TORONTO

STAFF REPORT
ACTION REQUIRED
with Confidential Attachment

Enbridge Pipeline Inc. Application to Reverse Pipeline 9B, Increase Capacity and Carry Heavy Crude – Options for City of Toronto Participation

Date:	February 11, 2013
To:	City Council
From:	City Solicitor
Wards:	All
Reason for Confidential Information:	This report includes information that is about potential litigation that affects the City.
Reference Number:	

SUMMARY

Enbridge Pipeline Inc. (“Enbridge”) has applied to the National Energy Board ("NEB") to make changes to the operation of its Pipeline Line 9 ("Line 9") which runs through Toronto. This report outlines issues that may be of concern to the City. This report also sets out options for City participation in the review of this application.

RECOMMENDATIONS

The City Solicitor recommends that:

1. City staff continue to review the Enbridge application and any further supporting materials and attempt to resolve any concerns by requesting additional information from Enbridge;

2. the City Solicitor be authorized to apply to the NEB to allow the City of Toronto to participate in the proceedings either through a written submission or as an intervenor in relation to any unresolved concerns;

3. funds as outlined in the confidential attachment be available to obtain such assistance as necessary in the opinion of the City Solicitor to represent the City's interest at the NEB;

4. the City continue to liaise with other municipalities, and Conservation Authorities to discuss cooperation in the presentation of issues before the NEB;

5. if the City becomes an intervenor, the City Solicitor be authorized to withdraw the City intervention if issues of concern have been resolved to the satisfaction of the City Solicitor in consultation with the Environment and Energy Office;

6. City staff be authorized to take steps as necessary to support the City Solicitor in the review of the application and presentation of any City issues to the NEB;

7. the City Solicitor, in consultation with Toronto Water advise the Ontario Ministry of the Environment of any unresolved concerns relating to the Enbridge application and implications for the proposed CTC Source Water Protection Plan; and

8. Confidential Attachment 1 to the report remain confidential until the release of the final decision of the NEB including appeals or judicial review.

Financial Impact

There will be no financial impact beyond the time of staff and the funds for external assistance as outlined in the attached confidential report. These funds are available in Toronto Water's approved 2013 Operating Budget. My staff will continue to discuss potential cost sharing arrangements with other municipalities and the TRCA.

The Deputy City Manager and Chief Financial Officer has reviewed this report and agrees with the financial impact information.

DECISION HISTORY

At the meeting of November 27, 2012, City Council adopted Member's Motion 28.22, which directed the City Solicitor to report directly to City Council on the Enbridge Pipelines Inc. application to the National Energy Board (NEB) to reverse the direction of flow of its Line 9B pipeline (which runs through the City) and increase the capacity of Line 9, the process at the NEB, and the cost of representing the City interest at the NEB. A copy of the decision document can be found at:

http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2012.MM28.22

At the meeting of November 27, 2012, City Council formally endorsed the Lake Ontario policies contained in the Credit Valley, Toronto and Region, Central Ontario (CTC)

Source Protection Plan, which are intended to protect the City of Toronto's drinking water source from threats, including a petroleum spill from a pipeline failure.

A copy of the decision document can be found at:

http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2012.PW19.6

ISSUE BACKGROUND

Enbridge operates a 30 inch steel pipe (Line 9) which flows from Sarnia to Montreal. When put into operation in 1976, the pipeline carried light crude from Western Canada to Montreal. In 1999, the pipeline flow was reversed as a result of market conditions. In 2012, Enbridge concluded that market conditions justified another reversal so that Western oil would once again flow eastward.

Since 1976, Line 9 has carried crude oil, and it continues to carry crude oil today.

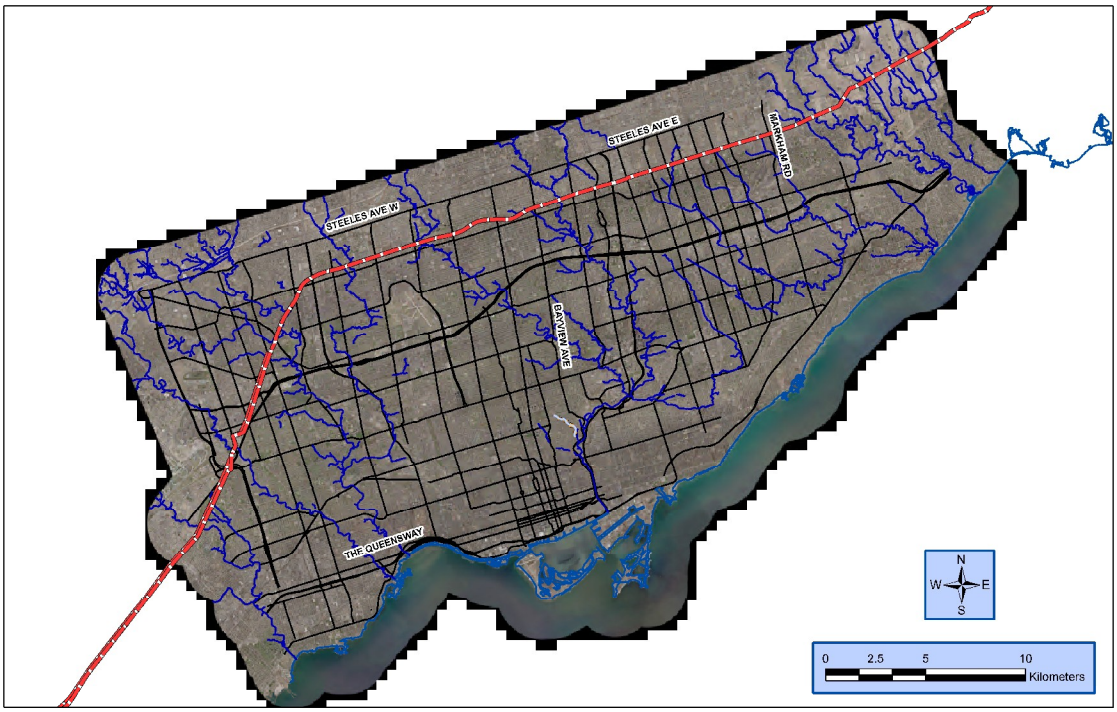

Figure 1. Map of the City of Toronto showing the location of Enbridge Pipeline 9

Line 9 flows through the north end of Toronto, roughly along Finch Avenue. It passes through Wards 2, 3, 7, 8, 10, 23, 24, 39, 41 and 42. It has operated since 1976 without significant incident. Enbridge conducts pipeline monitoring and inspection programs on Line 9 as required by the NEB on an ongoing basis.

In 2012, Enbridge obtained approval (with conditions attached) from the NEB to reverse the portion of Line 9 from Sarnia to the North Westover station near Hamilton. This was known as the Line 9 – Phase I application.

The current application was filed on November 29, 2012 and seeks the following:

- Reversal of the remainder of Line 9 from North Westover to Montreal. This section of Line 9 is known as Line 9B

- Increase in overall Line 9 capacity from 240,000 barrels per day to 300,000 barrels per day using "drag reducing agent". This is a waxy material which increases flow without changing operating pressure

- Change to the Enbridge tariff so Line 9 may carry heavy crude oil, which may include diluted bitumen (or "dilbit"). Dilbit is a mixture of bitumen with a diluting material such as naphtha to facilitate its handling

Subject to obtaining all required approvals, Enbridge anticipates that it will begin operation of the reversed Line 9B in the spring of 2014. A link to the Enbridge application materials on the NEB website follows:

http://www.neb-one.gc.ca/clf-nsi/rthnb/pplctnsbfrthnb/nbrdgln9brvrsl/nbrdgln9brvrsl-eng.html

I have written to the NEB to preserve the City of Toronto's rights to participate in the proceedings. My staff also wrote to Enbridge requesting further information on the issues as identified to date, and has received a response from Enbridge which is currently being reviewed.

The NEB has indicated that it will hold a public hearing on this application. A Hearing Order and list of issues is expected soon. The NEB has indicated that it will be assessing the environmental and socio-economic effects associated with the Project. Interested parties will have an opportunity to comment on the issues. Subsequently, the City and others will have a chance to formally apply to participate in the process.

The NEB process requires direct consultation with the proponent. If issues cannot be resolved through this exchange, concerns may be addressed through a written letter of comment (with no right to file, or question evidence), or by participation as an intervenor. The intervention process is iterative, and provides for written evidence and written questions filed by both Enbridge and intervenors. An oral final argument will be held before the NEB. The NEB has indicated that its decision will be delivered by March 19, 2014 at the latest, as required by its legislation.

The NEB has indicated that up to $200,000 is available under its participant funding program to interested parties; however, the NEB has confirmed that these funds are not

available to governments or their agencies. A link to the NEB funding information follows:

http://www.neb-one.gc.ca/clf-nsi/rthnb/nwsrls/2013/nwsrls03-eng.html

This report outlines issues that have been identified by staff as of potential interest to the City. It also identifies procedures by which the City can present any outstanding concerns through the NEB process.

COMMENTS

As of the date of this report, my office has received and is reviewing a response to its inquiries of Enbridge. City Legal staff, in consultation with the Environment and Energy Office, have been gathering information from various City divisions including Toronto Water, Fire Services, the Office of Emergency Management, and others. As a result, potential issues have been identified as set out below. My staff will continue to consult with City staff that may have an interest in this application.

Potential City issues identified to date

a) Pipeline integrity

Questions have been raised about whether the transportation of dilbit through Line 9 poses a greater risk of internal corrosion than existing crude products transported through the pipeline. Conflicting views about the relative corrosive properties of dilbit have been expressed in publicly available studies and analysis.

The National Resource Defence Council in a report dated June 2012, called *Going in Reverse: The Tar Sands Threat to Central Canada and New England*, has suggested that dilbit is more prone to spills due to its corrosive properties and based upon comparative pipeline spill analysis of Albertan and U.S pipelines. Enbridge refutes this assessment. Enbridge relies on a news release from the Alberta Energy Resources Conservation Board which states that, when properly compared, Alberta pipelines fail significantly less frequently than those in the U.S.

Enbridge also relies on a report prepared by Alberta Innovates Technology Futures in its application concluding that dilbit has comparable properties to other crude oils currently being transported through Line 9. Recent tests and reports by Natural Resources Canada on the comparative corrosion of different grades of crude oil suggest that dilbit does not have increased corrosion potential compared to conventional crudes.

Despite the publication of reports indicating similarities in composition and attributes between dilbit and conventional heavy crude oil, report authors and experts have acknowledged there are some knowledge gaps about the performance of dilbit in pipelines. Currently, the question of whether the transportation of dilbit increases risk of

spills is being studied by a Committee of the National Academies of the Sciences, on direction of the U.S. Congress, and a report is expected in the summer of 2013.

Enbridge also notes that policies, standards and operating procedures govern the conditions under which materials are transported. All materials transported in Line 9 would be required to comply with these general standards. These standards are routinely reviewed by the NEB and bind Enbridge. The application includes specifications for maximum temperature, water content and sediment content for materials transported in Line 9.

Dilbit has been and remains controversial as result of a spill near Kalamazoo, Michigan in 2010. An Enbridge pipeline of similar construction and age to Line 9 ruptured in a remote wetland area as a result of external corrosion, unrelated to the transportation of dilbit. The leak was not identified as such by Enbridge for some 17 hours. As a result, more than 3.3 million litres of dilbit was discharged into waterways in the area. The cleanup cost was over $750 million (US) as of October 2011. Remediation is still not complete. The U.S. regulatory authority (the National Transportation Safety Board, or "NTSB") conducted an investigation which concluded that the spill was a result of failures with pipeline integrity management, staff training and public awareness and education. A link to the NTSB's synopsis of the investigation follows:

http://www.ntsb.gov/news/events/2012/marshall_mi/index.html

As a result of the Kalamazoo spill, the U.S. Department of Transportation fined Enbridge $3.7 million.

Since the Kalamazoo spill, Enbridge has increased spending on pipeline integrity and enhanced procedures for leak detection. Enbridge is currently carrying out a comprehensive in-line inspection program in Line 9B, which will be completed prior to flow reversal. Enbridge also has existing programs to manage corrosion, cracking threat and mechanical damage to Line 9. These programs are subject to review by the NEB.

The pipeline integrity issue is discussed further in the confidential attachment.

b) Spill Response Measures

The potential for discharge of dilbit from Line 9 may be significant for two reasons:

- Dilbit behaves differently from other materials and therefore may require special steps from emergency responders; and

- The discharge of dilbit and its components into waterways may affect the near-shore water quality of Lake Ontario.

Dealing with Dilbit

The Kalamazoo spill resulted in two distinct environmental effects. The first was the effect on air quality from the volatile components in the mixture. The Kalamazoo spill resulted in health effects and evacuation associated with fumes. Similar impacts would be expected in Toronto. The second was the difficulty dealing with the heavier, bitumen component of dilbit, especially in a wet environment. (The Kalamazoo spill took place shortly after a heavy rain event.) The same concerns would apply to Toronto, as the pipeline crosses several watersheds and wetlands.

In either case, local emergency responders had to deal with the problem during the early stages of the spill. Enbridge emergency staff did not arrive on site until 17 hours after the first discharge as a result of the misinterpretation of alarms in the Edmonton Control Centre. The NTSB was critical of Enbridge's level of emergency preparedness and reiterated an earlier direction that it

> require operators of natural gas transmission and distribution pipelines and hazardous liquid pipelines to provide system-specific information about their pipeline systems to the emergency response agencies of the communities and jurisdictions in which those pipelines are located. This information should include pipe diameter, operating pressure, product transported, and potential impact radius.

Enbridge advises that it regularly provides important information to emergency responders; and, it participated in a water-based emergency exercise on the Don River in 2011.

The City is reviewing Enbridge's emergency procedures and will clarify with Enbridge what liaison and training has been or will be carried out with local emergency responders to ensure that they are aware of the properties of the materials transported in Line 9 and any special considerations they may raise. The City will also examine what training or equipment is made available to first responders to deal with a spill of dilbit.

Finally, the City will seek assurance from Enbridge that, should a spill take place, adequate resources are quickly available to contain the impacts and adequate security is available to compensate the City for any costs incurred.

It is anticipated that City staff from Fire Services and the Office of Emergency Management should be available to provide evidence as to emergency service issues.

Threat to Drinking Water Quality

Under the *Clean Water Act* (2006) [S.O. 2006, Chapter 22], the CTC (Credit Valley, Toronto and Region, Central Lake Ontario) Source Protection Committee developed a source water protection plan to protect drinking water supplies against potential future threats. The City of Toronto is a member of the CTC Source Protection Committee. A

link to the policies relevant to the City of Toronto's drinking water intakes can be found below:

http://www.ctcswp.ca/files/CTCProposedSourceProtectionPlan_Chapter10(1).pdf

The CTC used a scenario approach to evaluate whether spills from specific sources could represent a significant threat to lake-based intakes. The scenarios were based on worst case scenarios of real events that occurred in the past and included the threat from release of gasoline/refined petroleum product due to failures of large pipelines located under major Lake Ontario tributaries.

Computer modelling results showed that a spill of petroleum product from a pipeline failure is a potential threat to City of Toronto water treatment plant intakes. The CTC Source Protection Plan, which applies to the City of Toronto, contains a recommended policy, to reduce the risk and/or impact of petroleum pipeline breaks.

The policy provides as follows:

a) review and recommend necessary improvements to existing spill prevention, spill management, risk reduction, and contingency plans to ensure the following:

- *i. plans are based on the depth of ground cover at surface water crossings;*
- *ii. spill response time frames are established;*
- *iii. responsibilities of first responders are established to ensure a prompt unified regulatory command structure to manage the spill response;*
- *iv. notification protocols are established jointly with the Spills Action Centre to ensure direct notification to all potentially affected water treatment plant operators and appropriate communication to the public and media;*
- *v. reporting thresholds are established for significant threat activities;*
- *vi. that information is communicated to all responsible parties (e.g., the originators of the spill, emergency response/clean-up personnel, medical officer of health, municipal water owner and water operating authority) who are responding to the spill;*
- *vii. that there are appropriate spills response plans for each crossing;*
- *viii. that appropriate pipeline system failure and shut down measures and policies are included;*
- *ix. a review is undertaken on the depth of ground cover over the pipeline at each crossing, including an assessment of erosion and flood risk;*
- *x. that an assessment of condition of the pipe system is provided;*
- *xi. that the pipeline design and operational Best Management Practices are in place (including potential additional design and operational Best Management Practices);*
- *xii. that any new or expansions or pipeline replacements are constructed to meet current best design criteria; and*
- *xiii. a provision is included in the contingency plan that the facility owner work with Emergency Management Ontario to ensure that testing of the contingency plan is carried out within 3 years of the Source Water Protection*

Plan coming into effect, followed by regular (frequency and priority to be determined in consultation) emergency response preparedness exercises to address the significant threats identified;"[1]

The above-listed actions should be reviewed and incorporated as applicable into any conditions of approval for the Enbridge application.

In addition, clarification should be sought from Enbridge, through the NEB process, that appropriate steps are being taken to protect the pipeline near major river crossings to prevent against potential effects of erosion, slump, and other events that may adversely affect the pipeline. At present, the City is aware that a section of Enbridge's Line 9 is partially exposed in the Rouge River as a result of natural erosion of the riverbank. The exposed section of the pipeline was discovered in 2009. Since that time, Enbridge has installed a temporary concrete barrier to protect the pipeline, and is working on a permanent barrier.

The NEB Process

When the NEB issues its procedural order and issues list, my staff will review same with the Environment and Energy Office and other staff, and provide feedback to the NEB as appropriate.

It is currently recommended that the City of Toronto preserve a right to participate either through written submission or as an intervenor in order to address concerns that cannot be satisfactorily resolved through inquiries of Enbridge. The City's objective will be to raise unresolved issues as outlined above, and any others that may come to light through review of the application materials, and the iterative process provided for by the NEB. The City of Toronto will also participate in the oral portion of the hearing if necessary.

Further discussion of options to present the City's interest is discussed in the confidential attachment.

Liaison with Others

A number of groups have already submitted letters of interest to the NEB.

Since notifying the NEB of the City interest, my staff have liaised with staff from Hamilton, Burlington, Mississauga, Ajax and Kingston, as well as staff from the TRCA. These groups and organizations have unanswered questions or concerns about the application and have been gathering information to assess possible risks and to report to their governing bodies. The TRCA is also preparing a detailed report reviewing many of the technical issues associated with the application. The report will be submitted to the March meeting of the TRCA.

[1] Reproduced from: Proposed Source Protection Plan: CTC Source Protection Region, October, 2012, pages 127 to 128 <http://www.ctcswp.ca/files/CTCProposedSourceProtectionPlan_Chapter10(1).pdf>

Many of these groups propose some form of participation in the process outlined above, either by a written submission to the NEB, or as an intervenor. Throughout the procedure, my staff will continue to liaise with staff from these other groups and determine whether opportunities exist to cooperate in the presentation of evidence to the NEB.

CONTACT

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SIGNATURE

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Anna Kinastowski
City Solicitor

ATTACHMENTS

Attachment 1 – Confidential Information (Enbridge Application to Reverse Line 9B – Options for City Participation)