



Minnesota Pollution Control Agency

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September 30, 2015

Ms. Jamie MacAlister
Minnesota Department of Commerce
85 7th Place East, Suite 500
St. Paul, MN 55101

Re: Public Comment Period - Enbridge Energy, Limited Partnership for the Line 3 Pipeline Replacement Project in Minnesota
Docket Nos. PL-9/CN-14-916 (Certificate of Need) and
PL-9/PPL-15-137 (Pipeline Routing Permit)

Dear Ms. MacAlister:

The Minnesota Pollution Control Agency (MPCA) offers these comments in response to the Notice of Public Information and Environmental Analysis Scoping Meetings, issued by the Minnesota Public Utilities Commission (PUC) on August 17, 2015, for the Enbridge Line 3 Pipeline Replacement project (Line 3).

Because Enbridge proposes to co-locate the Line 3 replacement pipeline along the same route as the proposed Sandpiper pipeline (PUC Docket Nos. PL6668/CN 13-473 and PL6668/PPL-13-474), the MPCA generally has the same environmental concerns with Line 3 as we expressed in the Sandpiper dockets. Instead of repeating the full extent of those comments here, the MPCA incorporates, by reference, the following already-filed comments.

1. The MPCA's April 4, 2014, comments (dated April 10, 2014) in the Sandpiper Route Permit docket PPL-13-474, PUC document number 20144-98170-01.
2. The MPCA's June 24, 2014, comments (dated June 25, 2014) in the Sandpiper Route Permit docket PPL-13-474, PUC document number 20146-100780-01.
3. The MPCA's August 21, 2014, comments (dated August 22, 2014) in the Sandpiper CN and Route Permit 13-474 dockets, PUC document numbers 20148-102458-01 and 20148-102458-03.
4. The MPCA's October 29, 2014, comments in the Sandpiper CN 13-473 and Route Permit 13-474 dockets providing information on Modified System Alternative 3, parts 1 through 12, PUC document numbers 201410-104247-01; 201410-104247-02, 201410-104249-01 through 201410-104249-19; 201410-104251-01 through 201410-104251-04.
5. The MPCA's January 23, 2015, comments in the Sandpiper CN docket 13-473, PUC document number 20151-106572-01.

In addition, the MPCA offers the following comments regarding cumulative environmental effects, connected and phased actions, access, pipeline abandonment, corrosion concerns, small leaks, high consequence areas, vulnerable groundwater areas, deep soil releases, risk assessment methodologies, and route and system alternatives.

Cumulative Environmental Effects

The proposal to place Line 3 next to Sandpiper increases the potential to impact some of Minnesota's most pristine natural resources. The possibility of simultaneous construction should be evaluated in the Environmental Review for the Line 3 and Sandpiper projects, including the effect of continuous construction of two pipelines over extended construction seasons. The discussion of project impacts should address the potential of concurrent construction impacts, connected or phased actions (see next paragraph), and the effects of extended construction of two projects in the same corridor on human, natural, and environmental resources.

Connected and Phased Actions

As pipelines are built and expanded over time, additional projects related to their construction and operation are also built, such as access roads, pump stations, power transmission lines, and additional pipelines following existing corridors. For example, the expansion of Minnesota Pipeline Line 4 was followed by several applications for transmission line construction to power the additional pump stations. The Environmental Review should identify all related activity that might occur as a result of pipeline construction and evaluate all projects in the same geographic area that will be undertaken within three years. The MPCA suggests that these activities should be included in the Environmental Review.

Access

Enbridge's preferred route for Line 3 will go through numerous areas with poor or limited access downstream of the proposed pipeline crossing including streams, rivers, and wetlands. These areas are often accessed in the winter because access to these areas in other seasons is difficult and often damaging to the environment. MPCA staff identified 28 such locations with limited to no access in the Sandpiper proceedings; however, that number was based on a narrowly defined boundary condition of no access within 250 feet to either side of a flowage for a distance of at least 2,000 feet downstream of the pipeline crossing location. In reality, there are many more areas along the proposed route with very poor downstream accessibility.

The high degree of connectivity of limited access waters is also a concern that should be addressed in Environmental Review. Environmental agencies in Minnesota have developed a scoring process relative to watershed health for connectivity of waters, or the overall distance that waters can flow in an area without impediment by structures such as bridges, culverts, or dams (see Attachment A). According to the scoring process, connectivity along the Enbridge preferred route is excellent. This is good for water quality and biota, because fish and other organisms can travel a long distance unimpeded, but could be problematic in the event of a release, as oil could travel significantly further in many locations along the preferred route. A more southern Minnesota alternative route would generally have less connectivity. Between poor access and excellent connectivity, MPCA staff believe that the potential for significant (worst case) environmental damage is greater along the preferred route than elsewhere in the state. The Environmental Review should examine areas of minimal access accordingly, and attempt to assess worst case scenarios for spills in these areas.

Pipeline Abandonment

The MPCA reviewed a report by the National Energy Board of Canada entitled "Pipeline Abandonment, a Discussion of Technical and Environmental Issues".¹ The report indicated that usually in sensitive environmental areas such as wetlands or water body crossings, the pipeline can be left in place to avoid "doing further damage" to sensitive resources. However, the report also identified several potential environmental impacts that could occur after decommissioning if it is abandoned rather than removed, including possible soil and groundwater contamination that may be caused by:

- residual hydrocarbons remaining on the walls of the pipeline
- residual treatment chemicals used during cleaning
- the line pipe and associated infrastructure
- pipeline coatings and their degradation products
- historical leaks and spills of product that were not cleaned to current standards
- possible polychlorinated biphenyl (PCB) contamination, if PCBs were used in the pump or compressor lubricants at some point in the history of the pipeline

The preferred route, as MPCA has noted previously, contains a very high concentration of wetlands, lakes, rivers and streams. This may indicate a likelihood that a pipeline placed along the preferred route would be left in place once operations end, leaving sensitive areas potentially vulnerable to continued risk from the possible impacts identified above. The report indicates that with a rigorous cleaning regimen after decommissioning, some of these impacts can be mitigated. The Environmental Review should examine these areas and evaluate the risks of placing pipelines in sensitive areas and the potential impacts associated with leaving pipelines in place after decommissioning.

Corrosion Concerns

Over 100 miles of the preferred route would be located along high voltage transmission line (HVTL) routes. Studies over the last decade have indicated that pipelines protected with cathodic protection located near HVTLs are susceptible to accelerated corrosion due to a number of factors related to stray voltage.² Although it is possible to mitigate for potential corrosion, this may not eliminate all potential impacts. The Environmental Review should assess the potential impacts of corrosion from transmission lines on the route and system alternatives, including whether pipelines placed adjacent to powerlines are at greater risk of corrosion than pipelines not located in these areas.

Small Leaks

Exponent, an engineering and scientific consulting firm, prepared a document entitled "Third Party Consultant Environmental Review of the TransCanada Keystone XL Pipeline Risk Assessment"³. In that document, Exponent explored the potential environmental impacts of large-scale releases of oil and the potential impacts of small "pinhole" leaks of approximately 1/32" in diameter. Such a small leak poses an environmental risk because it can release up to 28 barrels of oil per day of oil, yet go unnoticed for months because the leak is too small to be detected by the pipeline leak detection equipment. A pinhole

¹ This report was developed through collaboration between the Canadian Association of Petroleum Producers (CAPP), the Canadian Energy Pipeline Association (CEPA), the Alberta Energy and Utilities Board (EUB), and the National Energy Board (NEB). <https://www.neb-one.gc.ca/prtcptn/pplnbndnmnt/pplnbndnmnttchnclnvrnmntl-eng.html#s3>.

² See, i.e. "AC Corrosion Induced by High Voltage Power Line on Cathodically Protected Pipeline," Ouadah M'hamed, Zergoug Mourad, Ziouche Aicha, Touhami Omar, Ibtouen Rachid, Bouyegh Saida and Dehchar Cherif.

³ <http://keystonepipeline-xl.state.gov/documents/organization/221278.pdf>

leak may not be discovered until there is visual evidence of a leak. The MPCA is concerned that visual leak detection may be less likely in highly remote areas such as the ones along Enbridge's preferred route. The Environmental Review for the Sandpiper/Line 3 projects should conduct an assessment of the potential impact of small releases for these projects similar to the Exponent study for the Keystone project.

High Consequence Areas

The same Exponent report found that water resources within a minimum distance of 10 miles downstream of a pipeline water crossing should be considered as potentially vulnerable to a release. Areas within 10 miles of the crossing with multiple types of sensitive resources (wild rice, trout streams, fens, other resources) were identified as "High Consequence Areas." The Environmental Review for the Sandpiper/Line 3 projects should perform a similar examination on the route and system alternatives included for consideration to determine which locations have the potential for multiple resource impacts in the event of a release.

Vulnerable Groundwater Areas

During the Sandpiper process, the MPCA provided a map created in 1989 which showed the degree of vulnerability to groundwater contamination throughout the state. There are datasets that show where larger drinking water supplies are located and attempts to indicate the degree of vulnerability to contamination in these areas (generally, these areas are identified because of their proximity to populated areas). In rural Minnesota, there are many citizens who do not live in areas of higher population whose drinking water is vulnerable to contamination in the event of a release, but are not included in an area identified as a "drinking water vulnerability area." MPCA suggests that the Environmental Review attempt to more accurately identify current areas of potential groundwater vulnerability.

Deep Soil Releases

Enbridge proposes to cross some water bodies along the preferred route using an "open cut" method or a variation thereof. Enbridge proposes to cross other water bodies using horizontal directional drilling (HDD) or guided bores, which essentially involves drilling a pathway for the pipe underground and then pushing the pipe through the opening. Guided bores are typically fairly shallow, perhaps 10-15 feet deep, and might be used to cross under a road or other infrastructure. HDD is used for large water body crossings such as large rivers, and typically goes much deeper (often around 30 feet or deeper). One advantage of deep drilling to lay a pipeline is that in the event of a release, there is a reduced likelihood of immediate surface water impacts. However, releases have occurred from drilling at depths of 30 feet or greater which pose a risk to the subsurface and groundwater. It is probable that soils with significant clays at a depth between 20 and 40 feet might be better locations for HDD than areas with coarser sandy soils at this depth. Clay aquitards can help to contain releases and prevent further downward migration should releases occur at deeper depths. The MPCA recommends that the Environmental Review include an examination of well records near potential crossing sites to determine soil types in these areas so that the choice of open cut versus HDD can be made accordingly.

Risk Assessment Methodologies

The MPCA requests that the methodologies for risk assessment described in the Exponent report "Third Party Consultant Environmental Review of the TransCanada Keystone XL Pipeline Risk Assessment" be considered for inclusion in the Environmental Review scoping.

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Route and System Alternatives

The MPCA requests that system alternatives that will transport oil to an alternative terminal with potentially less environmental impact should be evaluated in the Environmental Review. The Sandpiper Certificate of Need docket discusses System Alternative SA-03 and System Alternative SA-03 Modified. SA-03 would likely require the construction of a new terminal in the Crookston area. Since the Sandpiper Certificate of Need (CN) contested case hearing, the MPCA and the Minnesota Department of Natural Resources (MDNR) have further evaluated the natural resources that might be impacted by a pipeline built along the suggested SA-03. The MNDNR has recommended evaluating modifications to SA-03 that could reduce potential resource impacts that have been previously identified. These modifications are included in MNDNR's September 30, 2015, comments in these dockets. MPCA supports evaluating these modifications in the Environmental Review analysis.

The MPCA thanks the Minnesota Department of Commerce and the PUC for the opportunity to comment upon these issues.

Sincerely,



 William Sierks, Manager
Environment and Energy Section
Resource Management and Assistance Division

WS:bt

Attachment

cc: Jamie Schrenzel, MDNR

Attachment A

