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Waterloo ON N2L 0A4

October 13, 2023

Project/File: CIAR# 80100

Julie Buron

Impact Assessment Agency of Canada

Dear Ms. Buron,

Reference: CN Milton Logistics Hub September 14th Spill 30-Day Report

The purpose of this correspondence is to provide the Impact Assessment Agency of Canada (IAAC), in accordance with Condition 14.5.4 of the amended Decision Statement issued July 26, 2022, with the 30-Day report following the incident that occurred on September 14, 2023. Notification of the incident was provided to IAAC verbally on September 14 and in writing (via email) on September 15, 2023.

Description of Incident and Adverse Effects

On the morning of September 14, 2023, a filter bag being used to dewater the isolation area (i.e., work area behind the coffer dam) associated with the downstream connection of the Indian Creek realignment failed, releasing sediment-laden water into a vegetated area more than 30 metres (m) from Indian Creek. A portion of the contents of that mixture made it through the secondary containment system, which consisted of straw bales, silt fence, and wildlife fencing, and was observed entering the creek, causing a visible, cloudy plume.

Cambridge Landscaping, the contractor retained to support Dufferin Construction Company (DCC) with the realignment of Indian Creek, began pumping water from the isolation area to facilitate channel construction activities. The pumps had been installed to direct water to a filter bag containment area that was set-up more than 30 m from Indian Creek as a mitigation measure to reduce sediment in any discharge water.

The filter bag was located approximately 100 m upstream (east) of Tremaine Road. The filter bag containment area was located approximately 40 m from Indian Creek, with discharge from the area following an approximately 55 m flow path to Indian Creek. All construction activities occurred on CN property.

As DCC attended the area to review Cambridge Landscaping's pumping set-up and containment area, an abrupt failure of the filter bag occurred releasing sediment laden water on the morning of September 14, 2023, which drained overland through the vegetated riparian area and other layers of secondary containment towards Indian Creek. Pumps were shut-off immediately by DCC to prevent further discharge to the environment.

Reference: CN Milton Logistics Hub September 14th Spill 30-Day Report

A plume of sediment-laden water was observed in Indian Creek downstream of the incident. The plume was observed to continue downstream of Tremaine Road outside of the Project Development Area (PDA). The EMs documented a turbidity reading of 510 NTUs shortly after the incident at a location immediately upstream of Tremaine Road, as compared to 10.1 NTUs documented upstream that same day where Indian Creek flows enter the PDA.

The following photographs illustrate the failed filter bag and the resulting plume within Indian Creek upstream and downstream of Tremaine Road on the morning of September 14, 2023.



Photo 1: Failed filter bag

Reference: CN Milton Logistics Hub September 14th Spill 30-Day Report



Photo 2: Indian Creek upstream of Tremaine Road

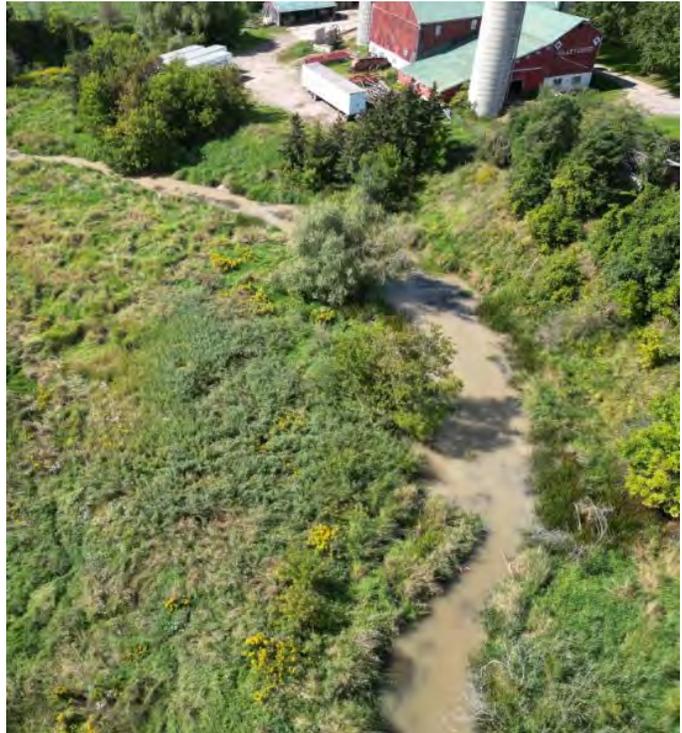


Photo 3: Indian Creek downstream of Tremaine Road

Within the next two hours, visible improvements to water quality were observed by the EMs. Within four hours of the incident, turbidity readings of 6.55 NTUs were documented upstream of Tremaine Road, demonstrating a rapid return to baseline levels.

Description of Mitigation Measures Implemented

Following the incident, immediate steps were taken to prevent any further release to the environment, including the following actions:

- Pumps were shut-off immediately to prevent further discharge of sediment laden water to the environment.
- DCC mobilized to repair the damaged filter bag.

Photographs and water quality samples were taken to document the incident and environmental conditions.

Prior to any repair, discussions occurred on-site between DCC, Cambridge Landscaping, Stantec, and CN to identify repairs and determine additional or modified mitigation measures. Based on this conversation, the following measures were implemented on September 14:

- DCC removed the existing filter bag and the damaged containment area, consisting of a layer of strawbales and layer of silt fence.
- DCC left the existing wildlife fencing intact and it was not removed as part of the repairs.

Reference: CN Milton Logistics Hub September 14th Spill 30-Day Report

- DCC installed a double row of strawbales to create a sediment basin within which the filter bag is located.
- DCC lined the sediment basin created by the strawbales with filter fabric.
- DCC installed a new, longer filter bag (10 m long) to replace the failed filter bag (5 m long). Bag size was increased in size to provide greater capacity to treat pumped discharge.
- DCC replaced a row of strawbales located downstream of the discharge point from the sediment basin with new bales.
- DCC installed a second row of silt fence at the discharge location.
- DCC installed a row of strawbales between the two rows of silt fencing.

The following photographs illustrate the repairs and measures being implemented on September 14 and 15, 2023 to improve the filter bag containment area.



Photo 4: Installed of double row of strawbales



Photo 5: Double silt fence with additional strawbales



Photo 6: Installed filter fabric liner and filter bag in sediment basin



Photo 7: Installed 10 m filter bag in sediment basin

Reference: CN Milton Logistics Hub September 14th Spill 30-Day Report

The EMs were present during the implementation of the above described measures and monitoring of turbidity levels within Indian Creek continued throughout the day. The EM inspected the area prior to initiating pumping activities on September 15. Periodic pumping of the isolation area continued over the weekend by DCC to maintain water levels. The EM was also present over the weekend to monitor proper functioning of the filter bag containment area during isolations pumping activities.

Subsequent to the implementation of the above measures, and at the request of CN, DCC developed a Site Specific Best Practices Document for Pumping Basins / Silt Bag Maintenance to document protocols and procedures for the use of filter bags and pumping of construction water on site, which includes the following requirements:

- inspection of proper functioning of silt bags at the following intervals:
 - Prior to use
 - Hourly for the first two hours of use
 - Every three hours during regular use
 - At the end of the regular work day
 - After-hours pumping intervals to be assessed on a case-by-case basis
 - Higher risk areas requiring more frequent monitoring
- Inspection of silt build up within silt bags on a daily basis
- Temporarily halting pumping as required to complete inspections
- Replacing silt bags when they are observed to be approximately 1/2 full
- Ensuring all sediment basins include filter cloth liner, staked strawbale walls, and an appropriately sized silt bag, with the hose connection to the silt bag using wire
- Ensuring all sediment basin / silt bag locations are >30 m from a watercourse
- Oversizing silt bags to provide a buffer within the available capacity

Further, a stand down meeting was held by DCC with their work force to review and discuss site environmental requirements in response to this incident.

Views from Indigenous Communities and Potentially Affected Parties

In accordance with the Accident and Malfunction Communication Plan, the incident was reported to various parties via phone call and email. Notification was provided to IAAC, the Fisheries and Oceans Canada (DFO), Mississaugas of the Credit First Nation, the Six Nations of the Grand River, the Ontario Ministry of the Environment, Climate and Parks (MECP) Spills Action Centre (ECCC representative in Ontario), the Region of Halton and the Town of Milton, and downstream landowners. **Attachment 1** provides a summary of the notifications provided and copies of email correspondence provided to the various parties. Phone calls and emails were used to notify agency staff and Indigenous communities, while downstream residents were contacted directly (i.e., door knock)

To date, no responses have been received from any of the agencies notified. Downstream landowners contacted following the incident had no issues and thanked CN for coming forward.

Reference: CN Milton Logistics Hub September 14th Spill 30-Day Report

Description of Residual Effects and Modified Mitigation Measures

Residual adverse effects to water quality, fish, and fish habitat within Indian Creek are expected to be negligible. While sediment laden water entered the creek causing elevated turbidity levels, the influx was short in duration (instantaneous, not continuous), as the pumps were shut off immediately, and turbidity levels returned to background levels within a few hours of the incident. While Indian Creek is known to experience elevated periods of turbidity on a regular basis (i.e., following storm events) for longer duration, as noted in project documentation and the Indian Creek Subwatershed Study, the turbidity concentration in Indian Creek was higher than normal during this spill and much shorter in duration. Sediment released into Indian Creek originated from within Indian Creek itself (i.e., native material), as the water being pumped into the filter bag came from the isolation area being dewatered for the channel realignment.

The sediment plume was observed to extend downstream of the PDA into the Local Assessment Area (defined in the Environmental Impact Statement as extending 300 m downstream from the PDA), and likely extended into the Regional Assessment Area, although turbidity levels would have decreased through dilution as the plume dispersed downstream. No residual accumulation of silt was observed within Indian Creek. Conditions returned to baseline levels shortly (i.e., within a few hours) after the incident. The incident occurred outside of the restricted activities period (March 15 to June 30) when fish are more susceptible to adverse water quality impacts. No fish mortality was observed. No long-term impacts on water quality, fish, or fish habitat are anticipated.

No other valued components of the environment are expected to have been impacted by this spill as the release to the environment was isolated and contained to Indian Creek.

Implementation of the Accident and Malfunction Response Plan

This incident was classified as a reportable release according to the Accident and Malfunction Communication Plan since the sediment laden water was considered to have the potential to impact the natural environment, or to pose a potential threat to surface water outside of the project construction limits. A coordinated response to the spill occurred by CN, DCC, and the EMs. The response, as described above, recognized the need for action to be taken to prevent further impacts to the environment.

Since no residual accumulation of silt was observed within Indian Creek, no cleanup of the spill or residual material was required.

Steps were taken to reinforce and improve the prevention and mitigation measures to avoid spill recurrence, as described above. These additional and modified mitigation measures will continue to be implemented throughout the construction phase.

90-Day Report

CN will be initiating work on the preparation of the 90-Day Report, required pursuant to Condition 14.5.5, which will be submitted to IAAC no later than December 12, 2023 providing a description of any changes made to avoid a subsequent incident and of any modified or additional mitigation measures, monitoring or progressive reclamation following the incident. Any views from the Mississaugas of the Credit First

Reference: CN Milton Logistics Hub September 14th Spill 30-Day Report

Nation, the Six Nations of the Grand River, and potentially affected parties and advice from relevant authorities received by CN will be considered.

Closing

We trust that the information contained in this correspondence addresses the information requirements of Condition 14.5.4 as it pertains to this incident. If you have any questions or require additional information, please do not hesitate to contact the undersigned.

Sincerely,

STANTEC CONSULTING LTD.

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Attachment: 1 – Summary of Notifications and Communication Record

c. Tara Schwitzer, DFO
Darren Reynolds, Kristina Boka, and France Moreau, CN

Attachment 1: Summary of Notifications and Communication Record

Date / Time	Party	Method of Notification	Description
September 14, 2023 @ 12:45 EST	Fisheries and Oceans Canada (DFO)	Call to Tara Schweitzer (DFO) by Chris Powell (Stantec)	<ul style="list-style-type: none"> • Advised of the release to the environment - silt bag failed in conjunction with dewatering, silt released to Indian Creek, plume visible, on-site water contained but plume visible downstream of Tremaine Road • Advised that CN was implementing the A&M Communication Plan (IAAC) and notifying DFO pursuant to Authorization conditions • Advised that CN was notifying the MECP SAC and that I would be notifying IAAC after this call • Advised that further details would be provided once available from the field regarding status, extent of impacts and need for clean up • Tara suggested keeping in mind whether a follow-up site meeting may be needed; to be determined based on details to follow
September 14, 2023 @ 12:50 EST	Impact Assessment Agency of Canada (IAAC)	Call to Julie Buron (IAAC) by Chris Powell (Stantec)	<ul style="list-style-type: none"> • Advised of the release to the environment - silt bag failed in conjunction with dewatering, silt released to Indian Creek, plume visible, on-site water contained but plume visible downstream of Tremaine Road • Advised that CN was implementing the A&M Communication Plan (IAAC) and had notified DFO pursuant to Authorization conditions • Advised that CN was notifying the MECP SAC • Advised that further details would be provided by email (within 24 hours) once available from the field regarding status, extent of impacts and need for clean up • Julie suggested contacted ECCC pursuant to deleterious effects (Fisheries Act) • Julie also noted the need for 30-day and 90-day report, which I acknowledged would be provided • Advised that additional notifications to Indigenous Communities, Town, Region and possibly neighbours would be notified as well pursuant to the A&M Communication Plan
September 14, 2023 @ 12:51 EST	Spills Action Centre (MECP)	Call to Spills Action Centre (MECP) by Aaron Stadnyk (CN)	<ul style="list-style-type: none"> • Reported the incident to the MECP Spills Action Centre (SAC) (SAC Incident No: 1-3U6YRN)

Date / Time	Party	Method of Notification	Description
			<ul style="list-style-type: none"> Requested if they would require a follow-up on site status, and they indicated that they would forward the notification to the Halton/Peel District Office
September 14, 2023 @ 13:57 EST	Spills Action Centre (MECP)	Call from MECP Officer Aseel Kaiser, from the Halton/Peel District Office (MECP) to Aaron Stadnyk (CN)	<ul style="list-style-type: none"> Spoke with MECP SAC and confirmed that based on field measurements, turbidity values have returned to background, with readings of 6.5 NTUs. SAC officer notified that the MECP has changed the incident reporting number to 1-3U6Z6G. The previous number was for the initial notification. This new number should be referenced going forward. SAC does not require an additional update, but we should expect follow up from the Halton/Peel district officer at some point.
September 14, 2023 @ 15:50 EST	Region of Halton	Call to Halton Region (#311, spoke with F. Mohammed) by Chris Powell	<ul style="list-style-type: none"> Reported through switchboard Advised of spill into Indian Creek
September 14, 2023 @ 16:00 EST	Town of Milton	Call to the Town of Milton (905-878-7252 x. 2500 Operations Services) by Chris Powell	<ul style="list-style-type: none"> Message left, advised of spill into Indian Creek
September 14, 2023 @ 16:06 EST	Region of Halton	Phone message from Nicole Hill, Supervisor of Industrial Waste Group (Halton Region) to Chris Powell	<ul style="list-style-type: none"> Called after receiving message from #311 and provided call back information
September 14 @ 17:00 EST	Region of Halton, Town of Milton, and Conservation Halton	Email from Darren Reynolds (CN) to Bob Gray (Halton), Andrew Siltala (Milton) and Hassan Basit (CH)	<ul style="list-style-type: none"> Provided written notification of the incident, summary of notifications provided, steps taken to prevent further release and implement mitigation Advised further information would be provided in 30-Day and 90-Day Reports
September 14, 2023 @ 17:56 EST	Region of Halton	Call to Nicole Hill, Supervisor of Industrial Waste Group (289-259-6288) by Chris Powell	<ul style="list-style-type: none"> Suggested that any spill to regional road / storm sewer would go through the Region, while any spill to a local road / storm sewer would go through the Town Clarified that there was no spill onto a road or into a storm sewer, and she indicated that it was 'not within Halton's jurisdiction' Nicole advised that they notified the Town of Milton to expect a similar call, and noted that they reached out to the Town because they are often difficult to reach

Date / Time	Party	Method of Notification	Description
September 14, 2023 @ 22:33 EST	IAAC and DFO	Email to Julie Buron (IAAC) and Tara Schweitzer (DFO) from Chris Powell	<ul style="list-style-type: none"> • Provided written notification of the incident, summary of notifications provided, steps taken to prevent further release and implement mitigation • Advised further information would be provided in 30-Day and 90-Day Reports
September 14, 2023 @ 21:04 EST	Huron Wendat Nation	Email to Maxime Picard (Huron Wendat) from Darren Reynolds (CN)	<ul style="list-style-type: none"> • Provided written notification of the incident, summary of notifications provided, steps taken to prevent further release and implement mitigation • Advised further information would be provided in 30-Day and 90-Day Reports
September 14, 2023 @ 21:06 EST	Mississaugas of the Credit First Nation	Email to Casey Jonathan (MCFN) from Darren Reynolds (CN)	<ul style="list-style-type: none"> • Provided written notification of the incident, summary of notifications provided, steps taken to prevent further release and implement mitigation • Advised further information would be provided in 30-Day and 90-Day Reports
September 14, 2023 @ 22:30 EST	Six Nations of the Grand River First Nation	Email to Dawn Laforme (Six Nations) and Tanya Hill Montour (Six Nations) from Darren Reynolds (CN)	<ul style="list-style-type: none"> • Provided written notification of the incident, summary of notifications provided, steps taken to prevent further release and implement mitigation • Advised further information would be provided in 30-Day and 90-Day Reports
September 15, 2023 @ 11:35 EST	Region of Halton, Town of Milton, and Conservation Halton	Email from Darren Reynolds (CN) to Bob Gray (Halton), Andrew Siltala (Milton) and Hassan Basit (CH)	<ul style="list-style-type: none"> • Provided summary on conversation with Halton staff during phone call on September 14, 2023
September 15, 2023	Landowner (5367 No. 2 Side Road)	Site Visit by Kristina Boka and Manny Loureiro (CN)	<ul style="list-style-type: none"> • Advised of failed silt bag releasing muddy water into the creek on September 14, 2023 and of CN's response to address the incident • Homeowner expressed no issues and thanked CN for notification
September 15, 2023	Landowner (5275 No. 2 Side Road)	Site Visit by Kristina Boka and Manny Loureiro (CN)	<ul style="list-style-type: none"> • No answer, business card and CN public inquiry card left in mailbox
September 15, 2023	Landowner (5116 Tremaine Road)	Site Visit by Kristina Boka and Manny Loureiro (CN)	<ul style="list-style-type: none"> • No answer, business card and CN public inquiry card left in mailbox
September 18, 2023	Landowner (5275 No. 2 Side Road)	Site Visit by Kristina Boka and Manny Loureiro (CN)	<ul style="list-style-type: none"> • Advised of failed silt bag releasing muddy water into the creek on September 14, 2023 and of CN's response to address the incident • Homeowner expressed no issues
September 18, 2023	Landowner (5116 Tremaine Road)	Site Visit by Kristina Boka and Manny Loureiro (CN)	<ul style="list-style-type: none"> • No answer

Date / Time	Party	Method of Notification	Description
September 20, 2023	Landowner (5116 Tremaine Road	Site Visit by Kristina Boka and Manny Loureiro (CN)	<ul style="list-style-type: none"><li>• Advised of failed silt bag releasing muddy water into the creek on September 14, 2023 and of CN's response to address the incident<li>• Homeowner expressed no issues