

## Don McCabe

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**From:** Tammy Ramanat <tammy\_ramanat@transcanada.com>  
**Sent:** Monday, March 16, 2015 11:45 AM  
**To:** Emilee Mailes; Tom MacMillan  
**Cc:** Don McCabe  
**Subject:** Grand Rapids - Trib to Wandering River - Turbidity Exceedance

Good Day Emilee and Tom,

As per AER Condition 18:

*Any exceedance of ESRD's suspended sediment thresholds must be reported to AER immediately and appropriate mitigation measure must be implemented.*

Grand Rapids Pipeline Project is reporting on the following isolated watercourse crossing.

Water Quality Monitoring at the Unnamed Tributary to the Wandering River (WC 27) captured an exceedance of turbidity levels according to CCME Water Quality Parameters for High Flow Periods. Below is a summary of the root causes and corrective measures taken for this exceedance.

**Root Cause:**

- Pre-construction assessment of the watercourse at the crossing earlier last week measured discharge at approximately 13-15 m<sup>3</sup>/min. Warm weather and spring run-off conditions resulted in actual conditions upwards of 40 m<sup>3</sup>/min at the time of isolation.
- The resulting increase in water volumes and discharges required all available pumps, as well as additional pumps brought in from offsite to adequately bypass the isolation according to established processes and calculation.
- The increased pump discharge required to maintain adequate flows in the watercourse caused increased turbidity during this time. This is an expected result of bypassing large volumes of water.
- During bypass, an 8" pump experience mechanical issues, causing water back-up and pooling on the upstream side. Once the pump was repaired, turbidity associated with this pooling was transferred downstream.

**Mitigation:**

- Pump discharge locations are being altered and rotated to avoid over-saturation and allow for increased dispersion/filtration of fine sediments before re-entering the watercourse.
- Increased diligence by construction crew for proper mechanical function of all pumps being used.
- Continued monitoring of water quality conditions and changes in overall discharge.

Please let me know if you have any questions or concerns.

Thanks,  
Tammy

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