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Notice of Alteration Request

Tracy Braun, Director
Manitoba Conservation and Water Stewardship
Environmental Approvals
2nd Floor 123 Main Street (Box 80)
Winnipeg, MB
R3C 1A5

June 3, 2016

Dear Ms. Braun,

RE: Notice of Alteration Request – Diageo Gimli Plant

This notice of Request for Alteration is submitted to Manitoba Conservation on behalf of the Diageo Gimli Plant (Diageo). This request is to incorporate an alteration to the process flow of the Diageo Gimli Wastewater Treatment Plant (Diageo WWTP) into the environment act license currently under development. The alteration requested in this letter would allow Diageo to pump clean water directly to Lake Winnipeg by bypassing the North Lagoon and Diageo Gimli Wastewater Treatment Plant (Diageo WWTP) effluent wet well. The resultant process alterations will be located on land currently owned and operated by Diageo Canada Inc.

Background

Under the previously submitted notice of alteration (dated September 29, 2015), the process consisted of clean water pumped from the clean water sump to the North Lagoon, from where it flowed into the Diageo WWTP effluent wet well, and was pumped to Lake Winnipeg. This clean water flow consisted of:

- Overflow of the 10th floor process water tank (source is fermenter cooling water)
- Overflow of the 6th floor process water tank (source is S-11 product cooler and batch cooker mash cooler cooling water)
- Cooling tower blowdowns
- Spent water from DDG product cooler (2nd floor boiler room)
- Demineralizer regeneration water (2nd floor boiler room)
- Dealkilizer regeneration water (2nd floor boiler room)
- Softener regeneration water (2nd floor boiler room)
- Cooling tower sump energy overflow

The proposed alteration would allow Diageo to bypass the lagoon and wet well, allowing the entire Diageo WWTP to be shut down while Diageo is operating under its Industrial Services Agreement with the Rural Municipality of Gimli (Gimli).

Description of Changes

The proposed alteration will send clean water from a new storage tank to Lake Winnipeg. Several clean water sources would be redirected to the R.M. of Gimli’s forcemain, with the remaining clean water sent to Lake Winnipeg and detailed below in **Table 1**.

Table 1: Clean Water Diversion Flow Alteration

Current	Planned	
	To R.M. of Gimli	To Lake Winnipeg
Overflow of the 10th floor process water tank (source is fermenter cooling water)		Overflow of the 10th floor process water tank (source is fermenter cooling water)
Overflow of the 6th floor process water tank (source is S-11 product cooler and batch cooker mash cooler cooling water)		Overflow of the 6th floor process water tank (source is S-11 product cooler and batch cooker mash cooler cooling water)
Cooling tower blowdowns	Cooling tower blowdowns	
Spent water from DDG product cooler (2nd floor boiler room)		Spent water from DDG product cooler (2nd floor boiler room)
Demineralizer regeneration water (2nd floor boiler room)	Demineralizer regeneration water (2nd floor boiler room)	
Dealkilizer regeneration water (2nd floor boiler room)	Dealkilizer regeneration water (2nd floor boiler room)	
Softener regeneration water (2nd floor boiler room)	Softener regeneration water (2nd floor boiler room)	
Cooling tower sump energy overflow	Cooling tower sump energy overflow	
Alcohol product cooling water which is raw groundwater (7th floor still house)		Alcohol product cooling water (7th floor still house)
Yeast tub cooling water (4th floor yeast room)		Yeast tub cooling water (4th floor yeast room)

The existing 100 mm well water supply line to the Diageo WWTP will be repurposed to bypass the North Lagoon and effluent wet well by tying into the 200 mm treated effluent line at the Diageo WWTP. Isolation valves will be used to isolate the bypass pipe. A check valve will be used to prevent backflow from the clean water connection to the production building.

A pH meter, flow meter, temperature instrument and sampling port will be installed on the line in the lift station to comply with the draft license requirements for non-contact cooling water.

The existing clean water sump will be replaced by an underground clean water tank of the same dimensions. This replacement will occur during a scheduled Diageo Gimli Plant shutdown.

The existing clean water pumps will be reused. These pumps turn on and off based on the clean water level in the tank, and operate in a lead-lag arrangement. If the pumps or piping need to be taken out of service for any reason, a submersible pump will be used to pump clean water from the sump/tank to the wet well via temporary line, from where clean water will be pumped to the lake using the effluent pumps.

The clean water flow path will be altered to allow the entire Diageo WWTP to be shut down while Diageo Gimli is operating under its Industrial Services Agreement with the Rural Municipality of Gimli (Gimli). The intent

behind these changes is to allow the Diageo WWTP to be completely shut down during the Industrial Services Agreement period.

These proposed alterations are illustrated on the process flow diagram (Figure 1).

Environmental Effects

Respecting Construction

Diageo will obtain the necessary permits, authorizations, licenses and approvals; dispose of all construction debris appropriately; and prevent deleterious substances from entering watercourses according to the terms and conditions of the draft environmental act license. None of the proposed piping additions are located underground.

Respecting Operation of the Development

The clean water will be discharged to Lake Winnipeg via the submerged 250 mm HDPE treated wastewater discharge (outfall pipe).

Respecting Solid Wastes

The proposed alteration is anticipated to have a negligible effect on the generation of solid wastes at the Development when the industrial services agreement is in use.

Respecting Dangerous Goods or Hazardous Waste

Diageo will continue to comply with the requirements laid out in this section.

Respecting the Wastewater Treatment Lagoon

The proposed alteration will send clean water directly to Lake Winnipeg, bypassing the lagoon. The lagoons will remain out of service once the proposed alteration is implemented.

Respecting Operation of the Wastewater Treatment Plant

The proposed alteration will bypass the wastewater treatment plant, except under emergency conditions. Under these conditions, only the wet well and effluent pumps will be placed into service.

Respecting Non-Contact Cooling Water

The proposed alteration will comply with the terms and conditions listed for non-contact cooling water by recording flow measurements, temperature and pH of the clean water, and reporting them to the Director.

Respecting Sludge Management

The proposed alteration is anticipated to have a negligible effect on the generation of sludge at the Development when the industrial services agreement is in use.

Waste Stillage and Liquid Wastes Disposal

The proposed alteration will reduce the volume of wastewater sent to Lake Winnipeg. The proposed alteration will redirect cooling tower blowdown, demineralizer regeneration water, dealkilizer regeneration water, softener regeneration water, and the cooling tower sump energy overflow to the R.M. of Gimli's WWTP, while the remaining clean water flows will continue to be discharged to Lake Winnipeg.

Respecting Air Emissions

The proposed upgrade is anticipated to have a negligible effect on air emissions from the plant.

Respecting Decommissioning

Diageo will not decommission the Diageo WWTP at this time. Should the decision be made to decommission the plant, Diageo will submit a formal detailed Decommissioning Plan for the WWTP.

I trust that this submission meets your needs. Should you have any further questions regarding this request, please do not hesitate to contact the undersigned. Thank you.

Regards,

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cc: Jennifer Winsor, Environmental Engineer (Government of Manitoba)
Leilanie Schmietenknop, Risk Manager (Diageo Canada - Gimli)
Murray Stewart, Distillation Manager (Diageo Canada - Gimli)
Craig Dryburgh, Site Director (Diageo Canada - Gimli)

Figure 1: Proposed Alterations

