YUKON WATER BOARD

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

Government of Yukon
P.O. Box 2703
Whitehorse, YT Y1A 2C6

LICENCE NUMBER: MS08-277

LICENCE TYPE: B **UNDERTAKING:** MISCELLANEOUS

LOCATION: Km 23.6 South McQuesten Road

UTM MAP CO-ORDINATES: Easting: 4498846 Northing: 7085533

PURPOSE: Repairs, upgrades and relocation of the existing bridge crossing.

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 31, 2019

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 15 day of May, 2009.

Approved by:

Witness

Chairperson
YUKON WATER BOARD

PART A - DEFINITIONS

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

"Application" means Water Use Application MS08-277, 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 Oil/Fuel Handling & Spill Contingency Plan that was submitted as part of the Application and included in Water Use Register MS08-277 as part of exhibit 1.2, 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 this licence limits the application of any other federal, territorial, first nation or municipal legislation.

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:

   Government of Yukon
   Highways and Public Works
   Transportation Engineering Branch
   P.O. Box 2703
   Whitehorse, YT Y1A 2C6
   Fax: (867) 393-6647

   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.

Other Uses

5. If, subsequent to the issuing of this licence, the Licensee uses water and/or deposits Waste in one or more ways not authorized in this licence, and the combined effect of those uses and/or deposits of Wastes, as determined by an Inspector:

   a) has no potential for significant adverse environmental effects; and
   b) does not interfere with existing rights of other water users or Waste depositors; and

c) satisfies the criteria set out in column 2 of Schedule 10 of the Regulation,

no amendment to this licence will be required for that use of water and/or deposit of Waste.

Spills and Unauthorized Discharges

6. The Licensee shall immediately contact the 24-hour Yukon Spill Report number, (867) 667-7244, and implement the Spill Contingency Plan should a spill or an unauthorized discharge occur. 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.

7. All personnel shall be trained in procedures to be followed and the equipment to be used in the containment of a spill.

8. 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.

9. The Spill Contingency Plan shall be posted on site for the duration of the works.

Fuel Storage and Transfer

10. 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

11. 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; and
c) the hours of pumping for each day; and
d) the quantity and size of rip-rap used; and
e) any reclamation to the site; and
f) any inspection reports regarding the slope stability; and
g) a description of disposal of creosoted treated timbers; and

h) a detailed record of any major maintenance work carried out or planned to be carried out that could have an impact on water; and

Reports

12. 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.

13. 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.

14. Electronic copies shall be IBM compatible in one of the following formats: Word 97 - 2003, Excel 97 - 2003 workbooks, or Adobe PDF format.

Term of Licence

15. The term of this licence is for the period from the effective date to December 31, 2019.

PART C - OPERATING CONDITIONS

Description of Water Use

16. The Licensee is hereby authorized to:

a) relocate and extend the existing single span bridge crossing South McQuesten River by 6.5m from the current location; and
b) construct the north and south abutments to accommodate the relocation of the bridge crossing; and
c) realign the bridge approaches; and
d) replace the bridge deck and curbs; and
e) decommission the old bridge site including removing the old bridge abutments; and
f) 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.

Notification

17. 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.

18. Notification shall be provided to the Board, in writing, 10 days prior to the start of dewatering activities.

PART D - DESIGN AND CONSTRUCTION

Design

19. Ten days prior to the commencement of construction, the Licensee shall submit to the Board final detailed design construction drawings for the South McQuesten bridge structure, including all bank modifications. 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.

20. The Licensee shall submit as-built design drawings of the bridge structure, including all bank modifications, sealed by a Professional Engineer licensed to practice in the Yukon, to the Board within 60 days of placement across the South McQuesten River.

21. 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

22. Work shall be carried out from August 1 to September 30 or from June 10 to July 5.

23. All works associated with the undertaking shall be maintained in good repair.

24. Construction and/or maintenance equipment shall be mechanically sound and free of leaks.

25. The tracks and/or wheels of heavy equipment are prohibited from entering the Wetted Perimeter of the South McQuesten River.

26. Granular bedding and backfill material shall consist of non-frozen material.

27. All water withdrawn from the abutment excavation shall be deposited into a constructed sump and/or a natural depression and all fine sediment shall be settled prior to any discharge to the South McQuesten River.

28. For the excavation of the abutments, the Licensee shall install or construct non-erodible cofferdams, silt barriers, or other suitable methods to control siltation downstream of the work area if work cannot be conducted in the dry.

29. Excavated material from the Watercourse shall be deposited a minimum of 10 horizontal metres beyond the Natural Boundary of the South McQuesten River.

30. Material excavated from the Watercourse must be deposited in the waste disposal area in such a manner as to remain in a stable condition.

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.

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.

Water Pumps

34. 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.

Rip-rap

35. Rip-rap shall be hard, dense, angular, non acid-generating quarry stone or boulders, free of seams, cracks, structural defects and contaminants, freeze-thaw resistant, non-slaking and free of fine-grained materials including silt and sand. Rip-rap gradation will conform to the specifications described in Exhibit 1.2 of the Application.

Geotextile

36. Specifications of the geotextile material shall comply with those described in Exhibit 1.2 of the Application.

Signage

37. The Licensee shall post signs on or near the bridge structure that reflects the load limit.

PART E - SITE DECOMMISSIONING AND RESTORATION

38. 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.

39. All construction materials, equipment, temporary structures and debris shall be removed from the site upon completion of the work.

40. Creosote treated timbers and/or other hazardous materials shall be disposed in accordance with the provisions of the *Special Waste Regulations* of the *Environment Act* of the Yukon Territory and shall include a description of the disposal as part of the annual report.