



Mackenzie Valley Land and Water Board
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 POSTER
 WATER
 LICENSE
 Draft

FILE NUMBER: MV2003L8-0007

Date: April 5, 2005

To: Distribution List

Company: Fort Providence Area

Fax Number: See list

From: Marilyn for Angela Plautz

Number of pages including cover 16

Remarks:

Please find attached the draft Water License for the Deh Cho Bridge Corporation for your review.



- ☐ Enclosures
- ☐ As requested
- ☐ For your information
- ☒ For your comment
- ☐ For your approval

Delivered by **Date**

- ☐ Mail
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JP

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April 5, 2005

File: MV2003L8-0007

Distribution List

Dear Sir/Madame:

Draft Water License for Review
Deh Cho Bridge Corporation, MV2003L8-0007
Bridge Construction, Km 23 of Hwy 3, near Fort Providence

Attached for your review and comments is the Draft Water License for the Deh Cho Bridge Corporation for the construction of a bridge at Km 23 of Highway 3.

Please submit your comments in writing by **April 15, 2005**, quoting Water Licence MV2003L8-0007.

If you have any questions regarding, please contact me at (867) 669-0506 or email mvlwbpermit@mvlwb.com.

Yours sincerely,

A handwritten signature in cursive script that reads "Angela Plautz".

Angela Plautz
Regulatory Officer

Attachment

April 5, 2005

Application MV2003L8-0007

DISTRIBUTION LIST by Fax**Fort Providence Area****FIRST NATIONS**

Grand Chief Herb Norwegian	Dehcho First Nation	867-695-2038
Chief Berna Landry	Deh Gah Got'ie Dene Council	867-699-3210
Chief Lloyd Chicot	Ka'a'gee Tu First Nation (Kakisa)	867-825-2002

COMMUNITIES

Mayor Maggie Levavasseur	Hamlet of Fort Providence	867-699-3210
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ABORIGINAL ORGANIZATIONS

Chris Paci	Dene Nation	920-2254
Heidi Wiebe	Deh Cho Land Use Planning Committee	867-699-3166
President Robert Tordiff	Northwest Territory Metis Nation	867-872-2772
President Albert Lafferty	Fort Providence Metis Council #57	867-699-4319
Frank Kotchea	Nahendeh Land & Environmental Services	867-770-4573

GOVERNMENT

Ed Hornby	South Mackenzie District Office	669-2720
Kathleen Racher	DIAND - Water Resources	669-2716
Tom Andrews	GNWT - Prince of Wales Heritage Museum	873-0205
Mark Davy	GWNT - MACA	920-6343
Duane Fleming	GNWT - Health	873-0122
Jason McNeil	GNWT - RWED	873-4021
Michael Brown	GNWT - DOT	920-2565
Mike Fournier	Environment Canada	873-8185
Ernest Watson	DFO	669-4940

OTHERS

Vern Christensen	MVEIRB	766-7074
Alan Harris	Beaver Enterprises Ltd. Partnership	867-770-4573
Tyler Hicks	IT Specialist	MVLWB

If there is an error in our contact, please notify our office.

**CONDITIONS ANNEXED TO AND FORMING PART
OF WATER LICENSE MV2003L8-007**

PART A: SCOPE AND DEFINITIONS

1. Scope

This License entitles the Deh Cho Bridge Corporation to use water and dispose of waste for miscellaneous undertakings and associated uses by the Deh Cho Bridge Corporation located at 61°15'45"N and 117°31'30"W, Fort Providence, Northwest Territories.

This License is issued subject to the conditions contained herein with respect to the taking of water and the depositing of waste of any type in any waters or in any place under any conditions where such waste or any other waste that results from the deposits of such waste may enter any waters. Whenever new Regulations are made or existing Regulations are amended by the Governor in Council under the *Northwest Territories Waters Act*, or other statutes imposing more stringent conditions relating to the quantity or type of waste that may be so deposited or under which any such waste may be so deposited, this License shall be deemed, upon promulgation of such Regulations, to be automatically amended to conform with such Regulations.

Compliance with the terms and conditions of this License does not absolve the Licensee from responsibility for compliance with the requirements of all applicable Federal, Territorial and Municipal legislation.

2. Definitions

In this License MV2003L8-0007:

"Act" means the *Northwest Territories Waters Act*;

"Analyst" means an Analyst designated by the Minister under Section 35(1) of the *Northwest Territories Waters Act*;

"Abutment Rock Placement" means the placement of rock associated with the construction of the abutments;

"Bridge Design" means the detailed engineered designs for all bridge components stamped by a design Engineer;

"Bridge Structure/Abutment" means the engineered structure identified as proposed in Attachments #5 and #6, entitled Plan and Profile, of the Developer's Assessment Report;

"Board" means the Mackenzie Valley Land and Water Board established under Part 4 of the *Mackenzie Valley Resource Management Act*;

"Developer's Assessment Report" means the impact prediction report and the revised version of the report submitted by the Deh Cho Bridge Corporation on April 7, 2004 and May 25, 2004, respectively, to the Mackenzie Valley Environmental Impact Review Board (MVEIRB) during the Environmental Assessment;

"Discharge" means the release of any water or waste to the receiving environment;

"Drainage Control and Collection System" means the drainage ditches, and any collection structures used for the diversion, collection, and disposal of runoff from the bridge structure, as proposed in Figure 1 entitled "Yellowknife HWY #3, km 23, Deh Cho Bridge on Mackenzie River, Surface Drainage, General Arrangement – North Approach" and Figure 2 entitled "Yellowknife HWY #3, km 23, Deh Cho Bridge on Mackenzie River, Surface Drainage, Details";

"Dredging Activities" means excavating and moving river - bottom sediments and glacial till below the high watermark and from the bottom of the Mackenzie River in the area of the footprints of the bridge abutments and piers;

"Engineered Structures" means any constructed facility which was designed and approved by a Professional Engineer registered with the Association of Professional Engineers, Geologists, and Geophysicists of the Northwest Territories;

"Environmental Assessment (EA)" means, for the purpose of this License, the totality of the Mackenzie Valley Environmental Impact Review Board (MVEIRB) Public Registry as established under the authority of Part 5 of the *Mackenzie Valley Resource Management Act* for the License application, this includes everything that was submitted by the Deh Cho Bridge Corporation to the MVEIRB, the scope of which is consistent with the Water License application;

"Geotechnical Engineer" means a professional engineer registered with the Association of Professional Engineers, Geologists, and Geophysicists of the Northwest Territories and whose principal field of specialization is the design and construction of earthworks in a permafrost environment.

"Inspector" means an Inspector designated by the Minister under Section 35(1) of the *Northwest Territories Waters Act*;

"Licensee" means the holder of this License;

"Minister" means the Minister of Indian Affairs and Northern Development;

"Modification" means an alteration to a physical work that introduces a new structure or eliminates an existing structure and does not alter the purpose or function of the work, but does not include an expansion;

"Pump-out Sewage" means all toilet wastes and/or grey water collected by means of a vacuum truck for disposal at an approved facility;

"Regulations" means Regulations proclaimed pursuant to Section 33 of the *Northwest Territories Waters Act*;

"Sewage" means all toilet wastes and grey water;

"Water License Application" means the type B Water License Application as submitted to the Mackenzie Valley Land and Water Board, dated July 3, 2003, and all additional supporting documents;

"Waste" means waste as defined by Section 2 of the *Northwest Territories Waters Act*;

"Waters" means any Waters as defined by Section 2 of the *Northwest Territories Waters Act*;

"Water Use" means a use of Water as defined by Section 2 of the *Northwest Territories Waters Act* and shall include freshwater from all sources and mine water, and

"Water Use Fee" means a fee for the use of Water as defined by Section 33 of the *Northwest Territories Waters Act*.

PART B: GENERAL CONDITIONS

1. The Water Use Fee shall be paid annually in advance.
2. Prior to the use of water for miscellaneous undertakings or the disposal of waste, the Licensee shall have posted and shall maintain a security deposit of TBD pursuant to Section 17(1) of the *Act* and Section 12 of the Regulations. The security deposit shall be maintained until such time as it is fully or in part refunded by the Minister pursuant to Section 17 of the *Act*. This clause shall survive the expiry of this License.
3. The Licensee shall file an Annual Report with the Board not later than ***March 31** the year following the calendar year reported which shall contain the following information:
 - a) the monthly and annual quantities in cubic metres of water obtained from all sources;
 - b) the monthly and annual quantities in cubic metres of each and all waste discharged;
 - c) the monthly and annual quantities in cubic metres of pump-out sewage;

- d) a summary report which includes all data and information generated under the "Surveillance Network Program" in an electronic and printed format acceptable to the Board;
 - e) a summary of construction activities conducted;
 - f) any revisions to the approved Contingency Plan;
 - g) a list and description including volumes of all unauthorized discharges, spills and summaries of follow-up action taken;
 - h) an outline of any spill training exercises carried out; and
 - i) any other details on water use or waste disposal requested by the Board by November 1st of the year being reported.
4. The Licensee shall comply with the "Surveillance Network Program" annexed to this License, and any amendment to the said "Surveillance Network Program" as may be made from time to time, pursuant to the conditions of this License.
5. The "Surveillance Network Program" and compliance dates specified in the License may be modified at the discretion of the Board.
6. The Licensee shall, within thirty (30) days of the issuance of this License, post the necessary signs, to identify the stations of the "Surveillance Network Program". All postings shall be located and maintained to the satisfaction of an Inspector.
7. The Licensee shall ensure a copy of this License is maintained at the site of operation at all times.

PART C: CONDITIONS APPLYING TO WATER USE

- 1. The Licensee shall obtain water for dust suppression from the Mackenzie River.
- 2. The daily quantity of water used for all purposes shall not exceed 300 cubic metres.
- 3. The Licensee shall construct and maintain the water intake in accordance with the Department of Fisheries and Oceans' (DFO) requirements to prevent the entrainment of fish. Dimensions should follow DFO's *Freshwater Intake End-of-Pipe Fish Screen Guidelines*.

PART D: CONDITIONS APPLYING TO THE UNDERTAKING

- 1. The Licensee shall provide written notification to an Inspector a minimum of forty-eight (48) hours prior to the commencement of construction.

2. The Licensee shall submit to the Board, within thirty (30) days of the issuance of this License, a Bridge Construction Plan including a schedule of activities and details for construction and bridge development.
3. Prior to the start of construction of any Bridge Structures, the Licensee shall submit to the Board for approval, design drawings stamped by a Geotechnical Engineer.
4. The Licensee shall ensure that bridge construction conforms to plans submitted with the Water License application.
5. The Licensee shall ensure that the existing river channel is maintained at normal width and depth to the greatest extent possible, both during and after construction.
6. The Licensee shall ensure that all waste and water containment and runoff control structures are designed and constructed to prevent escape of wastes to the surface or ground water systems.
7. The Licensee shall ensure that any unauthorized wastes associated with this undertaking do not enter any water body.
8. The Licensee shall ensure that any fuels, chemicals, or wastes associated with this undertaking do not enter any waters. The Licensee shall re-fuel at a location designated by the Inspector not less than one hundred (100) metres from any water body.
9. The Licensee shall ensure that all equipment entering the water will be clean and inspected for leaks prior to entering the water.
10. The Licensee shall not deposit or permit the deposit of any vegetation, soils, or other materials cleared from the site into any water body.
11. Any excess excavated material shall be stored at a location that is a minimum of thirty (30) meters from the normal high water mark of any water body.
12. The Licensee shall dispose of all riverbed soil removed during the installation of in-stream piers to a gravel pit.
13. All fill material used for construction must be free of contaminants. In the event that ammonia residue is detected in the representative samples of blasted rock to be placed in the Mackenzie River, the Licensee shall, thirty (30) days prior to placing blasted rock in the River, submit to the Board for approval an Ammonia Blasting Residues Management and Monitoring Plan that shall include, but not necessarily be limited to, the test results for ammonia. The Licensee shall implement the Plan as and when directed by the Board.

14. The Licensee shall place rip rap at all piers, abutments and approaches to protect against localized scour from ice and water flows.
15. The Licensee shall use, whenever possible, techniques and equipment that minimize the creation, amount and duration of suspended solids during the installation of in-stream piers.
16. The Licensee shall, thirty (30) days prior to pumping water from the pier cofferdams, submit to the Board for approval a Water Disposal and Monitoring Plan. The Plan shall include alternative disposal methods in the event extracted water does not meet Canadian Council of Ministers of the Environment (CCME) Canadian Water Quality Guidelines for the Protection of Aquatic Life.
17. All sites affected by construction or removal activities shall be stabilized and landscaped as necessary, and erosion control measures implemented to minimize sediment deposition into the Mackenzie River.
18. The Licensee shall install geotextile silt barriers and erect silt fences or other erosion control measures at the construction site, as directed and approved by an Inspector.
19. The Licensee shall conduct annual routine maintenance activities, including regular inspections of all superstructure and substructure components for signs of wear, damage and erosion, particularly any signs of erosion near the pier footings or abutments.
20. The Licensee shall clean the bridge deck in the spring to remove accumulated sand and other debris. Chemical de-icers or cleaning agents shall not be used for cleaning.

PART E: CONDITIONS APPLYING TO MODIFICATIONS

1. The Licensee may carry out modifications to the planned undertakings:
 - a) without written approval from the Board, provided that such modifications are consistent with the terms of this License and the Licensee has notified the Board in writing of such modifications at least five (5) days prior to beginning the modifications and an Inspector has not rejected the proposed modifications; or
 - b) with the written approval of the Board and under such conditions decided by the Board.

PART F: CONDITIONS APPLYING TO CONTINGENCY PLANNING

1. The Licensee shall have a Contingency Plan in accordance with the NWT Water Board's "Guidelines for Contingency Planning, January 1987" which must meet with approval of the Board.
2. If not approved by the Board, the Contingency Plan referred to in Part F, Item 1 shall be revised and resubmitted within three (3) months of receiving notification of the Board's decision.
3. The Licensee shall review the Contingency Plan annually and modify the Plan as necessary to reflect changes in operation and technology. Any proposed modifications shall be submitted to the Board for approval.
4. If during the period of this License, an unauthorized discharge of waste occurs, or if such a discharge is foreseeable, the Licensee shall:
 - a) advise an Inspector immediately via the 24 Hour NWT Spill Report Line (867) 920-8130; and
 - b) submit to an Inspector, a detailed report on each occurrence not later than thirty (30) days after initially reporting the event.

MACKENZIE VALLEY LAND AND WATER BOARD

Witness

Chair

**MACKENZIE VALLEY LAND AND WATER BOARD
SURVEILLANCE NETWORK PROGRAM**

LICENSEE: Deh Cho Bridge Corporation

LICENSE NUMBER: MV2003L8-0007

EFFECTIVE DATE OF LICENSE: Month day, 2005

**EFFECTIVE DATE OF SURVEILLANCE
NETWORK PROGRAM (SNP):** Month day, 2005

1. Surveillance Network Program Description & Sampling Requirements

For the purposes of this water license, the sampling parameters have been grouped into the following categories:

Dissolved Metals = Total elemental analysis by ICP-Metal Scan of: Silver (Ag), Arsenic (As), Aluminum (Al), Barium (Ba), Cadmium (Cd), Cobalt (Co), Copper (Cu), Chromium (Cr), Iron (Fe), Manganese (Mn), Molybdenum (Mo), Nickel (Ni), Lead (Pb), Selenium (Se), Strontium (Sr) and Zinc (Zn);

Hydrocarbons = Extractable Hydrocarbons (ExtHC), and Benzene, Toluene, Ethylbenzene, and Xylene (BTEX);

Solids = Total Suspended Solids (TSS), Turbidity and Total Dissolved Solids (TDS);

Standard = pH, Temperature (T), and Conductivity (Cond). These parameters should be measured both in the field as well as in the laboratory; and

Total Metals = Total elemental analysis by ICP-Metal Scan of: Silver (Ag), Arsenic (As), Aluminum (Al), Barium (Ba), Cadmium (Cd), Cobalt (Co), Copper (Cu), Chromium (Cr), Iron (Fe), Manganese (Mn), Molybdenum (Mo), Nickel (Ni), Lead (Pb), Selenium (Se), Strontium (Sr) and Zinc (Zn).

Note: If any sampling requirement falls within two (2) required sampling categories, it need only be sampled once.

Note: Where metals are analyzed, hardness must be analyzed as well.

Surveillance Network Program (SNP) Station 7-1 (a to d)

Description:	Closest pier to north shore of Mackenzie River. Four locations to be sampled: the pier (7-1 a), 100 metres (7-1 b), 500 metres (7-1 c) and 1000 metres (7-1 d) downstream of pier.
Location:	Coordinates TBD
Sampling Frequency:	One hour intervals during pier construction
Sampling Parameters:	Standard, Solids, Total Metals, Dissolved Oxygen

Surveillance Network Program (SNP) Station 7-2 (a to d)

Description:	Second closest pier to north shore of Mackenzie River. Four locations to be sampled: the pier (7-2 a), 100 metres (7-2 b), 500 metres (7-2 c) and 1000 metres (7-2 d) downstream of pier.
Location:	Coordinates TBD
Sampling Frequency:	One hour intervals during pier construction
Sampling Parameters:	Standard, Solids, Total Metals, Dissolved Oxygen

Surveillance Network Program (SNP) Station 7-3 (a to d)

Description:	Second closest pier to south shore of Mackenzie River. Four locations to be sampled: the pier (7-3 a), 100 metres (7-3 b), 500 metres (7-3 c) and 1000 metres (7-3 d) downstream of pier.
Location:	Coordinates TBD
Sampling Frequency:	One hour intervals during pier construction
Sampling Parameters:	Standard, Solids, Total Metals, Dissolved Oxygen

Surveillance Network Program (SNP) Station 7-4 (a to d)

Description:	Closest pier to south shore of Mackenzie River. Four locations to be sampled: the pier (7-4 a), 100 metres (7-4 b), 500 metres (7-4 c) and 1000 metres (7-4 d) downstream of pier.
Location:	Coordinates TBD
Sampling Frequency:	One hour intervals during pier construction
Sampling Parameters:	Standard, Solids, Total Metals, Dissolved Oxygen

Surveillance Network Program (SNP) Station 7-5 (TBD)

Description:	Upstream reference areas. 100 to 500 m upstream of construction zones. Sample number TBD.
Location:	Coordinates TBD
Sampling Frequency:	Three times per day during pier construction
Sampling Parameters:	Standard, Solids, Total Metals, Dissolved Oxygen

Surveillance Network Program (SNP) Station 7-6 (a and b)

Description:	Backwater habitat and riffle-run complex reference areas upstream of north approach. A minimum of two locations to be sampled: backwater habitat (7-6 a); and riffle-run complex (7-6 b) upstream of north approach.
Location:	Coordinates TBD
Sampling Frequency:	Three times per day during pier construction
Sampling Parameters:	Standard, Solids, Total Metals, Dissolved Oxygen

Surveillance Network Program (SNP) Station 7-7 (a and b)

Description:	Backwater habitat and riffle-run complex reference areas upstream of south approach. A minimum of two locations to be sampled: backwater habitat (7-7 a); and riffle-run complex (7-7 b) upstream of south approach.
Location:	Coordinates TBD
Sampling Frequency:	Three times per day during pier construction
Sampling Parameters:	Standard, Solids, Total Metals, Dissolved Oxygen

Surveillance Network Program (SNP) Station 7-8 (a to d)

Description:	Backwater habitat and riffle-run complex areas downstream areas of north approach. A minimum of four locations to be sampled: two backwater habitat (7-8 a and b) and two riffle-run complexes (7-8 c and d).
Location:	Coordinates TBD
Sampling Frequency:	One hour intervals during pier construction
Sampling Parameters:	Standard, Solids, Total Metals, Dissolved Oxygen

Surveillance Network Program (SNP) Station 7-9 (a to d)

Description:	Backwater habitat and riffle-run complex areas downstream areas of south approach. A minimum of four locations to be sampled: two backwater habitat (7-9 a and b) and two riffle-run complexes (7-9 c and d).
Location:	Coordinates TBD
Sampling Frequency:	One hour intervals during pier construction

Sampling Parameters:	Standard, Solids, Total Metals, Dissolved Oxygen
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Surveillance Network Program (SNP) Station 7-10

Description:	Fort Providence Water Intake
Location:	Coordinates TBD
Sampling Frequency:	One hour intervals during pier construction
Sampling Parameters:	Standard, Solids, Total Metals, Dissolved Oxygen

Surveillance Network Program (SNP) Station 7-11 (TBD)

Description:	Areas of Domestic Fisheries; Number of samples TBD
Location:	Coordinates TBD
Sampling Frequency:	One hour intervals during pier construction
Sampling Parameters:	Standard, Solids, Total Metals, Dissolved Oxygen

Surveillance Network Program (SNP) Station 7-12 (a to d)

Description:	Discharge from bridge runoff containment drainages. Four locations to be sampled: west drainage at north approach (7-12 a); east drainage at north approach (7-12 b); west drainage at south approach (7-12 c); and east drainage at south approach (7-12 d).
Location:	Coordinates TBD
Sampling Frequency:	Daily, during periods of runoff
Sampling Parameters:	Standard, Total Metals, Hydrocarbons