INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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April 26, 2013

VIA CERTIFIED MAIL 91 7190 0005 2710 0027 0993

Ms. Rachael Shetka
Enbridge Energy, Limited Partnership
1409 Hammond Avenue
2nd Floor
Superior, WI 54880

Dear Ms. Shetka:

Re: Section 401 Water Quality Certification
Project: Line 6B Phase 2 Replacement Project
IDEM No.: 2012-321-64-MTM-A
Counties: Lake, Porter, Laporte and St. Joseph

The Office of Water Quality has reviewed your application for Section 401 Water Quality Certification dated June 14, 2012, and received July 3, 2012. We have also reviewed the revised application dated December 14, 2012, and received December 17, 2012. We have also reviewed the supplemental information and project revisions submitted in correspondence dated April 4, 2013, and received April 8, 2008. According to the application and April 4, 2013, correspondence, you propose to replace approximately 50 miles of 30 inch pipeline with a 36 inch pipeline through Lake, Porter, Laporte and St. Joseph counties. Segment 1A is 29 miles in length and starts in Lake County approximately 0.25 miles east of the SR 55 and north of the intersection of West 63rd Street and Arthur Street in Merrillville (NW ¼ of Section 8 of Township 35 North and Range 8West) and ending approximately 0.13 miles northeast of the intersection of Jonathon Court and West Applewood Drive on the southeast side of Laporte (SE ¼ of Sec. 27 of Township 37 North and Range 4 West). Segment 2A is 21 miles in length and starts approximately 0.42 miles south of where the Toll Road crosses over SR 35 on the north side of Laporte (NE ¼ of Sec. 21 of Township 37 North and Range 3 West) and ends just north of the intersection of Chicago Trail and Redwood Road in St. Joseph County.

The project will cross 108 wetlands using either a bore or open cut method. Approximately 21,000 linear feet of wetland will be traversed and 37.1 acres impacted

by construction. Approximately, 47,000 cubic yards of material will be temporarily excavated and stored during installation of the pipeline. Approximately 1.86 acres of forested wetland will be converted to emergent wetland. No permanent fill is proposed.

All wetlands impacted by the project will be restored at the point of impact except for those impacts which require the permanent conversion of forested wetland into emergent wetland. This project along with the activities described in IDEM Public Notice No. 2012-322-45-MTM-A, dated August 17, 2012, will permanently covert a total of 1.86 acres of forested wetland to emergent wetland. The conversions will be mitigated by the establishment of 11.2 acres of forested wetland on property owned and managed by the Indiana Department of Natural Resources. In addition to the establishment of the forested wetland, while not required by IDEM as part of this Section 401 Water Quality Certification, you will also establish scrub-shrub and emergent/inundated wetlands and as well as herbaceous dry to mesic prairie grassland buffer community.

The mitigation is located in the Southwest quadrant of where County Line Road crosses over I-80/94 (Southeast ¼, of Sec. 13 of Township 37 North and Range 5 West in Porter County).

Based on available information, it is the judgment of this office that the proposed project will comply with the applicable provisions of 327 IAC 2 and Sections 301, 302, 303, 306, and 307 of the Clean Water Act if you comply with the conditions set forth below. Therefore, subject to the following conditions, the Indiana Department of Environmental Management (IDEM) hereby grants Section 401 Water Quality Certification for the project described in your application received June 14, 2012: revised December 14, 2012, and project revisions submitted in correspondence dated April 4, 2013, and received April 8, 2013; and as modified by this Section 401 Water Quality Certification.

CONDITIONS OF THE SECTION 401 WATER QUALITY CERTIFICATION

I. GENERAL CONDITIONS

1) Implement the project as depicted and described in the revised application for Section 401 Water Quality Certification dated June 14, 2012, and received July 12, 2012; as modified in the revised application dated December 14, 2012, and received December 17, 2012; as modified in the supplemental information and project revisions submitted in correspondence dated April 4, 2013, and received April 8, 2013.

2) Complete all approved discharges no later than two (2) years of the date of issuance of this Section 401 Water Quality Certification. You may request a one (1) year extension to the Section 401 Water Quality Certification by submitting a

written request ninety (90) days prior to the deadline stated above. The written request shall contain an account of which discharges and mitigation have been completed and list the reasons an extension is requested.

3) Allow the Commissioner or an authorized representative of the Commissioner (including an authorized contractor), upon the presentation of credentials:

a) to enter your property, including impact and mitigation site(s);
b) to have access to and copy at reasonable times any records that must be kept under the conditions of this certification;
c) to inspect, at reasonable times, any monitoring or operational equipment or method; collection, treatment, pollution management or discharge facility or device; practices required by this certification; and any mitigation wetland site;
d) to sample or monitor any discharge of pollutants or any mitigation site.

II. Erosion and Sediment Control and Construction Conditions

1) Allow no construction equipment, temporary run-arounds, coffer dams, temporary causeways, temporary crossings, or other such structures to enter or be constructed within streams, unless specifically stated, depicted, or detailed in the aforementioned correspondence and project plans. A modification of this Section 401 Water Quality Certification is required from this office if any of the aforementioned items are needed for project construction.

2) Implement erosion and sediment control measures on the construction site prior to land disturbance and include operations that phase project activities to minimize the impact of sediment to the receiving water body(ies). Erosion and sediment control measures shall be implemented using an appropriate order of construction (sequencing) relative to the land disturbing activities associated with the project. Run-off and sediment control measures shall be installed prior to any land disturbance to minimize soil leaving the construction site or entering a water body. Wetlands and/or water bodies that are adjacent to land disturbing activities must be protected with appropriate sediment control measures. Appropriate measures include, but are not limited to, silt fence, diversions, and sediment traps. As work progresses, all areas void of protective cover shall be re-vegetated or stabilized as described in the plan or permit conditions. Areas that are to be re-vegetated should utilize mulch that is anchored or, under more severe conditions, use erosion control blankets. Erosion control blankets or other armament shall be used for all areas associated with concentrated flow. The selection of material must be made based on site conditions and all applicable permit requirements.

3) Comply with the requirements of 327 ICA 15-5 storm water run-off associated with construction activity. Regarding evaluation and reporting, 327 IAC 15-5- 7 (b)(18) requires the following:

   (A) A trained individual shall perform a written evaluation of the project site:
      (i) by the end of the next business day following each measurable storm event; and
      (ii) at a minimum of one (1) time per week.
   (B) The evaluation must:
      (i) address the maintenance of existing storm water quality measures to ensure they are functioning properly; and
      (ii) identify additional measures necessary to remain in compliance with all applicable statutes and rules.
   (C) Written evaluation reports must include:
      (i) the name of the individual performing the evaluation;
      (ii) the date of the evaluation;
      (iii) problems identified at the project site; and
      (iv) details of corrective actions recommended and completed.
   (D) All evaluation reports for the project site must be made available to the inspecting authority within forty-eight (48) hours of a request.

   The evaluation reports are to be submitted under separate cover from the weekly construction reports which are required by the Conditions Part V. Independent Environmental Monitors and Construction Monitoring Reports. Please note, the monitoring and reporting requirements contained in Conditions Part V of this 401 Water Quality Certification are requirements of this Section 401 Water Quality Certification and thus do not fulfill other reporting requirements contained in 327 IAC 15-5 or for storm water reporting requirements that would be applicable to local storm water ordinances administered by the local Municipal Separate Storm Sewer System (MS4) entities.

4) Enbridge shall utilize the reporting document in Attachment B for compliance with 327 IAC 15-5- 7 (b)(18).

5) Equipment that is necessary for construction and must ford the watercourse to the opposite side is limited to a one-time event (over and back) and should occur only if an existing crossing at another location is not available or practical to use.

   a) If minor rutting is likely to occur, stream bank and bed protection methods (e.g., swamp mats, pads) should be used provided they do not constrict flows or block fish passage.
   b) Grading of the stream banks for the approaches should not occur.

6) Operate machinery on land above the ordinary highwater mark and in a manner that minimizes disturbance to the banks of the watercourse.

7) Restore banks to original condition if any disturbance occurs.

8) Implement and adhere to the Drilling Fluid response, Containment, and Notification Plan in Attachment C.

III. Reynolds Creek Mitigation

1) Implement the mitigation plan for the Reynolds Creek Wetland Mitigation Area described in the revised application dated June 14, 2012, and received July 12, 2012; as modified in the revised application dated December 14, 2012, and received December 17, 2012; and as modified in the supplemental information and project revisions submitted in correspondence dated April 4, 2013, (referred to collectively hereinafter as the "mitigation plan"), and as modified by the conditions of this certification. The wetland(s) created or restored at the pursuant to the Reynolds Creek Mitigation Plan shall be referred to hereinafter as the "Reynolds Creek mitigation wetland" or "Reynolds Creek mitigation wetlands."

2) Complete all activities necessary to create the Reynolds Creek mitigation wetlands within one (1) year of the effective date of this certification, unless IDEM grants a written extension upon request. These activities include excavation, grading, installation of hydrologic controls, and planting.

3) Monitor the Reynolds Creek mitigation wetland annually for the years 1 to 5 and years 7 and 10 after construction to determine if it is meeting the success criteria specified in Condition 4 of Part III Reynolds Creek Mitigation. The monitoring must start no later than one full growing season after construction, and monitoring reports must be submitted to this office by December 31 of each year until released from monitoring by this office. These reports shall contain information concerning what steps you have taken to create the mitigation wetland and whether the wetland is achieving each of the success criteria specified in Reynolds Creek Condition 4 of Part III Reynolds Creek Mitigation. The reports shall include the following:

   a) The IDEM identification number.
   b) As-built plans (in the first year's report).
   c) Discussion of hydrology at the mitigation site.
   d) Discussion of plant community development at the mitigation wetland site.
   e) Discussion of methods or means used to determine compliance with the success criteria.
   f) Photographs representative of the mitigation wetland site and sampling points.
   g) Identification of any problems with meeting the success criteria.
   h) Recommendations for correcting any problems identified.

Wetland delineation for the mitigation wetland in the final monitoring report. For IDEM to release the mitigation site you must demonstrate to IDEM, through your monitoring reports, that the site meets or exceeds the success criteria. Once you believe that the site meets or exceeds all of the success criteria, you may submit a proposed final monitoring report to IDEM and suspend monitoring. If IDEM confirms that the mitigation site meets or exceeds all of the success criteria, then IDEM shall notify you that the mitigation is complete and that you may permanently discontinue monitoring. If the site fails to meet the success criteria then corrective actions and extended monitoring will be required. Extended monitoring may constitute the sole corrective action if IDEM believes that the site needs more time to meet the success criteria. These corrective actions may also include additional grading, planting, relocation, or other actions deemed necessary by IDEM to meet the success criteria.

4) Ensure that the Reynolds Creek wetland mitigation wetland meets all of the following success criteria for at least two (2) consecutive years:

   a) The area of wetland established, as measured by a wetland delineation, must meet or exceed the 11.24 acres of forested wetland.
   b) Greater than 50% of the dominant vegetation species must have a wetland indicator of FAC (i.e., facultative) or wetter.
   c) The hydrology at the mitigation wetland site must meet the wetland hydrology criteria contained in the United States Army Corps of Engineers Wetland Delineation Manual, Technical Report Y-87-1 (January, 1987).
   d) The combined surface areal coverage of *Phalaris arundinacea* (reed canary grass) and *Typha spp.* (cattail), Populus deltoids (cottonwood) and Salix sp. (willow), open water and bare ground, shall not be greater than 10 percent.
   e) The mitigation wetland is free of the following exotic species: *Lythrum salicara* (purple loosestrife), *Phragmites australis* (common reed), and *Myriophyullum spicatum* (water milfoil).
   f) A minimum of 70% of the planted trees shall be surviving at the end of the monitoring period.
   g) A minimum of 70% of the planted shrubs shall be surviving at the end of the monitoring period.
   h) Any additional success criteria specified in the mitigation plan.

5) File a signed and recorded environmental notice, which describes the compensatory mitigation contained in the mitigation plan, with the department within sixty (60) days of the release from monitoring requirements. You may substitute a copy of a properly recorded deed restriction or conservation easement. You may also submit a long term management plan, agreed to and signed by both Enbridge and IDNR, for written approval by IDEM.

IV. Restoration of Impacted On-site Wetlands

1) Implement the re-vegetation plan for the on-site impacted wetlands and as described in the supplemental information and project revisions submitted in correspondence dated April 4, 2013, and received April 8, 2013, (referred to collectively hereinafter as the "on-site wetland mitigation plan"), and as modified by the conditions of this certification. The wetlands restored pursuant to the on-site wetland mitigation plan are referred to hereinafter as the "On-site Wetland Restoration Wetland" or "On-site Wetland Restoration Wetlands."

2) The species identified for each impacted on-site wetland are to be planted at a minimum of 300 trees per acre.

3) Complete all activities necessary to restore the on-site impacted wetlands within one (1) year of the effective date of this certification, unless IDEM grants a written extension upon request. These activities include excavation, grading, installation of hydrologic controls, and planting.

4) Notify IDEM upon completion of the on-site wetland mitigation restoration activities.

5) Monitor the on-site restored wetlands annually for the years 1 to 5 and years 7 and 10 after construction to determine if it is meeting the success criteria specified in Condition 6 of Part IV Restoration of Impacted On-site Wetlands Condition. The monitoring must start no later than one full growing season after construction, and monitoring reports must be submitted to this office by December 31 of each year until released from monitoring by this office. These reports shall contain information concerning what steps you have taken to create the mitigation wetland and whether the wetland is achieving each of the success criteria specified in Condition 6 of Part IV Restoration of Impacted On-site Wetlands Condition. The reports shall include the following:

   a) The IDEM identification number.
   b) As-built plans (in the first year's report).
   c) Discussion of hydrology at the mitigation site.
   d) Discussion of plant community development at the mitigation wetland site.
   e) Discussion of methods or means used to determine compliance with the success criteria.
   f) Photographs representative of the mitigation wetland site and sampling points.
   g) Identification of any problems with meeting the success criteria.
   h) Recommendations for correcting any problems identified.
   i) Wetland delineation for the mitigation wetland in the final monitoring report.

   For IDEM to release the mitigation site you must demonstrate to IDEM, through your monitoring reports, that the site meets or exceeds the success criteria. Once you believe that the site meets or exceeds all of the success criteria, you may submit a proposed final monitoring report to IDEM and suspend monitoring. If

IDEM confirms that the mitigation site meets or exceeds all of the success criteria, then IDEM shall notify you that the mitigation is complete and that you may permanently discontinue monitoring. If the site fails to meet the success criteria then corrective actions and extended monitoring will be required. Extended monitoring may constitute the sole corrective action if IDEM believes that the site needs more time to meet the success criteria. These corrective actions may also include additional grading, planting, relocation, or other actions deemed necessary by IDEM to meet the success criteria.

6) Ensure that the on-site restored wetlands meet all of the following success criteria for at least two (2) consecutive years within a minimum of 3 consecutive years of monitoring:

   a) Greater than 50% of the dominant vegetation species must have a wetland indicator of FAC (i.e., facultative) or wetter.
   b) Each on-site restored wetland shall be restored at minimum to the acreage of wetland existing prior to impact.
   c) The hydrology at each restored wetland must meet the wetland hydrology criteria contained in the United States Army Corps of Engineers Wetland Delineation Manual, Technical Report Y-87-1 (January, 1987).
   i) The combined surface areal coverage of *Phalaris arundinacea* (reed canary grass) and *Typha spp.* (cattail), Populus deltoids (cottonwood) and Salix sp. (willow), open water and bare ground, shall not be greater than 10 percent.
   d) The restored wetlands are free of the following exotic species: *Lythrum salicara* (purple loosestrife), *Phragmites australis* (common reed), and *Myriophyullum spicatum* (water milfoil).
   e) A minimum of 70% of the planted trees shall be surviving at the end of the monitoring period.
   f) A minimum of 70% of the planted shrubs shall be surviving at the end of the monitoring period.
   J) Any additional success criteria specified in the mitigation plan

V. Independent Environmental Monitors and Construction Monitoring Reports

1) Enbridge Energy, Limited Partnership shall implement the Independent Environmental Monitor Program as proposed by in Attachment A and as modified by this Section 401 Water Quality Certification.

2) The independent third-party environmental monitor (IEM) will work collaboratively with Enbridge to observe construction activities to ensure compliance with the Section 401 Water Quality Certification and manage storm water, including erosion and sediment control implementation, at the select wetlands and waterbody crossings.

3) Upon request by IDEM for clarification of items in the weekly reports, the permittee must respond within 2 days. In an effort to clarify future reporting, IDEM may request modification to the format of the form and reportable items.

4) The weekly reports submitted by Enbridge Energy, Limited Partnership shall include the following information:

   a) Description of pipeline construction activities.
   b) Map that identifies the beginning and ending of construction of activities that have occurred since the last weekly report.
   c) List of wetlands and/or waterbodies crossed since the last weekly report.
   d) Photos showing the typical condition of the site during construction activities.
   e) Description of any problems relative working in wetlands, stream crossings and the implementation of erosion and sediment control measures.

5) Provide IDEM with the name, contact information and background of the proposed IEM at least 4 weeks prior to the initiation of construction activities. IDEM will meet with the IEM and Enbridge Energy, Limited Partnership representatives to discuss their responsibilities and expectations.

Any changes in project design or scope not detailed in the application described above or modified by the conditions below are not authorized by this certification. This certification does not relieve you of the responsibility of obtaining any other permits or authorizations that may be required for this project or related activities from IDEM or any other agency or person, including but not limited to the following:

- Land disturbing activities require permit coverage administered through the local Municipal Separate Storm Sewer System (MS4) entities through which this project will be built. Each MS4 that is impacted may have specific requirements for storm water, including acreage thresholds of less than one (1) acre. Prior to working within an MS4 area, it is the responsibility to obtain any local permits. In addition, continue to work with IDEM's Storm Water Program to ensure compliance with 327 IAC 15-5 (Rule 5) for all land disturbances of greater than one (1) acre.

- You may wish to contact the Indiana Department of Natural Resources at 317-232-4160 (toll free at 877-928-3755) concerning the possible requirement of natural freshwater lake or floodway permits

This certification does not:

(1) authorize impacts or activities outside the scope of this certification;
(2) authorize any injury to persons or private property or invasion of other private rights, or any infringement of federal, state or local laws or regulations;
(3) convey any property rights of any sort, or any exclusive privileges;
(4) preempt any duty to obtain federal, state or local permits or authorizations

required by law for the execution of the project or related activities; or
(5) authorize changes in the plan design detailed in the application.

Failure to comply with the terms and conditions of this Section 401 Water Quality Certification may result in enforcement action against you. If an enforcement action is pursued, you could be assessed up to $25,000 per day in civil penalties. You may also be subject to criminal liability if it is determined that the Section 401 Water Quality Certification was violated willfully or negligently.

This certification is effective eighteen (18) days from the mailing of this notice unless a petition for review and a petition for stay of effectiveness are filed within this 18-day period. If a petition for review and a petition for stay of effectiveness are filed within this period, any part of the certification within the scope of the petition for stay is stayed for fifteen (15) days, unless or until an Environmental Law Judge further stays the certification in whole or in part.

This decision may be appealed in accordance with IC 4-21.5, the Administrative Orders and Procedures Act. The steps that must be followed to qualify for review are:

1) You must petition for review in writing that states facts demonstrating that you are either the person to whom this decision is directed, a person who is aggrieved or adversely affected by the decision, or a person entitled to review under any law.

2) You must file the petition for review with the Office of Environmental Adjudication (OEA) at the following address:

   Office of Environmental Adjudication
   100 North Senate Avenue
   IGCN Room N501
   Indianapolis, IN 46204

3) You must file the petition within eighteen (18) days of the mailing date of this decision. If the eighteenth day falls on a Saturday, Sunday, legal holiday, or other day that the OEA offices are closed during regular business hours, you may file the petition the next day that the OEA offices are open during regular business hours. The petition is deemed filed on the earliest of the following dates: the date it is personally delivered to OEA; the date that the envelope containing the petition is postmarked if it is mailed by United States mail; or, the date it is shown to have been deposited with a private carrier on the private carrier's receipt, if sent by private carrier.

Identifying the certification, decision, or other order for which you seek review by number, name of the applicant, location, or date of this notice will expedite review of the petition.

Note that if a petition for review is granted pursuant to IC 4-21.5-3-7, the petitioner will, and any other person may, obtain notice of any prehearing conferences, preliminary hearings, hearings, stays, and any orders disposing of the proceedings by requesting copies of such notices from OEA.

If you have procedural questions regarding filing a petition for review you may contact the Office of Environmental Adjudication at 317-232-8591.

If you have any questions about this certification, please contact Mr. Marty Maupin, Project Manager, of my staff by phone at 317-233-2471, or by e-mail at mmaupin@idem.in.gov or you may contact the Office of Water Quality through the IDEM Environmental Helpline (1-800-451-6027).

Sincerely,

Mary E. Hollingsworth, Chief
Surface Water, Operations & Enforcement Branch
Office of Water Quality

Attachments

cc: Andrew Blackburn, Chicago District, USACE
Aaron Damril, South Bend Office, USACE
Liz McCloskey, USFWS
Lori White, Regional Env. Biologist, IDNR
Naomi Christenson, Merjent
Jeff Mackenthun, Merjent
Matt Buffington, IDNR

ATTACHMENT A

Independent Environmental Monitor Proposal

The Line 6B 2012 Maintenance and Rehabilitation Project and the Line 6B Phase 2 Replacement Project (collectively referred to herein as the "Projects") will have an independent third-party environmental monitor (IEM) that will work collaboratively with the Indiana Department of Environmental Management (IDEM) and Enbridge to observe construction activities at select wetland and waterbody crossings subject to the Projects' 401 Water Quality Certifications. The IEM will observe construction activities at the following locations until such time that the pipeline is installed, the excavation is backfilled, and temporary stabilization measures have been implemented:

- All wetlands and waterbodies located between pipeline milepost 482.5 and 501.1 (Enbridge wetland identification numbers w-482-a through w-500-a and waterbody identification numbers s-482- a through s-500-a); and
- All wetlands and waterbodies located between pipeline milepost 515.7 and 517.9 (Enbridge wetland identification numbers w-515-a through w-517-f and waterbody identification numbers s-515-d through s-517-b).

Any areas where the IEM monitoring is not required or no longer necessary will still be inspected by the Enbridge Environmental Inspection (EI) team and will be included in required weekly status/summary reports compiled and submitted by Enbridge to IDEM.

The IEM position will be funded by Enbridge; however, the IEM will not report directly to Enbridge. Enbridge will work with an independent environmental monitoring service provider to identify a qualified candidate. The monitor must have experience both with pipeline construction and the resources of interest to IDEM. Enbridge and the independent environmental monitoring service provider will identify a plan for an alternate if the monitor is unable to perform his/her duties due to illness, etc. IDEM will have the right to request the removal of a monitor whose job performance does not meet their expectations. In that event, Enbridge will work with IDEM to identify a replacement monitor and to establish a smooth transition. Construction activities will continue during the transition period.

Project Documents and Training

Enbridge will work with the independent environmental monitoring service provider to provide general training and project documentation requirements. The IEM will be provided with copies of the Projects' construction alignment sheets/maps, 401 Water Quality Certifications, and Environmental plans applicable to wetland and waterbody construction. Enbridge will also conduct Projects' specific training for the IEM to discuss the project requirements applicable to wetlands and waterbodies, Enbridge safety requirements, and communication protocols. The IEM will also be invited to participate in the Projects' training events to be conducted by Enbridge for contractor and Enbridge inspection/management staff.

Communication and Reporting

The IEM may be requested by Enbridge to attend construction meetings where issues are discussed. During construction, the IEM will communicate directly with IDEM (Marty Maupin or his designee) and with Enbridge's EIs, but will not communicate directly with the Contractor or sub-Contractor(s) unless an Enbridge EI is present. The IEM will not have the authority to direct construction or contractor activities, and will work through Enbridge's Environmental Inspection Team to address concerns directly related to

the 401 Water Quality Certifications; however, only IDEM can make any necessary determinations regarding compliance with the 401 Water Quality Certification conditions. The IEM will communicate observations through weekly reports submitted to IDEM and Enbridge via email utilizing the attached template (including photographs). Reports must be submitted by 10:00 am EST on Monday for activities occurring during the previous week.

ATTACHMENT B

ENBRIDGE

Line 6B 2012 Maint. Rehab. Project
Inspection Report

Inspector:

Stormwater Mgt Certification Number:

Inspection Date:

Segment/Location:

Project Name:

Report Type:

Compliance Level:

Activity:

County:

Wetland:

Begin Station:

End Station:

Milepost Start:

Milepost End:

Tract Number 1:

Tract Number 2:

Tract Number 3:

Tract Number 4:

Tract Number 5:

Tract Number 6:

Tract Number 7:

Tract Number 8:

Tract Number 9:

Tract Number 10:

Tract Number 11:

Tract Number 12:

Event inspection:

Rainfall amount:

Weather conditions during inspection:

Phase of construction:

Natural resource area ECD's in place/functional:

Slopes protected from erosion:

Discharge points free of sediment transport:

Temp stock piles properly protected:

Construction entrances properly protected:

Road adjacent to ROW free of debris and mud:

Correction Action(s) needed and taken (notes):

ATTACHMENT C

Enbridge Energy, Limited Partnership

Drilling Fluid Response, Containment, and Notification Plan

January 2013

Enbridge Energy, Limited Partnership
Drilling Fluid Response, Containment, and Notification Plan

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1.0 Introduction

Construction of an Enbridge Energy, Limited Partnership (referred to herein as "Enbridge") pipeline may include the use of trenchless methods known as the horizontal directional drilling (HDD) and guided/road bore methods. Throughout this document, both methods are referred to collectively as "drilling". Drilling is a widely used construction technique that accomplishes the installation of buried utilities with minimum environmental impact. However, drilling is not entirely without impact. The primary environmental impact potentially associated with drilling is the inadvertent release of drilling fluids/mud to the surface during construction (sometimes referred to as "frac-out"). While the HDD method always includes the use of drilling fluid, the guided or road bore method might use drilling fluid or only use water to power and lubricate the bore. The HDD drilling fluids/mud consists primarily of water mixed with inert bentonite clay. Under certain conditions an additive may need to be mixed with the drilling fluids/mud for viscosity or lubricating reasons. Only non-hazardous additives will be used and a Material Safety Data Sheet (MSDS) for the drilling fluid will be maintained on-site. The objective of this plan is to provide procedures that will minimize the potential for release of drilling fluids/mud into wetlands, waterbodies, or onto the adjacent surface soils.

This "Containment, Response and Notification Plan" elaborates on measures to be implemented if a release occurs despite prevention efforts. The plan is to be implemented as appropriate by the contractor under the supervision of Enbridge to contain, control and clean up any release of drilling fluid during pipeline construction. Prior to the commencement of drilling operations, Enbridge's construction contractor will inform construction personnel involved in as to the responsible party(ies) for release containment and response. Enbridge's construction contractor will ensure that the appropriate response personnel and containment equipment are on site for each drill/bore.

2.0 On-Site Observation During Construction

During construction of a directionally-drilled crossing, pipeline construction personnel will monitor the pipeline route throughout the process, as follows:

- Construction observers will be briefed on what to watch for and will be made aware of the importance of timely detection and response actions to any release of drilling fluid.
- Construction observers will have appropriate, operational communication equipment (*e.g.,* radio and cell phones) available at all times during installation of the directionally drilled crossing, with the ability to communicate directly with the HDD operator.
- The HDD operator will monitor the annular drilling fluid pressures during pilot hole operations by using an annual pressure tool as part of the bottom hole assembly.
- If the HDD operator realizes a sustained loss in fluid pressure or loss of circulation:
    - The operator will immediately notify the construction observers of the assumed position of the drill tool;

- The appropriate portion of the drill path where the drill tool is located will be continuously visually monitored to determine if an inadvertent return occurred. The contractor construction observers, Enbridge Environmental Inspector, or Enbridge HDD craft inspector may perform this continuous monitoring by walking or by using a boat, as appropriate.

- Construction observers, Enbridge Environmental Inspectors, or the Enbridge HDD craft inspector have the authority to order installation of containment structures, if needed, and to require additional response measures if deemed appropriate.

3.0 Containment, Response, and Clean-up Equipment

Containment, response and clean-up equipment will be available at both sides of an HDD crossing location and one side of a guided or road bore prior to the commencement to assure a timely response in the event of an inadvertent release of drilling fluid. Containment and response equipment includes but is not limited to:

- straw bales and staking
- pre-filled sandbags
- turbidity curtain (not necessary for guided or road bores that do not involve a waterbody)
- silt fence
- plastic sheeting and/or geotextile fabric
- shovels, brooms, buckets, and other appropriate hand tools
- pumps and sufficient hose
- fluid storage tanks (may not be necessary for guided or road bores)
- vacuum truck on 24-hour call
- one small boat (for larger rivers and open water wetlands)
- roll-off, steel box, or large-diameter pipe section (or the equivalent) that, under appropriate conditions, could be used to contain an inadvertent return
- light plant/generator

4.0 Response

In the event an inadvertent drilling fluid release is observed, it will be assessed to determine the amount of fluid being released and potential for the release to reach sensitive resource areas (e.g., wetlands and waterbodies). Response measures will vary based on location of inadvertent release as discussed below.

4.1 Upland Locations

Response measures include:

- Evaluate the release to determine if containment structures are warranted and if they will effectively contain the release.

- If the amount of the surface release is not great enough to allow the practical physical collection from the affected area, it will be diluted with clean water and/or the fluid will be allowed to dry and dissipate naturally.
- Earthen or sandbag berms, silt fence, and/or hay bales will be installed to contain small releases and prevent migration of drilling fluid.
- Remove excess fluid at a rate sufficient to prevent an uncontrolled release.
- If the amount of the surface release exceeds that which can be completely contained with hand-placed barriers, small collection sumps (less than 5 cubic yards) may be used (with approval from Enbridge) to remove released drilling fluid by the use of portable pumps and hoses.
- Initiate immediate suspension of drilling operations if the fluid release cannot be effectively contained.

4.2 Wetland and Waterbody Locations

This section also applies to areas immediately adjacent to wetlands and waterbodies, such as stream banks or steep slopes, where drilling fluid releases could quickly reach surface waters.

- In the event of a drilling fluid release in wetlands, waterbodies, or adjacent areas:
  - the release will be evaluated, and appropriate containment measures will be deployed;
  - emergency containment measures will be deployed as feasible based on the site-specific conditions, including the location of the release;
  - following containment, recovery measures will be evaluated to determine the most effective collection method;
  - review and adjust drill pressures, pump volume rates, and drill profile to minimize the extent of the release;
  - drilling operations will be suspended if, as determined by the Enbridge, containment measures do not effectively control the release;
  - agency and project management personnel will be notified in accordance with Section 5 below;

- If the amount of the surface release exceeds that which can be contained with hand-placed barriers, small collection sumps (less than 5 cubic yards) may be excavated to collect released drilling fluid for removal by the use of portable pumps and hoses.
- If the amount of the surface release is not great enough to allow the practical physical collection from the affected area without causing additional impacts, with approval from Enbridge Environmental and Construction Management, it may be diluted with clean water and/or the fluid will be allowed to dry and dissipate naturally.
- Excess fluid will be held within the containment area and removed using pumps or other appropriate measures at a rate sufficient to maintain secure containment.

- Removed fluid will be stored in a temporary holding tank or other suitable structure out of the floodplain and/or wetland for reuse or eventual disposal in an approved disposal facility
- Enbridge will consult with the appropriate regulatory agencies to evaluate the circumstances of the release, discuss additional containment or cleanup requirements, and determine whether and under what conditions the HDD may proceed.

5.0 Notification and Resumption of Suspended HDD Operations

The Contractor must immediately notify the Enbridge Environmental Inspector of all drilling fluid releases. If the Enbridge Environmental Inspector determines the release affects wetland or waterbody areas, he or she will immediately notify Enbridge Environment and Construction Management and the appropriate regulatory agency.

If notifications are necessary during non-business hours they will be done according to prior arrangements made between Enbridge and the regulatory agencies. Follow-up notifications will be made as necessary and practicable.

The conditions under which drilling/boring operations can resume will be discussed with appropriate regulatory agencies and/or field representatives. If containment measures are functioning, and the circumstances and potential impacts of the release are understood, drilling/boring operations will resume.

There may be exceptional situations when large and difficult to control releases in very sensitive areas may require additional planning and review of the crossing and coordination among appropriate regulatory agencies.

6.0 Clean-up

Clean-up measures following fluid releases in uplands, wetlands, and waterbodies will be implemented as determined by this plan and in consultation with the appropriate regulatory agencies. The following measures are to be considered as appropriate:

- Drilling fluid will be cleaned up by hand using hand shovels, buckets and soft-bristled brooms as possible without causing extensive ancillary damage to existing vegetation. Clean water washes may also be employed if deemed beneficial and feasible.
- Containment structures will be pumped out and the ground surface scraped to bare topsoil without causing undue loss of topsoil or ancillary damage to existing and adjacent vegetation.
- Material will be collected in containers for temporary storage prior to removal from the site.
- Potential for secondary impact from the clean-up process is to be regularly evaluated and clean-up activities terminated if physical damage to the site is deemed to exceed the benefits

of removal activities. This decision will be made in consultation with the appropriate regulatory agencies and/or field representatives.

7.0 Restoration and Post-Construction Monitoring

Following cleanup activities, restoration and revegetation of affected areas will be completed in accordance with all applicable local, state, and federal permits in addition to Enbridge's Environmental Mitigation Plan. Enbridge will monitor the release site as appropriate to assure adequate restoration.

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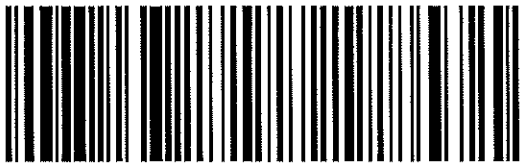

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