

Correspondence

3. Where any direction, notice, order or report under this licence is required to be in writing, it shall be given:
- a) To the Licensee, if delivered or mailed by registered mail to the address on page 1 of this licence, and shall be deemed to have been given to the Licensee on the day it was delivered, or 7 days after the day it was mailed, as the case may be; or
 - b) To the Board, if delivered, faxed or mailed by registered mail to the following address:

Yukon Water Board
Suite 106, 419 Range Road
Whitehorse YT Y1A 3V1

Fax: (867) 456-3890

and shall be deemed to have been given to the Board on the day it was delivered or faxed, or 7 days after the day it was mailed, as the case may be.

- c) The Board or the Licensee may, by notice in writing, change its address for delivery.

Non-Compliance

4. In the event that the Licensee fails to comply with any provision or condition of this licence, the Board may, subject to the Act, cancel the licence.

Spills and Unauthorized Discharges

5. Where a spill or an unauthorized discharge occurs, that is of a reportable quantity under the Yukon *Spills Regulations*, the Licensee shall immediately contact the 24-hour Yukon Spill Report number, (867) 667-7244 and implement the Spill Contingency Plan. A detailed written report on any such event including, but not limited to, dates, quantities, parameters, causes and other relevant details and explanations, shall be submitted to the Board not later than 10 days after the occurrence.
6. The Licensee shall apply the relevant procedures in the Spill Contingency Plan. The Licensee shall review the Spill Contingency Plan annually and shall provide a summary of that review, including any revisions to the plan, as a component of the annual report.
7. The Licensee shall maintain a log book of all spill or unauthorized discharge occurrences, including spills that are less than the reportable quantities under the Yukon *Spills Regulations*. The log book shall be made available at the request of an Inspector. The log book shall include, but not necessarily be limited to the:
- a) date and time of the spill;

- b) substance spilt or discharged;
 - c) approximate amount spilt or discharged;
 - d) distance between the spill or discharge and the nearest Watercourse; and
 - e) remedial measures taken to contain and clean-up the spill area or to cease the unauthorized discharge.
8. The Licensee shall include a summary of all spills or unauthorized discharges that occurred during the year reported, as part of the annual report.
9. All personnel shall be trained in procedures to be followed and the equipment to be used in the containment of a spill.
10. Prior to the commencement of construction, the Licensee shall submit an additional Spill Contingency Plan, specific to construction activities, and provide the plan to the Board.
11. The Spill Contingency Plan shall be posted on site for the duration of the works.
12. Ten days prior to construction, the Licensee shall submit material safety data sheets to the Board for all petroleum products and/or hazardous materials that are to be present during this undertaking.

Fuel Storage and Transfer

13. Fuel, lubricants, hydraulic fluids, coolants and similar substances shall be stored and/or transferred a minimum of 30 metres from the Natural Boundary of any Watercourse, in such a way that said substances are not deposited in or allowed to be deposited in waters.

Annual Reports

14. On or before the anniversary of the date of issuance of this licence, and for each year during which this licence is in effect, the Licensee shall submit an annual report to the Board. The report shall include the information required by the Regulation including, but not necessarily limited to:
- a) a description of the water use operations carried out during the year reported;
 - b) the quantity of water used each day;
 - c) the hours of pumping for each day;
 - d) copies of all orders, directions and correspondence relating to drinking water sampling or analysis from the Medical Health Officer or from a Health Officer;
 - e) details of the methods, procedures and standards used in the data collection and sample testing;
 - f) the requirements outlined in Part F of this licence;

- g) the results of all monitoring and analyses as required by Part F and Schedule A of this licence;
- h) the inspection results, including photographs, repairs or plans for modification required by the physical monitoring program;
- i) a detailed record of any major maintenance work carried out or planned to be carried out that could have an impact on water, and
- j) summaries of all data generated as a result of the monitoring requirements of this licence, including analysis and interpretation by a qualified individual or firm and a discussion of any variances from baseline conditions or from previous years' data.

Reports

- 15. The Licensee shall provide to the Board one unbound, single-sided, paper copy of all reports required by this licence. All reports must be reproducible by standard photocopier.
- 16. The Licensee shall upload electronic copies of all reports required by this licence to the Yukon Water Board's online licensing registry, the WATERLINE. Electronic copies shall be submitted in one of the following formats: Word 97 - 2003, Excel 97 - 2003 workbooks, or Adobe .pdf format. Water quality results uploaded to the WATERLINE must be in the format outlined in the most recent version of Yukon's "*Laboratory Data Submission Standards for Water Quality*". This guide is available on the Yukon Water Board website.

PART C - OPERATING CONDITIONS

Description of Water Use and Deposit of Waste

- 17. The Licensee is hereby authorized to:
 - a) obtain, store, and distribute water for municipal purposes at a combined maximum rate of 2,198 m³/day from water wells #3 and #5 located in Haines Junction, YT;
 - b) collect, store and treat sewage at an existing wastewater treatment facility;
 - c) construct, operate, and maintain sludge drying beds;
 - d) construct, operate, and maintain a septage receiving station at the Public Works building;
 - e) discharge treated effluent from the wastewater treatment facility to the Dezadeash River; and
 - f) operate and maintain water supply, water distribution, sewage collection, and sewage treatment and disposal systems,

as described in the Application, and subject to the conditions of this licence. Where there is a discrepancy between the Application and this licence, the conditions of this licence shall prevail.

18. Effluent shall only be discharged from the existing wastewater treatment facility through the outfall ditch from the facility, to the Dezadeash River wetlands.
19. The Licensee shall notify the Board no less than 10 days prior to the commencement of any effluent discharge.
20. The Licensee shall not commence discharge of effluent prior to August 1 of any year or ten weeks after the loss of ice cover on the wastewater treatment lagoons, whichever comes later.
21. No effluent discharge shall be allowed to occur when the water surface elevation in the Dezadeash River is such that a direct surface water connection exists between the river and the adjacent wetland into which the outfall ditch discharges.
22. Notification, including the name and phone number of the field supervisor, shall be provided to the Board, in writing, 10 days prior to the start of construction associated with maintenance.
23. The Licensee shall submit a sludge management plan for the wastewater treatment facility to the Board, in writing, within one year of the sludge drying beds construction being completed, or 30 days prior to the commencement of use of the sludge drying beds, whichever occurs first.
24. The Licensee is authorized to use a polymer such as Solve 137 to facilitate the dewatering of sludge. Alternative polymers may be utilized provided they are of equal or less ecological toxicity as Solve 137. The Licensee must submit Material Data Safety Sheets (MSDS) to the Board prior to the use of alternative types of polymers.
25. Dewatered sludge from the sludge drying beds shall be disposed of in a manner that meets the requirements of appropriate legislation including, but not limited to, the *Environment Act* and associated regulations.
26. The Licensee shall submit a Wastewater Treatment Facility Operations Manual to the Board, in writing, within one year of any major construction works being completed; including, but not limited to, the septage receiving station at the Public Works building, the emergency overflow structure, and the sludge drying beds.

PART D - DESIGN AND CONSTRUCTION

Design

27. Ten days prior to the commencement of construction, the Licensee shall submit to the Board final detailed design construction drawings for the water reservoir, septage receiving station, sludge drying beds, emergency overflow structure, and associated infrastructure. The final detailed design drawings must be consistent with the drawings which were

submitted as part of the Application and sealed by a Professional Engineer licensed to practice in Yukon. All construction shall be carried out in accordance with the final design drawings.

28. Within 60 days of completion of the construction of the, the Licensee shall submit to the Board, as-built design drawings of the water reservoir, septage receiving station, sludge drying beds, emergency overflow structure and associated infrastructure sealed by a Professional Engineer licensed to practice in the Yukon.
29. Where site conditions require minor modifications to the designs submitted to the Board, the Licensee shall notify the Board, a minimum of 10 days in advance, of the details of the modifications or variations from final detailed design, specifications and quality assurance/quality control procedures previously submitted to the Board, provide a detailed construction schedule and the name and contact number(s) of the construction superintendent. The notice shall be in writing and must include an explanation of the reasons for the change and an assessment of the potential impact on the performance of the works. The notice shall be sealed by a Professional Engineer licensed to practice in Yukon.

Construction

30. All works associated with the undertaking shall be maintained in good repair.
31. Construction and/or maintenance equipment shall be mechanically sound and free of leaks.
32. Granular bedding and backfill material shall consist of non-frozen material.
33. Waste substances shall be used, transported, stored or disposed of in such a manner that they are not deposited, or allowed to be deposited, into any Watercourse or on any surrounding land, unless authorized by this licence.
34. Except as authorized by this licence, no Waste shall enter any Watercourse as a result of any operation carried out by the Licensee.
35. All disturbed ground surfaces shall be stabilized in such a manner so as to prevent erosion and surface runoff from carrying sediment into any Watercourse.

PART E – EFFLUENT QUALITY STANDARDS

36. Any discharge from the wastewater treatment facility shall meet the following effluent quality standards at monitoring station HJ-4 and HJ-4a, as described in Schedule A of this licence:

Parameter	Maximum Concentration in a Grab Sample
CBOD ₅	20 milligrams per litre
Total Suspended Solids	25 milligrams per litre
pH	6 – 9.5
Oil and Grease	5 milligrams per litre
Fecal Coliforms	400 counts / 100 millilitres
Total Phosphorus	1 milligram per litre
Bioassay* (LC ₅₀ static 96 hour bioassay at 100% concentration)	Non-toxic
Unionized Ammonia	1.25 milligrams per litre @ 15°C ± 1°C

* bioassay using rainbow trout, pH non-adjusted –reference method EPS 1/RM/13

37. The point of compliance at location HJ-4 and HJ-4a, as described in Schedule A of this licence, for the effluent quality standards included in this licence shall be the final point of control prior to discharging effluent to the environment.
38. All analyses must be performed by a laboratory accredited under the International Organization for Standardization ISO/IEC 17025: 2005 standard and the accreditation must include the actual tests being performed by the laboratory.

PART F – MONITORING AND SURVEILLANCE

39. The Licensee shall comply with the water quality monitoring program and surveillance network program contained in Schedule A of this licence.
40. The water level in the lagoons shall be measured and recorded monthly.
41. The sludge levels in the lagoons shall be measured and recorded annually.
42. Annually, the Licensee shall carry out a physical inspection of the wastewater treatment and disposal facility, including the sludge drying beds. The inspection shall be carried out by a Professional Engineer licensed to practice in Yukon. The engineer shall submit a report assessing the condition and performance of the facility, and presenting recommendations for any necessary maintenance, repairs or modifications.

PART G - SITE DECOMMISSIONING AND RESTORATION

43. The Licensee shall develop a decommissioning plan for the closure of the municipal water facility and wastewater treatment facility, and submit the plan to the Board 1 year prior to the commencement of decommissioning activities. The plan shall include, but not necessarily be limited to a schedule and cost for completion of decommissioning and

reclamation activities. As part of each annual report, the Licensee shall report on the status of the decommissioning plan.

44. During the term of the licence, the Licensee shall submit to the Board a plan for any well proposed to be decommissioned.
 45. All disturbed ground surfaces shall be re-graded in a manner which is consistent with the topography of the site and which prevents erosion and surface runoff from carrying sediment into any Watercourse. Where soil conditions permit, disturbed areas shall be re-vegetated with appropriate reclamation seeds and/or plant species that are native in Yukon.
 46. All construction materials, equipment, temporary structures and debris shall be removed from the site upon completion of the work.
 47. Subject to any required assessments, authorizations or approvals, the Licensee shall implement the plan required by this section of this licence.
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SCHEDULE A - MONITORING AND SURVEILLANCE REQUIREMENTS**1. LOCATIONS OF SAMPLING STATIONS**

Sampling Station	Description
HJ-1b	Water supply from Well #3
HJ-1d	Water supply from Well #5
HJ-3	Influent to sewage treatment facility
HJ-4	Effluent from sewage treatment facility at the outlet of aerobic lagoon #3
HJ-4a	Effluent from the sewage treatment facility at the outlet of the emergency overflow structure
HJ-5	Dezadeash River immediately upstream of outfall from sewage treatment facility
HJ-6	Dezadeash River 1000 metres downstream of outfall from sewage treatment facility (mid-channel)
HJ-8	Outlet of wetland treatment area or ponded water within wetland.

2. SAMPLING² AND MONITORING FREQUENCY

Analysis	Station							
	HJ-1b	HJ-1d	HJ-3	HJ-4	HJ-4a	HJ-5	HJ-6	HJ-8
Fecal Coliform	-	-	-	A**	A**	BW*	BW*	BW*
Total Coliforms	-	-	-	-	-	-	BW*	BW*
Dissolved Oxygen	-	-	-	W*	W*	BW*	BW*	-
Specific Conductance	-	-	-	W*	W*	BW*	BW*	-
Temperature	-	-	-	W*	W*	BW*	BW*	-
CBOD ₅	-	-	-	W*	W*	A*	A*	BW*
Suspended Solids	-	-	-	W*	W*	BW*	BW*	BW*
pH	-	-	-	W*	W*	BW*	BW*	BW*
Oil and Grease	-	-	-	W*	W*		A*	BW*
Ammonia	-	-	-	W*	W*	BW*	BW*	BW*
Total Phosphorous	-	-	-	W*	W*	BW*	BW*	BW*
Bioassay ¹ (LC ₅₀ static 96 hour bioassay-100%)	-	-	-	A**	A**	-	-	-
Flow Rate	D	D	D	D*	D*	-	-	-
Water Level	Q	M	-	-	-	-	-	-

Note: ¹ bioassay using rainbow trout, pH non-adjusted - reference method EPS 1/RM/13. ²Water sample collection = grab samples.

LEGEND

D = Daily, W = Weekly but at least 5 days after any other sample, BW = Every two weeks, Q = Quarterly, A = Annually, M = Monthly * = When discharging, ** = Prior to discharge



Yukon
Water Board

Office des eaux
du Yukon

0141

April 13, 2012

Darrell Pasloski
Minister
Executive Council Office
Government of Yukon
Box 2703
Whitehorse YT Y1A 2C6

RE: Application MN12-009 (amendment of MN11-030), Village of Haines Junction, Operation and Maintenance of the Potable Water System and the Wastewater Treatment Facility

The Yukon Water Board concluded its deliberations on application MN12-009 on April 4, 2012. The application is for an amendment to include upgrades to the water storage and distribution system for the operation and maintenance of the Village of Haines Junction potable water system and wastewater treatment facility.

Should you be favourably inclined to grant the attached approval, pursuant to the requirements of the *Waters Act*, the Board will proceed to issue the renewal.

Yours truly,

A handwritten signature in blue ink, appearing to read 'Bruce Willis'.

Bruce Willis, Chairperson
Yukon Water Board

C: Register MN12-009, exhibit 10.1

Encl: Copy of licence MN11-030 (amendment 1)

YUKON WATER BOARD

Pursuant to the *Waters Act* and *Waters Regulation*, the Yukon Water Board hereby grants a Type A water licence for a municipal undertaking to:

Village of Haines Junction
Box 5339
Haines Junction YT Y0B 1L0

APPLICATION: MN12-009

LICENCE NUMBER: MN11-030 **RENEWAL OF:** MN99-027

AMENDMENT: This licence shall be deemed to be amendment 1 of licence number MN11-030.

LICENCE TYPE: A

UNDERTAKING: MUNICIPAL **WATER MANAGEMENT AREA:** 3

LOCATION: Dezadeash River at Village of Haines Junction and Water Wells #3 and #5 at the Village of Haines Junction

MAP CO-ORDINATES: Wastewater treatment facility:
Latitude: 60° 45' 58" N Longitude: 137° 31' 56" W
Well #3 and pump house #1:
Latitude: 60° 44' 53" N Longitude: 137° 30' 30" W
Well #5: Latitude: 60° 45' 25" N Longitude: 137° 31' 44" W
Pump house #2 and water reservoir:
Latitude: 60° 45' 28" N Longitude: 137° 30' 30" W

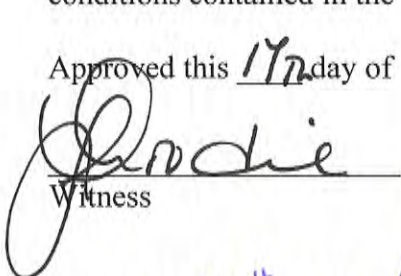
PURPOSE: To operate and maintain a municipal water facility and wastewater treatment facility, and to discharge treated municipal wastewater into the Dezadeash River.

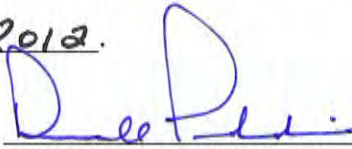
EFFECTIVE DATE: The effective date of this licence shall be January 30, 2012.

EXPIRY DATE: January 29, 2022


This licence shall be subject to the restrictions and conditions contained herein and to the restrictions and conditions contained in the *Waters Act* and the *Waters Regulation* made thereunder.

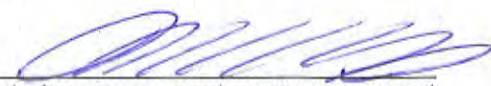
Approved this 17th day of April, 2012.


Witness


Minister, Executive Council Office
Government of Yukon

Issued this 20th day of April, 2012.


Witness


Chairperson – Yukon Water Board

PART A - DEFINITIONS

"Act" means *Waters Act* and any amendments thereto.

"Application" means Water Use Application MN11-030 and MN12-009, including any additional submissions and/or revisions submitted to the Yukon Water Board by the Licensee, up to the date of the Board's decision.

"Board" means the Yukon Water Board.

"Inspector" means any person designated as an Inspector under the Act.

"Natural Boundary" means the visible high water mark of any lake, river, stream or other body of water where the presence and action of water is so common and usual and so long continued as to mark upon the soil of the bed of the lake, river, stream or other body of water a character distinct from that of the banks thereof, both in respect to vegetation and in respect to the nature of the soil itself. In addition, the best estimates of the edge of dormant or old side channels and marsh areas are considered to be Natural Boundaries.

"Regulation" means the *Waters Regulation* made under the Act.

"Spill Contingency Plan" means the *Spill Prevention and Response Plan* that was submitted as part of the Application and included in Water Use Register MN12-009 as exhibit 1.3 and any subsequent revisions.

"Waste" means any substance as defined in the Act.

"Watercourse" means any stream, lake, pond, river, creek, spring, ravine or swamp whether ordinarily containing water or not.

"Wetted Perimeter" means the horizontal extent of the present water level while the work is taking place.

PART B - GENERAL CONDITIONS

Other Laws

1. No condition of the water use licence limits applicability of any statutory authority.
2. All construction or installation of works authorized by this licence shall occur on property that the Licensee has the right to enter upon and use for that purpose.

Correspondence

3. Where any direction, notice, order or report under this licence is required to be in writing, it shall be given:
 - a) To the Licensee, if delivered or mailed by registered mail to the following address:

Village of Haines Junction
Box 5339
Haines Junction YT Y0B 1L0

and shall be deemed to have been given to the Licensee on the day it was delivered, or 7 days after the day it was mailed, as the case may be.

- b) To the Board, if delivered, faxed or mailed by registered mail to the following address:

Yukon Water Board
Suite 106, 419 Range Road
Whitehorse YT Y1A 3V1
Fax: (867) 456-3890

and shall be deemed to have been given to the Board on the day it was delivered or faxed, or 7 days after the day it was mailed, as the case may be.

- c) The Board or the Licensee may, by notice in writing, change its address for delivery.

Non-Compliance

4. In the event that the Licensee fails to comply with any provision or condition of this licence, the Board may, subject to the Act, cancel the licence.

Spills and Unauthorized Discharges

5. Where a spill or an unauthorized discharge occurs, that is of a reportable quantity under the *Yukon Spills Regulations*, the Licensee shall immediately contact the 24-hour Yukon Spill Report number, (867) 667-7244 and implement the Spill Contingency Plan. A detailed written report on any such event including, but not limited to, dates, quantities, parameters, causes and other relevant details and explanations, shall be submitted to the Board not later than 10 days after the occurrence.
6. The Licensee shall apply the relevant procedures in the Spill Contingency Plan. The Licensee shall review the Spill Contingency Plan annually and shall provide a summary of that review, including any revisions to the plan, as a component of the annual report.
7. The Licensee shall maintain a log book of all spill or unauthorized discharge occurrences, including spills that are less than the reportable quantities under the *Yukon Spills Regulations*. The log book shall be made available at the request of an Inspector. The log book shall include, but not necessarily be limited to the:
- a) date and time of the spill;
 - b) substance spilt or discharged;
 - c) approximate amount spilt or discharged;
 - d) distance between the spill or discharge and the nearest Watercourse; and
 - e) remedial measures taken to contain and clean-up the spill area or to cease the unauthorized discharge.

8. The Licensee shall include a summary of all spills or unauthorized discharges that occurred during the year reported, as part of the annual report.
9. All personnel shall be trained in procedures to be followed and the equipment to be used in the containment of a spill.
10. Prior to the commencement of construction, the Licensee shall submit an additional Spill Contingency Plan, specific to construction activities, and provide the plan to the Board.
11. The Spill Contingency Plan shall be posted on site for the duration of the works.
12. Ten days prior to construction, the Licensee shall submit material safety data sheets to the Board for all petroleum products and/or hazardous materials that are to be present during this undertaking.

Fuel Storage and Transfer

13. Fuel, lubricants, hydraulic fluids, coolants and similar substances shall be stored and/or transferred a minimum of 30 metres from the Natural Boundary of any Watercourse, in such a way that said substances are not deposited in or allowed to be deposited in waters.

Annual Reports

14. On or before the anniversary of the date of issuance of this licence, and for each year during which this licence is in effect, the Licensee shall submit an annual report to the Board. The report shall include the information required by the Regulation including, but not necessarily limited to:
 - a) a description of the water use operations carried out during the year reported;
 - b) the quantity of water used each day;
 - c) the hours of pumping for each day;
 - d) copies of all orders, directions and correspondence relating to drinking water sampling or analysis from the Medical Health Officer or from a Health Officer;
 - e) details of the methods, procedures and standards used in the data collection and sample testing;
 - f) the requirements outlined in Part E of this licence;
 - g) the results of all analyses required by the monitoring program as per the requirements of Schedule A of this licence;
 - h) the results of the sampling from stations HJ-1b, HJ-1d, HJ-3, HJ-4, HJ-5, HJ-6, and HJ-8;
 - i) the inspection results, including photographs, repairs or plans for modification required by the physical monitoring program;
 - j) a detailed record of any major maintenance work carried out or planned to be carried out that could have an impact on water; and,
 - k) summaries of all data generated as a result of the monitoring requirements of this licence, including analysis and interpretation by a qualified individual or firm and a discussion of any variances from baseline conditions or from previous years' data.

Reports

15. All reports required to be submitted to the Board will be unbound and reproducible by standard photocopier, accompanied by one electronic copy on a CD/DVD.

16. The Licensee shall provide to the Board 5 additional copies of all reports. The additional copies may be either 5 bound paper copies or 5 electronic copies on individual CDs/DVDs.
17. Electronic copies shall be Windows computer compatible in one of the following formats: Word 97 - 2003, Excel 97 - 2003 workbooks, or Adobe .pdf format. Water quality results must be presented in Excel 97-2003 .xls format.

Term of Licence

18. The term of this licence is for the period from the effective date to January 29, 2022.

PART C - OPERATING CONDITIONS

Description of Water Use and Deposit of Waste

19. The Licensee is hereby authorized to:
 - a) obtain, store, and distribute water for municipal purposes at a combined maximum rate of 2,198 m³/day from water wells #3 and #5 located in Haines Junction, YT;
 - b) collect, store and treat sewage at an existing wastewater treatment facility;
 - c) discharge treated effluent from the wastewater treatment facility to the Dezadeash River; and,
 - d) operate and maintain water supply, water distribution, sewage collection, and sewage treatment and disposal systems.

as described in the Application, and subject to the conditions of this licence. Where there is a discrepancy between the Application and this licence, the conditions of this licence shall prevail.

20. Effluent shall only be discharged from the existing wastewater treatment facility through the outfall ditch from the facility, to the Dezadeash River wetlands.
21. The Licensee shall notify the Board no less than 10 days prior to the commencement of any effluent discharge.
22. The Licensee shall not commence discharge of effluent prior to August 1 of any year or ten weeks after the loss of ice cover on the wastewater treatment lagoons, whichever comes later.
23. No effluent discharge shall be allowed to occur when the water surface elevation in the Dezadeash River is such that a direct surface water connection exists between the river and the adjacent wetland into which the outfall ditch discharges.
24. Notification, including the name and phone number of the field supervisor, shall be provided to the Board, in writing, 10 days prior to the start of construction associated with maintenance.
25. The Licensee shall submit a sludge management plan for the wastewater treatment facility

26. to the Board, in writing, within one year of the effective date of this licence.

PART D - DESIGN AND CONSTRUCTION

Design

25. Ten days prior to the commencement of construction, the Licensee shall submit to the Board final detailed design construction drawings for the water reservoir and associated infrastructure. The final detailed design drawings must be consistent with the drawings which were submitted as part of the Application and sealed by a Professional Engineer licensed to practice in Yukon. All construction shall be carried out in accordance with the final design drawings.
26. Within 60 days of completion of the construction of the water reservoir and associated infrastructure, the Licensee shall submit to the Board, as-built design drawings of the water reservoir and associated infrastructure, sealed by a Professional Engineer licensed to practice in the Yukon.
27. Where site conditions require minor modifications to the designs submitted to the Board, the Licensee shall notify the Board, a minimum of 10 days in advance, of the details of the modifications or variations from final detailed design, specifications and quality assurance/quality control procedures previously submitted to the Board, provide a detailed construction schedule and the name and contact number(s) of the construction superintendent. The notice shall be in writing and must include an explanation of the reasons for the change and an assessment of the potential impact on the performance of the works. The notice shall be sealed by a Professional Engineer licensed to practice in Yukon.

Construction

28. All works associated with the undertaking shall be maintained in good repair.
29. Construction and/or maintenance equipment shall be mechanically sound and free of leaks.
30. Granular bedding and backfill material shall consist of non-frozen material.
31. Waste substances shall be used, transported, stored or disposed of in such a manner that they are not deposited, or allowed to be deposited, into any Watercourse or on any surrounding land, unless authorized by this licence.
32. Except as authorized by this licence, no Waste shall enter any Watercourse as a result of any operation carried out by the Licensee.
33. All disturbed ground surfaces shall be stabilized in such a manner so as to prevent erosion and surface runoff from carrying sediment into any Watercourse.

PART E – EFFLUENT QUALITY STANDARDS

34. Any discharge from the wastewater treatment facility shall meet the following effluent quality standards at monitoring station HJ-4, as described in Schedule A of this licence:

Parameter	Maximum Concentration in a Grab Sample
CBOD ₅	20 milligrams per litre
Total Suspended Solids	25 milligrams per litre
pH	6 – 9.5
Oil and Grease	5 milligrams per litre
Fecal Coliforms	400 counts / 100 millilitres
Total Phosphorus	1 milligram per litre
Bioassay* (LC ₅₀ static 96 hour bioassay – 100% concentration)	Non-toxic
Unionized Ammonia	1.25 milligrams per litre @ 15°C ± 1°C

* bioassay using rainbow trout, pH non-adjusted.

35. The point of compliance at location HJ-4, as described in Schedule A of this licence, for the effluent quality standards included in this licence shall be the final point of control prior to discharging effluent to the environment.

PART F – MONITORING AND SURVEILLANCE

36. The Licensee shall comply with the water quality monitoring program and surveillance network program contained in Schedule A of this licence.
37. All data collection and analyses shall be conducted in accordance with the most recent edition of *Standard Methods for the Examination of Water and Wastewater*, prepared and published by the American Water Works Association and the Water Pollution Control Federation.
38. Samples taken from HJ-4 and HJ-8, as described in Schedule A of this licence, shall be four-hour composite samples. All other samples shall be grab samples.
39. The effluent level in the lagoons shall be measured and recorded monthly.
40. The sludge levels in the lagoons shall be measured and recorded annually.
41. Annually, the Licensee shall carry out a physical inspection of the wastewater treatment and disposal facility. The inspection shall be carried out by a Professional Engineer licensed to practice in Yukon. The engineer shall submit a report assessing the condition and performance of the facility, and presenting recommendations for any necessary maintenance, repairs or modifications.

PART G - SITE DECOMMISSIONING AND RESTORATION

42. The Licensee shall develop a decommissioning plan for the closure of the municipal water facility and wastewater treatment facility, and submit the plan to the Board 1 year prior to the commencement of decommissioning activities. The plan shall include, but not necessarily be limited to a schedule and cost for completion of decommissioning and reclamation activities. As part of each annual report, the Licensee shall report on the status of the decommissioning plan.
 43. During the term of the licence, the Licensee shall submit to the Board a plan for any well proposed to be decommissioned.
 44. All disturbed ground surfaces shall be re-graded in a manner which is consistent with the topography of the site and which prevents erosion and surface runoff from carrying sediment into any Watercourse. Where soil conditions permit, disturbed areas shall be re-vegetated with appropriate reclamation seeds and/or plant species that are native in Yukon.
 45. All construction materials, equipment, temporary structures and debris shall be removed from the site upon completion of the work.
 46. Subject to any required assessments, authorizations or approvals, the Licensee shall implement the plan required by this section of this licence.
-

SCHEDULE A - MONITORING AND SURVEILLANCE REQUIREMENTS**1. LOCATIONS OF SAMPLING STATIONS**

Sampling Station	Description
HJ-1b	Water supply from Well #3
HJ-1d	Water supply from Well #5
HJ-3	Influent to sewage treatment facility
HJ-4	Effluent from sewage treatment facility at the outlet of aerobic lagoon #3
HJ-5	Dezadeash River immediately upstream of outfall from sewage treatment facility
HJ-6	Dezadeash River 1000 metres downstream of outfall from sewage treatment facility (mid-channel)
HJ-8	Outlet of wetland treatment area or ponded water within wetland.

2. SAMPLING AND MONITORING FREQUENCY

Analysis	Station						
	HJ-1b	HJ-1d	HJ-3	HJ-4	HJ-5	HJ-6	HJ-8
Fecal Coliform	-	-	-	A**	BW*	BW*	BW*
Total Coliforms	-	-	-	-	-	BW*	BW*
Dissolved Oxygen	-	-	-	BW*	BW*	BW*	-
Specific Conductance	-	-	-	BW*	BW*	BW*	-
Temperature	-	-	-	BW*	BW*	BW*	-
BOD ₅	-	-	-	BW*	A*	A*	BW*
Suspended Solids	-	-	-	BW*	BW*	BW*	BW*
pH	-	-	-	BW*	BW*	BW*	BW*
Oil and Grease	-	-	-	BW*	-	A*	BW*
Ammonia	-	-	-	BW*	BW*	BW*	BW*
Total Phosphorous	-	-	-	BW*	BW*	BW*	BW*
Bioassay ¹ (LC ₅₀ static 96 hour bioassay-100%)	-	-	-	A**	-	-	-
Flow Rate	D	D	D	D*	-	-	-
Water Surface Elevation	Q	M	-	-	-	-	-

Note: ¹ bioassay using rainbow trout, pH non-adjusted.

LEGEND

D = Daily, BW = Every two weeks, Q = Quarterly, A = Annually, M = Monthly

* = When discharging, ** = Prior to discharge

REASONS FOR DECISION

WATER USE APPLICATION MN12-009 (AMEND. TO MN11-030) Village of Haines Junction Haines Junction, Yukon

The Yukon Water Board (“the Board”) has concluded deliberations pertaining to Water Use Application MN12-009 to amend Type A Licence MN11-030 for a municipal undertaking.

The purpose of the application is to amend the current licence to include provisions for the addition of an underground water reservoir to the Village of Haines Junction municipal water system.

Notice of this application was provided in accordance with the requirements of the *Waters Act*. In response, the Board did not received any interventions.

The Board did not receive a request for a public hearing.

In making licensing decisions pertaining to this application, the Board took into account the *Waters Act*, *Waters Regulation*, the application, recommendations from the interveners, the Board's standard licence requirements, the *Yukon Environmental and Socio-economic Assessment Act* (“YESAA”) Decision Document, Chapter 14 of the Umbrella Final Agreement (“UFA”) and Board policies.

Environmental Assessment

This application required an environmental assessment under the YESAA.

Prior to making licensing decisions, the Board reviewed the YESAA Decision Document that is included in the water use register. As per section 86 of YESAA, the Board is satisfied that the issuance of amendment #1 to licence MN11-030 is not contrary to the terms and conditions included in the YESAA Decision Document.

UFA-Chapter 14

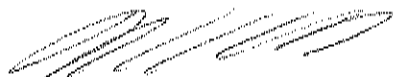
The proposed activity is for increased water storage, and does not increase the volume of water the applicant is already licensed to withdraw on a daily bases. Since there is no change in the amount of water being withdrawn, the Board determined that this project will not substantially alter the quantity, quality or rate of flow of water flowing on, through or adjacent to settlement land, including seasonal rate of flow.

Water Use Licence MN11-030 (amendment #1)
Village of Mayo

Page 2 of 2

Conclusion

The Board has relied on the representations, warranties and undertakings provided by the Licensee in the material filed in the application. The Board has approved the issuance of Water Use Licence MN11-030 with amendment #1.



Chairperson
Yukon Water Board

April 13, 2012
Date

YUKON WATER BOARD

Pursuant to the *Waters Act* and *Waters Regulation*, the Yukon Water Board hereby grants a Type B water licence for a municipal undertaking to:

Kaminak Gold Corporation
Suite 1020 – 800 West Pender Street
Vancouver BC V6C 2V6

LICENCE NUMBER: MN12-014

LICENCE TYPE: B **UNDERTAKING:** MUNICIPAL

WATER MANAGEMENT AREA: 02 Yukon

LOCATION: Yukon River

MAP CO-ORDINATES: Latitude: 62° 54' 47" N Longitude: 139° 4' 58" W

PURPOSE: To withdraw and store water, operate a wastewater treatment and disposal system, and construct and manage a wastewater lagoon for an 80-person camp.

EFFECTIVE DATE: The effective date of this licence shall be the date on which the signature of the Chairperson of the Yukon Water Board is affixed.

EXPIRY DATE: July 11, 2016

This licence shall be subject to the restrictions and conditions contained herein and to the restrictions and conditions contained in the *Waters Act* and the *Waters Regulation* made thereunder.

Dated this 18th day of

Approved by:

April, 2012.

Kelly Dary
Witness


Chairperson
YUKON WATER BOARD

PART A - DEFINITIONS

“Act” means *Waters Act* and any amendments thereto.

“Application” means Water Use Application MN12-014, including any additional submissions and/or revisions submitted to the Yukon Water Board by the Licensee, up to the date of the Board’s decision.

“Board” means the Yukon Water Board.

“Inspector” means any person designated as an Inspector under the Act.

“Natural Boundary” means the visible high water mark of any lake, river, stream or other body of water where the presence and action of water is so common and usual and so long continued as to mark upon the soil of the bed of the lake, river, stream or other body of water a character distinct from that of the banks thereof, both in respect to vegetation and in respect to the nature of the soil itself. In addition, the best estimates of the edge of dormant or old side channels and marsh areas are considered to be Natural Boundaries.

“Regulation” means the *Waters Regulation* made under the Act.

“Spill Contingency Plan” means the *Emergency and Spill Contingency Plan for Coffee Gold Project 2012-2016* that was submitted as part of the Application and included in Water Use Register MN12-014 as exhibit 1.5 and any subsequent revisions.

“Waste” means any substance as defined in the Act.

“Watercourse” means any stream, lake, pond, river, creek, spring, ravine or swamp whether ordinarily containing water or not.

“Wetted Perimeter” means the horizontal extent of the present water level while the work is taking place.

PART B - GENERAL CONDITIONS

Other Laws

1. No condition of the water use licence limits applicability of any statutory authority.
2. All construction or installation of works authorized by this licence shall occur on property that the Licensee has the right to enter upon and use for that purpose.

Correspondence

3. Where any direction, notice, order or report under this licence is required to be in writing, it shall be given:

- a) To the Licensee, if delivered, faxed or mailed by registered mail to the following address:

Kaminak Gold Corporation
Suite 1020 – 800 West Pender Street
Vancouver BC V6C 2V6
Fax: (604) 646-4526

and shall be deemed to have been given to the Licensee on the day it was delivered or faxed, or 7 days after the day it was mailed, as the case may be.

- b) To the Board, if delivered, faxed or mailed by registered mail to the following address:

Yukon Water Board
Suite 106, 419 Range Road
Whitehorse YT Y1A 3V1
Fax: (867) 456-3890

and shall be deemed to have been given to the Board on the day it was delivered or faxed, or 7 days after the day it was mailed, as the case may be.

- c) The Board or the Licensee may, by notice in writing, change its address for delivery.

Non-Compliance

4. In the event that the Licensee fails to comply with any provision or condition of this licence, the Board may, subject to the Act, cancel the licence.

Spills and Unauthorized Discharges

5. Where a spill or an unauthorized discharge occurs, that is of a reportable quantity under the Yukon *Spills Regulations*, the Licensee shall immediately contact the 24-hour Yukon Spill Report number, (867) 667-7244 and implement the Spill Contingency Plan. A detailed written report on any such event including, but not limited to, dates, quantities, parameters, causes and other relevant details and explanations, shall be submitted to the Board not later than 10 days after the occurrence.
6. The Licensee shall apply the relevant procedures in the Spill Contingency Plan. The Licensee shall review the Spill Contingency Plan annually and shall provide a summary of that review, including any revisions to the plan, as a component of the annual report.
7. The Licensee shall maintain a log book of all spill or unauthorized discharge occurrences, including spills that are less than the reportable quantities under the Yukon *Spills Regulations*. The log book shall be made available at the request of an Inspector. The log book shall include, but not necessarily be limited to the:

- a) date and time of the spill;
 - b) substance spilt or discharged;
 - c) approximate amount spilt or discharged;
 - d) distance between the spill or discharge and the nearest Watercourse; and
 - e) remedial measures taken to contain and clean-up the spill area or to cease the unauthorized discharge.
8. The Licensee shall include a summary of all spills or unauthorized discharges that occurred during the year reported, as part of the annual report.
 9. All personnel shall be trained in procedures to be followed and the equipment to be used in the containment of a spill.
 10. Prior to the commencement of construction, the Licensee shall update the Spill Contingency Plan and provide the updated plan to the Board.
 11. The Spill Contingency Plan shall be posted on site for the duration of the works.

Fuel Storage and Transfer

12. Fuel, lubricants, hydraulic fluids, coolants and similar substances shall be stored and/or transferred a minimum of 30 metres from the Natural Boundary of any Watercourse, in such a way that said substances are not deposited in or allowed to be deposited in waters.

PART C - OPERATING CONDITIONS

13. The Licensee is hereby authorized to:
 - a) withdraw and store water from the Yukon River for municipal purposes up to a maximum of 20 m³/day;
 - b) operate a wastewater treatment and disposal system;
 - c) construct a wastewater treatment lagoon;
 - d) operate, maintain and decommission wastewater treatment lagoons; and
 - e) deposit a waste to groundwater;as described in the Application, and subject to the conditions of this licence. Where there is a discrepancy between the Application and this licence, the conditions of this licence shall prevail.
14. The Licensee shall operate and maintain the wastewater treatment facility in a manner which is consistent with standard municipal practices.

Water Pumps

15. All engine driven pumps shall be contained within an impermeable liner/structure that has the capacity to contain 110% of the maximum combined volumetric capacity of the fuel, lubricants and coolants within the engine of the water pump.
16. The Licensee shall provide barriers consisting of fish guards, screens, coverings or nets on all water intakes as follows:
 - a) Screens or nets shall have a minimum of 3.5 openings per centimetre and openings no greater than 3.2 millimetres along any given side.
 - b) If a punch plate or similar material is used, openings shall be no greater than 3.2 millimetres in length or width.
 - c) There shall be no less than 929 square centimetres of open screen for every 205 litres per minute being withdrawn.
 - d) The barriers shall be monitored and maintained to ensure that they function effectively at all times when water is being withdrawn.
 - e) The barriers shall be designed and installed in such a manner that the screen is submerged and a uniform flow distribution is maintained through the total screen area.
 - f) Water shall not be withdrawn when the barrier is removed for renewal, repair or inspection.
 - g) The Licensee shall cease pumping or decanting and take remedial action if there is alteration to the bed or bank of the water channel.

PART D – EFFLUENT QUALITY STANDARDS

17. Waste discharged to lagoon 3 from the wastewater treatment systems at station C-2 or station C-3, as described in Schedule A of this licence, shall not exceed the following effluent discharge standards:

Parameter	Maximum Concentration in a Grab Sample
pH	6 to 9 pH units
CBOD ₅	25 mg/L
Total Suspended Solids (TSS)	25 mg/L
Total Residual Chlorine (TRC)	0.02 mg/L
Un-ionized Ammonia (NH ₃) ¹	1.25 mg/L @15°C ± 1°C
Oil and Grease	5 mg/L
Fecal Coliform	100 counts/ 100ml

¹ In situ temperature and pH readings are required to be taken for this parameter.

PART E – MONITORING AND SURVEILLANCE

18. The Licensee shall establish a water quality monitoring stations, C-1, C-2, C-3, MW-1, MW-2, MW-3, and MW-4, as described in table A-1 of Schedule A. The Licensee shall submit to the Board the UTM coordinates of these newly established monitoring stations when submitting the first monitoring results for these stations.
19. The Licensee shall comply with the water quality monitoring program and surveillance network program contained in Schedule A of this licence.
20. All data collection and analyses shall be conducted in accordance with the most recent edition of Standard Methods for the Examination of Water and Wastewater, prepared and published jointly by the American Waterworks Association and the Water Pollution Control Federation.
21. The Licensee shall compile data relating to the surveillance network program into a monthly report. The report shall be submitted to the Board within 30 of the end of each month for which the report is compiled.

Physical Inspections and Monitoring

22. An annual inspection of the lagoons shall be carried out by a Professional Engineer licensed to practice in Yukon. A report on the inspection, prepared by the Professional Engineer, shall be submitted as part of the annual report. The report shall document the inspection locations and methodologies, the results of the inspection, all problems identified, and remedial measures recommended.
23. The Licensee shall monitor and record observations pertaining to the stability of the lagoon berms. If monitoring indicates potential berm failure, corrective action shall be taken.

PART F - DESIGN AND CONSTRUCTION

24. Notification, including the name and phone number of the field supervisor, shall be provided to the Board, in writing, 10 days prior to the start of construction and upgrading of the sewage collection, treatment, and disposal infrastructure.

Design

25. The Licensee shall provide to the Board, verification to confirm whether or not the existing sewage collection infrastructure, including the pumping station and forcemain, are adequate to receive sewage for an 80-person camp. If existing sewage collection infrastructure requires upgrading, the Licensee shall submit design drawings and specifications of any proposed upgrades a minimum of 30 days prior to the commencement of construction. The design drawings shall be sealed by a Professional Engineer licensed to practice in Yukon.

26. The Licensee shall provide to the Board, final design drawings or a final design report for the wastewater treatment plant, a minimum of 10 days prior to the commissioning of the wastewater treatment plant. The final design drawings or a final design report shall be sealed by a Professional Engineer licensed to practice in Yukon
27. Within 60 days of the completion of the construction of the lagoon 3 and any upgrades of the sewage collection infrastructure, the Licensee shall submit to the Board, as-built design drawings of the lagoon, sealed by a Professional Engineer licensed to practice in Yukon.
28. Where site conditions require minor modifications to the designs submitted to the Board, the Licensee shall notify the Board, a minimum of 10 days in advance, of the details of the modifications or variations from final detailed design, specifications and quality assurance/quality control procedures previously submitted to the Board, provide a detailed construction schedule and the name and contact number(s) of the construction superintendent. The notice shall be in writing and must include an explanation of the reasons for the change and an assessment of the potential impact on the performance of the works. The notice shall be sealed by a Professional Engineer licensed to practice in Yukon.

Construction

29. All works associated with the undertaking shall be maintained in good repair.
30. Construction and/or maintenance equipment shall be mechanically sound and free of leaks.
31. Granular bedding and backfill material shall consist of non-frozen material.
32. Waste substances shall be used, transported, stored or disposed of in such a manner that they are not deposited, or allowed to be deposited, into any Watercourse or on any surrounding land, unless authorized by this licence.
33. Except as authorized by this licence, no Waste shall enter any Watercourse as a result of any operation carried out by the Licensee.
34. No Waste shall enter any Watercourse as a result of any operation carried out by the Licensee.
35. All disturbed ground surfaces shall be stabilized in such a manner so as to prevent erosion and surface runoff from carrying sediment into any Watercourse.

PART G - REPORTS

Annual Reports

36. On or before the anniversary of the date of issuance of this licence, and for each year during which this licence is in effect, the Licensee shall submit an annual report to the Board. The report shall include the information required by the Regulation including, but not necessarily limited to:

- a) summaries of all data generated as a result of the monitoring requirements of this licence, prepared by an individual or firm qualified to do so, including at a minimum:
 - i. analysis and interpretation of the water data; and
 - ii. any variances from baseline conditions or from previous years' data;
- b) a record of the construction activities for the year reported;
- c) a description of the water use operations, including operational difficulties, significant maintenance work, and modifications carried out during the year reported;
- d) the quantity of water used each day;
- e) copies of all orders, directions and correspondence relating to drinking water sampling or analysis from the Medical Health Officer or from a Health Officer; and
- f) the inspection results required by the physical monitoring program, as described in clause 22 of this Licence;
- g) a detailed record of any major maintenance work carried out or planned to be carried out that could have an impact on water;
- h) details of any maintenance, inspection and/or surveillance activities undertaken in the previous year; and
- i) any reclamation or decommissioning of the water treatment system.

Monthly Reports

37. Unless otherwise specified in this Licence, the Licensee shall forward to the Board a copy of all data collected as part of the monthly monitoring program, as described in Schedule A of this Licence, on a monthly basis while operating, and no more than 30 days after the conclusion of the month in which the data was collected.

Reports

38. All reports required to be submitted to the Board will be unbound and reproducible by standard photocopier, accompanied by one electronic copy on a CD/DVD.
39. The Licensee shall provide to the Board 5 additional copies of all reports. The additional copies may be either 5 bound paper copies or 5 electronic copies on individual CDs/DVDs.
40. Electronic copies shall be Windows computer compatible in one of the following formats: Word 97 - 2003, Excel 97 - 2003 workbooks, or Adobe .pdf format. Water quality results must be presented in Excel 97-2003.xls format.

PART H - SITE DECOMMISSIONING AND RESTORATION

41. The Licensee shall submit a decommissioning plan to the Board, 90 days prior to commencing decommissioning activities.
 42. As part of final decommissioning, all disturbed ground surfaces shall be regraded in a manner which is consistent with the topography of the site and which prevents erosion and surface runoff from carrying sediment into any Watercourse.
 43. All wastewater treatment infrastructure, equipment, temporary structures and debris shall be removed from the site as part of final decommissioning of the wastewater treatment system.
-

SCHEDULE A: MONITORING AND SUEILLANCE

Table A-1: Location of Sampling Stations

Sampling Station	Water Monitoring Location Description	Northing ¹	Easting ¹
C-1	Influent to Wastewater Treatment System		
C-2	Compliance Point- Discharge from Wastewater Treatment Plant prior to entering lagoon #3		
C-3	Compliance Point -Discharge from lagoon #2 prior to entering lagoon #3		
MW-1	Groundwater Monitoring Well 1 -- North-East of Waste Water Treatment System		
MW-2	Groundwater Monitoring Well 2 -- South-East of Waste Water Treatment System		
MW-3	Groundwater Monitoring Well 3 -- South-West of Waste Water Treatment System		
MW-4	Groundwater Monitoring Well 4 -- North-West of Waste Water Treatment System		

¹Locations to be provided upon submission of first monitoring report as per clause 18 of this licence.

Table A-2: Water Quality Monitoring Parameters and Sampling Frequencies

Parameter	C-1	C-2	C-3	MW-1	MW-2	MW-3	MW-4
Flow	D	-	-	-	-	-	-
pH (<i>in situ</i> and laboratory)	-	M2	M3	C/ J/ S	C/ J/ S	C/ J/ S	C/ J/ S
Temperature (<i>in situ</i>)	-	M2	M3	C/ J/ S	C/ J/ S	C/ J/ S	C/ J/ S
Specific Conductance	-	M2	M3	C/ J/ S	C/ J/ S	C/ J/ S	C/ J/ S
Total Suspended Solids (TSS)	-	M2	M3	C/ J/ S	C/ J/ S	C/ J/ S	C/ J/ S
Total Residual Chlorine (TRC)	-	M2	M3	C/ J/ S	C/ J/ S	C/ J/ S	C/ J/ S
Un-ionized Ammonia (NH ₃) ¹	-	M2	M3	C/ J/ S	C/ J/ S	C/ J/ S	C/ J/ S
Oil and Grease	-	M2	M3	C/ J/ S	C/ J/ S	C/ J/ S	C/ J/ S
Fecal Coliform	-	M2	M3	C/ J/ S	C/ J/ S	C/ J/ S	C/ J/ S
<i>E. coli</i>	-	-	-	C/ J/ S	C/ J/ S	C/ J/ S	C/ J/ S
Organic Phosphorus (as P)	-	-	-	C/ J/ S	C/ J/ S	C/ J/ S	C/ J/ S
Total Phosphorus (as P)	-	-	-	C/ J/ S	C/ J/ S	C/ J/ S	C/ J/ S
Total Nitrogen (as N)	-	-	-	C/ J/ S	C/ J/ S	C/ J/ S	C/ J/ S
Nitrites	-	-	-	C/ J/ S	C/ J/ S	C/ J/ S	C/ J/ S
Nitrates	-	-	-	C/ J/ S	C/ J/ S	C/ J/ S	C/ J/ S
Chloride	-	-	-	C/ J/ S	C/ J/ S	C/ J/ S	C/ J/ S

Table A-3: Monitoring Schedule Frequency Legend

Symbol	Frequency
D	Daily when operating
M2	Monthly, when discharging directly from the wastewater treatment plant to lagoon #3
M3	Monthly when discharging directly from the lagoon #2 to lagoon #3
C	One time initial characterization of groundwater prior to effluent entering lagoon #3
J	Annual July sampling event
S	Annual September sampling event

YUKON WATER BOARD

Pursuant to the *Waters Act* and *Waters Regulation*, the Yukon Water Board hereby grants a Type B water licence for a municipal undertaking to:

Golden Predator Corporation
201A-170 Titanium Way
Whitehorse YT Y1A 0G1

LICENCE NUMBER: MN12-038

LICENCE TYPE: B **UNDERTAKING:** MUNICIPAL

WATER MANAGEMENT AREA: 02

LOCATION: Brewery Creek Mine Site

MAP CO-ORDINATES: Center: Latitude: 64° 3' 7" N Longitude: 138° 11' 23" W

PURPOSE: Obtain groundwater and upgrade existing septic system for camp use.

EFFECTIVE DATE: The effective date of this licence shall be the date on which the signature of the Chairperson of the Yukon Water Board is affixed.

EXPIRY DATE: July 5, 2022

This licence shall be subject to the restrictions and conditions contained herein and to the restrictions and conditions contained in the *Waters Act* and the *Waters Regulation* made thereunder.

Dated this 6th day of

Approved by:

August, 2012.


Witness


Chairperson
YUKON WATER BOARD

PART A - DEFINITIONS

“Act” means *Waters Act* and any amendments thereto.

“Application” means Water Use Application MN12-038, including any additional submissions and/or revisions submitted to the Yukon Water Board by the Licensee, up to the date of the Board’s decision.

“Board” means the Yukon Water Board.

“Inspector” means any person designated as an Inspector under the Act.

“Natural Boundary” means the visible high water mark of any lake, river, stream or other body of water where the presence and action of water is so common and usual and so long continued as to mark upon the soil of the bed of the lake, river, stream or other body of water a character distinct from that of the banks thereof, both in respect to vegetation and in respect to the nature of the soil itself. In addition, the best estimates of the edge of dormant or old side channels and marsh areas are considered to be Natural Boundaries.

“Regulation” means the *Waters Regulation* made under the Act.

“Spill Contingency Plan” means the *Spill Contingency Plan for Brewery Creek Project, Golden Predator Corporation 2012-2019* that was submitted as part of the Application and included in Water Use Register MN12-038 as exhibit 1.8, and any subsequent revisions.

“Waste” means any substance as defined in the Act.

“Watercourse” means any stream, lake, pond, river, creek, spring, ravine or swamp whether ordinarily containing water or not.

“Wetted Perimeter” means the horizontal extent of the present water level while the work is taking place.

PART B - GENERAL CONDITIONSOther Laws

1. No condition of the water use licence limits applicability of any statutory authority.
2. All construction or installation of works authorized by this licence shall occur on property that the Licensee has the right to enter upon and use for that purpose.

Correspondence

3. Where any direction, notice, order or report under this licence is required to be in writing, it shall be given:

- a) To the Licensee, if delivered, faxed or mailed by registered mail to the following address:

Golden Predator Corporation
201A-170 Titanium Way
Whitehorse YT Y1A 0G1
Fax: (867) 633-3011

and shall be deemed to have been given to the Licensee on the day it was delivered or faxed, or 7 days after the day it was mailed, as the case may be.

- b) To the Board, if delivered, faxed or mailed by registered mail to the following address:

Yukon Water Board
Suite 106, 419 Range Road
Whitehorse, YT Y1A 3V1
Fax: (867) 456-3890

and shall be deemed to have been given to the Board on the day it was delivered or faxed, or 7 days after the day it was mailed, as the case may be.

- c) The Board or the Licensee may, by notice in writing, change its address for delivery.

Spills and Unauthorized Discharges

4. Where a spill or an unauthorized discharge occurs, that is of a reportable quantity under the Yukon *Spills Regulations*, the Licensee shall immediately contact the 24-hour Yukon Spill Report number, (867) 667-7244 and implement the Spill Contingency Plan. A detailed written report on any such event including, but not limited to, dates, quantities, parameters, causes and other relevant details and explanations, shall be submitted to the Board not later than 10 days after the occurrence.
5. The Licensee shall apply the relevant procedures in the Spill Contingency Plan. The Licensee shall review the Spill Contingency Plan annually and shall provide a summary of that review, including any revisions to the plan, as a component of the annual report.
6. The Licensee shall maintain a log book of all spill or unauthorized discharge occurrences, including spills that are less than the reportable quantities under the Yukon *Spills Regulations*. The log book shall be made available at the request of an Inspector. The log book shall include, but not necessarily be limited to the:

- a) date and time of the spill;
 - b) substance spilt or discharged;
 - c) approximate amount spilt or discharged;
 - d) distance between the spill or discharge and the nearest Watercourse; and
 - e) remedial measures taken to contain and clean-up the spill area or to cease the unauthorized discharge.
7. The Licensee shall include a summary of all spills or unauthorized discharges that occurred during the year reported, as part of the annual report.
8. All personnel shall be trained in procedures to be followed and the equipment to be used in the containment of a spill.
9. The Spill Contingency Plan shall be posted on site for the term of this licence.

Non-Compliance

10. In the event that the Licensee fails to comply with any provision or condition of this licence, the Board may, subject to the Act, cancel the licence.

Fuel Storage and Transfer

11. Fuel, lubricants, hydraulic fluids, coolants and similar substances shall be stored and/or transferred a minimum of 30 metres from the Natural Boundary of any Watercourse, in such a way that said substances are not deposited in or allowed to be deposited in waters.

Annual Reports

12. On or before the anniversary of the date of issuance of this licence, and for each year during which this licence is in effect, the Licensee shall submit an annual report to the Board. The report shall include the information required by the Regulation including, but not necessarily limited to:
- a) a description of the water use operations carried out during the year reported; and
 - b) the quantity of water used each day from a groundwater well for camp purposes or fire suppression, as applicable; and
 - c) any reclamation to the site; and
 - d) copies of all orders, directions and correspondence relating to drinking water sampling or analysis from the Medical Health Officer or from a Health Officer; and
 - e) inspection results, including photographs, repairs or plans for modification required to the groundwater well or the septic system; and
 - f) a detailed record of any maintenance work carried out or planned to be carried out that could have an impact on water; and
 - g) details of any failure encountered during the use of the septic system and actions taken to store or dispose of camp wastewater.

Reports

13. All reports required to be submitted to the Board will be unbound and reproducible by standard photocopier, accompanied by one electronic copy on a CD/DVD.
14. The Licensee shall provide to the Board 5 additional copies of all reports. The additional copies may be either 5 bound paper copies or 5 electronic copies on individual CDs/DVDs.
15. Electronic copies shall be Windows computer compatible in one of the following formats: Word 97 - 2003, Excel 97 - 2003 workbooks, or Adobe .pdf format.

Term of Licence

16. The term of this licence is for the period from the effective date to July 5, 2022.

PART C - OPERATING CONDITIONSDescription of Water Use and Deposit of Waste

17. The Licensee is hereby authorized to:
 - a) obtain a maximum quantity of 50 m³/d of water for camp use and fire suppression purposes; and
 - b) store water for camp use and fire suppression purposes; and
 - c) upgrade the existing septic system to accommodate a maximum 120 persons by replacing tanks and associated piping; and
 - d) discharge camp sewage and greywater to ground via the septic system; and
 - e) construct earthworks and erosion protection,as described in the Application, and subject to the conditions of this licence. Where there is a discrepancy between the Application and this licence, the conditions of this licence shall prevail.
18. Notification, including the name and phone number of the mine site supervisor, shall be provided to the Board, in writing, 10 days prior to the commencement of camp expansion to 120 persons.
19. All works associated with the undertaking shall be maintained in good repair.
20. All equipment on site shall be mechanically sound and free of leaks.
21. Granular bedding and backfill material shall consist of non-frozen material.
22. Excavated material shall be deposited to a Waste disposal area a minimum of 10 horizontal metres beyond the Natural Boundary of the any Watercourse.

23. Waste substances shall be used, transported, stored or disposed of in such a manner that they are not deposited, or allowed to be deposited, into any Watercourse or on any surrounding land, unless authorized by this licence.
24. Except as authorized by this licence, no Waste shall enter any Watercourse as a result of any operation carried out by the Licensee.
25. All disturbed ground surfaces shall be stabilized in such a manner so as to prevent erosion and surface runoff from carrying sediment into any Watercourse.

Fertilizer

26. Fertilizer is prohibited from use for all water use and Waste deposit activities authorized by this licence.

PART D - DESIGN AND CONSTRUCTION

Design

27. Ten days prior to the commencement of expanding the camp to accommodate 120 persons, the Licensee shall submit to the Board as-built drawings for upgrades to the existing septic system. The drawings must be consistent with the drawings which were submitted as part of the Application and must be sealed by a Professional Engineer licensed to practice in Yukon.

Minor Modifications

28. Where site conditions require minor modifications to the designs submitted to the Board, the Licensee shall notify the Board, a minimum of 10 days in advance, of the details of the modifications or variations from final detailed design, specifications and quality assurance/quality control procedures previously submitted to the Board, provide a detailed construction schedule and the name and contact number(s) of the construction superintendent. The notice shall be in writing and must include an explanation of the reasons for the change and an assessment of the potential impact on the performance of the works. The notice shall be sealed by a Professional Engineer licensed to practice in Yukon.

PART E - SITE DECOMMISSIONING AND RESTORATION

29. All disturbed ground surfaces shall be regraded in a manner which is consistent with the topography of the site and which prevents erosion and surface runoff from carrying sediment into any Watercourse. Where soil conditions permit, disturbed areas shall be re-vegetated with appropriate reclamation seeds and/or plant species that are native in Yukon.
 30. All construction materials, equipment, temporary structures and debris shall be removed from the site upon completion of the work.
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YUKON WATER BOARD

Pursuant to the *Waters Act* and *Waters Regulation*, the Yukon Water Board hereby grants a Type B water licence for a municipal undertaking to:

Northern Cross (Yukon) Limited
201B – 1191 First Avenue
Whitehorse YT Y1A 0K5

LICENCE NUMBER: MN12-061

LICENCE TYPE: B **UNDERTAKING:** MUNICIPAL

WATER MANAGEMENT AREA: 5

LOCATION: Eagle River and Glacier Creek, Eagle Plains

MAP CO-ORDINATES: Latitude: 66° 20' 53" N Longitude: 136° 51' 33" W

PURPOSE: To withdraw and store water, operate and maintain wastewater treatment and disposal systems for a main camp, mobile camps and drill site camps.

EFFECTIVE DATE: The effective date of this licence shall be the date on which the signature of the Chairperson of the Yukon Water Board is affixed.

EXPIRY DATE: December 10, 2022

This licence shall be subject to the restrictions and conditions contained herein and to the restrictions and conditions contained in the *Waters Act* and the *Waters Regulation* made thereunder.

Dated this 10th day of

Approved by:

December, 2012.

Natasha Sandys
Witness

R. Johnson
Chairperson
YUKON WATER BOARD

PART A - DEFINITIONS

“Act” means *Waters Act* and any amendments thereto.

“Application” means Water Use Application MN12-061, including any additional submissions and/or revisions submitted to the Yukon Water Board by the Licensee, up to the date of the Board’s decision.

“Board” means the Yukon Water Board.

“Inspector” means any person designated as an Inspector under the Act.

“Natural Boundary” means the visible high water mark of any lake, river, stream or other body of water where the presence and action of water is so common and usual and so long continued as to mark upon the soil of the bed of the lake, river, stream or other body of water a character distinct from that of the banks thereof, both in respect to vegetation and in respect to the nature of the soil itself. In addition, the best estimates of the edge of dormant or old side channels and marsh areas are considered to be Natural Boundaries.

“Regulation” means the *Waters Regulation* made under the Act.

“Riparian Zone” means a portion of the stream bank, either vegetated or not, immediately adjacent to the stream channel and is measured from the high water mark on each bank of the watercourse and follows the shape of the channel.

“Sludge Management Plan” means the *Sludge Management Plan* that was submitted as part of the Application and included in Water Use Register MN12-061 as exhibit 1.8.1, and any subsequent revisions.

“Spill Contingency Plan” means the *Eagle Plains Emergency Spill and Response Plan* that was submitted as part of the Application and included in Water Use Register MN12-061 as exhibit 1.4.1, and any subsequent revisions.

“Waste” means any substance as defined in the Act.

“Watercourse” means any stream, lake, pond, river, creek, spring, ravine or swamp whether ordinarily containing water or not.

“Wetted Perimeter” means the horizontal extent of the present water level while the work is taking place.

PART B - GENERAL CONDITIONSOther Laws

1. No condition of the water use licence limits applicability of any statutory authority.
2. All construction or installation of works authorized by this licence shall occur on property that the Licensee has the right to enter upon and use for that purpose.

Correspondence

3. Where any direction, notice, order or report under this licence is required to be in writing, it shall be given:
 - a) To the Licensee, if delivered, faxed or mailed by registered mail to the following address:

Northern Cross (Yukon) Limited
201B – 1191 First Avenue
Whitehorse YT Y1A 0K5
Fax: (867) 456-7815

and shall be deemed to have been given to the Licensee on the day it was delivered or faxed, or 7 days after the day it was mailed, as the case may be.

- b) To the Board, if delivered, faxed or mailed by registered mail to the following address:

Yukon Water Board
Suite 106, 419 Range Road
Whitehorse YT Y1A 3V1
Fax: (867) 456-3890

and shall be deemed to have been given to the Board on the day it was delivered or faxed, or 7 days after the day it was mailed, as the case may be.

- c) The Board or the Licensee may, by notice in writing, change its address for delivery.

Spills and Unauthorized Discharges

4. Where a spill or an unauthorized discharge occurs, that is of a reportable quantity under the *Yukon Spills Regulations*, the Licensee shall immediately contact the 24-hour Yukon Spill Report number, (867) 667-7244 and implement the Spill Contingency Plan. A detailed written report on any such event including, but not limited to, dates, quantities, parameters, causes and other relevant details and explanations, shall be submitted to the Board not later than 10 days after the occurrence.

5. The Licensee shall apply the relevant procedures in the Spill Contingency Plan. The Licensee shall review the Spill Contingency Plan annually and shall provide a summary of that review, including any revisions to the plan, as a component of the annual report.
6. The Licensee shall maintain a log book of all spill or unauthorized discharge occurrences, including spills that are less than the reportable quantities under the *Yukon Spills Regulations*. The log book shall be made available at the request of an Inspector. The log book shall include, but not necessarily be limited to the:
 - a) date and time of the spill;
 - b) substance spilt or discharged;
 - c) approximate amount spilt or discharged;
 - d) distance between the spill or discharge and the nearest Watercourse, and
 - e) remedial measures taken to contain and clean-up the spill area or to cease the unauthorized discharge.
7. The Licensee shall include a summary of all spills or unauthorized discharges that occurred during the year reported, as part of the annual report.
8. All personnel shall be trained in procedures to be followed and the equipment to be used in the containment of a spill.
9. The Spill Contingency Plan shall be posted on site for the duration of the works.

Non-Compliance

10. In the event that the Licensee fails to comply with any provision or condition of this licence, the Board may, subject to the Act, cancel the licence.

Fuel Storage and Transfer

11. Fuel, lubricants, hydraulic fluids, coolants and similar substances, with the exception with liquid contained within the water pump engine, shall be stored and/or transferred a minimum of 30 metres from the Natural Boundary of any Watercourse, in such a way that said substances are not deposited in or allowed to be deposited in waters.

Annual Reports

12. On or before the anniversary of the date of issuance of this licence, and for each year during which this licence is in effect, the Licensee shall submit an annual report to the Board. The report shall include the information required by the Regulation including, but not necessarily limited to:
 - a) description of the water use operations carried out during the year reported;
 - b) the quantity of water withdrawn per day;
 - c) the hours of pumping per day when water is withdrawn;
 - d) data collected according to the requirements of Part E of this licence;

- e) details of the methods, procedures and standards used in the collection and sample testing;
 - f) detailed record of the operation of the wastewater treatment facilities, including operational difficulties, significant maintenance work and modifications;
 - g) the results of any physical inspections of the wastewater treatment facilities as described in Part E of this licence;
 - h) the inspection results, including photographs, repairs or plans for modification required by the monitoring program;
 - i) details of the sludge monitoring, removal and disposal methods, as described in the Sludge Management Plan;
 - j) a detailed record of any major maintenance work carried out or planned to be carried out that could have an impact on water;
 - k) summaries of all data generated as a result of the requirements outlined in Part E of this licence, including analysis and interpretation by a qualified individual or firm and a discussion of any variances from baseline conditions or from previous years' data, and
 - l) any reclamation to the site.
13. Within six months of the issuance of this licence, the Licensee shall submit to the Board the geographic coordinates of the water withdrawal locations at Eagle River and Glacier Creek.

Reports

14. All reports required to be submitted to the Board will be unbound and reproducible by standard photocopier, accompanied by one electronic copy on a CD/DVD.
15. The Licensee shall provide to the Board 5 additional copies of all reports. The additional copies may be either 5 bound paper copies or 5 electronic copies on individual CDs/DVDs.
16. Electronic copies shall be Windows computer compatible in one of the following formats: Word 97 - 2003, Excel 97 - 2003 workbooks, or Adobe .pdf format. Water quality results must be presented in Excel 97-2003.xls format.

Water Sampling Event Reporting

17. Within one month of each sampling event the Licensee shall submit a monitoring report to the Board. The report shall include the following information, but not necessarily limited to:
- a) Final and complete analytical report from an accredited laboratory;
 - b) Comparison of analytical results in tabular format to the effluent quality standards listed in Part E of this licence; and,
 - c) Discussion of any irregularities and corrective action.

PART C - OPERATING CONDITIONSDescription of Water Use and Deposit of Waste

18. The Licensee is hereby authorized to:
- a) withdraw and store water from the Eagle River and from Glacier Creek at a combined maximum volume of 20 m³/day;
 - b) collect, store, treat and dispose of municipal wastewater at the Main Camp, mobile camps and drill site camps;
 - c) operate and maintain mechanical treatment systems located at the Main Camp, mobile camps and drill site camps;
 - d) operate and maintain a wastewater treatment lagoon and exfiltration system at the Main Camp; and
 - e) deposit a waste to ground,

as described in the Application, and subject to the conditions of this licence. Where there is a discrepancy between the Application and this licence, the conditions of this licence shall prevail.

19. All works associated with the undertaking shall be maintained in good repair.
20. All equipment on site shall be mechanically sound and free of leaks.

Water Acquisition

21. The Licensee shall provide barriers consisting of fish guards, screens, coverings or nets on all water intakes as follows:
- a) Screens or nets shall have a minimum of 3.5 openings per centimeter and openings no greater than 3.2 millimetres along any given side;
 - b) If a punch plate or similar material is used, openings shall be no greater than 3.2 millimetres in length or width;
 - c) There shall be no less than 929 square centimeters of open screen for every 205 litres per minute being withdrawn;
 - d) The barriers shall be monitored and maintained to ensure that they function effectively at all times when water is being withdrawn;
 - e) The barriers shall be designed and installed in such a manner that the screen is submerged and a uniform flow is maintained through the total screen area;
 - f) Water shall not be withdrawn when the barrier is removed for renewal, repair or inspection, and
 - g) The Licensee shall cease pumping or decanting and take remedial action if there is alteration the Riparian Zone or the bed or bank of the Watercourse resulting from any activity undertaken by the Licensee.
22. The withdrawal of any water shall not exceed ten percent of the instantaneous flow.