

**2015 THIRD QUARTER REPORT
FOR GN-CGS RANKIN INLET**

QUARTER BEING REPORTED: July – September 2015

The following information is compiled pursuant to the requirements of Part B, Item 2 of Water Licence No. **3AM-
GRA1015** issued to **Government of Nunavut, Department of
Community and Government Services (GN-CGS)**.

- a) Tabular summaries of all data generated under the Monitoring Program; and
- b) Monthly quantities of fresh water obtained from all sources;

Below are results for Monitoring Program Stations GRA-1 and GRA-3.

Month Reported	Quantity of Water Obtained from all Sources (m³)	Quantity of Sewage Waste Discharged (Estimated, m³)
July	47,836.59	47,836.59
August	46,181.49	46,181.49
September	49,707.51	49,707.51
QUARTER TOTAL	143,725.59	143,725.59

Note: The sewage discharge volume is considered equal to the volume of water consumption since no metering system exists at the Sewage Treatment Plant.

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Below are the results for Monitoring Program Station GRA-6. There was a total water volume of 243,637 m³ transferred from Char River to Nipissar Lake between June 18 and September 11, 2015. Daily volumes can be found in Appendix C.

Month Reported	Water Transferred from Char River to Nipissar Lake (m ³)
June	32,381
July	90,983
August	88,619
September	31,654
SEASONAL TOTAL	243,637

As per Part H, Item 5 of the Licence, below is a summary of solids removed from the Sewage Treatment Facility at Monitoring Station Number GRA-4.

Month Reported	Solids Removed from the Sewage Treatment Facility (m ³)
July	4
August	4
September	4
QUARTER TOTAL	12

- c) Quarterly sampling results from Monitoring Program Station;

Sewage Effluent was sampled at Monitoring Program Station GRA-3 on October 15, 2015. Refer to Appendix A and B for the sampling parameter summary and lab results.

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- d) The current estimated volume of Nipissar Lake based on water elevation determined at Monitoring Program Station GRA-5.

Golder Associates is currently completing a toolkit for GN-CGS that will provide the current estimated volume from the staff guage installed in Nipissar Lake after freshet 2015 and seasonal level loggers. This toolkit will be available by January 31, 2016.

The below elevation readings were taken from the same benchmark to demonstrate the change in lake elevation over the open water season. The water level in Nipissar Lake increased by 26.99 cm from June 18, 2015 (when pumping from Char River began) to September 25, 2015 (after pumping from Char River had stopped).

Date	Nipissar Lake Elevation (m)	Change in Nipissar Lake Elevation (m)
June 18, 2015	3.146425	-
June 26, 2015	3.115	0.031425
July 7, 2015	3.0940375	0.0523875
July 20, 2015	3.0226	0.123825
July 27, 2015	3.032125	0.1143
August 10, 2015	2.9464	0.200025
August 17, 2015	2.92735	0.219075
September 9, 2015	2.921	0.225425
September 25, 2015	2.87655	0.269875

- e) Follow-up regarding inspection/compliance concerns.

The AANDC Inspection took place on June 17, 2015. The inspection report stated "No concerns with sites identified in this inspection report, all information and logs were available during inspection". A copy of the inspection report can be found in Appendix D.

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Appendix A: Summary of GRA-3 Sampling Parameters

GN-CGS Rankin Inlet Monitoring Stations and Sampling Parameters for Licence No. 3AM-GRA1015

Parameters	Unit	Detection Limit	GRA-3			
			30-Mar-15	34-Jun-15	15-Oct-15	CCME Guideline ¹
BOD ₅	mg/L	6.0	32.1	520	95	N/G
Fecal Coliforms	MPN/100mL	3	>110000	>110000	>110000	N/G
pH	pH units	0.10	7.93	5.61	7.14	7.0-8.7
Conductivity	umhos/cm	20	736	861	595	N/G
Total Suspended Solids	mg/L	5.0	85.0	11300.0	73.0	Compare to background levels
Ammonia Nitrogen	mg/L	1.0	736	9.4	12.2	N/G
Nitrate-Nitrite	mg/L	0.070	<0.070	<0.070	<0.070	N/G
Oil and Grease	mg/L	2.0	19.9	896	23	N/G
Total Phenols	mg/L	0.0010	0.0095	0.027	0.093	N/G
Sulphate	mg/L	0.30	36	17.4	29.6	N/G
Sodium	mg/L	0.030	56.2	35.2	37.8	N/G
Potassium	mg/L	0.020	10.9	16.9	10.7	N/G
Magnesium	mg/L	0.010	10.3	16.3	6.02	N/G
Calcium	mg/L	0.10	39	106.0	26.9	N/G
Total Arsenic	mg/L	0.00020	0.00123	<0.020	0.00096	0.0125
Total Cadmium	mg/L	0.000010	0.000108	0.0023	0.000161	0.00012
Total Copper	mg/L	0.00020	0.147	2.81	0.145	0.004
Total Chromium	mg/L	0.0010	<0.0010	<0.10	<0.0010	0.0015
Total Iron	mg/L	0.10	0.44	<10	0.30	N/G
Total Lead	mg/L	0.000090	0.000789	0.0785	0.00108	N/G
Total Mercury	mg/L	0.00020	<0.00020	<0.00040	<0.00020	0.000016
Total Nickel	mg/L	0.0020	0.0027	<0.20	0.0026	N/G
Total Zinc	mg/L	0.0020	0.0960	3.2600	0.0807	N/G

¹Canadian Environmental Quality Guidelines - Water Quality Guidelines for the Protection of Aquatic Life, Marine
N/G - No Guideline

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Appendix B: Certificate of Analysis, October 15, 2015



Nunavut - Community & Government
Services - Rankin Inlet
ATTN: JOE STRICKLAND - FACILITY MGR
P.O. Box 490
Rankin Inlet NU XOC OGO

Date Received: 16-OCT-15
Report Date: 30-OCT-15 13:22 (MT)
Version: FINAL

Client Phone: 867-645-8158

Certificate of Analysis

Lab Work Order #: L1688882
Project P.O. #: NOT SUBMITTED
Job Reference:
C of C Numbers:
Legal Site Desc:



Hua Wo
Chemistry Laboratory Manager

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ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1688882-1 GRA-3							
Sampled By: MEGAN LUSTY on 15-OCT-15 @ 13:30							
Matrix: WW							
Miscellaneous Parameters							
Total Organic Carbon	33.6		0.50	mg/L		29-OCT-15	R3299953
Nunavut WW Group 1							
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	183		1.2	mg/L		26-OCT-15	
Alkalinity, Carbonate							
Carbonate (CO3)	<0.60		0.60	mg/L		26-OCT-15	
Alkalinity, Hydroxide							
Hydroxide (OH)	<0.34		0.34	mg/L		26-OCT-15	
Ammonia by colour							
Ammonia, Total (as N)	12.2		1.0	mg/L		19-OCT-15	R3292551
Biochemical Oxygen Demand (BOD)							
Biochemical Oxygen Demand	95	DLA	20	mg/L		16-OCT-15	R3294631
Carbonaceous BOD							
BOD Carbonaceous	88	DLA	20	mg/L		16-OCT-15	R3294631
Chloride in Water by IC							
Chloride (Cl)	64.1		0.50	mg/L		16-OCT-15	R3293339
Conductivity							
Conductivity	595		1.0	umhos/cm		23-OCT-15	R3295937
Fecal Coliform							
Fecal Coliforms	>110000		3	MPN/100mL		16-OCT-15	R3296087
Hardness Calculated							
Hardness (as CaCO3)	92.0		0.30	mg/L		24-OCT-15	
Mercury Total							
Mercury (Hg)-Total	<0.00020	DLM	0.00020	mg/L	21-OCT-15	21-OCT-15	R3293967
Nitrate in Water by IC							
Nitrate (as N)	<0.020		0.020	mg/L		16-OCT-15	R3293339
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.070		0.070	mg/L		21-OCT-15	
Nitrite in Water by IC							
Nitrite (as N)	<0.010		0.010	mg/L		16-OCT-15	R3293339
Oil and Grease, Total							
Oil and Grease, Total	23.1		2.0	mg/L	22-OCT-15	22-OCT-15	R3295688
Phenol (4AAP)							
Phenols (4AAP)	0.093	DLM	0.050	mg/L		26-OCT-15	R3297439
Note: DLM: diluted due to unknown interferences.							
Phosphorus, Total							
Phosphorus (P)-Total	3.81		0.050	mg/L		23-OCT-15	R3295338
Sulfate in Water by IC							
Sulfate (SO4)	29.6		0.30	mg/L		16-OCT-15	R3293339
Total Alkalinity as CaCO3							
Alkalinity, Total (as CaCO3)	150		1.0	mg/L		23-OCT-15	R3295937
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.207		0.0050	mg/L	23-OCT-15	23-OCT-15	R3295775
Arsenic (As)-Total	0.00096		0.00020	mg/L	23-OCT-15	23-OCT-15	R3295775
Cadmium (Cd)-Total	0.000161		0.000010	mg/L	23-OCT-15	23-OCT-15	R3295775
Calcium (Ca)-Total	26.9		0.10	mg/L	23-OCT-15	23-OCT-15	R3295775
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-OCT-15	23-OCT-15	R3295775
Cobalt (Co)-Total	0.00035		0.00020	mg/L	23-OCT-15	23-OCT-15	R3295775
Copper (Cu)-Total	0.145		0.00020	mg/L	23-OCT-15	23-OCT-15	R3295775
Iron (Fe)-Total	0.30		0.10	mg/L	23-OCT-15	23-OCT-15	R3295775
Lead (Pb)-Total	0.00108		0.000090	mg/L	23-OCT-15	23-OCT-15	R3295775

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Sample Details/Parameters		Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1688882-1 GRA-3								
Sampled By: MEGAN LUSTY on 15-OCT-15 @ 13:30								
Matrix: WW								
Total Metals by ICP-MS								
Magnesium (Mg)-Total		6.02		0.010	mg/L	23-OCT-15	23-OCT-15	R3295775
Manganese (Mn)-Total		0.0423		0.00030	mg/L	23-OCT-15	23-OCT-15	R3295775
Nickel (Ni)-Total		0.0026		0.0020	mg/L	23-OCT-15	23-OCT-15	R3295775
Potassium (K)-Total		10.7		0.020	mg/L	23-OCT-15	23-OCT-15	R3295775
Sodium (Na)-Total		37.8		0.030	mg/L	23-OCT-15	23-OCT-15	R3295775
Zinc (Zn)-Total		0.0807		0.0020	mg/L	23-OCT-15	23-OCT-15	R3295775
Total Suspended Solids								
Total Suspended Solids		73.0		5.0	mg/L		22-OCT-15	R3295363
pH								
pH		7.14		0.10	pH units		23-OCT-15	R3295937

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLA	Detection Limit adjusted for required dilution
DLM	Detection Limit Adjusted due to sample matrix effects.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-CO3CO3-CALC-WP	Water	Alkalinity, Carbonate	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by carbonate is calculated and reported as mg CO3 2-/L.			
ALK-HCO3HCO3-CALC-WP	Water	Alkalinity, Bicarbonate	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by bicarbonate is calculated and reported as mg HCO3-/L			
ALK-OHOH-CALC-WP	Water	Alkalinity, Hydroxide	CALCULATION
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by hydroxide is calculated and reported as mg OH-/L.			
ALK-TITR-WP	Water	Total Alkalinity as CaCO3	APHA 2320B
The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. Total alkalinity is determined by titration with a strong standard mineral acid to the successive HCO3- and H2CO3 endpoints indicated electrometrically.			
BOD-CBOD-WP	Water	Carbonaceous BOD	APHA 5210 B
Samples are diluted and seeded, have TCMP added to inhibit nitrogenous demands, and then are incubated in airtight bottles at 20°C for 5 days. Dissolved oxygen is measured initially and after incubation, and results are computed from the difference between initial and final DO.			
BOD-WP	Water	Biochemical Oxygen Demand (BOD)	APHA 5210 B
Samples are diluted and seeded and then incubated in airtight bottles at 20°C for 5 days. Dissolved oxygen is measured initially and after incubation, and results are computed from the difference between initial and final DO.			
C-TOC-HTC-WP	Water	Total Organic Carbon by Combustion	APHA 5310 B-WP
Analysis is by high temperature combustion using procedures adapted from APHA method 5310 "Total Organic Carbon" NPOC Method.			
CL-IC-N-WP	Water	Chloride in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
EC-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
ETL-HARDNESS-TOT-WP	Water	Hardness Calculated	HARDNESS CALCULATED
FC-MPN-WP	Water	Fecal Coliform	APHA 9221E
The Most Probable Number (MPN) method is based on the Multiple Tube Fermentation technique. The results of examination of replicate tubes and dilutions of a sample are reported after confirmations specific to total coliform, fecal coliform and E. coli are performed. Results are reported in MPN/100 mL for water and MPN/gram for food and solid samples.			
HG-T-CVAF-WP	Water	Mercury Total	EPA245.7 V2.0
Mercury in filtered and unfiltered waters is oxidized with Bromine monochloride and analyzed by cold-vapour atomic fluorescence spectrometry.			
MET-T-L-MS-WP	Water	Total Metals by ICP-MS	APHA 3030E/EPA 6020A-TL
This analysis involves preliminary sample treatment by hotblock acid digestion (APHA 3030E). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.			
NO2+NO3-CALC-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-IC-N-WP	Water	Nitrite in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
NO3-IC-N-WP	Water	Nitrate in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
OGG-TOT-WT	Water	Oil and Grease, Total	APHA 5520 B
Sample is extracted with hexane, extract is then evaporated and the residue is weighed to determine total oil and grease.			
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorus is determined colourimetrically after persulphate digestion of the sample.			
PH-WP	Water	pH	APHA 4500H
The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.			
PHENOLS-4AAP-WT	Water	Phenol (4AAP)	EPA 9066
An automated method is used to distill the sample. The distillate is then buffered to pH 9.4 which reacts with 4AAP and potassium ferricyanide to form a red complex which is measured colorimetrically.			
SO4-IC-N-WP	Water	Sulfate in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
SOLIDS-TOTSUS-WP	Water	Total Suspended Solids	APHA 2540 D (modified)
Total suspended solids in aqueous matrices is determined gravimetrically after drying the residue at 103 105°C.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Canada Toll Free: 1 800 668 9878

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L1688882-COFC

REFER TO BACK PAGE FOR AIS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

NA-E M-032E v08 Final 03 October 2012

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form**.

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Appendix C: Char River Water Pumped to Nipissar Lake, with Elevations



Char River Water Pumped to Nipissar Lake

Water Licence No. 3AM-GRA1015

GRA-6

Date	Time	Flow Meter Reading (m ³)	Daily Volume Pumped (m ³)	Total Volume Pumped (m ³)	Nipissar Lake Elevations		Change in Elevation*	
					(inches)	(m)	(inches)	(m)
18-Jun-15	11:40 AM	7	-	-				
19-Jun-15	9:05 AM	2651	2644	2644	123.875	3.146425		
20-Jun-15	7:45 AM	5427	2776	5420				
21-Jun-15	8:00 AM	8399	2972	8392				
22-Jun-15	8:30 AM	11367	2968	11360				
23-Jun-15	8:30 AM	14338	2971	14331				
24-Jun-15	8:45 AM	17250	2912	17243				
25-Jun-15	8:30 AM	20100	2850	20093				
26-Jun-15	9:30 AM	22117	2017	22110	122.5	3.115	1.375	0.031425
27-Jun-15	8:30 AM	24785	2668	24778				
28-Jun-15	9:45 AM	27909	3124	27902				
29-Jun-15	8:45 AM	29857	1948	29850				
30-Jun-15	9:30 AM	32388	2531	32381				
01-Jul-15	9:27 AM	35422	3034	35415				
02-Jul-15	8:55 AM	38373	2951	38366				
03-Jul-15	9:14 AM	41440	3067	41433				
04-Jul-15	9:50 AM	44545	3105	44538				
05-Jul-15	9:39 AM	47555	3010	47548				
06-Jul-15	9:03 AM	50498	2943	50491				
07-Jul-15	8:40 AM	53456	2958	53449	121.8125	3.0940375	2.0625	0.0523875
08-Jul-15	7:15 AM	56399	2943	56392				
09-Jul-15	9:30 AM	59430	3031	59423				
10-Jul-15	8:40 AM	62265	2835	62258				
11-Jul-15	8:00 AM	65177	2912	65170				
12-Jul-15	8:30 AM	68242	3065	68235				
13-Jul-15	8:45 AM	71221	2979	71214				
14-Jul-15	9:12 AM	74155	2934	74148				
15-Jul-15	9:30 AM	77054	2899	77047				
16-Jul-15	8:30 AM	79782	2728	79775				
17-Jul-15	8:30 AM	82560	2778	82553				
18-Jul-15	8:50 AM	85443	2883	85436				
19-Jul-15	8:55 AM	88343	2900	88336				
20-Jul-15	8:45 AM	91105	2762	91098	119	3.0226	4.875	0.123825
21-Jul-15	9:15 AM	94100	2995	94093				
22-Jul-15	9:24 AM	97093	2993	97086				
23-Jul-15	8:45 AM	100028	2935	100021				
24-Jul-15	9:15 AM	102463	2435	102456				
25-Jul-15	8:30 AM	105848	3385	105841				
26-Jul-15	8:45 AM	108779	2931	108772				
27-Jul-15	9:13 AM	111764	2985	111757	119.375	3.032125	4.5	0.1143

28-Jul-15								
29-Jul-15	9:30 AM	117609	5845	117602				
30-Jul-15	1:53 PM	121007	3398	121000				
31-Jul-15	9:30 AM	123371	2364	123364				
01-Aug-15	7:45 AM	126016	2645	126009				
02-Aug-15	7:45 AM	128880	2864	128873				
03-Aug-15	7:45 AM	131766	2886	131759				
04-Aug-15	8:30 AM	134796	3030	134789				
05-Aug-15	9:15 AM	137481	2685	137474				
06-Aug-15	10:15 AM	140815	3334	140808				
07-Aug-15								
08-Aug-15	8:15 AM	146307	5492	146300				
09-Aug-15	9:00 AM	149293	2986	149286				
10-Aug-15	9:00 AM	152211	2918	152204	116	2.9464	7.875	0.200025
11-Aug-15	9:11 AM	155111	2900	155104				
12-Aug-15	8:45 AM	157952	2841	157945				
13-Aug-15	8:35 AM	160865	2913	160858				
14-Aug-15	11:15 AM	164003	3138	163996				
15-Aug-15	9:00 AM	166860	2857	166853				
16-Aug-15	8:07 AM	169386	2526	169379				
17-Aug-15	9:30 AM	172412	3026	172405	115.25	2.92735	8.625	0.219075
18-Aug-15	9:00 AM	175233	2821	175226				
19-Aug-15	9:08 AM	178103	2870	178096				
20-Aug-15	2:50 PM	181668	3565	181661				
21-Aug-15	9:00 AM	183875	2207	183868				
22-Aug-15								
23-Aug-15								
24-Aug-15	9:30 AM	192316	8441	192309				
25-Aug-15	8:45 AM	195029	2713	195022				
26-Aug-15	9:15 AM	197817	2788	197810				
27-Aug-15	9:00 AM	200671	2854	200664				
28-Aug-15	9:30 AM	203919	3248	203912				
29-Aug-15	9:20 AM	206359	2440	206352				
30-Aug-15	8:45 AM	209126	2767	209119				
31-Aug-15	8:54 AM	211990	2864	211983				
01-Sep-15	9:05 AM	214821	2831	214814				
02-Sep-15	8:45 AM	217639	2818	217632				
03-Sep-15								
04-Sep-15								
05-Sep-15								
06-Sep-15								
07-Sep-15								
08-Sep-15								
09-Sep-15					115	2.921	8.875	0.225425
10-Sep-15								
11-Sep-15	2:19 PM	243644	26005	243637				
12-Sep-15								
13-Sep-15								
14-Sep-15								
15-Sep-15								
16-Sep-15								

17-Sep-15								
18-Sep-15								
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23-Sep-15								
24-Sep-15								
25-Sep-15					113.25	2.87655	10.625	0.269875

*from first reading

Last day of pumping

**Appendix D: 3AM-GRA1015 AANDC Inspection
Report 2015**



ENVIRONMENTAL INSPECTION FORM

☒ Original
☐ Follow-Up Report

Licensee	Licensee Representative
Government of Nunavut, Community and Government Services	Megan Lusty, Municipal Planning E.I.T. Rob Hogan , Plant Operations Engineer
Licence No. / Expiry	Representative's Title
3AM-GRA1015 (Rankin Inlet)	Municipal Planning Engineer-in-Training
Land / Other Authorizations	Land / Other Authorizations
Date of Inspection	Inspector
17/6/2015	Atuat Shouldice
Activities Inspected	
<input type="checkbox"/> Camp <input type="checkbox"/> Drilling <input type="checkbox"/> Mining <input type="checkbox"/> Construction <input type="checkbox"/> Reclamation <input checked="" type="checkbox"/> Fuel Storage	
<input type="checkbox"/> Roads/Hauling <input checked="" type="checkbox"/> Other: Water Discharge <input type="checkbox"/> Other:Water Supply/ Waste discharge	

Conditions:	A - Acceptable	C - Concern	U - Unacceptable	NA – Not Applicable	NI – Not Inspected			
Water Use	Condition	Comment	Site Conditions	Condition	Comment	Haz/Mat Management	Condition	Comment
Intake/Screen	A		Water Management Structures	A		Storage	NI	
Flow Measure. Device	A		Culverts / Bridges	NA		Spills	NI	
Source:	A		Drainage	NA		Spill Plan	NI	
Water Use:	A		Erosion / Sediment	A				
Recirculation (y /n)	Y		Mitigation Measures	A		Administrative		
			Reclamation Activities	N/A		Records	A	
			Materials Storage	A		Reports	A	
Waste Disposal			Signage	A		Plans	A	
Waste Water	A					Notifications	A	
Solid Waste	A		Monitoring			Other		
Hazardous Waste	A		Sample Collection / Analysis	NI				
<i>*The number in the comments field will correspond with specific comments provided below.</i>								
Samples taken by Inspector:			Location(s): Rankin Inlet, Char River, Nipisar Lake.					
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No								

SECTION 1	<input checked="" type="checkbox"/> Comments	<input type="checkbox"/> Non-Compliance with Act or Licence	<input type="checkbox"/> Action Required
<u>Inspectors Statement</u>			
<p>An Inspection was conducted on June 17th 2015 in the Hamlet of Rankin Inlet of Government of Nunavut, Community and Government Services licence 3AM-GRA1015. Megan Lusty (Municipal Planning E.I.T.) and Rob Hogan (Plant Operations Engineer) accompanied Inspector Atuat Shouldice to the various sites permitted under licence 3AM-GRA1015.</p> <p>An introduction site meeting took place on June 17TH 2015 to discuss inspection format, site activities and a site inspection followed.</p>			
SECTION 2	<input checked="" type="checkbox"/> Comments	<input type="checkbox"/> Non-Compliance with Act or Licence	<input checked="" type="checkbox"/> Action Required
<u>Char River Pump station</u>			
Observations			
<p>Pumping station was not active during time of inspection and CGS was waiting on a flow meter to track water usage before they start pumping.</p> <ol style="list-style-type: none">Water Intake<ol style="list-style-type: none">No concerns. Screen on hose was 1/4in meshWater pump<ol style="list-style-type: none">No concerns. Water pump was located in a sea can at Char River to prevent from vandalism.Refueling Water pump<ol style="list-style-type: none">No concerns. The fuel tank for the water pump is located in the sea can and will be refueled by a pick-up truck equipped with a double walled tidy tank. No fuel is being stored on site.Water discharge to Nipisar<ol style="list-style-type: none">No concerns. At the end of the discharge hose, a concrete board was fastened to the ground to diffuse water to stop erosion and sediments from running in to Nipisar Lake			



Nipisar Pump Station

Water is recirculated from Williamson Lake pump station back to Nipisar pump station in a closed loop to prevent freezing. The recirculated water does not re-enter the lake but stays in a loop between pump stations.

Observations

1. Intake hose

a. No concerns. Intake pipes located off the bottom of lake. The intake hose was equipped with 1/2in mesh screens.
2. Water log sheets/O&M manuals/spill plan.

a. No concerns. All logs were up to date and manuals were available for inspectors review.
3. Fuel on site

a. No concerns. The fuel tank for the pump house is located in a secondary containment berm beside the pump station.
No signs of erosion were visible in the berm.
4. Sampling/Sites signage

a. No Concerns. Sampling sites were identified

Sewage Plant

Solids are collected every Thursday and average approximately one cubic meter a week. The solids are disposed of into a trench in a designed “sewage screenings” area at the Hamlet of Rankin Inlet Municipal Dump as authorized with the written agreement with the Hamlet of Rankin Inlet water licence.

Observations

1. Out flow hose

a. No concerns noted. Recent repairs were made to the discharge pipe and diffuser to better displace the sewage effluent and allow for better distribution in to the environment.
2. Water log sheets/O&M manuals/spill plan.

a. No concerns. All logs were up to date and manuals were available for inspectors review.
3. Fuel on site

a. No concerns. No fuel or spills were observed during the inspection.
4. Sampling/Site signage

a. No Concerns. All required signage was posted

SECTION 3

☒ Comments

☐ Non-Compliance with Act or Licence

☐ Action Required

No concerns with sites identified in this inspection report, all information and logs were available during inspection.

Inspector's Name

Atuat Shouldice

Signature

Atuat Shouldice

Date

June 17th 2015

Inspector's Name

Signature

Date

Office Use Only:

Follow-up report to be issued by Inspector

☐ Yes

☒ No