

April 15, 2015

Don McCabe
Alberta Energy Regulator
Suite 1000, 250 – 5th Street S.W.
Calgary, Alberta T2P 0R4

Dear Mr. McCabe,

**RE: Grand Rapids Pipeline GP Ltd. Grand Rapids Pipeline Project
Decision 2014 ABAER 012
Condition Compliance Update - Condition 17**

Grand Rapids Pipeline GP Ltd. (Grand Rapids) provides the following update to the Alberta Energy Regulator (AER) on compliance with Condition 17 of Decision 2014 ABAER 012 (Decision) for the Grand Rapids Pipeline Project (Project). Condition 17 states:

Where watercourses are not dry or frozen to bottom at the time of construction and where flowing water occurs, Grand Rapids must, through the use of a qualified aquatic environmental specialist, ensure that a water quality monitoring program is implemented during construction to monitor and confirm the effectiveness of the mitigation measures employed. This requirement applies to both horizontal directional drilling and isolated open cut crossings.

The AER has requested the following, to ensure this condition is met:

Grand Rapids will submit to the AER a water quality monitoring program implementation report signed by a qualified aquatic environmental specialist.

Grand Rapids prepared a Water Quality Monitoring and Fish Salvage Plan for spreads 3b and 4 along the proposed pipeline route that was constructed in winter 2014/2015. The Water Quality Monitoring and Fish Salvage Plan was submitted to the AER on February 26, 2015. Grand Rapids notes that water quality monitoring of all isolated and horizontal directional drill (HDD) crossings is not a standard industry practice.

A Qualified Aquatic Environment Specialist (QAES) assessed each of the watercourse crossings along the proposed pipeline route. As per an assessment of the fish and fish habitat sensitivity present at each watercourse crossing location, and the proposed pipeline and vehicle crossing installation techniques, it was determined that the proposed installations could proceed with limited potential to negatively impact fish or fish habitat.

Based on the site-specific conditions and the proposed pipeline installation techniques, TERA's QAES identified specific watercourse crossings where water quality monitoring may be required during isolated trench and trenchless crossings. Water quality monitoring at the sites identified below is dependent on site-specific conditions at the time of construction, and based on the results of the site assessment and TERA's QAES professional opinion. The locations identified by TERA, with potential for requiring water quality monitoring, are identified below:

Isolated Trench Crossings:

- Buffalo Creek (WC1);

- Livock River (WC3); Dropoff Creek (WC11);
- Unnamed Tributary to the House River (WC19);
- Unnamed Tributary to the Wandering River (WC22);
- Unnamed Tributary to the Wandering River (WC23);
- Wandering River (WC25);
- Unnamed Tributary to the Wandering River (WC27);
- Unnamed Tributary to Flat Lake (WC31);
- Namepi Creek (WC36);
- Beaverhill Creek (WC39); and
- Oldman Creek (WC44).

Trenchless Crossings:

- Unnamed Tributary to Loon Creek (WC6);
- Loon Creek (WC7);
- Athabasca River (WC8);
- Boivin Creek (WC9);
- House River (WC10);
- House River (WC17);
- La Biche River (WC28);
- North Saskatchewan River (WC38); and
- Unnamed Tributary to the North Saskatchewan River (WC45).

In the professional opinion of the QAES, water quality monitoring will not be required at the other isolated or HDD crossings.

Isolated crossings are an accepted pipeline installation technique supported by Fisheries and Oceans Canada's Measures to Avoid Causing Harm to Fish and Fish Habitat and the Pipeline Associated Watercourse Crossings, 3rd Edition (Canadian Association of Petroleum Producers [CAPP] *et al.* 2005). This document is a compilation of planning considerations and best practices in pipeline and vehicle watercourse crossing construction techniques, and available environmental protection methods to meet provincial and federal regulatory requirements and reduce potential effects on fish and fish habitat.

All watercourse crossings will be conducted in accordance with industry guidelines, such as Pipeline Associated Watercourse Crossings [CAPP *et al.* 2005], and outside their respective restricted activity periods (RAPs). Limited or negligible increases in suspended sediment in the water column are anticipated due to the construction activities required to install the pipeline. To complete successful crossings, Geotechnical investigations have been or will be carried out at all of the proposed watercourse crossings that are planned to be constructed using an HDD. If drilling mud releases occur, the Directional Drilling Procedures and Instream Drilling Mud Release Contingency Plan (C&R Appendix 1E) will be implemented. Trenched crossings will be constructed using an isolated technique if water is present. By

isolating the crossing area and filtering any water prior to release to the watercourse, limited or negligible increased sediment load is anticipated. During construction of isolated crossings a minor and short-term sediment release is expected during installation and removal of the dam. Recent evidence demonstrates that smaller watercourses that lack substantial subsurface flow can be readily isolated with minimal sediment introduction when proper design, construction and mitigation measures are applied (CAPP *et al.* 2005).

Grand Rapids is currently evaluating the need for water quality monitoring for construction activities anticipated to commence in summer 2015 and would be pleased to discuss the plan with the AER, as required. If you have any questions or can provide further direction on closing the condition, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tammy Ramanat', with a stylized, cursive script.

Tammy Ramanat
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