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2010 September 7

Milena Kostova, Ph.D.
Project Officer
Wastes and Decommissioning Division
Canadian Nuclear Safety Commission
280 Slater Street, P.O. Box 1046 Station B
Ottawa, ON K1P 5S9

Dear Dr. Kostova,

***PORT HOPE PROJECT: NOTIFICATION OF PREFERRED OPTION
TO MITIGATE RISK OF AN EMERGENCY DISCHARGE TO CLARK'S DITCH***

The purpose of this letter is to respond to your correspondence dated 2010 July 27, [1] concerning proposed modifications to increase the collection pond capacity at the Welcome Waste Management Facility (WWMF) [2]. Your letter acknowledges recent positive developments at the WWMF and requests AECL to confirm its preference for meeting CNSC expectations to preclude emergency discharges to Clark's Ditch.

AECL prefers to mitigate the potential for an emergency discharge to Clark's Ditch by implementing operational improvements that address the management of water volumes at the WWMF. These improvements are described in Attachment 1 to this letter and include increased discharge capability, added redundancy of critical equipment and improved monitoring. Many of the upgrades have already been completed and were observed by the CNSC Staff at its semi-annual compliance inspection of the WWMF.

AECL's proposal to modify the collection ponds by increasing the height of the berms will be set aside until operating experience suggests that the modifications are required and/or the detailed design of the water treatment system for the new Long-Term Waste Management Facility is developed. Should berm modification prove to be necessary, AECL will factor into the work plan the recommendations advanced by CNSC Staff [1].

Based on the physical changes to the water treatment facility and the progressive approach to management of water volumes at the WWMF, AECL submits that the risk of an emergency discharge to Clark's Ditch is substantially mitigated and requests the CNSC to close the open action.

If you have any questions regarding this matter, please do not hesitate to contact me at (905) 885-8830 ext. 4-1150.

Regards,



Dave Boyce
Manager, Waste Facility Operations
Port Hope Area Initiative Management Office

DB:tlw

Attachment

c.	C. Fahey	G. Case	A. Denby	J. Miller	R. Neufeld
	A. Choate	S. Faught	B. Taylor	>PHAI Files	D. Howard, CNSC

References:

- [1] M. Kostova letter to D. Boyce: *Port Hope Project - CNSC Comments on AECL Work Plan to Increase Collection Pond Capacity at the Welcome Waste Management Facility*. 4.05.02/37-26-0-0, 2010 July 27.
- [2] D. Boyce letter to M. Kostova: *Port Hope Project: Work Plan to Increase Collection Pond Capacity at the Welcome Waste Management Facility*. 4501-508760-021-000, 4501-ACNO-10-0011-L DB-2010-015, 2010 June 18.

Welcome Waste Management Facility Operational Improvements

I. Collection Ponds Water Level Management

The current collection pond configuration consists of two ponds with a combined surge capacity of 17,470 cubic metres. As stated in the 2009 Golder Associates Design Summary Report [1] the surge capacity of the collection ponds is sufficient to handle a 100 year rain storm event.

Since assuming licence responsibility on 2010 March 31, AECL has completed the following measures that improve the management of collection pond water levels and mitigate the risks of discharge to Clark's Ditch:

Completed Measures

- Remote monitoring capable telemetry systems have been installed that monitor collection pond water level in real time and the operation of a weather station at the site.
- Cameras have been installed to remotely monitor the site as a backup to the telemetry system allowing a visual inspection of the site.
- An operating principle has been adopted to maintain the water level in the east collection pond at a low operating level and in the west collection pond essentially empty allowing for maximum storm run-off capacity.

Measures Underway

- Further development of the telemetry system that includes remote monitoring of inflow flow rates, treated effluent discharge flow rates and system operating status.

II. Operations and Maintenance of the Welcome Waste Management Facility

To improve the operations of the WWMF, the following measures have been taken and or planned:

Completed Measures

- In the fall of 2009 the previous licensee, Cameco Corporation, completed installation of two new 100 mm diameter treated effluent discharge lines to Lake Ontario (replacing the original single 75 mm diameter pipeline). This upgrade more than doubled the discharge capacity to >600 litres per minute, effectively eliminating the risk of a treated effluent discharge to Clark's Ditch. The previous 75 mm diameter discharge line limited the volume of treated effluent that could be discharged to Lake Ontario
- Critical spares have been identified and are available on site to address mechanical breakdowns.
- Security and Fire Detection systems have been installed in the Water Treatment Building and site trailer for deterrence and early warnings to protect the operating capability of the water treatment system.
- The daily inspections conducted by the AECL operations team allows for early intervention to address conditions that may effect the operation of the WWMF.

- Contracts are in place with Cameco and others to provide supplementary labour should extreme conditions demand intervention. Contracts for routine electrical, mechanical and site services maintenance have also been established.

Measures Underway

- In order to continue operations during an extended power failure at the WWMF, a switching panel that will allow the water treatment building to be run from a diesel generator is being installed.
- The single inflow pump from the east collection pond has been identified as a critical piece of equipment. The spare pump has been recently overhauled and will be plumbed in line to allow for easy switchover should the primary pump fail. To augment the current electric pumps that are used to transfer water from the east to the west collection pond under surge conditions, the operations team is sourcing two high volume gas powered pumps.

[1] Golder and Associates: *Current Design Summary Report for Welcome Waste Management Facility*, 2009 August, Report Number 09-1111-0003/1000