

NEW BRUNSWICK ENERGY AND UTILITIES BOARD

IN THE MATTER OF the *Pipeline Act, 2005*, S.N.B. 2005, c. P-8.5 and the regulations made thereunder, and a butane leak which was discovered on January 8, 2018 on a pipeline in the 59 Pipeway owned and operated by Irving Oil Terminals and Pipelines, G.P.

ORDER

WHEREAS the New Brunswick Energy and Utilities Board (Board) is responsible for ensuring the safe construction and operation of various pipelines in New Brunswick;

AND WHEREAS the Board's Pipeline Safety Staff investigated a butane leak that took place on a pipeline in the 59 Pipeway (Pipeline), which Pipeline is owned and operated by Irving Oil Terminals and Pipelines, G.P. (Irving Oil);

AND WHEREAS the Board's Pipeline Safety Staff has prepared an Incident Investigation Report, numbered 2018-001 (Report);

AND WHEREAS the Board has reviewed the Report;

AND WHEREAS, the Board notes that, at the direction of the Board's Pipeline Safety Staff, Irving Oil has completed work to demonstrate that the Pipeline can be operated safely and that this work includes:

- a. Repairs to the pipeline which included raising a section of the pipeline so it was not susceptible to constraints due to icy conditions.
- b. The necessary nitrogen and equipment needed for purging operations in the event of a leak is now located adjacent to the pipeline and is readily available.
- c. Four additional patrol checkpoint locations were added throughout the 59 Pipeway and the patrol intervals have been increased from twice daily to 3 times daily.

- d. The pipeline was thoroughly inspected to identify any deficiencies. This included;
 - i. 554 circumferential UT thickness scans. All readings were found to exceed minimum code requirements.
 - ii. Radiographs were completed at all low point areas to determine if any internal corrosion was present. All readings were found to exceed minimum code requirements.
 - iii. A review of the pipeline supports was completed to identify any issues dealing with movement of the pipeline due to ambient temperatures
- e. Irving Oil implemented and tested a new leak detection system capable of detecting butane and other hydrocarbons present along the 59 Pipeway.

The Board inspection of the leak detection system concluded that the system is a continuous (24/7) external leak detection and monitoring system. A demonstration of the system at the time of the inspection showed that the detection of hydrocarbons will trigger the system and cause an alarm (visual and auditory) at the refinery Control Panel.

AND WHEREAS the Report recommends further corrective action;

NOW THEREFORE IT IS ORDERED THAT:

1. Pursuant to section 50 of the *Pipeline Act, 2005, S.N.B. 2005, c. P-8.5*, Irving Oil is ordered to file a corrective action plan (CAP) with the Board by July 1, 2018 for review and approval. The CAP is to include how the corrective actions as outlined below are to be addressed and include any changes required to programs, processes and procedures to satisfy the actions items. The CAP must also include a schedule of implementation and completion for each item.
 - a. In addition to the newly installed leak detection described above, install and implement a leak detection system to continually monitor internal pressure of the pipelines in the 59 Pipeway. Upon the detection of a loss in pressure in one of the pipelines, the systems shall be capable to trigger an alarm (visual and auditory) at the refinery control panel.

- b. Review the emergency response plan including the availability of any necessary equipment for controlling and stopping the flow of a leak, including purging operations, for the pipelines in 59 Pipeway. The procedures shall include the control and containment of lost product.
- c. Liaise with emergency response agencies that responded to the January 8, 2018 incident and complete a debriefing exercise as outlined in CSA Standard Z731-03 Emergency Preparedness and Response.
- d. Hazard identification, risk analysis and risk evaluation shall be conducted for the 59 Pipeway and include the review of methods and procedures to reduce the consequences associated with failure or damage incidents. This risk assessment shall be carried out as per the requirements and guidelines of the Z662. The following shall be considered in the assessment;
 - i. Methods for early leak detection,
 - ii. Methods to control and shutdown supply sources,
 - iii. Methods to limit the amount of product released,
 - iv. Methods of recovery and clean-up of product released,
 - v. Improved emergency response procedures, and
 - vi. Improved public awareness and education programs.
- e. Consult with appropriate emergency response agencies when updating the emergency procedures manual.
- f. All pipelines shall be isolated from supply sources during non-flow conditions, i.e. in-between shipments.
- g. Ensure that adequate drainage is provided to protect the aboveground pipelines from ice and snow buildup.
- h. All patrol personnel shall use the punch recording system as presently used by security and records are to be retained for a minimum of five years.
- i. Review the leak detection systems and emergency response procedures to confirm their adequacy and effectiveness at least annually.

DATED at the City of Saint John, New Brunswick, this 9th day of May, 2018.

BY THE BOARD



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