

## **NEB Section 58 Order XO-E101-003-2014 Conditions**

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- 1) Enbridge shall comply with all of the conditions contained in this Order unless the Board otherwise directs.
- 2) Enbridge shall cause the approved Project to be designed, located, constructed, installed, and operated in accordance with the specifications, standards, commitments made and other information referred to in its Application or in its related submissions.
- 3) Enbridge shall implement or cause to be implemented all of the policies, practices, programs, mitigation measures, recommendations, procedures and its commitments for the protection of the environment included in or referred to in its Application or in its related submissions.

### ***Prior to Construction***

- 4) Enbridge shall file with the Board, at least 30 days prior to commencing construction, a construction schedule identifying key construction activities for the Project, and must notify the Board of any modifications to the schedule(s) as such modifications occur.
- 5) Enbridge shall:
  - a) file with the Board and post on its company website, in French and English, at least 30 days prior to commencing construction, a Commitments Tracking Table listing all commitments made by Enbridge in its Application or in its related submissions, or during the OH-002-2013 proceeding in relation to the Project, including reference to:
    - i) the documentation in which reference to the commitment is made (for example: the application and subsequent filings; responses to information requests; the transcript reference; any permit, authorization or approval requirements; condition filings; or other);
    - ii) the accountability for implementing each commitment; and
    - iii) the timelines associated with the fulfillment of each commitment;
  - b) update the status of the commitments in Condition 5a) on Enbridge's website until such time that all commitments have been fulfilled, and advise the Board in writing of such updates where the status of any commitment has changed; and

- c) maintain at its construction office(s):
  - i) the relevant environmental portion(s) of the Commitments Tracking Table listing all regulatory commitments including, but not limited to, those commitments referred to in Condition 5a) herein,
  - ii) copies of any permits, approvals or authorizations for the Project issued by federal, provincial or other permitting authorities, which include environmental conditions or site-specific mitigation or monitoring measures; and
  - iii) any subsequent variances to any permits, approvals or authorizations in ii).
- 6) Enbridge shall file with the Board, at least 30 days prior to commencing construction, a Project-specific Environmental Protection Plan (EPP). The EPP shall:
  - a) describe all environmental protection procedures, mitigation and monitoring commitments, as set out in Enbridge's Application or as otherwise agreed to in its related submissions;
  - b) include maps of the environmental features within the Local Assessment Area (LAA) of each Project Site; and
  - c) include a Project-specific Archaeological Resource Contingency plan.
- 7) Enbridge shall file with the Board, at least 15 days prior to commencing construction, the Project-specific Field Emergency Response Plan that would be implemented during the construction phase, and which includes comprehensive site-specific spill contingency measures that Enbridge would employ in response to accidental spills attributable to construction activities.

***During Construction***

- 8) Enbridge shall file with the Board, on a monthly basis, construction progress reports in a form satisfactory to the Board. The reports must include, but not be limited to, information on:
  - a) the activities carried out during the reporting period;
  - b) any environmental, socio-economic, safety and security issues and issues of non-compliance; and
  - c) the measures undertaken for the resolution of each issue and non-compliance.

***Prior to Requesting Leave to Open***

- 9) Enbridge shall file with the Board, at least 90 days prior to applying for leave to open (LTO), an Updated Pipeline Engineering Assessment (Updated EA) in a similar format to that of the Line 9B Engineering Assessment. The Updated EA

shall be based on the in-line inspections (ILI) and excavations that Enbridge has performed on Line 9 in 2012 and 2013 from Sarnia Terminal to Montreal Terminal. The Updated EA shall include, but not be limited to:

- a) a remaining life analysis, taking into account coincident features, demonstrating that the pipeline between Sarnia Terminal and Montreal Terminal is fit-for-service in the reversed flow direction at Board approved maximum operating pressures (MOPs). If Enbridge chooses to apply different operating pressures for this analysis a justification must be provided;
  - b) a pipeline predicted Rupture Pressure Ratio analysis for integrity threats (including coincident threats) using 100% of the Specified Minimum Yield Strength as reference;
  - c) ILI tool performance, including their probability of detection and probability of sizing;
  - d) Field-tool unity plots for crack and corrosion, including for depth and length; and
  - e) Results of the 2012 annual survey of the cathodic protection system.
- 10) Based on the MOP and integrity status information used in the Updated EA, at least 30 days prior to applying for LTO, Enbridge shall:
- a) repair all features in the pipeline sections between Sarnia Terminal and Montreal Terminal as identified by additional assessments and/or re-assessments to which Enbridge committed in the Application that meet CSA Z662-11 repair criteria, and all features with a safety factor less than 125% of the MOP, including the defects which triggered the current self-imposed pressure restrictions specified in Enbridge's Line 9B Pipeline Engineering Assessment, regardless of existing operating pressure; and
  - b) file with the Board a report that includes, but is not limited to, a list of features repaired, feature sizes, safety factors prior to repair, and repair date(s).
- 11) Enbridge shall file its hydrostatic pressure testing program, pursuant to section 23 of the *National Energy Board Onshore Pipeline Regulations* (OPR), at least 60 days prior to applying for LTO.
- 12) Enbridge shall file with the Board, at least 60 days prior to applying for LTO, the leak detection system (LDS) manual for the Project. The LDS manual must include, but not be limited to, the following:
- a) senior management policy and commitment to leak detection;
  - b) the roles, responsibilities, and authorities of personnel in the event of a suspected leak;

- c) the theory and rationale for each LDS design and application. Enbridge LDS design must meet or exceed the latest version of CSA Z662-11-Annex E for all class location designations along Line 9 from Sarnia Terminal to Montreal Terminal;
- d) the methodology and instrument requirements;
- e) performance indicators such as the accuracy, reliability, and sensitivity of the LDS;
- f) leak alarms and diagnostic messaging as well as related procedures;
- g) any information to be provided by the LDS to assist in operating the LDS and responding to any potential leak;
- h) the estimated maximum amount of product released before a leak is detected;
- i) the process to be followed with respect to the continuous improvement, non-conformity, audits and corrective protocols;
- j) the procedures for LDS record keeping, training, and performance evaluation; and,
- k) the plan for maintenance, testing methods (i.e., simulated signal, fluid withdrawal, etc.), and frequency of testing.

The LDS manual (regarding the Enbridge Control System, Control Center, operators and teams, procedures, alarms, Material balance calculations, column separation, etc.) must also demonstrate compliance with the relevant conclusions and outcomes of the Compliance Verification Report under the *National Energy Board Act* In the Matter of Enbridge Pipelines Inc. - Edmonton Control Room Inspection and Assessment (May 2013) and related Order SO-E101-003-2013.

- 13) Enbridge shall file with the Board, at least 60 days prior to LTO, an Environmental Protection and Emergency Response Coordination Framework (Framework) for the Project that clearly demonstrates coordination, linkages and alignment of the Environmental Protection Program and the Emergency Management Program. The Framework shall address the objectives of risk assessment, protection, mitigation and monitoring and shall conform to OPR section 6.5.
- 14) Enbridge shall file with the Board at least 60 days prior to applying for LTO, a plan to update and implement Enbridge's continuing education program (including emergency management exercises), liaison program and consultation activities on emergency preparedness and response for the Project. This plan must comply with Annex A of the Guidance Notes for the *National Energy Board Onshore Pipeline Regulations* (OPR Guidance Notes) and include
  - a) the plan's scope;
  - b) the plan's objectives;
  - c) a list of regulatory authorities, municipalities and first responders that have been or will be consulted;
  - d) a list of Aboriginal groups that have been or will be consulted; and

- e) the methods to track commitments made during consultation (if applicable) and to incorporate them into an amended Emergency Procedures Manual(s).
- 15) Enbridge shall file with the Board, at least 30 days prior to applying for LTO, confirmation that the emergency shutdown system (including backup power supplies) of each facility from Sarnia Terminal to Montreal Terminal comply with all requirements of OPR section 12 and CSA Z662-11 clause 4.14.3.3. Enbridge is also required to provide a description of how its emergency shutdown systems meet above mentioned requirements.
- 16) Enbridge shall file with the Board for approval, at least 90 days prior to applying for LTO, the results of its project to update the Line 9 mainline valves system from Sarnia Terminal to Montreal Terminal using Enbridge Intelligent Valve Placement (IVP) methodology. Through these results Enbridge shall:
- a) demonstrate that the new Line 9 valves system meets or exceeds the requirements of CSA Z662-11 clause 4.4 Valve location and spacing, with particular reference to clause 4.4.8, note (2);
  - b) demonstrate and explain why it believes that the maximum release volume between valves is as low as reasonably practicable, so as to prevent spill volumes that pose a significant risk to the public or the environment including, but not limited to, watercourses, water intakes, urban infrastructure, and ecologically sensitive areas. This assessment shall be based on the Watercourse Crossing Management Plan requested in **Condition 18**. It shall also address terrain profiles and flow conditions that could interact with the subject crossing in a manner that could present a risk to people or the environment at locations distant from the release;
  - c) provide explicit criteria and rationale for using 8 manually operated valves (MOV) on the pipeline, instead of remotely controlled valves, and describe how these MOVs are to be maintained, how access to them is to be assured (including during snowing periods), and for each valve provide an estimate of the maximum time to close the valve once an alarm is sounded;
  - d) describe the procedure to be used to verify the alarm before personnel are dispatched to manually close valves, including a description of any other measures that will be taken with respect to MOVs to reduce spill volumes in the event of a release, and the effect of these measures on the size of spill anticipated; and
  - e) explain if the use of these MOVs may negatively affect Enbridge's leak control evaluation for the Project (i.e., Initial Volume out of 95.2 m<sup>3</sup>, total volume out, assessed incremental Project risk of 2.2%, etc.).
- 17) Enbridge shall file with the Board, at least 30 days prior to applying for LTO, the updated results of its 2013 Geohazard Study for Line 9. Enbridge should include

with the Geohazard Study a summary of its 2012-2013 depth of cover remediation activities.

- 18) Enbridge shall file with the Board for approval, at least 90 days prior to applying for LTO, a Project-specific Watercourse Crossing Management Plan (WCMP) to establish a management plan identifying the current watercourse crossing conditions and demonstrating how Enbridge will proactively manage watercourse crossings along the existing line.

The WCMP shall contain, but not be limited to:

- a) criteria, and rationale for developing such criteria, used to identify major watercourse crossings along Line 9, and such criteria shall meet or exceed CSA Z662-11, clause 4.4.8, note (2);
  - b) a tabular inventory of:
    - i. all watercourse crossings along Line 9, from Sarnia Terminal to Montreal Terminal;
    - ii. those watercourse crossings which do not meet the criteria, with a clear indication of which criteria are not met (for each crossing);
    - iii. those watercourse crossings which do meet the criteria; and
    - iv. for each watercourse crossing that meets the criteria, the proximity to downstream water bodies, critical infrastructure and environmentally significant areas;
  - c) the location and frequency of monitoring activities, on both a project-wide scale (e.g., fly-overs) and a local scale (e.g., site visits);
  - d) feedback mechanisms in place to track and update the condition of the crossings within the Environmental Protection Program, as degraded conditions are identified from monitoring activities;
  - e) a description of possible degraded crossing conditions that may occur and their relative risk; and
  - f) a description of how environmental risks to watercourse crossings will be managed, including provision of a responsibility chart for decisions and the hierarchy of decision points identifying which remedial actions would be implemented, for which degraded conditions, and under what timeframes.
- 19) Enbridge shall submit to the Board, prior to applying for LTO, a plan to manage cracking features in the pipeline section between Sarnia Terminal and Montreal Terminal. This plan must include the timeline associated with the assessment methodology, and the rationale for selecting the timeline.
  - 20) Enbridge shall file with the Board, at least 60 days prior to applying for LTO, an Emergency Response Plan (ERP) for Line 9, which demonstrates compliance with each element of Annex A to the OPR Guidance Notes in respect of each

municipality and each high consequence area (which includes major watercourse crossings and densely populated areas). Enbridge shall update the ERP as required by Annex A to the OPR Guidance Notes and file such updates with the Board.

***Post Construction***

- 21) Enbridge shall file with the Board, within 30 days following the receipt of Board approval for LTO, a confirmation by the accountable officer of the company appointed pursuant to OPR section 6.2, that the Project was completed and constructed in compliance with all applicable pre-LTO conditions in this Order. If compliance with any of the pre-LTO conditions cannot be confirmed, the accountable officer of the company must file with the Board details as to why compliance cannot be confirmed.
- 22) Enbridge shall file with the Board, within 30 days of the Project going into service the results of its detailed engineering and associated studies to validate the actual sensitivity and reliability performance of the Line 9 LDS computational monitoring system. These results shall incorporate longer term calculation windows on service fluid measurements for one day, one week and one month.
- 23) Enbridge shall file with the Board, within six months of the Project going into service:
  - a) the results of post-construction noise monitoring at the Sarnia Terminal, North Westover Station, Hilton Station, Cardinal Station, Terrebonne Station, and Montreal Terminal; and
  - b) a noise control plan, if necessary, for the terminals and stations to ensure that the Ontario or Quebec provincial noise guidelines are met.
- 24) Enbridge shall file with the Board, at least 30 days prior to LTO and every six months thereafter for the first three years of operation, an Ongoing Engagement Report for the continued operation of Line 9. The Ongoing Engagement Report will include, at minimum:
  - a) the persons or groups with whom Enbridge offered or sought to consult during the previous six month period;
  - b) the persons or groups actually consulted during the previous six month period;
  - c) confirmation that Enbridge consulted or offered to consult at least once each year with, at minimum, a representative of each Landowner, Municipality, Conservation Authority, and Aboriginal group whose land, jurisdiction or traditional territory is traversed by Line 9;
  - d) the methods, dates and locations of consultation activities;
  - e) the information that was distributed to persons or groups (for example, health, safety and environmental performance of Line 9);

- f) a summary of the comments and concerns expressed by potentially affected persons or groups;
  - g) a summary of the response made regarding each of the concerns or comments;
  - h) how outstanding concerns will be addressed;
  - i) how input from persons or groups has influenced the operation of the Project;
  - j) details regarding discussions with Aboriginal groups;
  - k) the details and results of the consultation undertaken with all persons who may be affected by any changes to the Project; and
  - l) details regarding discussions with municipal emergency responders.
- 25) Enbridge shall file with the Board for approval, within 12 months of being granted LTO, an update to the WCMP (WCMP Update), reporting the data which will be used to establish the current watercourse crossing conditions to be used in informing the Plan into the future.

The WCMP Update shall contain, but not be limited to:

- a) a reiteration of both the criteria used to identify major watercourse crossings along Line 9, from Sarnia Terminal to Montreal Terminal, and the tabular inventory including:
  - i. all watercourse crossings along Line 9, from Sarnia Terminal to Montreal Terminal;
  - ii. those watercourse crossings which do not meet the criteria, with a clear indication of which criteria are not met (for each crossing);
  - iii. those watercourse crossings which do meet the criteria; and
  - iv. for each watercourse crossing that meets the criteria, the proximity to downstream water bodies, critical infrastructure and environmentally significant areas.
- b) for crossings which meet the criteria (listed in a)iii) above), provide;
  - i. channel-specific seasonal hydrographs (1 yr return);
  - ii. bankfull profiles at crossing locations;
  - iii. sediment characteristics immediately up- and downstream of the crossing location;
  - iv. depth of cover and geotechnical assessments of the adjacent banks, to a distance of 100 m;
  - v. floodplain delineation maps; and
  - vi. scour assessments and flood frequency analyses at each watercourse crossing based on 50-yr, 100-yr, and regulatory storm flood volumes.



- c) a description of how the data collected will be used to address the requirements to manage environmental risks, including the effects of the environment on watercourse crossings;
  - d) a schedule for future updates, incorporating monitoring activities provided in **Condition 18**, frequency of additional data collection and analysis, as well as the protocol for alterations or refinements to the Plan based on the updated watercourse conditions; and
  - e) evidence of consultation with Environment Canada, the Toronto and Region Conservation Authority and other appropriate provincial, regional and municipal authorities regarding the WCMP (**Condition 18**) and the WCMP Update.
- 26) Enbridge shall file with the Board within 12 months of receiving LTO and every 12 months thereafter for the first three years of operation, a report detailing the status of Enbridge's continuing education program (including emergency management exercises), liaison program and consultation activities with regulatory authorities, municipalities, Aboriginal groups and any other participating stakeholders that may have a role in responding to an emergency. The report shall include, but not be limited to the following:
  - a) a list of participants, consultation type, locations and timing of the continuing education program (including emergency management exercises), liaison program and consultation activities that have been conducted during the previous 12 month period;
  - b) the persons or groups with whom Enbridge offered or sought to conduct such activities during the previous 12 month period;
  - c) confirmation that Enbridge conducted or offered to conduct the continuing education and emergency response exercises in the manner, within the timeframes and with the persons or groups described in Annex A to the OPR Guidance Notes;
  - d) a description of any developed agreements or protocols;
  - e) identification of any issues or concerns raised during the continuing education program (including emergency management exercises), liaison program and consultation activities; and
  - f) explanation for outstanding issues or concerns, the steps that Enbridge will take or has taken to address or respond to them, or rationale for why no actions were taken.
- 27) Enbridge shall file with the Board, within 18 months following the receipt of Board approval for LTO, a proposed long-term integrity improvement plan to mitigate and monitor remaining ILI-reported corrosion (internal and external), geometry and cracking features in the pipeline sections between North Westover Station and the Montreal Terminal indicating, but not limited to, their timelines, the rationale for selecting those features, and the planned re-inspection interval.

- 28) Enbridge shall file with the Board for approval, within 18 months following the receipt of Board approval for LTO, an updated Deterministic Remaining Life evaluation for each segment (i.e., pump station to pump station) of Line 9 from the Sarnia Terminal and the Montreal Terminal. This assessment should take into account (but not be limited to) the results of the most recent ILI runs and excavations, coincident imperfections, the Board approved MOPs, and actual operating pressure cycling dataset for the most aggressive periods since the reversal.
- 29) Enbridge shall file with the Board for approval, concurrent with its final Ongoing Engagement Report, a plan describing how Enbridge will continue to engage persons and groups during the operation of Line 9 and how Enbridge will continue to promote transparency of information with its stakeholders.
- 30) Unless the Board otherwise directs prior to 6 March 2015, this Order shall expire on 6 March 2015 unless construction in relation to the Project has commenced by that date.

## **NEB Part IV Order TO-002-2014 Conditions**

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- 1) The tolling methodology is approved.
- 2) The Line 9 Rules and Regulations Tariff is approved.
- 3) Enbridge is relieved from the requirement to keep the system of accounts as prescribed by the OPUAR.
- 4) Enbridge is relieved from the requirement to comply with the reporting and filing requirements set forth in the National Energy Board's Filing Manual, Guide BB entitled Financial Surveillance Reports.
- 5) Enbridge shall file the following information on an annual basis:
  - a) Income statement, including revenues and expenses broken down by major categories, for Line 9;
  - b) Rate base information for Line 9 by gross and net plant in service; and
  - c) Details of related company transactions over \$500,000 between Enbridge Pipelines Inc. and other Enbridge corporate entities.
- 6) Enbridge shall file, on a quarterly basis, the throughput information by committed and uncommitted volume, by commodity type, and by receipt and delivery point, broken down by month. Should any of these categories not be comprised of volumes from at least three shippers, Enbridge may disclose the aggregate volume across all three crude categories, as described in Article 6(b) of the Draft Pro Forma Line 9 Rules and Regulations Tariff.