



November 27, 2017

The Honorable Rick Snyder
Governor, State of Michigan
Romney Building
111 S. Capitol Avenue
P.O. Box 30013
Lansing MI 48909
USA

Dear Governor Snyder:

This agreement, which is signed today between Enbridge and the State of Michigan, sets forward a plan to improve coordination between Enbridge and the State for the operation and maintenance of Enbridge's Line 5 pipeline located in Michigan, while providing enhanced transparency to the citizens of Michigan.

Enbridge is committed to the letter and spirit of this important agreement and to the actions outlined in the agreement that move us toward a longer-term set of decisions about the future of pipeline operations. We strongly affirm our recognition of the Great Lakes as an international treasure that must be preserved now and for future generations.

We appreciate the emphasis that you, other state leaders and the public place on the stewardship responsibilities that come with being part of the Great Lakes community. We also will do our part through the meaningful and concrete actions contained in this agreement.

Sincerely,

A handwritten signature in black ink, appearing to read 'Al Monson', written in a cursive style.

**AGREEMENT BETWEEN THE STATE OF MICHIGAN AND ENBRIDGE ENERGY,
LIMITED PARTNERSHIP AND ENBRIDGE ENERGY COMPANY, INC.**

This Agreement is entered between the State of Michigan (referred to herein as “the State”), AND Enbridge Energy, Limited Partnership and Enbridge Energy Company, Inc., formerly known as Lakehead Pipe Line Company, Inc. (collectively referred to herein as “Enbridge”) concerning those segments of Enbridge’s Line 5 that are located within the State of Michigan.

WHEREAS, the segments of Line 5 located within Michigan extend 547 miles, from the border of Wisconsin near Ironwood, Michigan to Marysville, Michigan, where it crosses the St. Clair River to the border with Sarnia, Ontario (“St. Clair River Crossing”);

WHEREAS, the segments of Line 5 located within Michigan must be operated and maintained in compliance with all applicable laws that are intended to protect the public health, safety, and welfare and prevent pollution, impairment, or destruction of the natural resources of the State of Michigan, including the unique resources of the Great Lakes;

WHEREAS, the continued operation of Line 5 through the State of Michigan serves important public needs by providing substantial volumes of propane to meet the needs of Michigan citizens, supporting businesses in Michigan, and transporting essential products, including Michigan-produced oil to refineries and manufacturers;

WHEREAS, the State issued an “Easement” to Lakehead Pipeline Company, Inc. (“Lakehead”), subsequently renamed Enbridge Energy Company, Inc., on April 23, 1953 pursuant to Act No. 10, PA 1953 “for the purpose of erecting, laying, maintaining and operating” an approximate 4-mile segment of Line 5 across the Straits of Mackinac (“Straits”) upon determining that such crossing would “be of benefit to all of the people of the State of Michigan and in furtherance of the public welfare”;

WHEREAS, in accordance with the Easement, Enbridge constructed two parallel pipelines, each 4.09-miles long (referred to herein as the “Dual Pipelines”) across the Straits in 1953 (referred to as the “Straits Crossing”), and since that time continues to operate and maintain such pipelines as part of Line 5;

WHEREAS, the State and Enbridge recognize that the Straits Crossing and the St. Clair River Crossing are located in the Great Lakes and connecting waters that include and are in proximity to unique ecological and natural resources that are of vital significance to the State and its residents, to tribal governments and their members, to public water supplies, and to the regional economy and the Crossings are also present in important infrastructure corridors;

WHEREAS, the State and Enbridge recognize that other important ecological and natural resources are located near other segments of Line 5 that cross or approach other waters of the State that are also of vital significance to the State and its residents, to tribal governments and their members, to public water supplies, and to the regional economy;

WHEREAS, the State and Enbridge desire to establish additional measures and undertake further studies with respect to certain matters related to Enbridge's stewardship of Line 5 within Michigan and the transparency of its operation;

WHEREAS, the State acknowledges that the stipulations specified in this Agreement are intended to further protect ecological and natural resources held in public trust by the State of Michigan, and that the terms of this Agreement will serve Enbridge's interest by providing clarity as to State's expectations concerning the safety and integrity of Line 5;

NOW, THEREFORE, the parties further agree as set forth below.

I. STIPULATIONS

Enbridge and the State agree to the following measures, which are designed to increase coordination between the State and Enbridge concerning the operation and maintenance of Enbridge's Line 5 pipeline located in the State of Michigan, including enhancing its operation in the interest of the citizens of Michigan.

A. Increased Coordination Between the State and Enbridge: In order to enhance coordination with the State concerning the operation and maintenance of Line 5 located in the State of Michigan, and to facilitate the implementation of the measures described at Paragraphs B-G below, the Parties agree as follows:

1. The State will provide in a timely fashion and at its own costs, personnel to participate in the Evaluations and Assessments specified in Paragraphs D-G, and will initially designate such personnel within 30 days of execution of this Agreement. In the event that the State does not designate such personnel by the time that Enbridge is ready to move forward with such Evaluations and Assessments, Enbridge may proceed with initiating the Evaluations and Assessments specified in Paragraphs D-G before the State has designated personnel to participate, provided that Enbridge will update such personnel on any work done prior to their participation.
2. The State will further provide designated representatives to participate in the stewardship and transparency consultations and communications to be carried out under this Agreement.

3. Enbridge will provide the State's representative with the opportunity to fully and directly participate in the preparation of Studies and Assessments specified in Paragraphs D-G below. As part of this effort, Enbridge will make available to the State's representative data and other materials generated under this Agreement, including but not limited to geologic, engineering, or other technological information concerning Line 5 located in the State of Michigan and Enbridge's implementation of the measures described herein. Enbridge will also make available to the State all requested information concerning the operation, integrity management, leak detection, control room operations, and emergency preparedness for Enbridge's Line 5 pipeline located in the State of Michigan. Enbridge and the State agree to work cooperatively to identify the nature and scope of the information to be provided, focusing on that which is most relevant to the State's interests.
4. Enbridge will facilitate the ability of State-designated representatives to participate in semi-annual reviews that Enbridge agrees to conduct to assess the operating plans for Enbridge's Line 5 located within the State of Michigan.
5. Enbridge and representatives designated by the State agree to meet semi-annually to discuss any changes to engineering parameters, risks, new technologies, and innovations pertaining to the operation and maintenance of Line 5 located within the State of Michigan and the U.S. portion of the St. Clair River Crossing.

B. Replacement of Line 5 St. Clair River Crossing: Enbridge will seek all US and Canadian authorizations and approvals (hereinafter "authorizations and approvals") necessary to replace Line 5's crossing of the St. Clair River ("St. Clair River Crossing") by the use of a horizontal directional drill ("HDD") method as expeditiously as practicable. Enbridge will begin compiling the information to support all applications for the authorizations and approvals necessary for the replacement of the St. Clair River Crossing upon the execution of this Agreement. By December 31, 2017, Enbridge will request pre-application consultations with the US regulatory agencies for which such pre-application consultations are necessary regarding the contents and requirements for the US authorizations and approvals for the replacement of the St. Clair River Crossing. Enbridge will report to the State the status of Enbridge's efforts to prepare applications for the US authorizations and approvals following completion of pre-application consultations. By February 28, 2018, Enbridge will file applications to seek all permits issued by the State of Michigan and by any of its political subdivisions necessary for the replacement of the St. Clair River Crossing, excluding those State of Michigan applications that are filed jointly with US federal agencies, including but not limited to the U.S. Army Corps of Engineers. No later than 240 days of the date on which this Agreement is fully executed, Enbridge will file

applications to seek all US federal and Canadian authorizations and approvals necessary for the replacement of the St. Clair River Crossing. No later than 180 days after obtaining all authorizations and approvals necessary to replace Line 5's crossing of the St. Clair River by the use of a HDD method, Enbridge will initiate the work necessary to replace that segment of Line 5.

C. Discontinuation of Line 5 Operations in the Straits During Sustained Adverse Weather Conditions: Enbridge will temporarily shut-down the operation of the Dual Pipelines while "Sustained Adverse Weather Conditions," as that term is defined in Appendix 1 to this Agreement, remain in effect in the Straits. The procedure that Enbridge is to employ during the presence of Sustained Adverse Weather Conditions is set forth in Appendix 1.

D. Evaluation of Underwater Technologies to Enhance Leak Detection and Technologies to Assess Coating Condition of the Dual Pipelines: Enbridge will provide the State with a copy of the report that is required to be prepared and submitted to the United States in accordance with Paragraphs 81-83 of the federal consent decree to assess the feasibility of installing an alternative leak detection system at the Straits (the "Consent Decree Report"). In accordance with Paragraph I.A.3 of this Agreement, Enbridge will provide the State's representative with the data used to generate the Consent Decree Report, and Enbridge will make the authors of that Consent Decree Report available to discuss its contents with the State's representative. Further, by June 30, 2018, Enbridge will review and assess any additional technologies that are not assessed in the Consent Decree Report to determine whether such other technologies would provide a viable additional benefit over and above the technologies that are already in place on the Dual Pipelines or those that Enbridge plans to implement to detect leaks as a result of the Consent Decree Report. Enbridge will also assess at the same time any technologies not currently in place that would allow it to detect damage to the coating of the Dual Pipelines. To the extent that Enbridge identifies any studied technologies that provide a viable additional benefit to detect leaks or damage to the coating of the Dual Pipelines, Enbridge will: (i) by August 30, 2018, file the necessary applications to seek all authorizations and approvals necessary to install or apply such technologies; (ii) proceed with the installation or application of such technologies no later than 365 days after receiving all approvals and authorizations necessary for their installation, or, to the extent that no approvals or authorizations are required, as expeditiously as practicable following the identification of the technologies.

E. Evaluation and Implementation of Measures to Mitigate Potential Vessel Anchor Strike: No later than June 30, 2018, Enbridge will complete a report that assesses options to mitigate the risk of a vessel's anchor puncturing, dragging, or otherwise damaging the Dual Pipelines. That report will, at a minimum, assess the following options: (i) measures to enhance shipping communication and warning technologies; and (ii) the use of protective barriers to further protect the Dual Pipelines from any risks posed by a vessel anchor coming into direct

contact with the Dual Pipelines. The report will assess the costs and engineering considerations associated with each alternative, as well as the potential environmental impacts that may result from the construction, operation, and maintenance of the alternatives. The report shall also identify a proposed timeline for seeking all regulatory approvals. Enbridge shall proceed with detailed design and installation of the most appropriate option within 180 days of receiving all authorizations and approvals necessary for the construction of that option.

F. Evaluation of Alternatives to Replace the Dual Pipelines: No later than June 15, 2018, Enbridge will prepare a report assessing the replacement of the Dual Pipelines across the Straits. That report will, at a minimum, include an assessment of the following alternatives: (i) placing a new pipeline or pipelines in a tunnel under the Straits; (ii) installing a new pipeline or pipelines under and across the Straits by the use of an HDD method; and (iii) installing a new pipeline or pipelines across the Straits with an open-cut method that includes secondary containment. The report will assess the costs and engineering considerations associated with each alternative, as well as the potential environmental impacts that may result from the construction, operation, and maintenance of the alternatives. The report will further identify the approvals or authorizations that would be necessary to construct, operate, and/or maintain each studied alternative.

G. Evaluation of Line 5 Water Crossings Other Than the Straits: Enbridge will work in coordination with a representative to be designated by the State to identify and evaluate water crossings by Line 5, other than the Straits, to assess measures to minimize the likelihood and/or consequences of a release at each water crossing location. No later than June 30, 2018, Enbridge will prepare and submit to the State plans that prioritize water crossings jointly identified by Enbridge and the State and that specify measures to minimize the likelihood and/or consequences of a release from Line 5 into such prioritized water crossings. The plans will include a schedule for implementing the measures described therein following Enbridge's receipt of all necessary authorizations and approvals.

H. Potential Further Agreement Concerning Pipelines Across the Straits: The State and Enbridge agree to initiate discussions, as soon as practicable following the completion of the evaluations required under Paragraphs D-G above, regarding a potential further agreement to address issues concerning actions related to pipelines across the Straits, with a goal of executing such an agreement by August 15, 2018.

II. AMENDMENT

The State or Enbridge may propose in writing that this Agreement be amended. The State and Enbridge agree to consult in good faith in an effort to reach agreement on any proposed amendment. Any amendment agreed to by the State and Enbridge shall be effective on the date that any written amendment is executed by the State and Enbridge.

III. DISPUTE RESOLUTION

The State and Enbridge agree that, should any dispute arise under this Agreement, the State and Enbridge shall in good faith attempt to resolve the dispute through informal negotiations. If the parties are unable to informally resolve such a dispute, either party may initiate proceedings in a court of competent jurisdiction to resolve the dispute.

IV. TERM AND TERMINATION

The terms of this Agreement shall remain in effect until the commitments in Paragraphs I. B and I.D.-G above are fulfilled, except that the obligations in Paragraphs I.A and I.C shall continue unless and until the Agreement terminates automatically. This Agreement shall terminate automatically upon: (i) the permanent discontinuation of service by Enbridge on the Dual Pipelines; or (ii) placing into operation a replacement pipeline or pipelines across the Straits that has been approved by the State pursuant to applicable permitting procedures.

V. COMPLIANCE WITH APPLICABLE LAW

The State and Enbridge acknowledge and agree that Enbridge's operation of Line 5 remains subject to the requirements of all applicable state and federal law, the Easement, the September 3, 2015 Agreement with the State that prohibits Enbridge from transporting heavy crude oil on Line 5 within the State of Michigan, and the terms of any easement granted by the State for Line 5 and agree that nothing in this Agreement is intended to relieve Enbridge of its obligation to comply with or waive any rights that Enbridge and the State may have under such laws or to supersede or displace applicable state law, regulation or requirement, or any federal law, regulation, or requirement that is applicable to the operation or maintenance of Line 5, including but not limited to the Pipeline Safety Act (including its preemption provisions); the Protecting Our Infrastructure of Pipelines and Enhancing Safety Act of 2016 (Public Law 114-183); any regulation or order issued by PHMSA or any other federal agency; or the Consent Decree entered into between Enbridge and the United States, in *United States v. Enbridge Energy, Limited Partnership, et al.*, No. 1:16-cv-914, ECF No. 14 (E.D. Mich., entered May 23, 2017), which specifies certain investigation, integrity management, leak detection, valve

placement, and emergency response measures to prevent discharges of oil or hazardous substances into or upon the waters of the United States or adjoining shorelines.

VI. ENTIRE AGREEMENT

This Agreement constitutes the whole of the agreement between the parties concerning the matters addressed in this Agreement.

VI. EXECUTION

This Agreement may be executed in counterparts without the necessity that the Parties execute the same counterpart, each of which will be deemed an original but which together will constitute one and the same agreement. The exchange of copies of this Agreement by electronic or hard-copy means shall constitute effective execution and delivery thereof and may be used in lieu of the original for all purposes.

FOR THE STATE OF MICHIGAN



Name: Rick Snyder

Title: Governor

Dated: 11/27/2017

FOR ENBRIDGE ENERGY, LIMITED PARTNERSHIP

BY: ENBRIDGE PIPELINES (LAKEHEAD) L.L.C. AS GENERAL PARTNER



Name: Bradley F. Shamla

Title: Vice President, U.S. Operations

Dated: 11/27/2017

FOR ENBRIDGE ENERGY COMPANY, INC.



Name: Bradley F. Shamla

Title: Vice President, U.S. Operations

Dated: 11/27/2017

Appendix 1

Enbridge Line 5 – Sustained Adverse Weather Conditions Procedure

This Appendix is designed to facilitate an effective emergency response to a potential release incident by specifying procedures for a systematic approach by Enbridge to temporarily shut down Line 5 in the Straits of Mackinac during Sustained Adverse Weather Conditions. Enbridge shall maintain a record of its use of the procedure and make it available to the State. If an alternate near-real time data point becomes available following the execution of this agreement, Enbridge shall notify the State in writing of Enbridge’s intent to use alternate data sources and the parties will work cooperatively to revise this Appendix to account for the alternative data source.

Definitions:

Sustained Adverse Weather Conditions: Conditions in which median wave heights in the Straits of Mackinac over a continuous 60-minute period are greater than 8 feet based on “Near-real Time Data,” or in its absence “Modeled Data.”

Near-real Time Data: The wave height data derived from Buoy 45175 (Mackinac Straits West) of the Great Lakes Research Center of Michigan Technological University’s Upper-Great Lakes Observing System (UGLOS).

Modeled Data: Modeled wave height data based on real-time data inputs that is available on the NOAA Great Lakes Coastal Forecasting System (GLCFS) Nowcast model at a representative point in the Straits.

Forecasted Data: Data available on the NOAA Great Lakes Coastal Forecasting System Forecast model at a representative point in the Straits.

Enbridge Line 5 Procedures – Sustained Adverse Weather Conditions

Step #	Action
1	Enbridge or Enbridge Consultant (collectively “Enbridge Monitor”) will continuously monitor Near-real Time Data, or in its absence Modeled Data, to identify Sustained Adverse Weather Conditions at the Straits.
2	When Sustained Adverse Weather Conditions are forecasted based on Forecasted Data, the Enbridge Monitor will inform the Control Center Operations Shift Supervisor, at which point the Control Center Operations will prepare for the potential that an unplanned shut down of Line 5 at the Straits may be required.
3	When Near-real Time Data, or in its absence Modeled Data, indicate that Sustained Adverse Weather Conditions are occurring at the Straits, the Enbridge Monitor will immediately contact the Control Center Operations Shift Supervisor.
4	The Control Center Operations Shift Supervisor will promptly call the Enbridge Great Lakes On-Call Manager to advise them that Sustained Adverse Weather Conditions exist at the Straits.

5	The Enbridge Great Lakes On-Call Manager will request, no later than 15 minutes after being notified in Step #4 above, that the Control Center Operations shutdown Line 5. If real time conditions in the Straits determined by the Enbridge Great Lakes On-Call Manager indicate Sustained Adverse Weather Conditions do not exist, the Great Lakes On-Call Manager will advise the Control Center Operations Shift Supervisor that Line 5 should not be shutdown. In that event, the Enbridge Monitor will continue to monitor conditions as per Step 1 for changes that indicate that Sustained Adverse Weather conditions may be present and the other Steps in this Appendix shall be followed should the Enbridge Monitor determine that such conditions are present.
6	Unless advised otherwise by the Enbridge Great Lakes On-Call Manager as per step 5 above, Control Center Operations will perform a controlled emergency shut down of Line 5 and isolate the segment across the Straits.
7	While shut down, the Enbridge Monitor will continuously monitor Near-real Time Data, or in its absence Modeled Data, to identify the continuance of Sustained Adverse Weather Conditions at the Straits.
8	When Near-real Time Data, or in its absence Modeled Data, indicates the Sustained Adverse Weather Conditions no longer exist at the Straits, the Enbridge Great Lakes On Call Manager and Control Center Operations Admin On Call will authorize the restart of Line 5.
9	Control Center Operations will safely restart Line 5.