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OGC File: 9639358

March 20, 2014

Shell Canada Limited  
PO Box 100 Station M  
400-4 Avenue SW  
Calgary, Alberta T2P 2H5

Attention: Surface Land Administrator

Re: Approval for Changes in and About a Stream

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The Oil and Gas Commission hereby authorizes the holder under section 9 of the Water Act to make changes in and about streams, as shown on construction plan PROJECT: 13-1447-0183, Revision 0, dated December 2, 2013, subject to the following conditions:

1. Any substance, sediment, debris or material that could adversely impact the stream
  - a. must not be allowed or permitted to enter or leach or seep into the stream from an activity, construction, worksite, machinery or from components used in the construction of any works, or
  - b. must not be placed, used or stored within the stream channel;
2. Temporary material, fill, bridge, culvert, pump, pipe, conduit, ditch or other structure used in the construction of any works must be constructed and maintained only during the period of construction, and must be removed upon completion of the works;
3. The stream crossing is constructed and maintained at times and in a manner that will not cause serious harm to fish that are parts of a commercial, recreational or Aboriginal (CRA) fishery, as defined under Section 35 of the *Fisheries Act*,
4. During the temporary ford of a stream the authorization holder must ensure that:
  - a. the construction occurs at a time of the year during which the construction can occur without causing harm to fish, wildlife or habitat,
  - b. the 1 in 10 year maximum daily flow over the ford is accommodated without the loss of the ford and without scouring the stream,
  - c. a stream culvert, if used, is designed and installed to pass the average low flow during the period of use,
  - d. the stream channel is protected against erosion during the period of construction and use of the ford, and
  - e. the temporary ford is removed at the end of the period of use at a time, before the next freshet, when the removal can proceed without causing harm to fish, wildlife or habitat.
5. During the construction, maintenance or removal of a clear span bridge, the authorization holder must ensure that:
  - a. the bridge and its approach roads do not produce a back water effect or increase the head in the stream,

- b. the equipment used for construction, including site preparation, maintenance or removal of the bridge, is situated in a dry stream channel or is operated from the top of the bank, and
  - c. the bridge is designed and fabricated in compliance with the Canadian Bridge Design Code, CAN/CSA-86, of the Canadian Standards Association;
6. During the restoration of a change in and about a stream, the authorization holder must ensure that:
- a. any structures constructed to cross the stream are removed,
  - b. the channel is restored to its natural state, to the extent practicable,
  - c. the site of the crossing and associated approaches (including cut and fill slopes and ditch lines) are restored by:
    - i. stabilizing any waste materials removed from the site to above the high water mark to prevent them from entering the stream,
    - ii. re-vegetating disturbed areas associated with the crossing using seed or vegetative propagules of an ecologically suitable species,
    - iii. redistributing coarse wood debris in a manner that aids soil stabilization, and
    - iv. ensuring that surface drainage associated with approaches will not transport sediments into the stream.

#### Additional Conditions

1. No instream activities can occur prior to April 1st at crossing location 2 as indicated on construction plan PROJECT: 13-1447-0183, Revision 0.
2. The permit holder must notify Haisla Nation office prior to commencement of activities.
3. Shell Canada Limited must ensure a qualified professional is on site during all in-stream activities associated with this project. This individual must have the authority to issue a stop work order if fish or fish habitat are determined to be at risk, and will be responsible for developing /implementing mitigation measures to reduce impacts on fisheries resources, as required.
4. Prior to fording activities or any instream works required, all equipment must be inspected to ensure it is clean and free of oil and fluid leaks.

#### Advisory Guidance

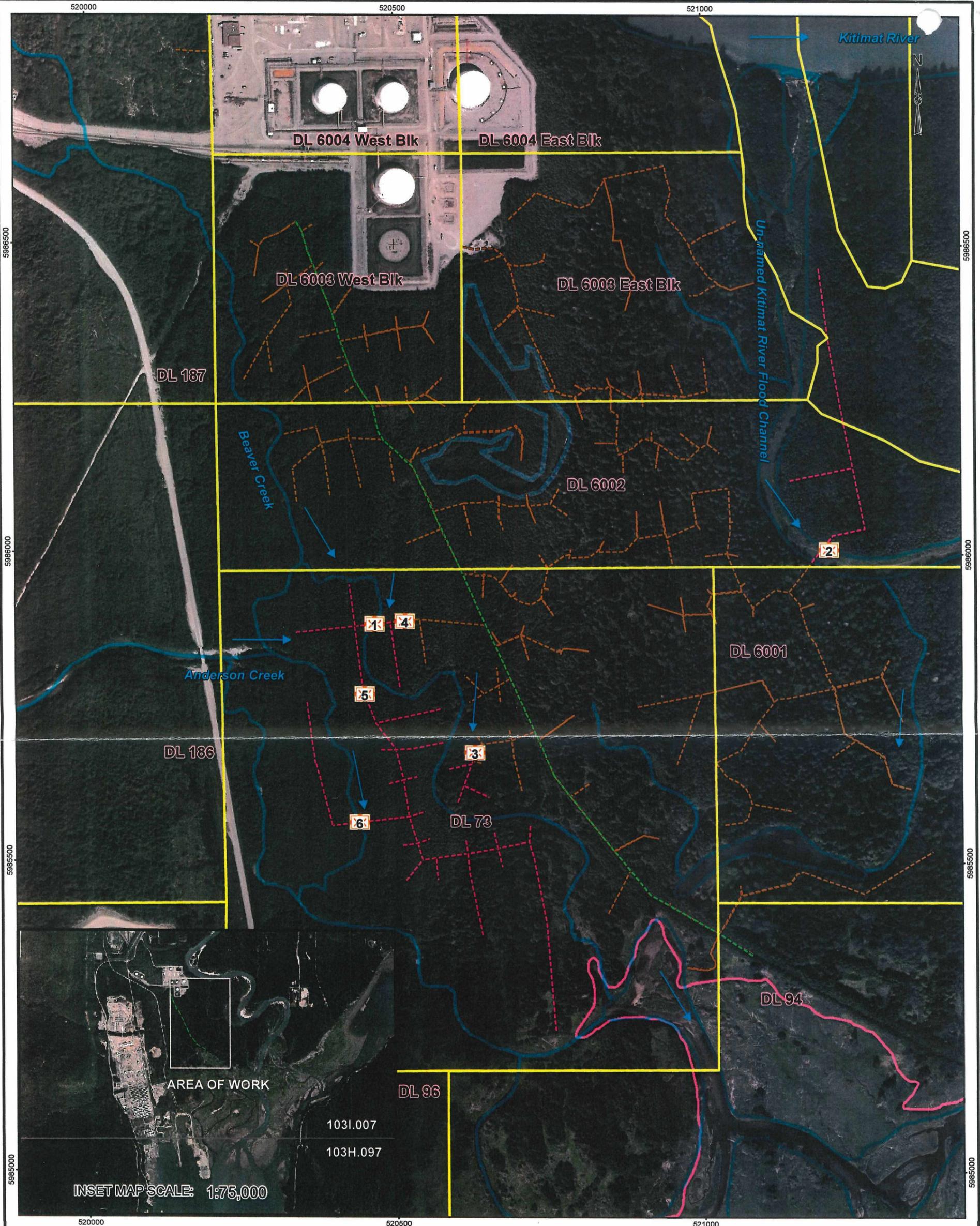
1. Stream crossing methods should be selected and/or constructed in accordance with the Environmental Protection and Management Guidebook, including the Best Management Practices outlined therein.



*Lori Phillips*

**Lori Phillips**  
Review Approval Resource Officer

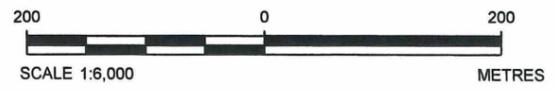
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- LEGEND**
- DYKE ROAD
  - STREAMS - SEE REFERENCE
  - ACCESS ROUTES
  - PROPOSED ROUTES REQUIRING STREAM CROSSING (SECTION 9 APPROVAL)
  - 1 PROPOSED STREAM CROSSINGS
  - PROPERTY BOUNDARIES
  - HIGH HIGH TIDE LINE

**Crossing UTM locations**

1	N. 5986018 m E. 521148 m
2	N. 5985714 m E. 520630 m
3	N. 5985892 m E. 520534 m
4	N. 5985887 m E. 520472 m
5	N. 5985773 m E. 520434 m
6	N. 5985576 m E. 520430 m



**REFERENCE**  
 STREAM VECTORS FROM CANVEC, MODIFIED BASED ON 2013 FIELDWORK BY TRITON. SATELLITE IMAGE OBTAINED FROM STANTEC FTP, USED WITH SHELL PERMISSION.  
 PROPERTY BOUNDARIES FROM BC INTEGRATED CADASTRAL FABRIC. DATUM: NAD83 PROJECTION: UTM ZONE 9N

PROJECT		LNG CANADA PROPOSED LNG TERMINAL KITIMAT, BRITISH COLUMBIA, CANADA	
TITLE		PROPOSED TEMPORARY STREAM CROSSINGS, SHOWING AREA OF WORK AND DISTRICT LOT BOUNDARIES (BCGS 103.I)	
PROJECT No. 13-1447-0183		FILE No.	
DESIGN	DC	2 Dec. 2013	SCALE AS SHOWN
GIS	DS	2 Dec. 2013	REV. 0
CHECK	CS	2 Dec. 2013	<b>Figure 1.</b>
REVIEW	DC	2 Dec. 2013	



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