



**INSPECTION OFFICER ORDER NO. LJP - 001 - 2019**

IN THE MATTER OF THE *NATIONAL ENERGY BOARD ACT*, AN ORDER UNDER SECTION 51.1

\_\_\_\_\_  
*Full name of the recipient*

is employed by Trans Northern Pipelines Inc., and/or is a person  
*Company Name*  
operating a pipeline located near Long Sault ON.

On or about 22 March 2019, the undersigned *National Energy Board* Inspection Officer  
*Date / time*  
conducted compliance verification of/at the remediation site at milepost 83.6 near Long Sault, ON.

*Location on R.O.W., compressor, pump or meter station, watercourse, KP, project/pipeline, watercourse, project name*

A field inspection was also conducted at milepost 83.6 site on 22 March 2019 by an NEB Inspection Officer.

The Inspection Officer has determined that a hazard is being or will be caused based on the following facts:

- TNPI identified historical contamination in soil and groundwater during construction of its Capacity Expansion and Line Reversal Project.
- Based on review of related filings, and from discussions with TNPI, the IO is of the view that there are uncertainties associated with the assessment of risks to human health conducted by TNPI, and additional confirmatory sampling is warranted:
  - Uncertainty regarding potential risks to human health via inhalation of indoor air:
    - As part of a Screening Level Risk Assessment (November 2018) conducted for the site, TNPI submitted results from two samples obtained from one well, on one occasion in July 2018.
    - The risk assessment included a recommendation to re-sample the vapour well in the winter to capture seasonal variability.
    - As discussed during the NEB Field Inspection, additional attempts to sample the soil vapour well have occurred, however adequate samples could not be obtained due to high groundwater levels.
  - Uncertainty regarding potential risks to human health via direct soil contact:
    - Per discussions held during the NEB Field inspection, shallower soil sample intervals were assessed in the field via field analytical methods. Though field analysis provides relevant site information for certain purposes, it does not



- yield data that is sufficiently accurate to provide certainty regarding potential impacts to human health.
- TNPI's previous submissions include laboratory analytical results of shallower surface soil sampling conducted from either too large of a sampling interval (0-1.5 m below grade), or too deep of an interval (0.8-1.5 m) to adequately estimate the contamination status of the actual surface soils, relevant to the direct soil contact exposure pathway.
  - The risk assessment (November 2018) appears to have been based on laboratory analytical data from either subsoil samples, or from the shallower soil intervals noted above (large composite, or relatively deep). Although the assessment was based on peak measured concentration, the risk did not adequately consider surface soil concentrations.
- There are uncertainties regarding groundwater delineation and potential risks to other downgradient receptors:
    - TNPI's previous submission (Final Report: Annual Environmental Monitoring Summary – Long Sault 29 May, 2018) states that groundwater delineation was no longer achieved after PAHs were identified in two wells on the western and northwestern perimeters of the site where they had not been previously observed (BH17-LS18 and BH15-LS13).
    - Per discussions held during the NEB Field Inspection, TNPI and its consultant confirmed that no additional groundwater monitoring wells had been installed at this site since 2017.

*the inspection officer shall describe the grounds for making the order*

*Based on the above mentioned, the inspection officer has reasonable grounds to believe that a hazard to the safety or security of the public or of employees of a company or a detriment to property or the environment is being or will be caused by the construction, operation, maintenance or abandonment of the pipeline, or any part of a pipeline, an abandoned pipeline or any part of it, or a ground disturbance or the construction of a facility.*

Therefore, \_\_\_\_\_ is HEREBY ORDERED,

*Fair name of the recipient*

pursuant to subsections 51.1(1) and 51.1(2) of the *National Energy Board Act*, to

take measures specified below for guarding the safety or security of the public or employees or protecting property or the environment

Suspend work until the hazard or detrimental situation has been remedied to the satisfaction of the inspection officer; or the order is stayed or rescinded by the Board

Specified Measures <sup>1</sup>:

<sup>1</sup> All documentation provided to meet the terms of the Order should be filed with the Secretary of the Board unless otherwise specified by the undersigned inspection officer.



TNPI will complete additional confirmatory sampling to inform an assessment of potential risks to human health and the environment at the Long Sault site. Confirmatory sampling of soil vapour, shallow/surface soils and groundwater required is outlined below <sup>2</sup>:

- 1) Confirmatory soil vapour sampling conducted in accordance with Chapter 7 of CCME guidance, due as soon as practicable but no later than 24 April 2019:
  - a. Install a network of additional soil vapour probes at a frequency, at locations, and at depths in accordance with guidance provided in Chapter 7 of CCME guidance and accounting for the known seasonal variability of the water table at this site.
  - b. Provide diagrams showing the soil vapour sampling locations as well as a rationale that demonstrates that the soil vapor sampling meets the cited guidance.
  - c. Provide the results and analysis of the potential for risks to human health from the first available round of soil vapour sampling from the wells installed in a., and if sampling is possible, at the well sampled in July 2018;
  - d. Develop and submit a monitoring plan for ongoing or repeated monitoring of the soil vapour probe network that will enable seasonal variability in soil vapour results to be captured.
  
- 2) Confirmatory shallow/surface soils sampling conducted in accordance with Chapter 5 of CCME guidance, due as soon as practicable but no later than 24 May 2019:
  - a. Locations to sample: Sample at least four locations in the peak impacted area<sup>3</sup> (including potential "worst case") within the right of way (ROW), and at least four potential "worst case" locations within the nearest residential property
  - b. Depths/intervals to be sampled: From each sample location, soil samples will be obtained from the intervals 0-0.3 m, 0.3-0.5 m and 0.5-1.0 m from ground surface.
  - c. Parameters to assess: petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAH) and metals
  - d. Criteria for comparison: compare against both Ontario Ministry of Environment and CCME criteria, indicating the most stringent criteria.
  
- 3) Conduct additional groundwater delineation and sampling, due as soon as practicable but no later than 24 May 2019:
  - a. Conduct additional characterization and delineation of contamination in groundwater and soil beyond monitoring well locations BH 15-LS13 and BH 17 – LS18 where PAH impacts were first observed in February 2018.

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<sup>2</sup> The data must be obtained at a level of detail and quality such that it can be used in a quantitative human health and ecological risk assessment, per guidance provided in Canadian Council of Ministers of the Environment (CCME's) Guidance Manual for Environmental Site Characterization in Support of Environmental and Human Health Risk Assessment (2016).

<sup>3</sup> In determining the peak impacted area, TNPI will review its records for any information on the spill location and extent, and any information available from the time the contamination was first identified in 2003 during the Capacity Expansion and Line Reversal Project, including grade plans, inspector's daily reports, as-built drawings or other sources of information.

National Energy Board



Office national de l'énergie

<b>Inspection Officer</b>	2558	 Signature
	IO Designation #	
	22 March 2019	
	Date	
Suite 210, 517 10th Avenue SW Calgary AB T2R 0A8		