

Exhibit 4

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

UNITED STATES OF AMERICA,)
)
)
 Plaintiff,)
)
 v.)
)
 ENBRIDGE ENERGY, LIMITED)
 PARTNERSHIP,)
 ENBRIDGE PIPELINES (LAKEHEAD) L.L.C.,)
 ENBRIDGE ENERGY PARTNERS, L.P.,)
 ENBRIDGE ENERGY MANAGEMENT, L.L.C.,)
 ENBRIDGE ENERGY COMPANY, INC.,)
 ENBRIDGE EMPLOYEE SERVICES, INC.,)
 ENBRIDGE OPERATIONAL SERVICES, INC.,)
 ENBRIDGE PIPELINES INC., and)
 ENBRIDGE EMPLOYEE SERVICES CANADA)
 INC.,)
)
 Defendants.)

Civil Action No. 1:16-CV-914

Judge Gordon J. Quist

CONSENT DECREE

REVISED FOLLOWING PUBLIC COMMENT PERIOD

m. “Day” shall mean a calendar day unless expressly stated to be a business day. In computing any period of time under this Consent Decree, where the last Day would fall on a Saturday, Sunday, or U.S. federal holiday, the period shall run until the close of business of the next business day.

n. “Defendants” shall have the same meaning as the term “Enbridge” as defined below.

o. “Dig List” shall mean the list of Crack features, Corrosion features and Geometric features required to be excavated in accordance with Section VII.D.

p. “Effective Date” shall have the definition provided in Section XVII.

q. “Enbridge” shall mean Enbridge Energy, L.P., Enbridge Pipelines (Lakehead) L.L.C., Enbridge Energy Partners, L.P., Enbridge Energy Management, L.L.C., Enbridge Energy Company, Inc., Enbridge Employee Services, Inc., Enbridge Operational Services, Inc., Enbridge Pipelines Inc., Enbridge Employee Services Canada Inc., and any of their successors and assigns.

r. “EPA” shall mean the United States Environmental Protection Agency and any of its successor departments or agencies.

s. “Established Maximum Operating Pressure” or “Established MOP” or “MOP” shall mean, with respect to each Lakehead System Pipeline segment ~~identified on Appendix A, the MOP value listed for that segment in Appendix A,~~ the MOP value listed for that segment in column C of the spreadsheet located at <https://www.epa.gov/enbridge-spill-michigan/enbridge-revised-maximum-operating-pressure-values>. For purposes of identifying the MOP value applicable to any particular pipeline segment, pipeline segments are identified (in

column B of the above-cited spreadsheet) by the milepost location at the beginning of the segment, and each pipeline segment includes the entire distance between the listed milepost location and the milepost location listed for the next pipeline segment identified on the spreadsheet.

t. “Feature Requiring Excavation” shall have the meaning set forth in Paragraph 36.

u. “Field Burst Pressure” shall mean, with respect to each Crack feature and each Corrosion feature located on any section of a Lakehead System Pipeline that is excavated, whether for repair or mitigation of features, investigation of features or otherwise, the Predicted Burst Pressure of such feature calculated based on field measurements of feature length and depth obtained during examination of the feature at the time of the excavation.

v. “Future Removal Costs” shall mean all costs, including direct and indirect costs, incurred and paid by the United States in responding to the Line 6B Discharges that were, or will be, charged against the Oil Spill Liability Trust Fund after October 1, 2015.

w. “Geometric feature” shall mean any feature that involves deformation of the pipe as defined in 4.28 of API 1163 (1st Edition), including any bend, buckle, dent, ovality, ripple, wrinkle or other change that affects the roundness of the pipe’s cross section or straightness of the pipe.

x. “High Consequence Area” or “HCA” shall have the meaning set forth in 49 C.F.R. § 195.450.

sums due (with accrued interest) to the United States within 7 Days after the resolution of the dispute. If Enbridge prevails concerning any aspect of the contested costs, Enbridge shall pay that portion of the costs (plus associated accrued interest) for which they did not prevail to the United States within 7 Days after the resolution of the dispute. Enbridge shall be disbursed any balance of the escrow account. All payments to the United States under this Paragraph shall be made in accordance with Paragraph 17 (Payment Instructions). The dispute resolution procedures set forth in this Paragraph in conjunction with the procedures set forth in Section XIII (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding Enbridge's obligation to reimburse the United States for its Future Removal Costs.

VII. INJUNCTIVE MEASURES

19. Enbridge shall fund and perform all injunctive measures set forth in Section VII as detailed in Subsections VII.A-J below and in Appendices A to ~~GF~~, which are incorporated into Section VII.

20. Except as otherwise specifically provided in this Consent Decree, requirements of this Section VII shall apply to all of the Lakehead System.

A. ORIGINAL US LINE 6B

21. Enbridge is permanently enjoined from operating, or allowing anyone else to operate Original US Line 6B for the purpose of transporting oil, gas, diluent, or any hazardous substance. Nothing in this Paragraph shall be construed to preclude Enbridge from removing pumps or other equipment from Original US Line 6B and reusing such equipment.

B. REPLACEMENT OF LINE 3; EVALUATION OF REPLACEMENT OF LINE 10

22. Replacement of Line 3 in the United States.

a. Enbridge shall replace the segment of the Lakehead System Line 3 oil transmission pipeline that spans approximately 292 miles from Neche, North Dakota, to Superior, Wisconsin (“Original US Line 3”). ~~Enbridge shall complete the replacement of Original US Line 3 and take Original US Line 3 out of service, including depressurization of Original US Line 3, as expeditiously as practicable after receiving required regulatory approvals and permits for new Line 3.”~~ **Enbridge shall complete the replacement of Original US Line 3 and take Original US Line 3 out of service, including depressurization of Original US Line 3, as expeditiously as practicable after receiving required regulatory approvals and permits for new Line 3.”, provided that Enbridge receives all necessary approvals to do so.** Enbridge shall seek all approvals necessary for the replacement of Original US Line 3, and provide approval authorities with complete and adequate information needed to support such approvals, as expeditiously as practicable, and Enbridge shall respond as expeditiously as practicable to any requests by approval authorities for supplemental information relating to the requested approvals. **If Enbridge receives approvals necessary for replacement of Original US Line 3, Enbridge shall complete the replacement of Original US Line 3 and take Original US Line 3 out of service, including depressurization of Original US Line 3, as expeditiously as practicable.**

b. Within 90 Days after Original US Line 3 is taken out of service, Enbridge shall purge remaining oil from Original US Line 3 by running a cleaning pig through the line, and Enbridge shall complete final clean-out and decommissioning of Original US Line 3 within one year thereafter.

c. Until decommissioning of Original U.S. Line 3 in accordance with Subparagraph 22.b, Enbridge shall limit the operating pressure in each segment of Original US Line 3 that Enbridge continues to operate so that the operating pressure within such segment does not exceed the ~~value specified in Appendix A for that segment,~~ **MOP value specified for that segment in <https://www.epa.gov/enbridge-spill-michigan/enbridge-revised-maximum-operating->**

pressure-values, unless and until Enbridge has completed hydrostatic pressure testing that validates use of an increased operating pressure, and has submitted to EPA a report summarizing the hydrostatic pressure test procedures and results. Under no circumstances shall a hydrostatic pressure test be deemed to validate an operating pressure within any hydrostatic pressure test segment that is higher than 80% of the lowest test pressure achieved in such test segment.

d. If Enbridge has not taken all portions of Original US Line 3 out of service by December 31, 2017, Enbridge shall comply with the additional requirements set forth below:

(1) On an annual basis with the exception of the final year of service for the Original US Line 3, Enbridge shall complete valid ILIs of all portions of Original US Line 3 that Enbridge continues to operate, using the most appropriate tools for detecting, charactering, and sizing all of the following: Crack Features, Corrosion Features, and Geometric Features;

(2) Enbridge shall identify, excavate and mitigate or repair all Features Requiring Excavation detected in the ILIs required pursuant to Subparagraph 22.d.(1), in accordance with the requirements of Subsection VII.D; and

(3) Enbridge shall clean all portions of Original US Line 3 that Enbridge continues to operate and shall use biocide treatments to reduce microbiological activity on a quarterly basis.

e. After Original US Line 3 is taken out of service, Enbridge shall be permanently enjoined from operating, or allowing anyone else to operate, any portion of the pipeline for the purpose of transporting oil, gas, diluent or any hazardous substance ~~unless and until Enbridge has satisfied all of the requirements set forth in Subparagraphs 22.f to h. Nothing~~

~~in this Consent Decree is intended to place any restriction on Enbridge's ability to use Original U.S. Line 3 for research, testing or other non-commercial purposes, provided that the line does not contain oil, gas, diluent or any hazardous substance.~~ Nothing in this Paragraph shall be construed to preclude Enbridge from removing pumps or other equipment from Original US Line 3 and reusing such equipment.

~~f. Enbridge shall provide written notice to EPA of its intention to operate Original US Line 3, or any segment thereof, for the purpose of transporting oil, gas, diluent or any hazardous substance after the date Original US Line 3 was taken out of service pursuant to Subparagraph 22.a. Enbridge shall provide such notice no less than 60 Days prior to any resumption of such operations and no less than 60 Days prior to any of the actions required under Subparagraphs 22.g to h. Before any resumption of operation of Original US Line 3, Enbridge shall also comply with any permitting requirements that may be applicable.~~

~~g. Enbridge shall perform the following on any portion of Original US Line 3 that Enbridge proposes to operate after the date Original US Line 3 was taken out of service pursuant to Subparagraph 22.a:~~

~~(1) Excavation and repair or mitigation of all Crack Features and Corrosion features on such portions of Original US Line 3 that have a Predicted Burst Pressure less than 1.39 times MOP, and correcting any other known unsafe defects or conditions on such portions of Original US Line 3; and~~

~~(2) complete hydrostatic pressure testing of all such portions of Original US Line 3 as provided in Paragraph 25.~~

~~h. Enbridge shall correct any other known unsafe defects or conditions on each segment of Original US Line 3 that Enbridge proposes to operate for the purpose of transporting oil, gas, diluent or any hazardous substance after the date Original US Line 3 was taken out of service pursuant to Subparagraph 22.a.~~

~~i. If Enbridge operates any portion of Original US Line 3 after the date Original US Line 3 was taken out of service pursuant to Subparagraph 22.a, such pipeline segments shall be considered a New Lakehead Pipeline for purposes of this Consent Decree.~~

23. *Evaluation of Replacement of Portions of Line 10 within the United States:* Within 120 Days of the Effective Date of the Consent Decree, Enbridge shall submit to EPA a report evaluating replacement of the entire portion of the Lakehead System Line 10 oil transmission pipeline between the Canadian border near Niagara Falls, NY, and the terminus of the pipeline near West Seneca, NY (“US Line 10”). The report shall evaluate replacement of the entire US Line 10. The Report shall also include a separate evaluation of replacement of the short segment of the pipeline that crosses the Niagara River at Grand Island, NY. The evaluation shall contain a discussion of the number, density, and severity of Crack features and Corrosion features found on US Line 10, as well as comparison of these features to those on the 21-mile section of Line 10 to be replaced near Hamilton, Ontario.

C. HYDROSTATIC PRESSURE TESTING

24. No less than 60 Days prior to any hydrostatic pressure testing undertaken pursuant to the terms of this Consent Decree, Enbridge shall prepare and submit to EPA a plan and schedule for hydrostatic pressure testing of the pipeline. The plan shall describe in detail how Enbridge will conduct the hydrostatic pressure test and demonstrate that the hydrostatic pressure

a. In the case of ILI tools used to assess Crack features, Initial ILI Reports shall be submitted to Enbridge within 120 Days after the tool is removed from the pipeline at the conclusion of the in line inspection.

b. In the case of ILI tools used to assess Corrosion features, Initial ILI Reports shall be submitted to Enbridge within 90 Days after the tool is removed from the pipeline at the conclusion of the in line inspection.

c. In the case of ILI tools used to assess Geometric features, Initial ILI Reports shall be submitted to Enbridge within 60 Days after the tool is removed from the pipeline at the conclusion of the in line inspection.

33. Priority Features

a. Enbridge shall require each of its vendors of ILI services to notify Enbridge of any Priority Feature identified during an ILI and to provide Enbridge with the ILI data relating to such Priority Feature immediately upon identification of the Priority Feature, without waiting for preparation and submission of the Initial ILI Report.

b. For the purposes of this Consent Decree, a “Priority Feature” shall mean any Crack feature, Corrosion feature, or Geometric feature that may require priority attention over other features based upon criteria specified by Enbridge in its contract or work order with the vendor for ILI services. In such a contract or work order, Enbridge shall define a Priority Feature as including, among other things, any feature that the ILI vendor may consider to be an immediate threat to the integrity of the pipeline. At a minimum, Priority Features shall include features that meet the criteria set forth in Appendix ~~B~~A.

than burst pressures for the same features calculated using the ILI-reported feature length and depth (“ILI Burst Pressure”). Both Field Burst Pressure and ILI Burst Pressure values shall be calculated in accordance with Subsection VII.D.(IV), below, and Appendix ~~E~~**B**, except that the Field Burst Pressure value for each feature may be calculated using all recorded depth measurements for the feature, rather than using the maximum reported feature depth value and a flaw profile approximation, such as parabolic or rectangular.

a. If Enbridge uses a statistical analysis of Field Burst Pressure values and ILI Burst Pressure values for features on excavated sections of any pipeline for the determination required in this Paragraph 40, and that analysis indicates that Field Burst Pressure values are greater than or equal to ILI Burst Pressure values, ILI-reported values concerning the length and depth of reported features shall be considered acceptable for purposes of this Paragraph 40, and Enbridge shall not be required to adjust any predicted burst pressure values previously calculated in accordance with Subsection VII.D.(IV), below, or any Remaining Life estimates calculated under Subsection VII. D.(VI), below, and Enbridge will not be required to add any new features to the Dig List.

b. If Enbridge uses a statistical analysis of Field Burst Pressure values and ILI Burst Pressure values for features on excavated sections of any pipeline for the determination required in this Paragraph 40, and that analysis indicates that Field Burst Pressure values are lower than ILI Burst Pressure calculations on such excavated pipeline sections, Enbridge shall (i) revise the calculated burst pressure values previously calculated in accordance with Subsection VII.D.(IV) below, for all remaining unrepaired features on such pipeline, to appropriately account for the reduction in burst pressure values established on the basis of field measurements, and (ii)

shall maintain such records until five years after termination of the Consent Decree, and Enbridge shall make such records available to the United States upon request.

(IV) Predicted Burst Pressure/Fitness for Service

42. Except as provided below in this Paragraph 42, Enbridge shall calculate the Predicted Burst Pressure of all Crack features and Corrosion features identified by ILI tools, in accordance with the requirements of this Subsection VII.D.(IV). Enbridge shall not be required to calculate the Predicted Burst Pressure of:

- a. any feature that Enbridge verifies was previously excavated and mitigated by installation of a sleeve around the section of pipe where the feature is located;
- b. any feature that Enbridge verifies was mitigated by grinding or blasting and recoating, provided that the feature dimensions reported by the ILI, factoring in the ILI tool tolerance, are no larger than the dimensions of the mitigated feature at the time mitigation was performed;
- c. any Crack feature for which the ILI tool reported a saturated signal; provided, however, that all such Crack features shall be excavated and repaired or mitigated in accordance with the dig selection criteria for “Crack feature with a Saturated Signal” in Subsection VII.D.(V); or
- d. Crack or Corrosion features within dents.

43. For purposes of the Consent Decree, the Predicted Burst Pressure of a feature refers to the lowest pressure in the pipeline at the location of the feature that would be predicted to result in failure of the feature. Enbridge shall calculate the Predicted Burst Pressure of features in accordance with the inputs and procedures in Appendix ~~CB~~.

Table 2 – Criteria and Timelines Governing Excavation and Repair of Corrosion Features		
Dig Selection Criteria	Maximum time from date that feature is placed on the Dig List until date that feature is repaired/mitigated	
	HCA	Non-HCA
Any Corrosion feature with a depth greater than 80% of the wall thickness of the joint where the feature is located. Wall thickness shall be determined in accordance with Appendix C B , Paragraph 5 4 .	As expeditiously as practicable, but not to exceed 30 Days	As expeditiously as practicable, but not to exceed 30 Days
Any Corrosion feature with a Predicted Burst Pressure is less than the established MOP	As expeditiously as practicable, but not to exceed 30 Days	As expeditiously as practicable, but not to exceed 30 Days
Any Corrosion feature with a Predicted Burst Pressure that is less than 1.39 times the established maximum operating pressure	Not to exceed 180 Days except as provided in Paragraph 49	365 Days
With respect to any Lakehead System Pipeline other than those portions of Original US Line 3 that are located outside an HCA, any Corrosion feature with a depth greater than 50% wall thickness but less than 80% of wall thickness. Wall thickness shall be determined in accordance with Appendix C B , Paragraph 5 4 .	Not to exceed 180 Days except as provided in Paragraph 49	365 Days
With respect to those portions of Original US Line 3 that are located outside an HCA, any Corrosion feature with a depth greater than 65% wall thickness but less than 80% of wall thickness. Wall thickness shall be determined in accordance with Appendix C B , Paragraph 5 4 .	N/A	365 Days

Detection System and those systems that Enbridge is required to implement under this Consent Decree.

(III) Requirements for New Lakehead Pipelines and Replacement Segments

84. *Applicability.* The requirements set forth in this Subsection VII.G.(III) shall apply to any New Lakehead Pipeline or any Replacement Segment of any pipeline that is part of the Lakehead System. For the purposes of this Consent Decree, the terms “New Lakehead Pipeline” and “Replacement Segment” shall mean the following:

a. The term “New Lakehead Pipeline” shall mean the pipeline that will replace Original US Line 3, as well as mean any new pipeline that will replace one of the other pipelines that comprise the Lakehead System. In the event that Enbridge resumes operation of ~~Original US Line 3 or~~ any other Lakehead System Pipeline that may be replaced after the Effective Date, the term “New Lakehead Pipeline” shall also apply to such pipeline or pipelines.

b. The term “Replacement Segment” shall mean any modification of a Lakehead System Pipeline after the Effective Date for the purpose of (1) adding one (or more) pump stations to the pipeline or (2) replacing a section of the pipeline with a volume capacity greater than 45,000 cubic meters (“m³”).

85. *Installation of flowmeters:* Each New Lakehead Pipeline or Replacement Segment shall have a flowmeter at all locations where oil (a) enters into the pipeline, (b) leaves the pipeline, or (c) passes through a pump station. In addition, Enbridge shall install flowmeters at additional locations between pump stations as needed to comply with the requirements of Paragraphs 88 or 90 below. All flowmeters shall be designed and constructed to monitor flow under all conditions, including during Startup and Shutdown, and to provide continuous real-time

a. Within 90 Days of Initial Linefill of a New Lakehead Pipeline or Replacement Segment, Enbridge shall submit to EPA a plan to demonstrate the ability of the MBS Leak Detection System to detect leaks or ruptures within each MBS Segment that has a capacity to hold more than 45,000 m³ of oil. The plan shall require Enbridge to conduct testing using the fluid-withdraw method except where the use of that method is not feasible due to a lack of on-site piping and/or tanks necessary to complete such testing. Where the use of the fluid withdraw method is not feasible for these reasons, Enbridge shall make the required demonstration using a software-based simulated leak methodology of the type described in API Publication 1130. The plan shall include a schedule for completing all required testing, but in no event shall the schedule provide for the completion of testing later than 12 months after completion of Initial Linefill. The plan shall require Enbridge to collect data with respect to each type of MBS Alarm (i.e. the 5-minute alarm, the 20-minute alarm, the 2-hour alarm, and the 24-hour alarm) demonstrating (1) the sensitivity of the MBS Leak Detection System in detecting leaks and ruptures and (2) the reliability of such system in terms of its false alarm rate. Further, Enbridge shall collect data demonstrating the relationship between these two variables, showing how the false alarm rate will rise (or fall) in response to adjustments made by Enbridge to the sensitivity of the MBS Leak Detection System in detecting leaks or ruptures (“S-R Performance”).

b. Within 30 Days of submitting the plan to EPA, Enbridge shall commence testing in accordance with its plan and schedule. Within 30 Days after completion of the testing, Enbridge shall submit to EPA a report presenting the results of the testing. In its report, Enbridge shall present its data sets in graphical form (as illustrated in Appendix ~~GF~~) showing the S-R

g. Upon receipt of an approved final Agreed Exercise Plan, Enbridge shall conduct the Agreed Exercise in accordance with the approved Agreed Exercise Plan.

h. No later than 30 Days after the completion of each Agreed Exercise, Enbridge shall organize and conduct a meeting to review the Agreed Exercise for the purpose of identifying “lessons learned” and making recommendations to improve future Agreed Exercises and response actions. In planning such a meeting, known for the purposes of this Section as an “After-Action Review,” Enbridge shall invite representatives from each Planning Participant.

i. No later than 60 Days after the Agreed Exercise After-Action Review, Enbridge shall submit to EPA for review and comment a report (“After Action Report”) that sets forth findings and conclusions regarding the Agreed Exercise. In the event EPA provides comments that are not incorporated into the draft After Action Report to EPA’s satisfaction, Enbridge shall include the comment(s) as an appendix to the report. No later than 90 Days after receiving EPA comments, Enbridge shall provide the final report to all Planning Participants electronically.

116. Field Exercises, Table Top Exercises, and Community Outreach

a. Enbridge shall conduct, on an annual basis, until the Consent Decree is terminated, at least six Field Exercises and ten Table-Top Exercises, as described more fully in Subparagraphs 116.b-d below. Enbridge shall conduct such exercises in cities and towns shown on Appendix ~~D~~C.

b. For the purposes of this Paragraph of the Consent Decree, a “Field Exercise” shall mean a training exercise conducted in the field to test and practice specific oil spill emergency response tactics used in the initial hours of an oil spill of at least 1,000 gallons into

water. Each Field Exercise shall include (i) a deployment of select equipment and personnel to water, (ii) a review of locations downstream of a spill where containment and recovery operations can occur, (iii) implementation of one or more containment measures set forth in Enbridge's "Inland Spill Response Guide," (iv) implementation of one or more collection measures set forth in the same document, and (v) an After-Action Review conducted at the conclusion of the Field Exercise.

c. For the purpose of this Consent Decree, a "Table-Top Exercise" shall mean an exercise – one that is not conducted in the field – to test and practice oil spill emergency response processes and procedures by using a hypothetical oil spill scenario. Each Table-Top exercise shall include (i) a spill scenario of at least 1,000 gallons from a pipeline in the Lakehead System located in close proximity to water, (ii) notifications of such spill to all of the government entities, including tribal authorities, that are identified in the ICPs, (iii) actions to be taken in the near-term and long-term to address the spill, (iv) the anticipated time periods for personnel and equipment to arrive at the spill site, (v) the risks that such a spill would pose to public health and the environment, and (vi) protective measures to prevent damages or injury to the local community, including evacuation procedures, as identified in the ICPs.

d. For each Field Exercise and Table-Top Exercise, Enbridge shall send invitations to community, state, and local first responders listed in Appendix ~~D~~C, as well as any first responder located within 5 miles of the exercise scenario. In sending such invitations, Enbridge shall (i) provide invitees with notice at least four weeks prior to the exercise, (ii) offer to provide meals to persons who attend each exercise, and (iii) state that training will be provided at no cost to invitees, excluding travel costs. Enbridge shall provide EPA with four weeks' notice of

each Field Exercise and Table Top Exercise. EPA may observe or participate in any of the Field or Table Top Exercises.

e. In addition to the above exercises, Enbridge shall conduct or hire a contractor to conduct Community Outreach sessions regarding the hazards of the different oils in the Lakehead System and the location of Enbridge pipelines in the community and how such pipelines are marked. Specifically, within one year of the Effective Date, and for each year thereafter until the Decree is terminated, Enbridge shall hold at least 15 Community Outreach Sessions in 15 different communities where the Lakehead System is located. Enbridge shall also provide information at the Community Outreach sessions regarding: (i) how the community should respond in the event of a spill, (ii) how the community can obtain information in the event of a spill from Enbridge and government agencies, and (iii) how the community can report spills to Enbridge, EPA, and the National Response Center.

117. Control Point Plans

a. Within three years after entry of the Consent Decree, except as provided in Subparagraphs 117.c and 117.d below, Enbridge shall update and maintain information for the Control Point locations set forth in Appendix ~~ED~~ that identify containment and recovery points, as well as identify staging locations and other response-related locations, along the waters that could be impacted by a spill from a pipeline in the Lakehead System. The information for each control point shall include the information in Subparagraph 117.b below, and such information shall be organized in a format that is consistent with the example attached as Appendix ~~EE~~. Enbridge shall use such information to guide initial response actions and to plan and implement the Agreed Exercises and the Field Exercises required under Paragraphs 115 and 116 above.

b. Enbridge shall provide the following for each of its Control Points identified in Appendix ~~E~~D:

(1) *Control Point information* that identifies (a) the name of the water where the Control Point is located, (b) the identification of the pipeline crossing milepost closest to the Control Point, (c) the GPS coordinates of the Control Point, (d) the entry points for vehicles to gain access to the Control Point, (e) the location of the anchor points for boom deployment, (f) the location of boat launches, and (g) any other geographical information pertinent to the preplanned response action;

(2) *A Written Description of the Control Point* that discusses (a) the width of the water during normal and high water conditions, (b) the ability of boats or vessels to operate on the water, including the type and size of boat or vessel, taking into account depth of the water column, bridge clearance, and other obstructions, (c) the velocity of the flow in the water taking into account weather and seasonal changes, and (d) other relevant characteristics of the water. In addition, Enbridge shall maintain and make available for EPA review the name and contact information of each commercial property owner or operator of each land and building where the Control Point is located;

(3) *A Strategic Plan* that describes (a) the strategy that Enbridge plans to use at the Control Point (*e.g.* containment vs. exclusion booming), (b) the type and quantity of boom and other equipment needed to implement the strategy, (c) the estimated travel time for personnel and equipment to arrive at the Control Point, and (d) other issues that may impact access to, and use of, the Control Point; and

(4) *Photos* that illustrate the information described above.

c. With regard to the Straits of Mackinac area Control Points, no later than one year after the date of entry of this Consent Decree, Enbridge shall revise such Control Point information for the Straits of Mackinac and provide EPA with the updated information identified in Subparagraph 117.b above.

d. Enbridge shall provide the Control Point information required in this Section for each Control Point location that is associated with an Agreed Exercise described above no later than six months prior to the initial planning meeting for the Agreed Exercise, except that Enbridge will not be required to provide this information six months in advance of the first Agreed Exercise described above, but will provide such information no later than 60 Days before the first Agreed Exercise is scheduled to occur..

e. Enbridge shall submit all Control Point information required in this Section to EPA in one of the following electronic formats: (i) .csv with individual IDs for each record and associated photos with linkages to that record, (ii) shape files with individual IDs for each record and associated photos with linkages to that record, (iii) .dbf with individual IDs and latitude and longitude locations for each record and associated photos with linkages to that record, (iv) or other format agreed to, in writing, by EPA and Enbridge. Once EPA has received the updated and revised Control Point Information, EPA may provide this information to the public.

f. Enbridge may submit a notification to EPA that it plans to amend the Control Point locations identified in Appendix ~~B~~D. Enbridge's notification shall identify and explain the reasons for its change. Enbridge shall include in its Semi-Annual Report: (1) a complete description of any changes to the control point location, (2) the reasons for those changes, and (3) the information required in Subparagraph 117.b for each amended control point

in a format that is consistent with Appendix ~~E~~. If EPA disagrees with any of Enbridge's changes to the control point locations, EPA will notify Enbridge of its disapproval of the changed location. Within 30 Days after any EPA disapproval, Enbridge shall reinstate the original control point location that is identified in Appendix ~~D~~.

g. In addition to providing EPA with its updated Control Point information, Enbridge will provide the same documents, upon request, to USCG, PHMSA, Sub-Area Committees, state and local responders, and tribal authorities.

118. Review of Response Times for Transport of Personnel and Equipment to Control Points and Other Locations

a. Within three years after the Effective Date, Enbridge shall complete a review, in accordance with this Section, of Enbridge and OSRO personnel and equipment available to respond to an oil spill from the Lakehead System. The scope of Enbridge's review shall, at a minimum, assess whether it and its OSROs can respond and meet all personnel and equipment needs within the timeframes allotted in the maps contained in the Lakehead ICPs.

b. As part of the review required by this Section, Enbridge shall explain the methodology that it has used to estimate driving times set forth in its ICPs. Enbridge shall determine whether any other methodology might yield more accurate information and whether an appropriate additional time cushion is needed for Enbridge and OSRO personnel to reach the response location after accounting for variations in road conditions, weather, and traffic. In assessing response times for OSRO personnel, Enbridge shall review the available methodologies, including the methodology used to estimate the driving times set forth in its ICP to estimate the amount of time for OSRO personnel to drive from their homes or workplaces and arrive at an

Subparagraphs 127.a - e below. If requested, Enbridge shall provide resumes, biographical information, and other relevant material concerning the candidates, including information on the relationship between Enbridge and the candidates.

a. The Independent Third Party and its personnel have demonstrated experience in pipeline integrity and operations, and have the appropriate education to provide the third-party services identified in Paragraph 125;

b. The Independent Third Party and its personnel have not conducted research, development, design, construction, financial, engineering, legal, consulting or any other advisory services for Enbridge within the last three years;

c. The Independent Third Party has not been involved in the development of Enbridge's control room, leak detection or pipeline integrity procedures that are the subject of this Consent Decree;

d. The Independent Third Party will not provide commercial, business or voluntary services to the Enbridge, excluding services provided in its capacity as Independent Third Party, for the life of the Consent Decree and for a period of at least three years following termination of the Consent Decree; and

e. Enbridge will not provide future employment to any of the Independent Third Party's personnel who conducted or otherwise participated in verification services under this Consent Decree for a period of at least three (3) years following termination of the Consent Decree.

128. In the event that Enbridge is not able to certify that a candidate meets all the conditions in Subparagraphs 127.a- e and if Enbridge is unable, after extensive efforts, to identify

206. Notwithstanding termination of other provisions of the Consent Decree, the restrictions ~~and conditions applicable to~~ on any resumption of operation of Original US Line 3 or Original Line 6B to transport oil, gas, diluent or any hazardous substance shall remain in effect and enforceable until 10 years after the Effective Date or until Defendant has satisfied the requirements for termination specified above, whichever is later.

XXI. PUBLIC PARTICIPATION

207. This Consent Decree shall be lodged with the Court for a period of not less than 30 Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Enbridge consents to entry of this Consent Decree without further notice and agrees not to withdraw from or oppose entry of this Consent Decree by the Court or to challenge any provision of the Decree, unless the United States has notified Enbridge in writing that it no longer supports entry of the Decree.

XXII. SIGNATORIES/SERVICE

208. Each undersigned representative of Enbridge and the Deputy Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document.

209. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis. Enbridge agrees to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree and to waive the formal service

requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons. The Parties agree that Enbridge does not need to file an answer to the complaint in this action unless or until this Court expressly declines to enter this Consent Decree.

XXIII. INTEGRATION

210. This Consent Decree constitutes the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in the Decree and supersedes all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. Other than deliverables that are subsequently submitted and approved pursuant to this Decree, no other document, or any representation, inducement, agreement, understanding, or promise, constitutes any part of this Decree or the settlement it represents, nor shall it be used in construing the terms of this Decree.

XXIV. FINAL JUDGMENT

211. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the United States and Enbridge. The Court finds that there is no just reason for delay and therefore enters this judgment as a final judgment under Fed. R. Civ. P. 54 and 58.

XXV. APPENDICES

212. The following Appendices are attached to and part of this Consent Decree:

“Appendix A” lists ~~Lakehead System pipeline Established MOP values;~~
Priority Features criteria;

“Appendix B” lists ~~Priority Features criteria;~~

~~“Appendix C” lists input values for Predicted Burst Pressure calculations;~~

“Appendix ~~D~~C” lists Lakehead System local responders for Field Exercises and Table-Top Exercises;

“Appendix ~~E~~D” lists all Control Point locations covered by the Consent Decree, ~~and~~;

“Appendix ~~F~~E” is a sample format for Control Point information; ~~and~~

“Appendix ~~G~~F” is an illustration of leak detection S-R Performance curves.

Dated and entered this ___ day of _____, ~~2016~~2017

HON. GORDON J. QUIST
UNITED STATES DISTRICT JUDGE

THE UNDERSIGNED PARTY enters into this Consent Decree regarding claims under the CWA and OPA for injunctive relief, civil penalties, and recovery of removal costs relating to the 2010 Discharges from Enbridge's Line 6A and Line 6B

FOR PLAINTIFF UNITED STATES OF AMERICA:

~~BRUCE S. GELBER~~ ~~JOHN C. CRUDEN~~
Deputy Assistant Attorney General
Environment and Natural Resources Division

s/Steven J. Willey (OH 0025361)
STEVEN J. WILLEY
JOSEPH W.C. WARREN
Environmental Enforcement Section
Environment and Natural Resources Division
Department of Justice
P.O. Box 7611
Washington, D.C. 20530
(202) 616-1303

PATRICK A. MILES, JR.
United States Attorney
Western District of Michigan

RYAN COBB
Assistant U.S. Attorney
330 Ionia Avenue, N.W.
Suite 501
Grand Rapids, MI 49503
616-456-2404

APPENDIX B

Appendix B

Predicted Burst Pressure Calculations

A. Calculation of ILI Burst Pressure

1. Enbridge shall calculate the Predicted Burst Pressure of all Crack features detected by an ILI tools using the CorLAS™ Model.

2. Enbridge shall calculate the Predicted Burst Pressure of all Corrosion features using the following models:

a. Enbridge shall calculate Predicted Burst Pressure using the effective area method (“RSTRENG”) or the modified B31G when the Corrosion feature is detected by (i) an ultrasonic wall measurement (“USWM”) tool or (ii) a magnetic flux leakage tool that: (A) provides an axial sampling interval no greater than 3 mm and a circumferential sampling interval no greater than 8 mm, and (B) characterizes feature depth with an accuracy of 8% of the wall thickness or better, and

b. Enbridge shall calculate Predicted Burst Pressure using the modified B31G method (i.e. 0.85 x depth of feature x length of feature) when the corrosion feature is detected by any magnetic flux leakage (“MFL”) tool, and that does not meet the requirements specified in 2.a, above.

~~b. Enbridge shall calculate Predicted Burst Pressure using the effective area method (“RSTRENG”) or the modified B31G when the Corrosion feature is detected by an ultrasonic wall measurement (“USWM”) tool.~~

3. In using each model, Enbridge shall calculate the Predicted Burst Pressure of a feature using the data inputs specified in Paragraphs 4 to 7 below. For those inputs that are not specified below, Enbridge shall use all applicable and appropriate data inputs for achieving accurate and reasonable estimates of the Predicted Burst Pressure of a feature detected by an ILI tool. Such inputs shall include, among other things, all information regarding the Joint where the feature is located, including (but not limited to) pipe grade, pipe diameter, SMYS, ultimate tensile strength, and flow stress.

4. “Wall thickness” Input: In selecting an input value for the wall thickness of the Joint with a Crack or Corrosion feature, Enbridge shall apply the following rules:

a. *General Rule:* Enbridge shall select a value for wall thickness equal to the wall thickness of the Joint as measured by a USWM tool. If no USWM data exists, Enbridge shall apply the wall thickness of the Joint as determined by the best available ILI tool for measuring wall thickness.

b. *Exception to General Rule:* The general rule in the preceding subparagraph shall not apply if it yields a wall-thickness value for the Joint that is greater than the specified nominal wall thickness of the Joint. In that circumstance, Enbridge shall select a value for wall thickness equal to the specified nominal wall thickness of the Joint.

c. *Exception to Exception*: If the specified nominal wall thickness of the Joint is more than 15% thinner than the wall thickness as determined in accordance with Subparagraph A.4.a, Enbridge is not required to use the specified nominal wall thickness of the Joint for the purpose of calculating the Predicted Burst Pressure of the feature, provided that Enbridge documents, in writing, that the specified nominal wall thickness is incorrect and does not reflect the actual wall thickness of the Joint as determined through historical dig information, as-built drawings, or other comparable records relating to the Joint. After making such a written determination, Enbridge may input a value for wall thickness that is equal to either of the following values, whichever yields the thinnest possible wall for the Joint: (i) the wall thickness as determined by historical records or (ii) the wall thickness as determined in accordance with Subparagraph A.4.a.

5. “Depth of feature” Input: In selecting an input value for the depth of a Crack or Corrosion feature detected by an ILI tool, Enbridge shall select a value equal to (a) the depth of the feature as reported by the IIL tool plus (b) an appropriate value representative of the tool tolerance of the ILI tool. If the ILI tool did not report a specific depth for a Crack feature but reported instead a minimum and maximum depth for the feature, Enbridge shall determine the depth of the feature using the following three-step process:

(i) Step One: Enbridge shall input a value for the depth of the Crack feature equal to the maximum depth for the feature reported by the ILI tool.

(ii) Step Two: Enbridge shall calculate the Predicted Burst Pressure of the Crack feature and then compare the value yielded by this calculation to the safe operating pressure determined by $1.25 \times \text{MOP}$. If Predicted Burst Pressure is less than the safe operating pressure for the Joint, Enbridge shall proceed to step 3 below.

(iii) Step Three: For the purpose of assessing the potential severity of the Crack feature, Enbridge shall recalculate the Predicted Burst Pressure of the Crack feature after inputting a new value for the depth of the Crack feature. The new value for the depth of the Crack feature shall be equal to (a) the maximum depth of the feature as reported by the ILI tool plus (b) an appropriate value representative of the maximum variance due to tool tolerance.

6. “Length of Feature” Input: In selecting an input value for the length of a Crack feature or Corrosion feature detected by an ILI tool, Enbridge shall select a value equal to the length of the feature reported by the ILI tool, unless the feature is classified as a “crack field.” With respect to crack fields, Enbridge shall select a value representative of the total interacting length of cracks in the field as reported by the ILI tool vendor.

7. “Notch Toughness” Input: In selecting an input value for the “notch toughness” of a Crack feature, Enbridge shall select a value equal to a Charpy V-notch energy of 5 foot/pounds (or an equivalent J integral value) for Crack features located in the long seams of low-frequency electric-resistance welded (“LF-ERW”) pipe or flash welded (“FW”) pipe. With respect to all other Crack features, Enbridge shall select an input value equal to a Charpy V-notch energy value that is no greater than 15 foot/pounds (or an equivalent J integral value).

B. Calculation of Field Burst Pressure

1. For purposes of Predicted Burst Pressure calculations performed after completing excavation and repair or mitigation of all Potentially Injurious Features identified in any initial Dig List, Enbridge apply the same procedures set forth above with respect to ILI Burst Pressure Calculations, except Enbridge shall use the inputs in Paragraph 2 and 3 below in lieu of those in Paragraph A.5 and A.6 above:

2. “Depth of feature” Input: In selecting an input value for the depth of a Crack feature or Corrosion feature analyzed in the field, Enbridge shall not select a single value for depth for the feature, but rather should input a number of values equal to the depth measurements collected by field personnel as they measured the feature’s varying depth over its entire length. In the event that the feature is a Crack feature that is located within a Corrosion feature, Enbridge shall ensure that the depth reported by field personnel reflects the combined depth of the features.

3, “Length of feature” Input: In selecting an input or the length of a Crack feature or Corrosion feature analyzed in the field, Enbridge shall select a value equal to the length reported by field personnel using NDE methodologies to measure the feature’s length.