



North Mackenzie District
P.O. Box 2100
Inuvik, NT X0E 0T0

Telephone: 867-777-8900
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November 9, 2011

Northwest Territories Water Board
P.O. Box 2531
Inuvik, NT X0E 0T0

Attn: Freda Wilson, Office and Finance Administrator

**RE: Industrial Water Use N7L1-1769
CLASS B - INDUSTRIAL
Unnamed Channel – Mackenzie River**

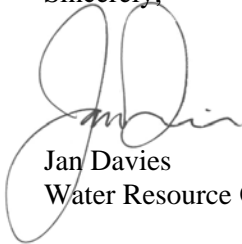
Dear Ms. Wilson,

Please find the enclosed Inspection Report for your review and records.

An electronic copy (un-editable Adobe pdf.) has also been provided by e-mail.

If you have any questions or concerns regarding the enclosed, and/or if additional information is required please contact me at (867) 777-8909.

Sincerely,



Jan Davies
Water Resource Officer

Cc: Conrad Baetz, District Manager, North Mackenzie District, Inuvik, NT

Enclosure: Industrial Water Use Inspection Report and Cover Letter (4 pages)



North Mackenzie District
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November 9, 2011

JAPEX Canada Limited
639 - 5th Avenue S.W., Suite 2300
Calgary, AB T2P 0M9

Attn: Yukio Kishigami

**RE: Industrial Water Use N7L1-1769
CLASS B - INDUSTRIAL
Unnamed Channel - Mackenzie River**

Dear Mr. Kishigami,

An inspection of the JAPEX Canada Limited Water Licence N7L1-1769 (expiry on September 30, 2002) was conducted on August 24, 2011. The operation under the above mentioned Industrial Water Use was inspected to assess compliance and ensure that the terms and conditions were met.

Enclosed is a copy of the Inspection Report (3 pages) for your review and records.

Please note that it is the Licensee's responsibility to ensure compliance with all of the terms and conditions of its Water Licence. A copy of this report will be sent to the Northwest Territories Water Board for their review and public records.

If you have any questions regarding the enclosed and/or if additional information is required, please do not hesitate to contact me at (867) 777-8909.

Sincerely,

Jan Davies
Water Resource Officer

Cc: Conrad Baetz, District Manager, North Mackenzie District, Inuvik, NT

Enclosure: Industrial Water Use Inspection Report (3 pages)



INDUSTRIAL WATER USE INSPECTION REPORT

LICENCE #:	N7L1-1769	EXPIRY DATE:	September 30, 2002
LICENCEE:	JAPEX Canada Limited	PREVIOUS INSPECTION:	March 26, 2002
COMPANY REP:	Toshi Hirata	INSPECTION DATE:	August 24, 2011

WATER SUPPLY

Source:	Unname Channel – Mackenzie River	Quantity Used:	N/A, See Annual Reports
Owner/Operator:	JAPEX Canada Limited	Meter Reading:	N/A

Indicate: **A - Acceptable** **U - Unacceptable** **N/A - Not Applicable** **N/I - Not Inspected**

Intake Facilities	N/A	Storage Structures	N/A	Treatment Systems	N/A	Recycling	N/A
Flow Meas. Device	N/A	Conveyance Lines	N/A	Pumping Stations	N/A	Chem. Storage	N/A
						Modifications	N/A

Water Supply Comments:

- N/A

WASTE DISPOSAL

Well Waste:	Off-Site Removal	N/A	Drilling Sump	A ¹	Downhole	N/A	Land spread	N/A
Solid Waste:	Open Dump	N/A	Landfill	A	Burn & Bury	N/A	Under ground	N/A
	Owner / Operator	N/A	Sludge Disposal	N/A	Other	N/A		
Tailings:	Tailings Pond	N/A	Natural Lake	N/A	Under ground	N/A		
Sewage:	Sewage Treat. System	N/A	Camp Sump	N/A	Natural Water Body	N/A	Wetland Treatment	N/A
	Continuous Discharge	N/A	Inter. Discharge	N/A	Seasonal Discharge	N/A	Trench	N/A

Indicate: **A - Acceptable** **U - Unacceptable** **N/A - Not Applicable** **N/I - Not Inspected**

Discharge Quality	N/A	Construction	N/A	Disch. Meas. Dev.	N/A	Freeboard	N/A
Decant Structures	N/A	O&M Plan	N/A	Dams, Dykes	N/A	Seepages	N/A
Dyke Inspections	N/A	A&R Plan	N/A	Erosion	U ¹	Spills	A
Conveyance Lines	N/A	Pond Treatment	N/A	Runoff Diversion	N/A	Sump Treatment	N/A
Sump Liners	N/A		SNP Samples Collected		N/A		
Periods of Discharge	N/A		Effluent Discharge Rate		N/A		

Waste Disposal Comments:

Concerns:

1. The drill sump cap has subsidence present and there is some water ponding surrounding the sump cap (see Figures 1 and 3). The camp sump has major subsidence in fact it is the most of any sumps in the area and there is water ponding in the northern section of sump subsidence in addition to major cracking and sloughing (see Figures 5 and 6). These issues will have an influence on sump long term stability. The presence of water ponding within the sump caps or in close proximity to the sumps could manifest larger problems later on. This is a concern as it relates to a possible effect on permafrost and the subsequent containment of wastes. Continued monitoring is recommended but the long term solution would be to give this matter the appropriate action such as reclaiming the sump caps by filling in the subsidence. This would aid in ensuring long term stability.



INDUSTRIAL WATER USE INSPECTION REPORT

GENERAL CONDITIONS

Indicate: **A - Acceptable** **U - Unacceptable** **N/A - Not Applicable** **N/I - Not Inspected**

Ore & Waste Rock Stockpiles	N/A	Records & Reporting	A	Surv. Net. Prog.	N/A
Geotechnical Inspection	N/A	Posting, Signage	N/A	Contingency Plan	N/A
Restorations Activities	A ^{1,2}	New Construction	N/A	Fuel Storage	N/A
Mine Water Discharge	N/A	Chemical Storage	N/A	Annual Report	A

General Condition Comments:

Concerns:

- Both the drill and camp sump are sloped to the ground surface but there is minimal sump cap present. A lot of areas it is almost at or close to the ground surface or subsided (see Figures 2 and 4). The vegetation cover on the drill sump is <10% whereas the camp sump has ~15% vegetation cover.
- There was a site visit in August 23, 2010 that found similar observations to the Inspection. The camp sump has major slumping and subsidence in the north and south ends about 1 – 1.5 metres deep, ponding was present in the north end. For the drill sump there was subsidence on the south end and northeast corner. It was noted that there was little vegetation cover. The sumps looked like they were in a state of change especially the camp sump.

Note:

- On August 28, 2008 there was an Inspection of the operation under the Land Use Permit – N2001A0016. It was evident that the camp sump was subsiding a great deal and action was needed to ensure compliance with the permit.

Subsequently a Mallik 2002 Camp Sump Assessment Plan was prepared by JAPEX Canada Limited through KAVIK-AXYS Inc. in April 2009 to address subsidence of the camp sump. A preliminary sump survey was conducted in which a detailed survey of the sump by Inukshuk Geomatics was to develop elevation/depression contours in addition to observance and collection of sump cap material. The information would be compared to a site survey in 2006 to determine if the subsidence had increased or stabilized.

A detailed sump survey occurred in which the sump content was tested to verify the camp sump contents remained frozen, to gain a sense of the volume and profile of sump cap material, and to test the sump contents to confirm their composition. There was also surface soil and water sampling to identify potential surface changes that may be related to the subsidence at the sump. Minor sump cap recontouring was conducted to address the more severe fractures in the cap adjacent to the subsidence area.


The final Mallik 2002 Camp Sump Assessment Report stated the “sump contents (comprising treated grey water) were only observed below the active layer, frozen within the permafrost”. The northern subsidence found there is little or no frozen sump contents and further significant subsidence is not anticipated since it has less ice content in the soil than the southern portion of the sump. The distance between the base of the active layer and the upper portion of the sump is 3cm in the southern subsidence and minimal thawing is thought to have occurred. The contents of the camp sump were verified to be treated grey water with no hydrocarbon contamination.

Sump contents appear to be stable but further erosion and flooding is expected given the location and natural occurrences. Further thaw penetration could occur and sump contents seep into the surrounding soil. The report estimated that the only impacts to the environment would be aesthetic and its release would not result in adverse affects to wildlife and vegetation. The report concluded the “potential release of grey water is not considered likely to result in detrimental effects to the environment”. It is thought to allow natural processes take place like subsidence and ponding since these are happening in the area and this would result in less adverse impacts to the environment as compared to undertaking physical remediation. The report commented that remediation would require imported soils, winter or summer use of heavy equipment, and challenges such as erosion, thermal changes etc. could occur during and after remediation similar to the current situation.

NON-COMPLIANCE/VIOLATIONS OF ACT OR LICENCE

N/A

Inspector’s Signature:





INDUSTRIAL WATER USE INSPECTION REPORT

Inspection Images:



Figure 1
Aerial overview of drill sump, water ponding around the sump edges. Some subsidence on the sump cap, August 24, 2011.

Figure 2
Drill sump cap with subsidence and ponding present. Poor vegetation growth, coverage of <10%, August 23, 2010.



Figure 3
Drill sump southeast corner major subsidence, August 24, 2011.

Figure 4
Aerial overview of camp sump. Large amount of deep subsidence and surficial cracking. Poor vegetation growth, coverage of ~15%, August 24, 2011.



Figure 5
Camp sump with very deep north side subsidence and water ponding in the bottom, August 24, 2011.

Figure 6
Camp sump south side subsidence and cracking, August 24, 2011.