation and creek alignment.	This information will be provided to the Board as soon as possible.	Design drawings for the new lagoon will be sent to the Board for approval prior to construction of the lagoon.	Design drawings are expected to be completed in November 2011.
Part F:	<u>Conditions Applying to Operation and Maintenance</u>					
F - 1	The Licensee shall, within 6 months of issuance of this Licence, submit to the Board for approval, a Plan for the Operation and Maintenance of the Sewage and Solid Waste Disposal Facilities in accordance with the "Guidelines for the Preparation of an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities (October 1996). This Plan shall specifically address the hazardous waste disposal and operational issues at the Solid Disposal Facility, as well as the operational issues identified at the Sewage Disposal Facility, which were identified in the August 22, 2002, DIAND Inspection Report.	Not in compliance. As per the Board's Assessment of Administrative Compliance (May 6, 2009), an O&M Manual has not been submitted.			An Operation and Maintenance Manual will be developed and submitted to the Board once the lagoon has been constructed.	The lagoon is expected to be completed in 2013.
F - 4	If, during the period of this Licence, an unauthorized discharge of waste occurs, or if such a discharge is foreseeable, the Licensee shall: a. employ the appropriate contingency measures plan as provided in the Operation and Maintenance Plan b. report the incident immediately via the 24-Hour Spill Reporting Line at (867) 920-8130 and to the Inspector; and c. submit to the Inspector a detailed report on each occurrence, not later than thirty (30) days after initially reporting the event.	Not in compliance. As per 2009 INAC Report, the lagoon is seeping continuously. The ground surrounding the lagoon is saturated in effluent, streaming out in multiple directions.			A contract has been awarded for the design and construction of a new lagoon facility. Measures will be included in the design to treat wastewater effluent as well as control effluent discharge to the environment.	The lagoon is expected to be completed in 2013.

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F - 5	In the absence of a contingency plan contained within an approved Operation and Maintenance Plan, and should during the period of this Licence an unauthorized discharge of waste occur, of if such a discharge is foreseeable, the Licensee shall: i) take whatever steps are immediately practicable to protect human life, health and the environment ii) without delay seek guidance from the Department of Community Government and Transportation and Sustainable Development with regards to mitigations and remedial actions required to address the discharge iii) report the incident immediately via the 24 Hour Spill Reporting Line at (867) 920-8130 and to an Inspector; and iv) submit to an Inspector a detailed report of each occurrence not later than thirty days after initially reporting the event.	Not in compliance. See Part F, Section 4. As per the Board's Assessment of Administrative Compliance, measures taken following sewage lagoon failure are unknown.			A contract has been awarded for the design and construction of a new lagoon facility. Measures will be included in the design to treat wastewater effluent as well as control effluent discharge to the environment.	The lagoon is expected to be completed in 2013.
<b>Part G:</b> <u>Conditions Applying to Abandonment and Restoration</u>						
G - 1	The Licensee shall submit to the Board for approval an Abandonment and Restoration Plan, at least six (6) months prior to abandoning of any facilities and the construction of new facilities to replace existing ones. Where applicable, the Plan shall include information on the following: a. water intake facilities b. the water treatment and waste disposal sites and facilities c. petroleum and chemical storage areas d. any site affected by waste spills e. leachate prevention f. an implementation schedule g. maps delineating all disturbed areas, and site facilities h. consideration of altered drainage patterns i. type and source of cover materials j. future area use k. hazardous wastes l. a proposal identifying measures by which restoration costs will be financed by the Licensee upon abandonment.	Not in compliance. According to the 2009 INAC Inspection Report, an Abandonment and Restoration Manual has not been submitted.			An Abandonment and Restoration Plan will be developed prior to the decommissioning of the existing sewage lagoon.	Abandonment and Restoration Plan will be completed six (6) months prior to decommissioning of the existing sewage lagoon.
<b>Part H:</b> <u>Conditions Applying to the Monitoring Program</u>						
H - 1	The Licensee shall maintain Monitoring Stations at the following locations: GJO-1 Raw water supply at the Swan Lake Water Supply prior to treatment; GJO-2 Effluent discharge from the Final Discharge Point of the Solid Waste Disposal Facilities; GJO-3 Raw Sewage at truck offload point; GJO-4 Effluent discharge from the Final Discharge Point of the Sewage Disposal Facilities.	Not in compliance. As per 2009 INAC Inspection Report, no signs have been posted, and no sample analysis results have been submitted to the Board.			Design and construction of a new lagoon for Gjoa Haven is estimated to be complete by 2013. Once the facility has been commissioned a monitoring program will be developed and maintained by the Licensee.	Monitoring program will be developed and maintained by the Licensee starting in 2013.

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H - 2	The Licensee shall collect samples at Monitoring Program Stations GJO-2 and GJO-4 during the months of May to August, inclusive. Samples shall be analyzed for the following parameters: Biochemical Oxygen Demand – BOD <sub>5</sub> Faecal Coliforms Total Suspended Solids pH Conductivity Nitrate-Nitrite Oil and Grease (visual) Total Phenols Magnesium Calcium Sodium Potassium Sulphate Ammonia Nitrogen Total Zinc Total Cadmium Total Iron Total Cobalt Total Manganese Total Chromium Total Nickel Total Copper Total Lead Total Aluminum Total Arsenic	Not in compliance. Sample analysis results have not been submitted to the Board.			See Section H-1	See Section H-1
H - 3	The Licensee shall measure and record in cubic meters, the monthly and annual quantities of water pumped from Monitoring Program Station GJO-1 for all purposes.	Not in compliance. As per 2009 INAC Inspection Report, unmonitored water withdrawals occur from the Water Lake (near WTP) for various purposes - Airport truck was observed extracting water at the time of inspection.			See Section H-1	See Section H-1
H - 4	The Licensee shall measure and record in cubic meters, the monthly and annual quantities of raw sewage offloaded from trucks at Monitoring Program Station GJO-3 for all purposes	Not in compliance. As per 2009 INAC Inspection Report, there are no records of the amount of raw sewage discharged.			See Section H-1	See Section H-1
H - 6	The Licensee shall conform to the Quality Assurance/Quality Control Plan which shall be provided to the Licensee by the NWB within 120 days of the issuance of this license.	Not in compliance. As per the Board's Assessment of Administrative Compliance, the Licensee is not complying with this condition.			See Section H-1	See Section H-1
H - 7	All sampling, sample preservation and analyses shall be conducted in accordance with methods prescribed in the current edition of Standard Methods for the Examination of Water and Wastewater, or as approved by the Board in writing.	Not in compliance.			See Section H-1	See Section H-1
H - 8	All analyses shall be performed by a laboratory certified by the Canadian Association of Environmental Analytical Laboratories (CAEAL), or an otherwise approved Analyst.	Not in compliance.			See Section H-1	See Section H-1
H - 9	The Licensee shall measure and record the annual quantities of sewage solids removed from the Sewage Disposal Facility.	Not in compliance.			See Section H-1	See Section H-1
H - 10	The Licensee shall, unless otherwise requested by an Inspector, include all of the data and information required by the "Monitoring Program" in the Licensee's Annual Report, as required per Part B, item 1.	Not in compliance. As per the Board's Assessment of Administrative Compliance, the Licensee has not submitted an Annual Report since 2001.			See Section H-1	See Section H-1