

**Subject:** Re: Update for Norman Wells Produced Water Release (Spill #2022382, INC 2022-122)  
**Date:** Friday, August 19, 2022 at 11:56:36 Mountain Daylight Saving Time  
**From:** Fatima Youssef  
**To:** Bonnie Bergsma  
**Attachments:** image001.jpg

**From:** "Fraser, Benjamin C" <benjamin.fraser@esso.ca>  
**Date:** Friday, August 12, 2022 at 5:26 PM  
**To:** Patti Dods <Patti.Dods@cer-rec.gc.ca>, Laurel McDonald <Laurel\_McDonald@gov.nt.ca>, "Smith,Olivia (ECCC)" <Olivia.Smith@ec.gc.ca>, Bonnie Bergsma <bonnie.bergsma@slwb.com>, "Morton, Tim" <tim.morton@rcaanc-cirnac.gc.ca>  
**Cc:** "Gregory, John C" <john.c.gregory@exxonmobil.com>, "Macdonald, Iain A" <iain.a.macdonald@exxonmobil.com>  
**Subject:** Update for Norman Wells Produced Water Release (Spill #2022382, INC 2022-122)

Good evening,

Reaching out to provide the latest status update regarding our ongoing active investigation before the weekend. Please don't hesitate to reach out if there are any questions.

- We are monitoring the water quality. There are no indications there is a risk to public health or wildlife.
- We are still investigating whether produced water entered the Mackenzie River. The cause has not yet been determined.
- On August 5 - 12, continued excavation of buried piping flanges and sourcing of specialty pressure test equipment in order to isolate sections of the pipeline and perform freshwater pressure tests.
- On August 5 - 12, completed engineering design and review of pressure tests; continued engineering support for specialty equipment rentals and work scope (i.e. tractor-enabled internal pipeline inspection camera).
- On August 10 - 12, an external environmental consultant collected water quality samples along the Mackenzie River, beginning near Goose Island and continued downstream at 20 km intervals, covering 100 km of river in total. Additional samples were collected further downstream near Fort Good Hope with Guardian representatives present through the K'ahsho Got'ine Foundation.
- We intend to commence pressure testing this weekend – delayed from our most recent update to obtain required specialty equipment determined necessary through excavations and direct investigations. Isolating and pressure testing portions of the pipeline will continue for an extended duration until the location of the release has been determined.

Kind regards,  
**Benjamin Fraser**  
 Environment & Regulatory Advisor  
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**From:** "Fraser, Benjamin C" <benjamin.fraser@esso.ca>  
**Date:** Thursday, August 18, 2022 at 6:19 PM  
**Subject:** Update for Norman Wells Produced Water Release (Spill #2022382, INC 2022-122)

Good evening,

Please see below for the latest status update regarding our ongoing active investigation. Please don't hesitate to reach out if there are any questions.

Latest Status Update

1. We have confirmed with freshwater pressure test that the release occurred in the section of the produced water line that is under the Mackenzie River. Using an internal pipeline crawler tool, the release point was observed 157 m SE from the flange closest to the water's edge on Goose Island with approximate GPS coordinates (65.264, -126.907). Root cause of the failure is still under investigation. See below diagram outlining the location. (Note: GIT 4 represents Goose Island Terminal 4, BIT 4 represents Bear Island Terminal 4)



2. We completed bathymetric surveys of the pipeline. Survey results indicate there is an exposed pipeline span approximately 18m in length along the riverbed where the internal pipeline crawler detected the release point of Line 490. Additional bathymetric surveys are planned to further assess the pipeline corridor as part of the continued investigation. Based upon our findings and as a precaution, we are shutting in production through the other 3 pipelines within the corridor and are assessing potential plans for repairs and remediation work. Details of the additional lines within the bundle are included in the table below:

Line #	Route	Fluid	Line OD (in)	Production Shutdown
263	GIT 4 to BIT 4	Gas Lift	4	2022-08-18
491	GIT 4 to BIT 4	Oil Emulsion	6	2022-08-18
490	GIT 4 to BIT 4	Produced Water	6	N/A
111	GIT 4 to BIT 4	Oil Emulsion	10	2022-08-18

3. We are monitoring the water quality. There are no indications there is a risk to public health or wildlife.
4. Water quality samples collected August 10th-12th downstream of the release location along the Mackenzie River were completed by an external environmental consultant (Worley Advisian) and are being analyzed by an accredited third party laboratory (Bureau Veritas).

5. When available, we will share the water sampling results including the sampling methodology, locations and discussion of results compared to CCME (Canadian Council of Ministers of the Environment) Water Quality Guidelines for the Protection of Aquatic Life.

Kind regards,

**Benjamin Fraser**

**Environment & Regulatory Advisor**

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