

PART A DEFINITIONS

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

“Application” means Application for water licence MN20-045, 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” refers to the plan that was submitted as part of the Application and included in register MN20-045 as exhibit 1.3, and any subsequent revisions.

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

“Watercourse” means a natural watercourse, body of water or water supply, whether usually containing water or not, and includes groundwater, springs, swamps, and gulches.

PART B DESCRIPTION OF WATER USE AND DEPOSIT OF WASTE

1. The Licensee is hereby authorized to:
 - a) operate, maintain, and decommission a black water septic system for the collection and treatment of wastewater; and
 - b) deposit of a waste by means of septic tanks and septic field which exfiltrates to ground, as described in the Application, and subject to the conditions of this Licence.
2. The Licensee must operate and maintain the sewage collection and sewage treatment in a manner that is consistent with standard municipal practices for the type of system.
3. Any deposit of Waste to a surface Watercourse is prohibited.

PART C DESIGN AND CONSTRUCTIONDesign

4. At a minimum of 30 days prior to the commencement of construction, the Licensee must submit to the Board final detailed design construction drawings and design report for the black water septic system. The submission must:
 - a) Be consistent with the preliminary design drawings which were submitted as part of the Application.
 - b) Be sealed by a professional engineer licensed to practice in Yukon.
 - c) Adhere to Government of Yukon, Environmental Health Services' publication *Design Specifications for Sewage Disposal Systems - A Guide to their Design and Maintenance*.
 - d) Include the locations of all standpipes.
 - e) Specify the maximum capacity of the design.
 - f) Show the estimated flow rates and rationale.
5. The Licensee must ensure the integrity of the system is maintained and measures are put in place to protect the public.
6. All construction must be carried out in accordance with the final design drawings.
7. Within 60 days of completion of construction for each structure, the Licensee must submit to the Board, as-built design drawings for the completed black water septic system, sealed by a professional engineer licensed to practice in Yukon.

Construction

8. Notification, including the name and phone number of the construction supervisor, must be submitted to the Board, in writing, 10 days prior to the start of construction.
9. Ten days prior to construction, the Licensee must submit safety data sheets to the Board for all petroleum products and/or hazardous materials that are to be present during this undertaking.
10. All works associated with the undertaking must be maintained in good repair.
11. Construction and/or maintenance equipment must be mechanically sound and free of leaks.
12. All material used in the construction of the black water septic field must consist of non-frozen material.

13. Excavated material from the septic field location must be deposited to a disposal area a minimum of 10 horizontal metres beyond the Natural Boundary of any Watercourse.
14. Waste substances must 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.
15. All disturbed ground surfaces must be stabilized in such a manner so as to prevent erosion and surface runoff from carrying sediment into any Watercourse.

Minor Modifications

16. Where site conditions require Minor Modifications to the final detailed design submitted to the Board, the Licensee must submit to the Board with the as-built drawings:
 - a) written details of the minor modifications made to the specifications and quality assurance/quality control procedures previously submitted to the Board as part of the Application; and
 - b) an explanation, signed by a professional engineer licensed to practice in Yukon, for the change, including an assessment of the potential impact on the performance of the works.

Fuel Storage and Transfer

17. Fuel, lubricants, hydraulic fluids, coolants and similar substances must 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 waters.

PART D MONITORING AND SURVEILLANCE

Physical Inspections and Monitoring

18. The Licensee must carry out physical inspections of the black water septic system, including the septic tank and septic field, and make any required repairs.
19. The Licensee must undertake visual inspections of the monitoring standpipes to assess the functionality of the system and take immediate action if there are signs of reduced functionality.

Monitoring Plan

20. Within one year of operation, the licensee must submit to the Board a monitoring plan for the black water septic system. The plan must include:
 - a) The schedule of physical monitoring of all infrastructure; and

- b) The schedule of visual inspections of the septic tanks, associated piping, the monitoring standpipes and the septic field.

- 21. The Licensee must keep the monitoring plan current and must submit any revisions to the plan to the Board within ten days of its revision.

PART E GENERAL CONDITIONS

- 22. Where there is a discrepancy between the Application and this Licence, the conditions of this Licence prevail.

- 23. The Licensee must ensure a copy of this Licence is maintained at the site during operations at all times.

Other Laws

- 24. No condition of this Licence limits the applicability of any statutory authority.
- 25. All construction or installation of works authorized by this Licence must occur on property that the Licensee has the right to enter upon and use for that purpose.

Correspondence

- 26. Where any direction, notice, order or report under this Licence is required to be in writing, it must be given:
 - a) To the Licensee, if delivered, faxed, e-mailed or mailed by registered mail, to the address identified on page 1 of this Licence, and must be deemed to have been given to the Licensee on the day it was delivered, faxed or e-mailed or 7 days after the day it was mailed, as the case may be; or
 - b) To the Board, if delivered, faxed, e-mailed 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
E-mail: ywb@yukonwaterboard.ca

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

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

Non-Compliance

28. 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 this Licence.

Spills and Unauthorized Discharges

29. Where a spill or an unauthorized discharge occurs, that is of a reportable quantity under the Yukon *Spills Regulations*, the Licensee must 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, must be submitted to the Board not later than 10 days after the occurrence.
30. The Licensee must apply the relevant procedures in the Spill Contingency Plan. The Licensee must review the Spill Contingency Plan annually and must provide a summary of that review, including any revisions to the plan, as a component of the annual report.
31. The Licensee must 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 must be made available at the request of an Inspector. The log book must include, but not necessarily be limited to:
- a) date and time of the spill;
 - b) substance spilt or discharged;
 - c) approximate amount spilt or discharged;
 - d) location of spill;
 - e) distance between the spill or discharge and the nearest Watercourse; and
 - f) remedial measures taken to contain and clean-up the spill area or to cease the unauthorized discharge.
32. The Licensee must include a summary of all spills or unauthorized discharges that occurred during the year reported, as part of the annual report.
33. All personnel must be trained in procedures to be followed and the equipment to be used in the containment of a spill.
34. Prior to the commencement of construction, the Licensee must update the Spill Contingency Plan and provide the updated plan to the Board.
35. The Spill Contingency Plan must be posted on site for the duration of the works.

Deliverables

36. The Licensee must provide to the Board one unbound, single-sided, paper copy of all deliverables required by this Licence. All deliverables, with the exception of design drawings must be reproducible by standard photocopier.
37. The Licensee must upload electronic copies of all reports required by this Licence to the Yukon Water Board's online licensing registry, Waterline. Electronic copies must be submitted in one of the following formats: MS Word, MS Excel, or Adobe .pdf format.

Annual Reports

38. 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 must submit an annual report to the Board. The report must include the information required by the Regulation including, but not necessarily limited to:
 - a) a description of the deposit of waste carried out during the year reported;
 - b) a detailed record of the operation of the black water septic system, including operational difficulties, significant maintenance work and modifications;
 - c) record of all pump outs from the septic tank;
 - d) the results of the inspections required in conditions 18 and 19, including photographs, repairs or plans for modification required to the septic tanks and septic field;
 - e) a detailed record of any maintenance work carried out or planned to be carried out that could have an impact on water;
 - f) summary of the review and revisions of the Spill Contingency Plan;
 - g) records of all spills/unauthorized discharges;
 - h) any reclamation to the site; and
 - i) details of any updates to the monitoring report required in conditions 20 and 21.

PART F SITE RECLAMATION, DECOMMISSIONING AND RESTORATION

39. All disturbed ground surfaces must 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 must be re-vegetated with appropriate reclamation seeds and/or plant species that are native in Yukon.
40. All construction materials, equipment, temporary structures and debris must be removed from the site upon completion of the work.

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41. In the event of decommissioning of the undertaking, all structures and associated equipment or infrastructure authorized by this Licence must either be removed or left in stable condition which does not present a risk to people or the environment.
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YUKON WATER BOARD

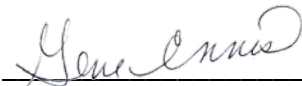
Pursuant to the *Waters Act* and *Regulation*, the Yukon Water Board hereby issues a water licence to:

LICENSEE:	Takhini Hot Springs Ltd.	
CONTACT INFORMATION:	Box 20404 Whitehorse, YT Y1A 7A2 E-mail: umbrich@gmail.com	
LICENCE NUMBER:	MN20-046	
UNDERTAKING:	Municipal	LICENCE TYPE: B
WATER MANAGEMENT AREA:	02 Yukon	
LOCATION:	Takhini Hot Springs, Whitehorse, Yukon	
MAP CO-ORDINATES:	Latitude: 60° 52' 42" N Longitude: 135° 21' 38" W	
PURPOSE:	To deposit a Waste associated with the operation of a greywater absorption field for the purpose of wastewater treatment.	
EFFECTIVE DATE:	March 25, 2021	
EXPIRY DATE:	March 24, 2046	

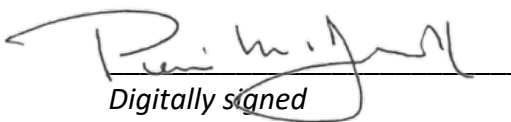
This Licence is subject to the restrictions and conditions contained herein and to the restrictions and conditions contained in the *Waters Act* and *Regulation*.

Dated this 25 day of
March, 2021

Approved by:



Digitally signed
Witness



Digitally signed
Chairperson
Yukon Water Board

PART A DEFINITIONS

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

“Application” means Application for water licence MN20-046, 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” refers to the plan that was submitted as part of the Application as exhibit 1.3, and any subsequent revisions.

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

“Watercourse” means a natural watercourse, body of water or water supply, whether usually containing water or not, and includes groundwater, springs, swamps, and gulches.

PART B DESCRIPTION OF WATER USE AND DEPOSIT OF WASTE

1. The Licensee is hereby authorized to:
 - a) operate, maintain, and decommission a greywater absorption system for the collection and treatment of wastewater; and
 - b) deposit of a Waste by means of a distribution chamber which exfiltrates to ground through a greywater absorption field,as described in the Application, and subject to the conditions of this Licence.
2. The Licensee must operate and maintain the greywater absorption field in a manner that is consistent with standard municipal practices for the type of system.

3. Any deposit of Waste to a surface Watercourse is prohibited.

PART C DESIGN AND CONSTRUCTION

Design

4. At a minimum of 30 days prior to the commencement of construction, the Licensee must submit to the Board final detailed design construction drawings and design report for the greywater absorption field and associated infrastructure. The submission must:
 - a) Be consistent with the preliminary design drawings which were submitted as part of the Application.
 - b) Be sealed by a professional engineer licensed to practice in Yukon.
 - c) Adhere to Government of Yukon, Environmental Health Services' publication *Design Specifications for Sewage Disposal Systems - A Guide to their Design and Maintenance*.
 - d) Include the locations of all standpipes.
 - e) Specify the maximum capacity of the design.
 - f) Show the estimated flow rates and rationale.
5. The Licensee must ensure the integrity of the system is maintained and measures are put in place to protect the public.
6. All construction must be carried out in accordance with the final design drawings.
7. Within 60 days of completion of construction for each structure, the Licensee must submit to the Board, as-built design drawings for the completed greywater absorption field and associated infrastructure, sealed by a professional engineer licensed to practice in Yukon.

Construction

8. Notification, including the name and phone number of the construction supervisor, must be submitted to the Board, in writing, 10 days prior to the start of construction.
9. Ten days prior to construction, the Licensee must submit safety data sheets to the Board for all petroleum products and/or hazardous materials that are to be present during this undertaking.
10. All works associated with the undertaking must be maintained in good repair.
11. Construction and/or maintenance equipment must be mechanically sound and free of leaks.

12. All material used in the construction of the greywater absorption field must consist of non-frozen material.
13. Excavated material from the absorption field location must be deposited to a disposal area a minimum of 10 horizontal metres beyond the Natural Boundary of any Watercourse.
14. Waste substances must 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.
15. All disturbed ground surfaces must be stabilized in such a manner so as to prevent erosion and surface runoff from carrying sediment into any Watercourse.

Minor Modifications

16. Where site conditions require Minor Modifications to the final detailed design submitted to the Board, the Licensee must submit to the Board with the as-built drawings:
 - a) written details of the minor modifications made to the specifications and quality assurance/quality control procedures previously submitted to the Board as part of the Application; and
 - b) an explanation, signed by a professional engineer licensed to practice in Yukon, for the change, including an assessment of the potential impact on the performance of the works.

Fuel Storage and Transfer

17. Fuel, lubricants, hydraulic fluids, coolants and similar substances must 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 waters.

PART D MONITORING AND SURVEILLANCE

Physical Inspections and Monitoring

18. The Licensee must carry out physical inspections of the greywater absorption field, distribution chamber and associated infrastructure, and make any required repairs.
19. The Licensee must undertake visual inspections of the monitoring standpipes to assess the functionality of the system and take immediate action if there are signs of reduced functionality.

Monitoring plan

20. Within one year of operation, the Licensee must submit to the Board a monitoring plan for the greywater absorption field. The plan must include:
- a) The schedule of physical monitoring of all infrastructure; and
 - b) The schedule of visual inspections of the discharge chamber, associated piping, the monitoring standpipes and the absorption field.
21. The Licensee must keep the monitoring plan current and must submit any revisions to the plan to the Board within ten days of its revision.

PART E GENERAL CONDITIONS

22. Where there is a discrepancy between the Application and this Licence, the conditions of this Licence prevail.
23. The Licensee must ensure a copy of this Licence is maintained at the site during operations at all times.

Other Laws

24. No condition of this Licence limits the applicability of any statutory authority.
25. All construction or installation of works authorized by this Licence must occur on property that the Licensee has the right to enter upon and use for that purpose.

Correspondence

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

E-mail: ywb@yukonwaterboard.ca

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

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

Non-Compliance

28. 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 this Licence.

Spills and Unauthorized Discharges

29. Where a spill or an unauthorized discharge occurs, that is of a reportable quantity under the Yukon *Spills Regulations*, the Licensee must 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, must be submitted to the Board not later than 10 days after the occurrence.
30. The Licensee must apply the relevant procedures in the Spill Contingency Plan. The Licensee must review the Spill Contingency Plan annually and must provide a summary of that review, including any revisions to the plan, as a component of the Annual Report.
31. The Licensee must 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 must be made available at the request of an Inspector. The log book must include, but not necessarily be limited to:
- a) date and time of the spill;
 - b) substance spilt or discharged;
 - c) approximate amount spilt or discharged;
 - d) location of spill;
 - e) distance between the spill or discharge and the nearest Watercourse; and
 - f) remedial measures taken to contain and clean-up the spill area or to cease the unauthorized discharge.
32. The Licensee must include a summary of all spills or unauthorized discharges that occurred during the year reported, as part of the Annual Report.
33. All personnel must be trained in procedures to be followed and the equipment to be used in the containment of a spill.
34. Prior to the commencement of construction, the Licensee must update the Spill Contingency Plan and provide the updated plan to the Board.

35. The Spill Contingency Plan must be posted on site for the duration of the works.

Deliverables

36. The Licensee must provide to the Board one unbound, single-sided, paper copy of all deliverables required by this Licence. All deliverables, with the exception of design drawings must be reproducible by standard photocopier.
37. The Licensee must upload electronic copies of all reports required by this Licence to the Yukon Water Board's online licensing registry, Waterline. Electronic copies must be submitted in one of the following formats: MS Word, MS Excel, or Adobe .pdf format.

Annual Reports

38. 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 must submit an annual report to the Board. The report must 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) a detailed record of the operation of the greywater absorption field, distribution chamber and associated piping, including operational difficulties, significant maintenance work and modifications;
 - c) record of all pump outs from the distribution chamber;
 - d) the results of the inspections required in conditions 18 and 19, including photographs, repairs or plans for modification required to the greywater absorption field and distribution chamber;
 - e) a detailed record of any maintenance work carried out or planned to be carried out that could have an impact on water;
 - f) summary of the review and revisions of the Spill Contingency Plan;
 - g) records of all spills/unauthorized discharges;
 - h) any reclamation to the site; and
 - i) details of any updates to the monitoring report required in condition 20 and 21.

PART F SITE RECLAMATION, DECOMMISSIONING AND RESTORATION

39. All disturbed ground surfaces must 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 must be re-vegetated with appropriate reclamation seeds and/or plant species that are native in Yukon.

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40. All construction materials, equipment, temporary structures and debris must be removed from the site upon completion of the work.
 41. In the event of decommissioning of the undertaking, all structures and associated equipment or infrastructure authorized by this Licence must either be removed or left in stable condition which does not present a risk to people or the environment.
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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:

LICENSEE: 40023 Yukon Inc.

CONTACT INFORMATION: 100-260 Lobird Road
Whitehorse, YT Y1A 5V5
E-mail: blbattersby@northwestel.net

LICENCE NUMBER: MN20-047

UNDERTAKING: Municipal

WATER MANAGEMENT AREA: 02 Yukon

WATER SOURCE: Groundwater

MAXIMUM QUANTITY: 110 cubic meters per day

LOCATION: Lobird Trailer Park, within the Municipality of Whitehorse, Yukon

MAP CO-ORDINATES: Latitude: 60°41'08" N Longitude: 135°04'45" W

PURPOSE: Water withdrawal and deposit of Waste for municipal purposes.

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

EXPIRY DATE: November 3, 2026

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

Dated this 2 day of
December, 2020



Digitally signed
Witness

Approved by:



Digitally signed
Chairperson, Yukon Water Board

PART A – DEFINITIONS

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

“Application” means water licence application MN20-047, including any additional submissions and/or revisions submitted to the 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.

“Minor Modification” means a change to the final detailed design that does not affect its functionality and ability to meet the design criteria or environmental performance requirements and does not affect any other design or performance criteria.

“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 Natural Boundaries.

“Operations and Maintenance Plan” means the *Lobird Park Water System Operation and Maintenance* that was submitted as part of the Application and included in water licence register MN20-047 as exhibit 1.6, and any subsequent revisions.

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

“Spill Contingency Plan” means the *Emergency Response Plan – Waterworks System – Lobird Trailer Park and Radar Apartments* that was submitted as part of the Application and included in water licence register MN20-047 as exhibit 1.3, and any subsequent revisions.

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

“Watercourse” means a natural watercourse, body of water, or water supply, whether usually containing water or not, and includes groundwater, springs, swamps, and gulches.

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

PART B – WATER USE AND DEPOSIT OF WASTE

1. The Licensee is hereby authorized to:
 - a) obtain water from up to eight groundwater wells, up to a maximum total quantity of 110 cubic meters per day;
 - b) use the water for municipal purposes;
 - c) convey the water via a distribution system;
 - d) operate and maintain a water distribution system;
 - e) operate and maintain a wastewater treatment system;
 - f) construct one additional lagoon storage cell;
 - g) store and treat wastewater in a lagoon treatment facility; and
 - h) discharge treated wastewater via infiltration to ground from the lagoon facility,

as described in the Application, and subject to the conditions of this Licence.

PART C – DESIGN AND CONSTRUCTIONDesign and Construction

2. At least 10 days prior to the commencement of construction, the Licensee must submit to the Board final detailed design construction drawings for the construction of an additional lagoon storage cell. The final detailed design drawings must be consistent with the drawings submitted as part of the Application, and must be sealed by a professional engineer licensed to practice in Yukon.
3. The Licensee must provide the name and contact number of the construction supervisor, and a detailed construction schedule. All construction must be carried out in accordance with final design drawings.

Construction

4. Within 60 days of the completion of construction, the Licensee must submit to the Board, as-built designs of the additional lagoon storage cell, sealed by a professional engineer licensed to practice in Yukon.
5. Construction and/or maintenance equipment must be mechanically sound and free of leaks.

Minor Modifications

6. Where site conditions require minor modifications to the designs submitted to the Board, the Licensee must notify the Board, a minimum of 10 days prior to the commencement of construction. The notification must be in writing, and must be sealed by a professional engineer licensed to practice in Yukon. The notifications must include:

- a) the details of the modifications or variations from final detailed design;
- b) rationale for the minor modification(s), and an assessment of the potential impact of the performance of the works;
- c) specifications and quality assurance/quality control procedures previously submitted to the Board;
- d) detailed construction schedule; and
- e) the name and contact number of the construction superintendent

PART D – OPERATING CONDITIONS

- 7. The Licensee must operate and maintain all water supply, wastewater collection, treatment and disposal systems in a manner that is consistent with generally accepted standard municipal practices for the types of systems being used.
- 8. Public access to the wastewater treatment facility must be restricted by perimeter fencing and a lockable gate. All fences must be posted with signs warning of human health hazards associated with the facility.
- 9. All works associated with the undertaking must be maintained in good repair.
- 10. Construction and/or maintenance equipment must be maintained in good repair.
- 11. The Licensee must keep the Operations and Maintenance Plan current and must submit any revisions to the plans to the Board within ten days of their revision.
- 12. Except as authorized by this Licence, no Waste shall enter any Watercourse as a result of any operation carried out by the Licensee.

Hydrogeological Assessment

- 13. The Licensee must retain a qualified hydrogeologist to complete a hydrogeological assessment of the wastewater treatment facility site by November 4, 2025.
- 14. The hydrogeological assessment must be based on a minimum of one well up-gradient and two wells down-gradient of the facility. Wells must be installed and sampled in accordance with protocol No. 7 “Groundwater Monitoring Well Installation, Sampling, and Decommissioning” pursuant to the *Contaminated Sites Regulation*. Wells must be drilled to a depth that will allow for adequate characterization of the groundwater regime as determined by a qualified hydrogeologist.
- 15. The Licensee must submit to the Board by November 4, 2025, a report on the hydrogeological assessment completed by a qualified hydrogeologist that includes:
 - a) determination of the direction and rate of groundwater flow;
 - b) identification of potential receiving environments; and

- c) assessment of travel times for potential contaminant pathways.
16. Upon completion of installation of the new groundwater monitoring wells, or by the November, 4, 2025, whichever is earlier, the Licensee must submit to the Board, an updated monitoring plan to include the addition of groundwater monitoring based on the results of the hydrogeological assessment. This plan must include evaluation of impacts to groundwater.

Effluent Discharge

17. Direct discharge of effluent from the wastewater treatment facility to a surface Watercourse is prohibited.

Spills and Unauthorized Discharges

18. The Licensee must keep the Spill Contingency Plan current and must submit any revisions to the plan to the Board within ten days of its revision.
19. Where a spill or an unauthorized discharge occurs that is of a reportable quantity under the *Yukon Spills Regulations*, the Licensee must 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 must be submitted to the Board no later than 10 days after the occurrence. The report must include but not be limited to:
- a) date and time of occurrence;
 - b) substance spilt or discharged;
 - c) quantity of substance spilt or discharge;
 - d) location of the spill including distance to nearest Watercourse; and
 - e) remedial actions taken to contain or cease the spill, and clean-up the spill area.
20. The Licensee must 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 must be made available at the request of an Inspector. The log book must include at minimum, the reportable items identified in condition 19.
21. The Licensee must include a summary of all spills or unauthorized discharges that occurred during the year reported as part of the annual report.
22. All personnel must be trained in procedures to be followed and the equipment to be used in the containment of a spill.
23. The Spill Contingency Plan must be posted on site for the duration of the works.

Fuel Storage and Transfer

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

Adaptive Management Plan for the Wastewater System

25. The Licensee must submit to the Board an updated adaptive management plan (AMP) by November 1, 2025. The plan must include the following:
- a) Identification of contaminants of potential concern;
 - b) Identification of adaptive management thresholds for the contaminants of potential concern with rationale;
 - c) Identification of analyses used to identify trends which utilizes all current and past data;
 - d) Identification of adaptive management actions to be taken if thresholds are reached.

PART E – MONITORING AND SURVEILLANCE

26. The Licensee must monitor at the stations identified in Schedule 1A for the parameters and at the frequency as identified in Table A-1 of this Licence.

Water Quality Monitoring

27. Laboratory 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.
28. All sample collection must be conducted in accordance to a nationally recognized sampling protocol (e.g. CCME Protocols Manual for Water Quality Sampling in Canada, 2011).

Sludge Monitoring

29. The sludge levels in the anaerobic lagoon must be measured each year in August. The results must be included in the annual report.

Wastewater Input to Lagoon

30. As of November 1, 2021, the Licensee must monitor and record daily the volume of wastewater deposited into the anaerobic lagoon. The daily volumes must be included in the monthly report.

Physical Inspections and Monitoring

31. An annual physical inspection of the wastewater facility must be carried out by a professional engineer licensed to practice in Yukon. A report on the inspection, prepared by the professional engineer, must be submitted as part of the annual report described in term 44 of this Licence. The report must document the inspection locations and methodologies, the results of the inspection, all problems identified, remedial measures recommended, and remedial measures implemented. The status of any remedial measures recommended in the previous year's inspection report must be appended to the report together with an explanation regarding any recommendation not implemented.

PART F– SITE DECOMMISSIONING AND RECLAMATION

32. All disturbed ground surfaces must 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 must be re-vegetated with appropriate reclamation seeds and/or plant species that are native to Yukon.
33. All hazardous materials and hydrocarbons must be disposed of in accordance with the provisions of the *Special Waste Regulations* and the *Contaminated Sites Regulation* of the *Environment Act* and must include a description of the disposal(s) as part of the annual report.
34. All construction materials, equipment, temporary structures and debris must be removed from the site upon completion of the work.
35. A minimum of one year prior to the commencement of decommissioning activities, the Licensee must develop a final decommissioning and reclamation plan for the closure of the water and wastewater distribution and treatment facilities, and submit the plan to the Board. The plan must include, but not necessarily be limited to, a schedule and cost for completion of decommissioning and reclamation activities.
36. Subject to any required assessments, authorizations or approvals, the Licensee must implement the final decommissioning and reclamation plan.

PART G – GENERAL CONDITIONS

37. The Licensee must ensure a copy of this Licence is maintained at the site during operations at all times.
38. Where there is a discrepancy between the Application and this Licence, the conditions of this Licence shall prevail.

Other Laws

39. No condition of this Licence limits the applicability of any statutory authority.
40. All construction or installation of works authorized by this Licence must occur on property that the Licensee has the right to enter upon and use for that purpose.

Non-Compliance

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

Correspondence

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

Yukon Water Board
Suite 106, 419 Range Road
Whitehorse, YT Y1A 3V1
Fax: (867) 456-3890
Email: ywb@yukonwaterboard.ca

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

Monthly Reports

43. Unless otherwise specified in this Licence, the Licensee must submit to the Board a copy of all data collected as part of the monitoring programs as described in Schedule 1A and Table A-1 of this Licence, no more than 30 days after the conclusion of the month in which that data was collected. The report must include but not necessarily be limited to the following information:
- a) Certificate of Analysis from an accredited laboratory;
 - b) A discussion of any irregularities and any corrective action taken to address them; and
 - c) The daily volume of wastewater input to the treatment lagoons subject to condition 30 of this Licence.

Annual Reports

44. The Licensee must submit annual reports to the Board for the period of January 1 to December 31 of each year. Annual reports are to be submitted by February 28 of the year following the year reported. The report must include the information required by the Regulation including:
- a) a description of the water use operations carried out during the year reported;
 - b) the quantity of water withdrawn each day;
 - c) the quantity of waste discharged to the facility, subject to condition 30;
 - d) data collected as required by the monitoring and surveillance requirements in Part E and Schedule 1A and Table A-1 of this Licence, and the analysis and interpretation of the collected data by an individual qualified to do so;
 - e) evaluation of impacts to groundwater;
 - f) details of the methods, procedures and standards used in the data collection and sampling testing;
 - g) a detailed record of the operations of the wastewater treatment facility including operational difficulties, and any inspection reports;
 - h) physical inspection reports including photographs, repairs or plans for modification as required by the physical monitoring program;
 - i) details of any maintenance, repairs, or improvements to all physical works, including details of how recommendations from inspection reports have been addressed;
 - j) summary of the review and revisions of the Spill Contingency Plan, Operations and Maintenance Plan, and Adaptive Management Plan;
 - k) records of all spills and unauthorized discharges;
 - l) details of any work carried out or planned to be carried out under the Operation and Maintenance Plan;
 - m) AMP water quality trend analysis;
 - n) lagoon sludge levels; and
 - o) the status of the decommissioning plan, including potential changes in the proposed decommissioning and reclamation approach;
45. The annual report for the first year of the Licence must include coordinates for the sampling locations in Schedule 1A of this Licence.
46. The Licensee must submit to the Board the 2026 annual report prior to the expiry of this Licence, if there is no renewal in place by Nov. 3, 2026.
47. The Board or the Licensee may, by notice in writing, change its address for correspondence.

Deliverables and Plans

48. The Licensee must submit to the Board, one unbound, single-sided, paper copy of all deliverables required by this Licence. All deliverables, with the exception of design drawings must be reproducible by standard photocopier.
 49. The Licensee must upload electronic copies of all deliverables required by this Licence to the Yukon Water Board's online licensing registry, Waterline. Electronic copies must be submitted in one of the following formats: MS Word, MS Excel, or Adobe.pdf. Water quality results must be uploaded to Waterline 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.
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SCHEDULE 1A – LOCATIONS OF SAMPLING STATIONS

<u>Station Identification</u>	<u>Grab Sample Station Location Description</u>	<u>Coordinates (Degrees, Minutes, Seconds)</u>	
		<u>Latitude</u>	<u>Longitude</u>
L-1	South end of Cell #4	TBD*	TBD*
L-2	Cell #2 at discharge pipe	TBD*	TBD*
L-3	Cell #1 at influent	TBD*	TBD*
L-4	Gravel quarry, at likely point of seepage flows from Cell #2	TBD*	TBD*
L-5	Nearest point of McLean Creek to Cell #4	TBD*	TBD*
L-6	McLean Creek Upstream of Cell #4, out of assumed influence of the Lobird Wastewater System.	TBD*	TBD*
L-7	McLean Creek Downstream of Cell #4	TBD*	TBD*
GW-01	Groundwater well upgradient of Wastewater treatment	TBD**	TBD**
GW-02	Groundwater well downgradient of Wastewater treatment	TBD**	TBD**
GW-03	Groundwater well downgradient of Wastewater treatment	TBD**	TBD**

* To Be Determined. Coordinates for each sampling location must be submitted in the first annual report.

** To Be Determined. Coordinates for each new groundwater monitoring well resulting from the hydrogeological assessment must be submitted in the first annual report after wells are installed.

TABLE A-1 SAMPLING PARAMETERS AND FREQUENCY

Analysis	Lagoon Samples			Surface Water Samples				Groundwater Samples		
	L1	L2	L3	L4	L5	L6	L7	GW01	GW02	GW03
Fecal Coliforms, cfu/100 mL	2A	2A	2A	2A	2A	2A	2A	2A	2A	2A
Total Coliforms, cfu/100 mL	N/A	N/A	N/A	2A	2A	2A	2A	N/A	N/A	N/A
Water Chemistry ^(a, b)	2A	2A	2A	2A	2A	2A	2A	2A	2A	2A
Specific Conductance, field, uS/cm	2A	2A	2A	2A	2A	2A	2A	2A	2A	2A
Temperature, field	2A	2A	2A	2A	2A	2A	2A	2A	2A	2A
BOD ₅	2A	2A	2A	2A	2A	2A	2A	N/A	N/A	N/A
Total Suspended Solids (TSS)	2A	2A	2A	2A	2A	2A	2A	N/A	N/A	N/A
Total Dissolved Solids (TDS)	2A	2A	2A	2A	2A	2A	2A	2A	2A	2A
pH, field	2A	2A	2A	2A	2A	2A	2A	2A	2A	2A
pH, Lab	2A	2A	2A	2A	2A	2A	2A	2A	2A	2A
Petroleum Hydrocarbons ^(c)	N/A	N/A	2A	N/A	N/A	2A	2A	2A	2A	2A
Total Ammonia -N	2A	2A	2A	2A	2A	2A	2A	2A	2A	2A
Un-ionized Ammonia ^(d)	2A	2A	2A	2A	2A	2A	2A	2A	2A	2A
Nitrate (as N)	2A	2A	2A	2A	2A	2A	2A	2A	2A	2A
Nitrite (as N)	2A	2A	2A	2A	2A	2A	2A	2A	2A	2A
Total Phosphorus	2A	2A	2A	2A	2A	2A	2A	2A	2A	2A
Water Level	2A	2A	2A	N/A	N/A	N/A	N/A	2A	2A	2A
Flow, m ³ /day	N/A	N/A	Daily	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sludge level	A	A	A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2A= twice annually; once in the spring following the thaw, and once in the fall prior to freeze-up.

Reasonable efforts must be made to take the samples on the same date each year.

A = annually

N/A = not applicable

- a) Surface water chemistry parameters include: chloride, fluoride, sulphate, nitrogen and ICP-MS total metals scan.
- b) Groundwater chemistry parameters include: chloride, fluoride, sulphate, nitrogen, and ICP- MS dissolved metals scan.
- c) Petroleum Hydrocarbons include: Benzene, Ethylbenzene, Styrene, Toluene, Acridine, Anthracene, Benz[a]anthracene, Benzo[a]pyrene, Fluoranthene, Fluorene, Naphthalene, Penanthrene, Pyrene, Quinoline, Volatile Petroleum Hydrocarbons in water (VPHw) and Light Extractable Petroleum Hydrocarbons in Water (LEPHw)
- d) The concentration of un-ionized ammonia in the sample must be determined in accordance with the following formula:

$$\text{Total Ammonia} \times 1 \div (1 + 10^{9.56-\text{pH}})$$

Where:

Total Ammonia is the concentration of total ammonia – namely, un-ionized ammonia (NH₃) plus ionized ammonia (NH₄⁺) – expressed in mg/L as nitrogen (N); and

pH is the pH of the sample adjusted to 15°C ±1°C.

YUKON WATER BOARD

Pursuant to the *Waters Act* and *Regulation*, the Yukon Water Board hereby issues a water licence to:

LICENSEE:	Government of Yukon Department of Community Services Infrastructure Development Branch	
CONTACT INFORMATION:	PO Box 2703 (C-13) Whitehorse, YT Y1A 2C6	
LICENCE NUMBER:	MN20-058	
UNDERTAKING:	Municipal	LICENCE TYPE: B
WATER MANAGEMENT AREA:	02 Yukon	
LOCATION:	Km 1,356.6 of the Alaska Highway.	
MAP CO-ORDINATES:	Latitude: 60° 25' 22" N Longitude: 134° 10' 46" W	
PURPOSE:	Operate the Marsh Lake Wastewater Treatment Facility.	
EFFECTIVE DATE:	June 25, 2021	
EXPIRY DATE:	June 24, 2031	

This Licence is subject to the restrictions and conditions contained herein and to the restrictions and conditions contained in the *Waters Act* and *Regulations*.

Issued this 25th day of June, 2021.



Witness



Digitally Signed
Chairperson
Yukon Water Board

PART A – DEFINITIONS

“Act” means *Waters Act* SY 2003, c.19; amended by SY 2007, c.6.

“Application” means Water Licence Application MN20-058, including responses to interventions, responses to information requests, and additional submissions 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.

“Monitoring Plan” means the means the *Marsh Lake Wastewater Treatment Facility Operation and Maintenance Plan* that was described in Exhibit 1.2 of the Application and submitted in accordance with Condition 31 of this Licence, and any subsequent revisions.

“Regulation” means the *Waters Regulation* O.I.C. 2003/58.

“Sludge Management Plan” means the *Sludge Management Plan* that was described in Exhibit 1.2 of the Application and submitted in accordance with Condition 31 of this Licence, and any subsequent revisions.

“Spill Contingency Plan” means the *Oil/Fuel Handling and Spill Contingency Plan* that was submitted as part of the Application and included in Register MN20-058 as Exhibit 1.3, and any subsequent revisions.

“Waste” has the same meaning as in the Act.

“Watercourse” has the same meaning as in the Regulation.

PART B – DESCRIPTION OF WATER USE AND DEPOSIT OF WASTE

1. The Licensee is hereby authorized to:
 - a) collect up to 4,270 cubic meters of wastewater between April 1 and October 31 of each year at the existing Marsh Lake Wastewater Treatment Facility (Facility);
 - b) store and treat wastewater at the Facility; and
 - c) deposit a Waste to ground from the exfiltration lagoon at the Facility;as described in the Application and subject to the conditions of this Licence.

PART C – OPERATING CONDITIONS

2. Except as authorized by this Licence, any deposit of Waste to a Watercourse is prohibited.

3. All disturbed ground surfaces must be stabilized in such a manner so as to prevent erosion and surface runoff.
4. The Licensee must operate and maintain the Facility in a manner that is consistent with generally accepted municipal practices for the type of system being used.
5. Public access to the Facility must be restricted by perimeter fencing and a lockable gate. All fences must be posted with signs warning of human health hazards associated with the Facility.
6. Construction and/or maintenance equipment must be mechanically sound and free of leaks.
7. All works associated with the undertaking must be maintained in good repair.

Sludge Management, Drying and Disposal

8. Sludge management must be done in accordance with the Sludge Management Plan. Where a discrepancy exists between the Sludge Management Plan and this Licence, this Licence shall prevail.
9. When the average sludge depth in the center of the anaerobic lagoon reaches 1.5 metres, the Licensee must remove the sludge from the cells.
10. Dried sludge must be tested and disposed of in a manner that meets the requirements of applicable legislation including, but not limited to, the *Environment Act* and associated regulations.

Spills and Unauthorized Discharges

11. Where a spill or an unauthorized discharge occurs that is of a reportable quantity under the *Yukon Spills Regulations*, the Licensee must 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 must be submitted to the Board no later than ten days after the occurrence. The report must include but not be limited to:
 - a) date and time of occurrence;
 - b) substance spilt or discharged;
 - c) quantity of substance spilt or discharged;
 - d) location of the spill including distance to nearest Watercourse; and
 - e) remedial actions taken to contain or cease the spill, and clean-up the spill area.
12. The Licensee must 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 must be made available at the request of an Inspector. The log book must include at a minimum, the reportable items identified in Condition 11.

13. The Licensee must include a summary of all spills or unauthorized discharges that occurred during the year reported, as part of the annual report.
14. All personnel must be trained in procedures to be followed and the equipment to be used in the containment of a spill.
15. The Spill Contingency Plan must be posted on site for the duration of the works.

Hazardous Materials Inventory

16. A complete inventory of chemicals, fuels, oils, lubricants and other hazardous materials relating to the water uses authorized by this Licence must be maintained by the Licensee.

PART D – WATER QUALITY OBJECTIVES

17. The Licensee must compare results from samples collected at groundwater wells ML-3 and MW12-03-ML to the following water quality objectives:

Parameter	Maximum Concentration in a Sample
pH	6 to 9 units
Volatile Hydrocarbons (VH _{w6-10})	15,000 µg/L
VP _{Hw}	1,500 µg/L
Extractable Petroleum Hydrocarbons (EPH _{w10-19}) ¹	5,000 µg/L
Nitrate	400 mg/L
CBOD ₅	10 mg/L
Total Ammonia	1.3 mg/L at pH ≥ 8.5 3.7 mg/L at pH 8.0 – < 8.5 11.3 mg/L at pH 7.5 – < 8.0 18.5 mg/L at pH 7.0 – < 7.5 18.4 mg/L at pH < 7.0
Fecal Coliforms	2 counts/ 100 mL

1. Using the silica gel extraction method.

18. If the analysis of a water quality sample collected at ML-3 or MW12-03-ML indicates an exceedance of the water quality objectives set out in Condition 17, the Licensee must close the Facility to septage deliveries until two consecutive groundwater sampling events, at least 14 days apart, indicate that concentrations are below the water quality objectives.

19. If the analysis of a water quality sample collected at ML-3 or MW12-03-ML indicates an exceedance of the water quality objectives set out in Condition 17, the Licensee must notify the Inspector and the Board in writing, within 24 hours of detecting the exceedance.

PART E – MONITORING AND SURVEILLANCE

20. The Licensee must comply with the monitoring requirements in Schedule A.
21. Monitoring must be carried out in accordance with the Monitoring Plan. Where a discrepancy exists between the Monitoring Plan and this Licence, this Licence shall prevail.
22. The Licensee must collect geographic site coordinates for all monitoring stations listed in Schedule A Table 1, and submit all new and updated coordinates as part of the annual report as described in Condition 51.

Water Quality Monitoring

23. All data collection must be conducted in accordance with a nationally recognized sampling protocol (e.g. CCME Protocols Manual for Water Quality Sampling in Canada, 2011).
24. Laboratory 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.
25. Groundwater monitoring data must be compared to the Yukon *Contaminated Sites Regulation* schedule 3 standards and the water quality objectives of this Licence, and this comparison must be reported as part of the annual report described in Condition 51.

Sludge Monitoring

26. Sludge monitoring must be done in accordance with the Sludge Management Plan.

Wastewater Volumes

27. The Licensee must monitor and record the volume of wastewater deposited into the Facility.

Physical Inspections and Monitoring

28. All water retaining structures must be inspected by September 30 of each year by a professional engineer licensed to practice in Yukon. A report on the inspection, prepared by the professional engineer, must be submitted as part of the annual report described in Condition 51 of this Licence. The report must document the inspection locations and methodologies, the results of the inspection, all problems identified, remedial measures recommended, and remedial measures implemented. The status of any remedial measures recommended in the previous year's inspection report must be appended to the report together with an explanation regarding any recommendation not implemented.

29. The Licensee must monitor and record observations pertaining to the stability of the Facility lagoon berms monthly, and during and after high water events. If monitoring indicates potential berm failure, corrective action must be taken immediately. The inspection findings must be submitted as part of the annual report described in Condition 51 of this Licence.

PART F – PLANS

30. The Licensee must keep the Monitoring Plan, Sludge Management Plan and Spill Contingency Plan current and must submit any revisions to the plan to the Board within ten days of its revision.
31. Within 90 days of the date of issuance of this licence, the Licensee must submit to the Board an updated Marsh Lake Wastewater Treatment Facility Operation and Maintenance Plan, including a Sludge Management Plan that reflects the conditions of this Licence, and the Schedule A tables.
32. Within 90 days of the date of issuance of this Licence the Licensee must submit an Adaptive Management Plan (AMP) for the Facility. The updated AMP must include the following:
- a) Adaptive management items described in Exhibit 1.6 of the Application;
 - b) Adaptive management threshold exceedances and management measures described in Exhibit 6.1 of the Application;
 - c) Re-evaluation of the surface water monitoring program if deterioration in groundwater quality downgradient of the Facility are observed; and
 - d) Any additional adaptive management measures that are developed for the Facility.

PART G – DESIGN AND CONSTRUCTION

33. The Licensee is authorized to construct a sludge drying bed as proposed in Exhibit 1.2 of the Application.
34. The Licensee is authorized to place additional filter material on approximately one third of the exfiltration lagoon, as proposed in Exhibit 1.2 of the Application.
35. Granular bedding and backfill material used by the Licensee must consist of non-frozen material.
36. To minimize impacts to surface drainage, the Licensee must prepare all sites in such a manner as to prevent rutting of the ground surface.

Design Drawings

37. Ten days prior to the commencement of construction, the Licensee must submit to the Board final detailed design construction drawings for the sludge drying bed, and placement of additional filter material. The final detailed design drawings must be consistent with the drawings in Exhibit 1.2 of the Application and sealed by a professional engineer licensed to practice in Yukon. Subject to Condition 39, all construction must be carried out in accordance with the final design drawings.
38. Within 60 days of completion of construction of the sludge drying bed and placement of additional filter material, the Licensee must submit to the Board, as-built design drawings of the sludge drying bed and placed filter material, sealed by a professional engineer licensed to practice in the Yukon.

Minor Modifications

39. Where site conditions require minor modifications to the final detailed design submitted to the Board, the Licensee must submit to the Board with the as-built drawings:
 - a) written details of the minor modifications made to the specifications and quality assurance/quality control procedures previously submitted to the Board as part of the Application; and
 - b) an explanation, signed by a professional engineer licensed to practice in Yukon, for the change, including an assessment of the potential impact on the performance of the works.

PART H – GENERAL CONDITIONS

40. The Licensee must ensure a copy of this Licence is maintained at the site during operations at all times.
41. Where there is a discrepancy between the Application and the conditions of this Licence, the conditions of this Licence shall prevail.

Other Laws

42. No condition of this Licence limits the applicability of any statutory authority.
43. All work authorized by this Licence must occur on property that the Licensee has the right to enter upon and use for that purpose.

Non-Compliance

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

Correspondence

45. Where any direction, notice, order or report under this Licence is required to be in writing, it must be given:
- a) to the Licensee by e-mail or mailed by registered mail and must be deemed to have been given to the Licensee on the day it was delivered, or e-mailed or 7 days after the day it was mailed as the case may be;
 - b) to the Board if delivered, faxed, e-mailed 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
E-mail: ywb@yukonwaterboard.ca

and must 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.

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

Deliverables

47. The Licensee must provide to the Board one unbound, single-sided, paper copy of all deliverables required by this Licence. All deliverables, with the exception of design drawings must be reproducible by standard photocopier.
48. The Licensee must upload electronic copies of all deliverables required by this Licence to the Yukon Water Board's online licensing registry, Waterline. Electronic copies must be submitted in one of the following formats: MS Word, MS Excel, or Adobe .pdf.
49. Water quantity and water level results must be submitted in MS Excel, and water quality results 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.

Monthly Reports

50. The Licensee must submit to the Board a copy of all data collected as part of the monitoring requirements described in Schedule A of this Licence, no more than 30 days after the conclusion of the month in which that data was collected. The submission must include the following information:
- a) Certificate of Analysis from an accredited laboratory;
 - b) A comparison of analytical results to the water quality objectives listed in Part D of this Licence; and

- c) A discussion of any irregularities and any corrective action taken to address them.

Annual Reports

51. The Licensee must submit annual reports to the Board for the period of January 1 to December 31 of each year. Annual reports must be submitted to the Board on or before February 28 of the year following the year reported. The report must include:
- a) a description of the operations carried out during the year reported;
 - b) data collected according to the requirements of Schedule A of this Licence;
 - c) results of sludge monitoring as completed in accordance with the Sludge Monitoring Plan;
 - d) details of the methods, procedures and standards used in the data collection and sample testing;
 - e) an analysis and interpretation of the collected data by an individual qualified to do so;
 - f) a comparison of the groundwater quality data against the Yukon *Contaminated Sites Regulation* schedule 3 standards and the water quality objectives in Condition 17 of this Licence, as required by Condition 25;
 - g) a detailed record of the operation of the Facility, including operational difficulties, significant maintenance work, and modifications;
 - h) volume of wastewater influent to the Facility as required by Condition 27 of this Licence;
 - i) the inspection results, including photographs, repairs or plans for modification required by the physical monitoring program as required by Conditions 28 and 29 of this Licence;
 - j) new and updated geographic site coordinates for monitoring stations as required by Condition 22 of this Licence;
 - k) any reclamation to the site;
 - l) any other information or reports required by this Licence or the Regulations.

PART I – SITE DECOMMISSIONING AND RESTORATION

52. During the term of the licence, the Licensee must submit to the Board a plan for any well proposed to be decommissioned.
53. All disturbed ground surfaces must 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 must be re-vegetated with appropriate reclamation seeds and/or plant species that are native in Yukon.

54. All hazardous materials must be disposed of in accordance with the *Special Waste Regulations* of Yukon's *Environment Act*. The Licensee must include a description of the disposal as part of the annual report.
55. In the event of decommissioning of the undertaking, all structures and associated equipment or infrastructure authorized by this Licence must either be removed or left in stable condition which does not present a risk to people or the environment.
56. Prior to the commencement of decommissioning work, the Licensee must submit to the Board a final plan for the decommissioning and reclamation of all water and wastewater related structures authorized by this Licence. The plan must include:
- a) delineation of the water and wastewater system;
 - b) a drainage plan to manage surface water associated with the decommissioned site;
 - c) details of any residual activities required to be carried out prior to final decommissioning and removal of any structures, associated timelines and supporting rationale;
 - d) methods to ensure long-term stability of water and wastewater structures;
 - e) a remediation plan for any contaminated areas of the site;
 - f) on-going monitoring activities required to minimize or mitigate environmental impacts;
and
 - g) a schedule and cost for completion of decommissioning and reclamation activities.
-

SCHEDULE A – MONITORING AND SURVEILLANCE REQUIREMENTS

Table 1 – Sampling Locations

Sampling Station	Description	UTM Easting	UTM Northing
ML-1	Surface seep site at the kettle depression 40 to 80 metres west of the exfiltration lagoon.		
ML-2	Surface seep site at the slope of the kettle depression defined in ML1.		
ML-3	Monitoring well located south and down gradient of the anaerobic lagoon, also known as ML-MW12-02, Installed by Golder in 2012	545177	6698730
ML-4	Monitoring well located northwest and up gradient of the exfiltration lagoon, also known as ML-MW12-01, Installed by Golder in 2012	545155	6698887
ML-5	AMP station at Judas Creek upstream and south of the Facility (reference site)		
ML-6	AMP station at Judas Creek downstream and southwest of the Facility and downstream of ML-5		
ML-7	AMP station at a kettle pond, approximately 700 metres down-gradient and southwest of the Facility		
MW12-03-ML	Installed by Golder in 2012	545207	6698700
BHI 1919.02-01	Installed by EBA in 1997	545168	6698718
BHI 1919.02-02	Installed by EBA in 1997	545133	6698852
ML20-01	Installed by Associated Environmental in 2020	545211	6698701
ML20-02	Installed by Associated Environmental in 2020	545120	6698846
ML20-03S	Installed by Associated Environmental in 2020	545296	6698809
ML20-03D	Installed by Associated Environmental in 2020	545296	6698809
ML-8	Center of the anaerobic lagoon.		

Table 2 – Monitoring Schedule

Sampling stations must be sampled as specified:

Station	ML-1	ML-2	ML-3	ML-4	MW12-03-ML	ML20-02	BHI 1919.02-02	BHI 1919.02-01	ML20-01	ML20-03S	ML20-03D	ML-8
Analysis												
Visual Inspection	TA	TA										
pH (Field and Laboratory)	TA	TA	TA	TA	TA	TA						
Temperature (Field)	TA	TA	TA	TA	TA	TA						
CBOD ₅	TA	TA	TA	TA	TA	TA						
Volatile Hydrocarbons (VH _{w6-10})	TA	TA	TA	TA	TA	TA						
VPHw	TA	TA	TA	TA	TA	TA						
Extractable Petroleum Hydrocarbons (EPH _{w10-19}) ¹	TA	TA	TA	TA	TA	TA						
Fecal Coliforms	TA	TA	TA	TA	TA	TA						
Total Ammonia	TA	TA	TA	TA	TA	TA						
Dissolved Metals ²	TA	TA	TA	TA	TA	TA						
Nitrate	TA	TA	TA	TA	TA	TA						
Inorganic Phosphorous	TA	TA	TA	TA	TA	TA						
Water Level ³			TA	TA	TA	TA	TA	TA	TA	TA	TA	
Sludge Depth												2Y

1) Using both standard and silica gel extraction method.

2) Includes arsenic, barium, boron, cadmium, chromium, copper, iron, lead, manganese, mercury, selenium, sodium, uranium, and zinc.

3) Measured in metres below the top of the well casing.

TA – Twice annually; between May and mid-June, and October and mid-November

2Y – At least once every two years

YUKON WATER BOARD

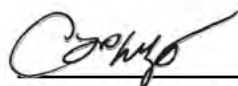
Pursuant to the *Waters Act* and *Regulation*, the Yukon Water Board hereby issues a water licence to:

LICENSEE:	Government of Yukon Department of Community Services	
CONTACT INFORMATION:	P.O. Box 2703 (C-13) Whitehorse, YT Y1A 2C6	
LICENCE NUMBER:	MN22-022	
UNDERTAKING:	Municipal	LICENCE TYPE: B
WATER MANAGEMENT AREA:	02 Yukon	
LOCATION:	Pelly Crossing	
MAP CO-ORDINATES:	Latitude: 62° 49' 25" N Longitude: 136° 34' 26" W	
PURPOSE:	Construct, operate and maintain a septic system for the treatment of wastewater.	
EFFECTIVE DATE:	July 25, 2022	
EXPIRY DATE:	July 24, 2047	

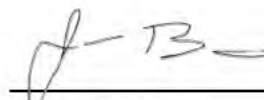
This licence is subject to the restrictions and conditions contained herein and to the restrictions and conditions contained in the *Waters Act* and *Regulation*.

Dated this 25th day
of July, 2022

Approved by:



Digitally signed
Witness



Digitally signed
Vice-Chairperson, Yukon Water
Board

PART A DEFINITIONS

“Act” means *Waters Act* SY 2003, c.19, as amended from time to time.

“Application” means Application for water licence MN22-022, 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 section 33(1) of the Act.

“Minor Modification” means a change to the final detailed design that does not affect its functionality and ability to meet the design criteria or environmental performance requirements and does not affect any other design or performance criteria.

“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” refers to the *Spill Prevention and Response Plan* that was submitted as part of the Application and included in register MN22-022 within exhibit 1.5, and any subsequent revisions.

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

“Watercourse” means a natural watercourse, body of water or water supply, whether usually containing water or not, and includes groundwater, springs, swamps, and gulches.

PART B DESCRIPTION OF WATER USE AND DEPOSIT OF WASTE

1. The Licensee is hereby authorized to:
 - a) Construct, operate and maintain a septic system for the treatment of wastewater;
 - b) Deposit a Waste by means of septic system which infiltrates to ground; and
 - c) Deposit drain water from the pool to ground;as described in the Application, and subject to the conditions of this Licence.

PART C OPERATING CONDITIONS

2. Except as authorized by this Licence, any deposit of Waste to a Watercourse is prohibited.
3. The Licensee must operate and maintain the septic system as described in the Application, in accordance with the conditions of this Licence, and in a manner that is consistent with standard practices for septic systems.
4. All equipment used for operation and maintenance must be maintained in good repair.

Physical Inspections and Monitoring

5. The Licensee must carry out monitoring as described in Section 9 of Exhibit 1.2 of Register MN22-022.

PART D DESIGN AND CONSTRUCTIONConstruction

6. Subject to condition 14, all construction must be carried out in accordance with the final design drawings.
7. Within 60 days of completion of construction, the Licensee must submit to the Board, as-built design drawings, sealed by a professional engineer licensed to practice in Yukon.
8. Notification, including the name and phone number of the construction supervisor, must be submitted to the Board, in writing, 10 days prior to the start of construction.
9. Ten days prior to construction, the Licensee must submit safety data sheets to the Board for all petroleum products and/or hazardous materials that are to be present during this undertaking.
10. All material used in the construction must consist of non-frozen material.
11. Excavated material must be deposited to a disposal area a minimum of 10 horizontal metres beyond the Natural Boundary of any Watercourse.
12. Waste substances must 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.
13. All disturbed ground surfaces must be stabilized in such a manner so as to prevent erosion and surface runoff from carrying sediment into any Watercourse.

Minor Modifications

14. Where site conditions require Minor Modifications to the final detailed design submitted to the Board, the Licensee must submit to the Board with the as-built drawings:
- a) Written details of the Minor Modifications made to the specifications and quality assurance/quality control procedures previously submitted to the Board as part of the Application;
 - b) An explanation, signed by a professional engineer licensed to practice in Yukon, for the change, including an assessment of the potential impact on the performance of the works; and
 - c) Written evidence that there has not been any fundamental changes to the original design criteria as presented in the Application.

PART E GENERAL CONDITIONS

15. Where there is a discrepancy between the Application and the conditions of this Licence, this Licence prevails.
16. The Licensee must ensure a copy of this Licence is maintained at the site during operations at all times.
17. All works authorized by this Licence must occur on property that the Licensee has the right to enter upon and use for that purpose.

Other Laws

18. No condition of this Licence limits the applicability of any statutory authority.

Correspondence

19. Where any direction, notice, order or report under this Licence is required to be in writing, it must be given:
- a) To the Licensee, if delivered or mailed by registered mail, to the address identified on page 1 of this Licence, and must 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, e-mailed 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
E-mail: ywb@yukonwaterboard.ca

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

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

Non-Compliance

21. In the event that the Licensee fails to comply with any condition of this Licence, the Board may, subject to the Act, cancel this Licence.

Hazardous Material Management

22. All hazardous materials must be used, stored and/or transferred in such a way that said substances are not deposited to a Watercourse.

Spills and Unauthorized Discharges

23. The Licensee must keep the Spill Contingency Plan current and must submit any revisions to the plan to the Board within ten days of the date the revisions were made.
24. Where a spill or an unauthorized discharge occurs, that is of a reportable quantity under the Yukon Spills Regulations, the Licensee must 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, must be submitted to the Board not later than 10 days after the occurrence. The report must include but not be limited to:
- a) Date and time of occurrence;
 - b) Substance spilt or discharged;
 - c) Quantity of substance spilt or discharged;
 - d) Location of spill including distance to nearest Watercourse; and
 - e) Remedial actions taken to contain or to cease the spill, and to clean up the spill area.
25. The Licensee must 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 must be made available at the request of an Inspector. The log book must include, at a minimum, the items identified in Condition 29.
26. The Licensee must include a summary of all spills or unauthorized discharges that occurred during the year reported, as part of the annual report.
27. The Spill Contingency Plan must be posted on site for the duration of the works.

Deliverables

28. The Licensee must provide to the Board one unbound, single-sided, paper copy of all deliverables required by this Licence. All deliverables, with the exception of design drawings must be reproducible by standard photocopier.
29. The Licensee must upload electronic copies of all deliverables required by this Licence to the Yukon Water Board's online licensing registry, Waterline. Electronic copies must be submitted in one of the following formats: MS Word, MS Excel, or Adobe .pdf format.

Annual Reports

30. The Licensee must submit annual reports to the Board for the period of January 1 to December 31 of each year. Annual reports must be submitted to the Board on or before April 1 of the year following the year reported. The report must include:
 - a) A description of the deposit of Waste carried out during the year reported;
 - b) A detailed record of the operation of the septic system including operational difficulties, significant maintenance work and modifications;
 - c) A detailed record of any maintenance work carried out or planned to be carried out that could have an impact to a Watercourse;
 - d) Summary of the review and revisions of the Spill Contingency Plan;
 - e) Records of all spills/unauthorized discharges in accordance with condition 26;
 - f) Any reclamation to the site; and

PART F SITE DECOMMISSIONING AND RECLAMATION

31. All disturbed ground surfaces must 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 must be re-vegetated with appropriate reclamation seeds and/or plant species that are native in Yukon.
 32. All construction materials, equipment, temporary structures and debris must be removed from the site upon completion of construction.
 33. In the event of decommissioning of the undertaking, all structures and associated equipment or infrastructure authorized by this Licence must be removed or left in stable condition which does not present a risk to people or the environment.
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