Manitoba
Conservation
Environmental Operations
123 Main Street, Suite 160
Winnipeg, MB R3C 1A5
T 945-7100 F 948-2338

April 12, 2011

Andrew Eason
Wardrop Engineering Inc.
400 - 161 Portage Avenue
Winnipeg MB R3B 0Y4

Dear Mr. Eason:

Re: Disraeli Bridge Project – Remedial Action Plan Amendment – Land-Based Construction, Pier SU5 Construction Adjacent to the Disraeli Bridge

This will acknowledge receipt of the Remedial Action Plan Revision dated April 5, 2011 regarding limited remediation of potentially impacted soils during the land-based construction activities pile installation and footing construction for the new Disraeli Bridge over the Red River in Winnipeg, Manitoba. The Revised Plan for SU5 was prepared by Wardrop Engineering Inc.

The Disraeli Bridge project will comprise the construction of a new bridge structure spanning the Red River. It is understood that certain land-based construction activities on the south side of the river may encounter potentially impacted soils which are the result of the operation of a former coal gasification plant.

Pier SU5 is located on the west bank of the Red River between the normal summer water level and the winter ice surface level. Originally designed to be supported on driven steel piles, the pier SU5 design has been revised to be supported on five caissons that will extend into the underlying bedrock. It is understood the caisson construction methodology will be similar to that of river pier SU6 as presented in the document entitled: Disraeli Bridges Project Environmental Impact Statement, August 2010. The work on SU6 will be undertaken under the authority of Environment Act Licence No. 2943.

It is understood that construction of pier SU5 will begin once a temporary ramp and work pad are installed on the west bank of the Red River to access the work site. The temporary ramp and work pads are parts of the temporary work bridge discussed in the August 2010 EIS. Pier SU5 will be constructed through potentially contaminated soil/sediment. Therefore, the spoils and water encountered during the construction will be treated as contaminated material.

…/2

The construction of each of the five caissons for pier SU5 will commence with the setting of a 3 metre diameter steel sleeve into the river bank as secondary containment. The sleeve will be positioned from the temporary work pad. The steel sleeve will be advanced through the contaminated soil/sediment to a depth of approximately 6.5 metres below grade, where the soil is not expected to exhibit coal tar related hydrocarbon impact. Soil/sediment within the secondary containment will be removed to approximately the bottom of the steel sleeve. The volume of soil/sediment to be removed from each steel sleeve is estimated to be 45 m^3. Water inside the secondary containment will be removed, loaded on tank trucks, and transferred off of the site for disposal. The potentially impacted soil/sediment removed from the secondary containment will be directly loaded onto trucks and transferred to MidCanada Environmental Services treatment facility in Ile des Chenes, Manitoba for disposal.

In the event that trucks are not immediately available, the soil/sediment will be temporarily stored in roll-off bins or within a lined containment cell. The bin or containment cell will be covered with polyethylene sheeting until it is removed for offsite disposal. The bin or containment cell will be located within a fenced area accessible only to authorized personnel.

Upon completion of removal of the soil/sediment from within the secondary containment sleeve, a thing bentonite cement mixture will be placed at the bottom of the steel sleeve.

Drilling of the caisson will proceed through the bottom of the secondary containment sleeve. A permanent 1.5 diameter steel casing will be advanced as primary containment during drilling. The casing will extend to, and be socketed into, the bedrock at approximately 30 metres below the river bank.

The solids from the caisson drilling process will be loaded onto trucks and hauled from the site for disposal as fill material.

Groundwater from the bedrock is expected to rise in the casing, but will not discharge directly into the river. The bedrock groundwater will be contained within the casing. Saline groundwater is not expected to be encountered.

Concrete for the caisson will be placed using the tremie method. Bedrock groundwater in the casing and containment sleeves will be displaced as the concrete is poured. Bedrock groundwater displaced by the tremied concrete in the first caisson will be transferred to the second caisson. The process of transferring bedrock groundwater to the next subsequent caisson will continue until the fifth and final caisson. The bedrock groundwater displaced by the tremied concrete in the final caisson will be loaded onto tank trucks, and transferred off of the site for disposal.

…/3

At the conclusion of the caisson construction, the void between the 3 metre diameter steel secondary containment sleeve and the 1.5 diameter permanent casing will be filled with bentonite cement mixture as the secondary containment sleeve is removed from the subsurface. Once the containment sleeve is removed from the riverbank, the caisson installation will be complete.

It is the position of Manitoba Conservation that the Remedial Action Plan for the potentially impacted soils during the land-based construction activities for the new Disraeli Bridge over the Red River in Winnipeg Manitoba be undertaken as proposed.

It should be noted that the position of Manitoba Conservation as stated in this letter is based on the information provided to this office by Wardrop Engineering Inc. and relates only to the matters within the scope of the investigation conducted by Wardrop Engineering Inc. No additional site monitoring was performed by Manitoba Conservation.

Yours truly,

Original signed by

Don Labossiere
Director

c File: 20861
Bruce Webb (Manitoba Conservation)