

2015-SEP-30

Province of British Columbia
Ministry of Forests, Lands & Natural Resource Operations
Office of the Comptroller of Water Rights
Water Management Branch
P.O. Box 9340 Stn Prov Govt
VICTORIA, BC V9W 9M1

ATTENTION: Mr. Glen Davidson, P. Eng., Comptroller of Water Rights

Dear Mr. Davidson:

RE: LOWER CHASE RIVER DAM, AUXILIARY SPILLWAY

I am writing in response to your letter of 2015-SEP-15 and the attached *Section 4 - Approval* regarding the Lower Chase River Dam. In response to the issues raised in the *Section 4 - Approval*, following are updates on these issues, plus further information on the project:

- 1) The City requests that the Auxiliary Spillway (Spillway) approval be granted in phases and that a Leave To Commence Construction be granted for the following work:
 - a. Auxiliary Spillway Excavation – the City plans to commence excavation of the Auxiliary Spillway, as noted on the attached plans submitted by Golder Associates (Golder).
 - b. Cut-Off Wall – In advance of full excavation, the City plans to commence construction of the cut-off wall using secant pile system to prevent seepage from the reservoir into the Spillway excavation. Attached are drawings and specifications from Golder and Herold Engineering (Herold) for the cut-off wall construction.

Please confirm that a Leave to Commence Construction can be granted for excavation and cut-off wall construction.

Attached is a cover email from Golder outlining their drawing submissions and possible alterations that may have to be made to the design, depending on soil conditions encountered during excavation.

- 2) The Engineer of Record (EoR) for the project is Bruce Downing, P. Eng., Golder, who has been the lead engineer for Golder on the Colliery Dam project for the past two years.
- 3) Bruce Downing will supervise construction of the project.

- 4) Minor changes to the approved project plans may be made and signed off by Bruce Downing.
- 5) The City will prepare an interim operation, maintenance & surveillance manual, and emergency preparedness plan prior to the operation of the Auxiliary Spillway and a final manual and plan within one year of completion of the project.
- 6) The City acknowledges that an independent engineer or an independent environmental monitor may be required if deemed necessary during the project.

Snuneymuxw First Nation (SFN) Review of Spillway

The Mayor has discussed the project with the SFN Chief and I have discussed the project with SFN Council member Chris Good and SFN staff. SFN representatives have confirmed they recognize the City is proceeding with the project and that the position the SFN expressed in letters to the City 2014-JUL-30 and 2015-MAR-18 remains the SFN position on the project. The SFN requested trees cut down for the project be given to the SFN, which has been completed, plus some of the fill material from the excavation be given to the SFN, which is planned.

Project Update

During the past two weeks, the following construction has taken place:

- ❖ Installation of a temporary bridge over Harewood Creek and the haul road to the site is complete.
- ❖ Environmental protection measures are in place for Harewood Creek.
- ❖ Trees within the Spillway footprint and adjacent construction zones have been removed and hauled off site. Stumps are being removed and grubbing of the site will be generally complete by October 2.
- ❖ Test pits and associated excavation will commence in the swale component of the Spillway and the area adjacent to the cut-off wall. The Spillway footprint will be excavated down approximately 2 metres prior to the installation of the cut-off wall.

Golder, Copcan Civil Ltd. (Copcan), and the City are pursuing a contractor for installation of the secant pile. A schedule for this work to be undertaken will be available in 7-10 days.

Project Schedule

As noted above, the schedule for installation of the cut-off wall will be known within 7-10 days and equipment will be mobilized on site to undertake this work. Following is the proposed schedule for either components of this work:

Week of October 5-9

Excavation and removal of material off-site. Contractor retained for installation of cut-off wall.

Week of October 13-16

Additional design drawings will be provided by Golder and Herold for construction of the Spillway, labyrinth weir, and pre-cast panels for the bridge over the Spillway. Timing of

structural designs from Herold will partially depend on the results of the excavation and further amendments to the structural designs previously submitted may be amended as needed.

October 13-30

Installation of the cut-off wall. Once the cut-off wall is in place, the full excavation can take place and construction of the labyrinth weir can commence.

Additional Items

As well as undertaking the above-noted work, Golder is also pursuing the items noted below:

Harewood Creek

Hydrology review is ongoing and an update will be available shortly.

Seismic Monitoring of the Lower Dam

Previously, it was recommended that monitoring equipment is to be installed in the Lower Dam to measure the impact a seismic event would have on the Lower Dam. Planning for this work is underway.

Middle Colliery Dam Analysis

Once Golder has completed the detailed design for the Auxiliary Spillway, they will undertake a review of the Middle Colliery Dam, as outlined in the Comptroller's Order of 2015-APR-29.

If you have any questions, or require further information and/or clarification, please contact Steve Ricketts, City Construction Manager and the City's representative for the construction of the Auxiliary Spillway, at (250) 756-5329 or steve.ricketts@nanaimo.ca; or please contact me at (250) 755-4424 or toby.seward@nanaimo.ca.

Yours truly,



Toby Seward

Acting General Manager

COMMUNITY DEVELOPMENT & PROTECTIVE SERVICES

TS/kb

Attachments: Email from Golder including drawings & specifications

cc: Wenda Mason, Manager, River Forecast Centre & Dam Safety Section
Scott Morgan, Head, Dam Safety Section
Ted Swabey, City Manager
Steve Ricketts, Manager of Construction, Public Works