

OGC File: 9637479

March 18, 2013

KM LNG Operating Ltd.  
1000, 700 – 9<sup>th</sup> Ave SW  
Calgary, Alberta, T2P 3V4

Attention: Surface Land Administrator

Re: Approval for Changes in and About a Stream

This approves you, under Section 9 of the Water Act to make changes in and about a stream as follows:

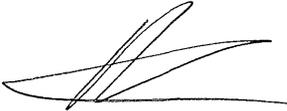
1. The Permit holder is approved to conduct instream works associated with the re-alignment and the installation of a permanent crossing structure of an unnamed creek on Crown land located at: UTM location N. 5983700 E. 519585.
2. This approval does not authorize any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat, as described within the Federal Fisheries Act of Canada.

Additional Conditions:

1. The Permit holder is to ensure a qualified professional is on site for operations within the high water mark of the unnamed creek. This individual must have the authority to issue a stop work order if fish or important fish habitat is determined to be at risk, and will be responsible for developing/implementing mitigation measures to reduce impacts to fish and fish habitat, as required. A post construction report must be prepared by the qualified professional detailing the construction activities that have taken place, the mitigation implemented and its effectiveness in protecting fish and fish habitat within the workspace and downstream. The report must be made available to the Oil and Gas Commission upon request.
2. Work within the wetted area of the unnamed creek is not authorized to take place during seasonal high flow events.
3. No in-stream works on fish bearing streams or works that may adversely impact fish or fish habitat are authorized.
4. Refer to the *Forest Practices Code of British Columbia Act – Forest Road Regulation* at: <http://www.for.gov.bc.ca/tasb/legsregs/ARCHIVE/FPC/FPCAREGS/forroad/froadr.htm#section7-1> for more information regarding temporary and permanent structures.

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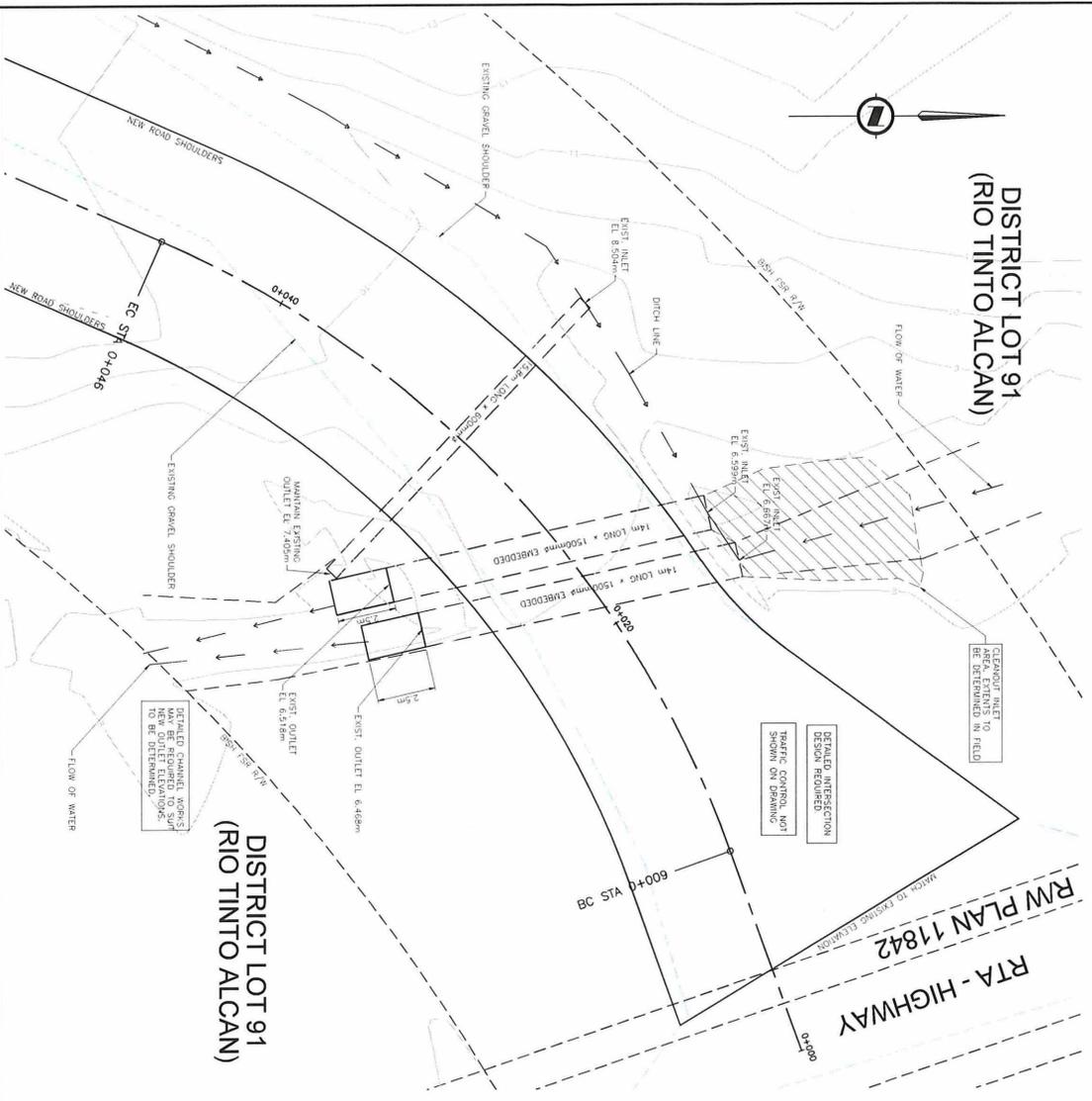
5. Stream crossing methods must be selected and constructed in accordance with the *Environmental Protection and Management Guidebook*, including the Best Management Practices outlined therein.



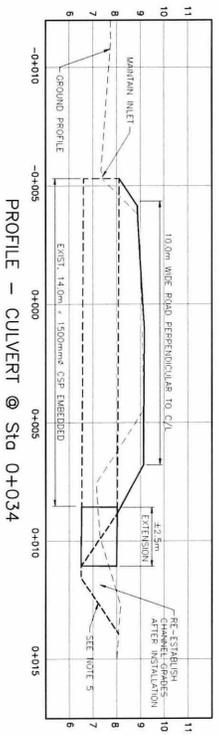
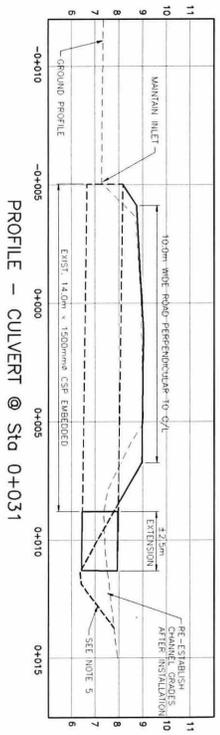
Ryan Stark  
Natural Resource Officer

pc: OGC File: 9637479  
pc: Haisla Nation

DISTRICT LOT 91  
(RIO TINTO ALCAN)



RTA-HIGHWAY  
RW PLAN 11842



**SURVEY NOTES**

1. FIELD SURVEY CONDUCTED IN MAY 2012.
2. ALL DIMENSIONS UNLESS OTHERWISE NOTED ARE IN METERS.
3. GROUND CONDITIONS DEPICTED AS DERIVED FROM SURVEY DATA.
4. SLOPE CLASSIFICATION: NORTH = 5983888557 EAST = 519793464

**DESIGN NOTES/SPECIFICATIONS**

1. DESIGN IN GENERAL ACCORDANCE WITH CAN/CSA S1-2006 DESIGN SPECIFICATIONS APPLIED TO BR'S TUB LOADS (90080 VS. CULV.)
2. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
3. ALL DIMENSIONS IN mm UNLESS NOTED OTHERWISE.
4. ASSURED ALLOWABLE BEDDING PRESSURE 150 kPa MINIMUM.
5. EXISTING CHANNEL TO BE EXCAVATED TO SUIT NEW CULVERT EXTENSIONS AND TO MAINTAIN EXISTING CHANNEL RE-CONSTRUCTION REQUIRED.

**QUANTITY ESTIMATE**

ITEM	UNIT	TOTAL EST.
100mm WIDE INLET PERPENDICULAR TO C/L	m	3.75
14.0m x 1500mm CSP EMBEDDED	sqm	17.5
RE-ESTABLISH CHANNEL GRAVITY AFTER INSTALLATION	sqm	17.5

THIS QUANTITY ESTIMATE IS BASED ON THE ASSUMPTIONS AND CONDITIONS SET OUT IN THE DESIGN NOTES AND SPECIFICATIONS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND UTILITIES AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND UTILITIES AT ALL TIMES.

**APPROVALS**

ISSUED FOR DISCUSSION	<input type="checkbox"/>	DATE: 2-29-12	BY: [Signature]
ISSUED FOR REVIEW	<input type="checkbox"/>	DATE: 2-29-12	BY: [Signature]
ISSUED FOR PERMIT	<input type="checkbox"/>	DATE: 2-29-12	BY: [Signature]
ISSUED FOR CONSTRUCTION	<input checked="" type="checkbox"/>	DATE: 2-29-12	BY: [Signature]

**McElhanney Consulting Services Ltd.**  
 11525 152nd Avenue, Edmonton, Alberta T5A 0A6  
 Phone: 780-443-7100, Fax: 780-443-7106

**Project Information:**  
 Project No: 01-97-20-45  
 Project Name: BISH FSR IMPROVEMENTS D1 STREAM CROSSING GENERAL ARRANGEMENT  
 Issue Date: 01-29-12

**Scale:** 1:1100  
 Drawing No: 01-97-20-45  
 Revision: 01