



# National Transportation Safety Board

Washington, DC 20594

## Safety Recommendation

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**Date:** July 25, 2012

**In reply refer to:** P-12-11 through -16

Mr. Pat Daniel  
Chief Executive Officer  
Enbridge Incorporated  
Calgary Office Tower  
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Calgary, AB Canada  
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The National Transportation Safety Board (NTSB) is an independent U.S. Federal Government agency charged by the U.S. Congress with investigating transportation accidents, determining their probable cause, and making recommendations to prevent similar accidents from occurring. We are providing the following information to urge your organization to take action on the safety recommendations in this letter.

On July 10, 2012, the NTSB adopted its report concerning the July 25, 2010, accident, in which a segment of a 30-inch-diameter pipeline owned and operated by Enbridge Incorporated ruptured in a wetland in Marshall, Michigan.<sup>1</sup> Additional information about this accident and the resulting recommendations may be found in the report of the investigation, which can be accessed at our website, <http://www.nts.gov>.

As a result of this investigation, the NTSB reiterated Safety Recommendation P-11-8 to the Pipeline and Hazardous Materials Safety Administration (PHMSA) and issued 19 new recommendations, including 2 to the U.S. Secretary of Transportation, 8 to PHMSA, 1 to the American Petroleum Institute, 1 to the Pipeline Research Council International, 1 to the International Association of Fire Chiefs and the National Emergency Number Association, and the following 6 recommendations to Enbridge Incorporated:

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<sup>1</sup> *Enbridge Incorporated Hazardous Liquid Pipeline Rupture and Release, Marshall, Michigan, July 25, 2010, Pipeline Accident Report NTSB/PAR-12/01* (Washington, D.C.: National Transportation Safety Board, 2012).

P-12-11

Revise your integrity management program to ensure the integrity of your hazardous liquid pipelines as follows: (1) implement, as part of the excavation selection process, a safety margin that conservatively takes into account the uncertainties associated with the sizing of crack defects from in-line inspections; (2) implement procedures that apply a continuous reassessment approach to immediately incorporate any new relevant information as it becomes available and reevaluate the integrity of all pipelines within the program; (3) develop and implement a methodology that includes local corrosion wall loss in addition to the crack depth when performing engineering assessments of crack defects coincident with areas of corrosion; and (4) develop and implement a corrosion fatigue model for pipelines under cyclic loading that estimates growth rates for cracks that coincide with areas of corrosion when determining reinspection intervals.

P-12-12

Establish a program to train control center staff as teams, semiannually, in the recognition of and response to emergency and unexpected conditions that includes supervisory control and data acquisition system indications and Material Balance System software.

P-12-13

Incorporate changes to your leak detection processes to ensure that accurate leak detection coverage is maintained during transient operations, including pipeline shutdown, pipeline startup, and column separation.

P-12-14

Provide additional training to first responders to ensure that they (1) are aware of the best response practices and the potential consequences of oil releases and (2) receive practical training in the use of appropriate oil-containment and -recovery methods for all potential environmental conditions in the response zones.

P-12-15

Review and update your oil pipeline emergency response procedures and equipment resources to ensure that appropriate containment equipment and methods are available to respond to all environments and at all locations along the pipeline to minimize the spread of oil from a pipeline rupture.

P-12-16

Update your facility response plan to identify adequate resources to respond to and mitigate a worst-case discharge for all weather conditions and for all your pipeline locations before the required resubmittal in 2015.

These recommendations are derived from the NTSB's investigation and are consistent with the evidence we found and the analysis we performed. Chairman HERSMAN, Vice Chairman HART, and Members SUMWALT, ROSEKIND, and WEENER concurred in these recommendations.

The NTSB is vitally interested in these recommendations because they are designed to prevent accidents and save lives. We would appreciate receiving a response from you within 90 days addressing the actions you have taken or intend to take to implement these recommendations. When responding, please refer to Safety Recommendations P-12-11 through -16. We encourage you to submit updates electronically to [correspondence@ntsb.gov](mailto:correspondence@ntsb.gov). If your response includes attachments that exceed 5 megabytes, please e-mail us at the same address for instructions. To avoid confusion, please do not submit both an electronic copy and a hard copy of the same response.

Sincerely,

*[Original Signed]*

Deborah A.P. Hersman  
Chairman