



ANNUAL REPORT

YEAR BEING REPORTED: 2011

The following information is compiled pursuant to the requirements of **Part B, Item 1** of Water Licence 1BR-KRK-1112 issued to the Hamlet of Kugaaruk.

- i) - iii) tabular summaries of all data generated under the “Monitoring Program”; monthly and annual quantities in cubic metres of freshwater obtained from all sources; monthly and annual quantities in cubic metres of each and all wastes discharged;

Attached are quantities of water used as reported in our On Tap Water Delivery System and the estimated discharge of sewage waste based on quantities used.

Month Reported	Quantity of Water Obtained from all sources (litres)	Quantity of Sewage Waste Discharged
January	2,282,419.40	Same
February	2,129,376.97	Same
March	2,395,393.70	Same
April	2,274,044.80	Same
May	2,337,631.00	Same
June	2,099,613.70	Same
July	2,332,954.50	Same
August	2,561,851.20	Same
September	2,398,588.70	Same
October	2,274,746.00	Same
November	2,384,512.40	Same
December	2,116,395.30	Same
ANNUAL TOTAL	27,587,527.67	Same

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- 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;
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No major changes of maintenance works in water supply and waste disposal. Only interruption of taking water from existing source was the salt intrusion during last winter and alternate source has been used as an emergency instead of the current active source.

- v. a list of unauthorized discharges and summary of follow-up action taken;
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No unauthorized discharge carried anytime during this period. All sewage waste has been discharged in the prescribed lagoon using vacuum truck. Solid waste were dumped inside the dump area, piled in proper place and segregated according to the type of dumps.

- vi. a summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;
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No abandonment or restoration work carried during this period. However, leakage in lagoon berm has been repaired as noted in the licence report of 2006. No new leakage or spill observed since after. Effluent flow on wetland working properly and natural treatment shows excellent results as referred in the monitoring program.

There will be an addition of facility for water treatment plant and improvement of intake system with new twin intake pumphouse. However, amendment for this facility will be updated with the board once the facility development in place.

- vii. a summary of any studies requested by the Board that relate to waste disposal, water use or reclamation, and a brief description of any future studies planned;
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No study requested by the board. However, with the help of GN, alternate source of water uses also in the plan of study for any emergency situation if salt intrusion recur any time.

Semi engineered wetland for sewage disposal in effect. It was not possible to sample discharge mix with water at 5 meter on ocean as directed in station PEL-5. However, discharge on wetland shows contamination parameters within the allowable limit.

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- viii.

any other details on water use or waste disposal requested by the Board by November 1st of the year being reported; and

No such details requested by the board, but to update the QA/QC plan, Contingency plan for sewage and Solid waste site facilities and operational plan to be submitted to the board. Hamlet is aware of this and working to update these plan to be submitted to the board.

- ix.

updates or revisions to the approved Operation and Maintenance Plans.

Operation and maintenance plan still in our plan and will be submitted once ready.

ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:

Not applicable.

FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

Not applicable.

Hamlet of Kugaaruk Chlorine Logs - 2012

Date	Received		Date	Received	
Ending	Yes	No	Ending	Yes	No
Jan 2-8		XXX	July 2-8	XXX	
Jan 9-15		XXX	July 9-15	XXX	
Jan 16-22		XXX	July 16-22	XXX	
Jan 23-29		XXX	July 23-29		XXX
Jan 30-Feb 5		XXX	July 30-Aug 5		XXX
Feb 6-12		XXX	Aug 6-12		XXX
Feb 13-19		XXX	Aug 13-19		XXX
Feb 20-26	XXX		Aug 20-26		XXX
Feb 27-Mar 4	XXX		Aug 27-Sept 2		XXX
Mar 5-11	XXX		Sept 3-9	XXX	
Mar 12-18		XXX	Sept 10-16	XXX	
Mar 19-25		XXX	Sept 17-23	XXX	
Mar 26-Apr 1		XXX	Sept 24-30	XXX	
Apr 2-8		XXX	Oct 1-7	XXX	
Apr 9-15		XXX	Oct 8-14	XXX	
Apr 16-22		XXX	Oct 15-21	XXX	
Apr 23-29		XXX	Oct 22-28	XXX	
Apr 30-May 6		XXX	Oct 29-Nov 4	XXX	
May 7-13		XXX	Nov 5-11	XXX	
May 14-20		XXX	Nov 12-18	XXX	
May 21-27		XXX	Nov 19-25	XXX	
May 28-June 3		XXX	Nov 26-Dec 2	XXX	
June 4-10		XXX	Dec 3-9		
June 11-17		XXX	Dec 10-16		
June 18-24		XXX	Dec 17-23		
June 25-July 1		XXX	Dec 24-30		

Part H: Monitoring Program

Wastewater/Sewage parameters

Sample date: July 19, 2012

Parameter	MAC	units	Results of sample taken on July 19, 2012					
	Limits		PEL-3	PEL-4	PEL-5	PEL-6	PEL-7	PEL-8
Alkalinity		mg/L	50.4	79.8		235	15	20.1
Conductivity		µS/cm	202	507		2180	95.2	105
p ^H	6-9		7.59	6.9		7.16	7.12	7.39
TSS		mg/L	8	12		44	<3	12
Ammonia N2		mg/L	4.14	9.34		8.22	<0.01	<0.01
BOD		mg/L	9	8		23	<2	<2
CBOD		mg/L	16.5	26.6				
Nitrate N2		mg/L	1.08			4.15	<0.01	<0.01
Calcium		mg/L	13.8	26.1		290	7.4	9.5
Chloride		mg/L	17.4	32.9		125	14.6	15.3
Hardness		mg/L	48.8	99.7		847	25.7	32.3
Magnesium		mg/L	3.5	8.4		29.8	1.8	2.1
Potassium		mg/L	3.7	11.8		31.8	0.7	0.8
Sodium		mg/L	15.3	43.9		164	9.6	9.8
Sulphate		mg/L	11	26		781	4	6
Fecal Coliform		CFU/100mL	1	162			2	14
Oil and Gas	5000	µg/L	non-vis	non-vis				
Aluminium		µg/L	107	48				
Arsenic	100	µg/L	0.5	3.1		2.7		0.3
Cadmium	10	µg/L	<0.1	<0.1		1.2		<0.1
Chromium	100	µg/L	0.3	0.6		2.2		1.2
Cobalt	50	µg/L	0.2	2.6				
Copper	200	µg/L	5.9	16.9		65.1		2.3
Iron		µg/L	218	550		14100		727
Lead	50	µg/L	<0.1	0.3		4.0		16.5
Manganese		µg/L	99.7	572				
Nickel	200	µg/L	1	4.7				0.8
Zinc	500	µg/L	5	16				
Mercury	0.6	µg/L	<0.01	0.03				<0.01
PCB	1000	µg/L						
Phenols	20	µg/L	<0.002	<0.002		0.004	<0.002	<0.002
Hexane						<2.0	<2.0	<2.0
Hydrocarbon								

PEL-3: Discharge from Sewage, PEL-4: Final Discharge from Wetland Treatment

PEL-5: Ocean Water 5-meters from point of discharge, PEL-6: Run-off from Solid Waste site

PEL-7: Monitoring well upper gradient of Solid Waste, PEL-8: Monitoring well down gradient of SW