



File OF-Surv-Gen-T217 01
13 August 2019

Mr. W. Alan Sawyer, Jr.
President and CEO
Trans-Northern Pipelines Inc.
45 Vogell Road, Suite 310
Richmond Hill, ON L4B 3P6

Dear Mr. Sawyer:

**Trans-Northern Pipelines Inc. (TNPI)
Amending Safety Order AO-002-SO-T217-03-2010
Request for Variance of Condition 5.c Prevention Measures and Timelines Report**

The National Energy Board (Board) issued Amending Safety Order AO-002-SO-T217-03-2010 (Amending Safety Order) on 24 October 2016 to TNPI, allowing operation of its pipeline system subject to certain conditions.

On 12 April 2017, the Board issued Amending Safety Order AO-003-SO-T217-03-2010 to TNPI, varying Condition 4.a. of the Amending Safety Order among other directions.

Background and Events

Condition 4.a. of the Amending Safety Order requires:

For each of the pipeline sections in Schedules A, B, C and D (as amended by Order AO-003-SO-T217-03-2010).

- a. TNPI shall perform the following actions:
 - i. TNPI shall conduct a hydraulic analysis that includes all possible steady and non-steady state condition scenarios for all TNPI facilities and pipeline segments at 100% Maximum Operating Pressure (MOP) and their reduced operating pressures (ROPs) to identify where overpressure events may occur. TNPI shall include in the hydraulic analysis an assessment of the collateral effects to the operation of third party pipelines in the event of an overpressure;

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- ii. TNPI shall conduct and validate the hydraulic analysis results by correctly predicting all of the reported overpressure incidents; TNPI shall develop and implement corrective and preventive measures in response to the results of the hydraulic analysis that are in compliance with CSA Z662-15 Clause 4.18. The recommended measures must include the installation of pressure relieving systems to ensure that overpressure will not occur at any point in the TNPI system;
- iii. TNPI shall integrate and optimize pressure-limiting systems, pressure-relieving systems, and Supervisory Control and Data Acquisition (SCADA), programmable logic controllers (PLC) and programming;
- iv. TNPI shall file with the Board a report that describes the security measures with respect to its SCADA and PLCs operating systems;
- v. TNPI shall notify the Board within 2 days after derating a pipeline section, if TNPI derates the operating pressure of any section set out in Conditions 1 a., 2 a., and 3 a. due to an identified transient analysis related issue. The notice must include the rationale for reducing the pipeline's pressure;
- vi. TNPI shall file with the Board for approval by 30 September 2017, a report that describes all specific evaluated scenarios, hydraulic analysis results, the recommended corrective and preventive measures, and the locations where overpressure protection system are proposed to be installed;
- vii. TNPI shall implement the recommended corrective and preventive measures within 24 months after receiving Board approval under 4.a.vii. TNPI shall file with the Board a report confirming that it completed the measures.

Condition 5 of the Amending Safety Order requires:

TNPI shall perform the following actions:

- a. A historical review of past overpressures to identify causal and contributing factors specific to management systems and organizational factors, as well as recommended corrective and preventive measures.
- b. Implementation of the associated corrective and preventive measures resulting from the historical review.
- c. TNPI shall file with the Board for approval by 31 December 2016, a report which describes the process of incident investigation and analysis including the incidents assessed, the analytic results and the implemented and required preventive and mitigative measures. The report shall include a timeline to implement the preventive and mitigative measures that are not implemented when the report is filed (outstanding measures).
- d. TNPI shall file with the Board, within 30 days after the conclusion of the timeline to implement the outstanding measures, confirmation that the outstanding measures referred to in Condition 5(c) have been implemented

On 28 September 2017, TNPI filed a report entitled National Energy Board Condition 4.a: TNPI Ontario-Quebec Pipeline (the Condition 4.a Report) in compliance with Condition 4.a.vii.

On 26 June 2019, the Board approved the corrective, preventive and mitigative measures included in the Condition 4.a Report and in additional documents filed in relation to Condition 4.a.

On 30 December 2016, TNPI filed (1) a Det Norske Veritas (Canada) Ltd. (DNV GL) report entitled Review of Overpressure Incidents - Condition 5.a (DNV GL Report), and (2) TNPI Condition 5.c Report – Prevention Measures and Timelines (Condition 5.c Report), in compliance with the Amending Safety Order.

On 12 September 2017, TNPI filed a revised report entitled Review of Overpressure Incidents – Condition 5.a (Revised Report) including DNV GL recommendations, TNPI Prevention Measures and Implementation Timelines.

On 15 November 2017, the Board issued a letter to TNPI confirming that Condition 5.a. and 5.c. had been complied with.

On 15 May 2019, TNPI filed a Request for Variance of Condition 5.c Prevention Measures and Timelines Report.

Views of the Board

Condition 4.a.viii of the Amending Safety Order requires TNPI to implement the recommended corrective and preventive measures approved by the Board on 26 June 2019 within 24 months after receiving Board approval of Condition 4.a.vii, which is 26 June 2021.

By letter issued on 15 November 2017, the Board requires TNPI to file the outstanding information related to Condition 5.b and 5.d by 31 December 2019.

The Board notes that the following two outstanding preventive measures included by TNPI in the Condition 5.c Report Filing were developed in accordance with Condition 4.a of the Amending Safety Order:

- i. Pressure-limiting systems; Supervisory Control and Data Acquisition (SCADA) and programmable logic controllers will be optimized (30 September 2017) and integrated per Amending safety Order Condition 4.a.iv and viii and TNPI Commitment Plan Condition 4.a.iv and viii.
- ii. Pressure-relieving systems will be optimized and installed per Amending Safety Order Condition 4.a.iii, iv and viii and TNPI Commitment Plan Condition 4.a.iii, iv and vii.

The Board has reviewed TNPI's Request for Variance of Condition 5.c Prevention Measures and Timelines Report filed on 15 May 2019.

The Board understands that TNPI Condition 4.a Report and Condition 5.c Report were developed concurrently and both pertain to the overall goal of preventing overpressure events on the TNPI pipeline system.

Therefore, the Board approves TNPI's request to vary the implementation timelines set out in the Condition 5.c Report for the two outstanding preventive measures listed above from "31 December 2019" to "within 24 months after receiving Board approval of the Condition 4.a Report pursuant to Condition 4.a.vii of the Amending safety Order", which is 26 June 2021.

The Board reminds TNPI that Condition 4.a.viii is not yet complete. As required by the Board Letter dated 26 June 2019, TNPI must implement the Recommended Measures required by Condition 4.a.vii by 26 June 2021. Further, TNPI must file with the Board a report confirming that TNPI completed the Recommended Measures and the two outstanding preventive measures listed on the Condition 5.c Report Filing as required by Condition 5.d.

The Board reminds TNPI that all other information related to Conditions 5.b and 5.d referring to the implementation of the associated corrective and preventive measures resulting from Condition 5.a and 5.c must be filed by 31 December 2019 as required by the Board letter of 15 November 2017.

Yours truly,

Original signed by L. George for

Sheri Young
Secretary of the Board