APPENDICES TO FLOW PUBLIC COMMENTS ON THE JOINT APPLICATION OF ENBRIDGE ENERGY TO OCCUPY GREAT LAKES BOTTOMLANDS FOR ANCHORING SUPPORTS TO TRANSPORT CRUDE OIL IN LINE 5 PIPELINES IN THE STRAITS OF MACKINAC AND LAKE MICHIGAN [NO. 2HB-VGKO-35JE]

TABLE OF CONTENTS

APPENDIX B

SUMMARY OF ENBRIDGE REQUESTS FOR INSTALLATION SUPPORTS, 2001-'10, G. STREET ...............B-1
EAST LEG BLUEPRINT .................................................................B-3
WEST LEG BLUEPRINT .................................................................B-4
FLOW FOIA REQUEST TO DEQ, 02-14-14 .................................................B-5
PERMIT No. 01 24 0046: SUPPORTS 09-14-01 A ..............................................B-7
PERMIT No. 01 24 0046: SUPPORTS 09-14-01 B ..............................................B-8
PERMIT No. 01 24 0046: SUPPORTS 09-17- 01 ..................................................B-9
PERMIT No. 01 24 0046: LETTER ASKING TO ADD SUPPORTS 10-02- 01 ..................B-12
PERMIT No. 01 24 0046: COMPLETION INITIAL SUPPORTS 12-05-01 .......................B-13
PERMIT No. 01 24 0046: LETTER TO ADD SUPPORTS 05-20-03 ...........................B-14
PERMIT No. 05 24 0014 0R 0013 SUPPORT LETTER 03-14-05 .............................B-15
PERMIT No. 05 24 0014 0R 0013 SUPPORT LETTER 04-13-05 .............................B-16
PERMIT No. 05 24 0014 0R 0013 SUPPORT APPLICATION TO DEQ 03-21-05 ..............B-17
PERMIT No. 05 24 0014 0R 0013: SUPPORT LOCATION 03-21-05 ..........................B-21
PERMIT No. 05 24 0014 0R 0013: SUPPORT NOTICE OF COMPLETION 07-22-05 ...............B-22
PERMIT No. 06 24 0016: SUPPORTS 05-03-06 ...............................................B-23
PERMIT No. 06 24 0016: REQUEST FOR PERMIT EXTENSION 05-02-06 ....................B-26
PERMIT No. 06 24 0016: SUPPORT PERMIT 05-11-06 ...........................................B-27
PERMIT No. 06 24 0016: PERMIT TO INSTALL ADDITIONAL SUPPORTS 06-08-06 .........B-29
PERMIT No. 06 24 0016: CORPS APPROVAL 07-19-06 ..........................................B-30
PERMIT No. 06 24 0016: SUPPORT MAP 06-08-06 .............................................B-32
PERMIT No. 06 24 0016: DEQ REVIEW- CONVEYANCE ISSUE ...............................B-33
PERMIT No. 10 24 0035: DEQ – CHAIN OF COMMAND ........................................B-36
PERMIT No. 10 24 0035: CONCERN BY ENVIRONMENTAL GROUPS .........................B-37
PERMIT No. 10 24 0035: DEQ PERMIT 09-17-10 ..................................................B-41
PERMIT No. 10 24 0035: JOINT PERMIT 08-26-10 .................................................B-43
PERMIT No. 10 24 0035: LOCATION OF ADDITIONAL SUPPORTS 08-26-10 ...............B-47
PERMIT No. 10 24 0035: DETAILS OF SUPPORT INSTALLATION 08-2010 ....................B-48
PERMIT No. 10 24 0035: PROJECT REVIEW AND NUMBER OF SUPPORTS 2010 ............B-53
PERMIT No. 10 24 0035: EASEMENT DISCUSSION ENBRIDGE/DEQ 08-07-10 ..................B-54
PERMIT No. 10 24 0035: JOINT PERMIT 08-26-10 .................................................B-55
PERMIT No. 10 24 0035: ADDITIONAL SUPPORTS 2010/APPLICATION ON HOLD 09-15-10 ..B-62
Summary of Enbridge Files Obtained from the MI DEQ
Line 5 at the Straits

Original Draft: May 1, 2014
Revised: August 23, 2016
By: Gary Street, M.S., PE

Overview

The files shared in Appendix B were provided by a FOIA request submitted by FLOW to the MDEQ, and primarily covered the period of 2001-2010, proceed through the subsequent years, and finally include a few entries from 2012.

Since 2001, Enbridge has engaged in numerous projects (6 or more) to install additional supports for Line 5 at the Straits. Questions raised by this information include:

- Why did they not install all of the needed supports in 2001?
- By postponing the installation of all the supports, did Enbridge expose the Straits unnecessarily to a major spill? Is that still the case?
- Given the record of multiple support installations, how can we be sure that even more supports are not needed?
- For at least three of the projects, no Notice of Completion was found in the DEQ files. Were the projects never completed?
- The East and West Leg Blueprints raise questions about Enbridge’s compliance with the Radius of Curvature provision in the 1953 Easement. Violations compromising the integrity of the pipelines may have occurred during construction and installation on the irregular topography of the lakebed (see East and West Leg Blueprints, Appendix B pp. 3-4; FLOW April 13, letter, p. 11).

Enbridge engineers have clearly recognized the hazard the lack of proper supports poses. They repeatedly said the situation was urgent, and there were no other alternatives. Nevertheless, installation was not always done promptly.

Table 1 is a Summary of the instances when Enbridge sought to install more supports between 2001 and 2010. It includes documented comments by Enbridge employees regarding the urgent need for these additional supports.
<table>
<thead>
<tr>
<th>Permit Request Date</th>
<th>Notice of Completion</th>
<th>Type of Support</th>
<th>Number of Supports</th>
<th>Comments - Urgency as Expressed by Enbridge</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/14/2001</td>
<td>12/5/2001</td>
<td>Grout bags</td>
<td>n/a</td>
<td>“These emergency preventative maintenance repairs must be completed as soon as possible. We are scheduled to begin work on Sunday morning, Sep. 16, 2001.” “These maintenance repairs can wait no longer.”</td>
</tr>
<tr>
<td>10/2/2001</td>
<td>12/5/2001</td>
<td>Grout bags?</td>
<td>8</td>
<td>“These emergency preventative maintenance repairs must be completed as soon as possible.” “We appreciate your work to expedite the process.”</td>
</tr>
<tr>
<td>05/20/2003</td>
<td>n/a</td>
<td>Auger</td>
<td>n/a</td>
<td>“Each of these indications(^1) have un-supported spans that are in need of repair.” “If additional un-supported sections of the pipeline requiring repair are located, we will issue an additional map indicating their location.”</td>
</tr>
<tr>
<td>03/14/2005</td>
<td>7/22/2005</td>
<td>Auger</td>
<td>10</td>
<td>“Each of these indications(^1) have un-supported spans that are in need of repair.” “If additional un-supported sections of the pipeline requiring repair are located, we will issue an additional map indicating their location.” “The purpose of this project is to provide support beneath our pipelines in sections where the pipeline is unsupported over too great a distance.” “In order to maintain integrity and safety additional supports are necessary under lengthy unsupported spans of the pipeline.”</td>
</tr>
<tr>
<td>05/03/2006</td>
<td>n/a</td>
<td>Auger</td>
<td>20</td>
<td>“The purpose of this project is to provide support beneath our pipelines in sections where the pipeline is unsupported over too great a distance.” “In order to maintain integrity and safety additional supports are necessary under lengthy unsupported spans of the pipeline.” “The purpose of this project is to enhance support beneath the pipelines where the span is currently unsupported for extended distances.”</td>
</tr>
<tr>
<td>08/26/2010</td>
<td>n/a</td>
<td>Auger</td>
<td>10+</td>
<td>“In order to maintain integrity, installation of additional supports to minimize the distance between presently unsupported pipeline spans is necessary.” “Project is for up to 10 anchoring structures to hold the pipeline to the bottom of Lake Michigan.” “Do nothing or the no-build alternative presents a future risk to the pipeline. The no build is not an option.”</td>
</tr>
<tr>
<td>9/16/2010</td>
<td></td>
<td></td>
<td></td>
<td>“The application is currently on hold at the request of Enbridge.”</td>
</tr>
</tbody>
</table>

\(^1\) Enbridge’s term “Indications” signifies problems or potential problems.
August 1, 2014

Freedom of Information Act Coordinator
Michigan Department of Environmental Quality
Water Resources Division
Land and Water Programs
P.O. Box 30204
Lansing, MI 48909-7704

RE: Freedom of Information Act Request, MCL 15.231, et seq., re: All permits related to Lakehead Pipeline Company, Inc. and Enbridge Energy's Line 5 and Line 6B pipelines in Sanilac County and under the St. Clair River

Dear Freedom of Information Act Coordinator:

Under the provisions of the Freedom of Information Act (FOIA), I request, on behalf of FLOW, a Michigan nonprofit corporation, access to and copies of all documents contained in your file relating to all permits issued to Lakehead Pipeline Company’s and Enbridge’s pipelines known as Line 5 and Line 6B, located in Sanilac County and under the St. Clair River.

Specifically, I request copies of all public documents prepared by or in possession of Michigan Department of Environmental Quality (MDEQ) Land and Water Management Division (LWMD), its divisions, and its field offices related to all permits for Lakehead Pipeline Company’s and Enbridge’s pipelines known as Line 5 and Line 6B located in Sanilac County and under the St. Clair River.

The terms “documents” and “materials,” as used in this FOIA request, should be construed in the broadest possible manner and include any written, graphic, or recorded matter, electronic, or a combination of these, however produced or reproduced, of any kind or description, including both sides of any two-sided writing, drafts and marked copies.

If there are any fees for searching for or copying the records I have requested, please advise and we will remit those fees at once, so long as the cost is within the limits of the Freedom of Information Act. If you believe that the volume of material contained in your file is so great that it would result in costs in excess of $100.00, please notify me and provide an estimate of the total cost of this request, so that I may personally review the file or otherwise attempt to narrow the scope of this request.
If your file contains large-scale plans or drawings, rather than photocopying them piecemeal, please let me know, identifying the contents and/or subject matter, and suggest some way in which full-size copies can be obtained. Likewise, if your file contains any other “writing,” as defined by the FOIA to include photographic films, prints, microfilm, microfiche, cards, disks, or other ways of recording or retaining meaningful information (such as audio or video tapes, CD, DVD, or information stored on computer), please advise, identifying contents and/or subject matter, as well as the format, and suggest some way in which we can obtain usable copies.

If all or any part of this request is denied, please cite the specific exemptions to justify your refusal to release the information, under Section 13 of the Act, and the reason why you have not invoked your discretion to release the requested documents in the public interest. We further request any segregable portion of any document you might otherwise withhold. For each record or portion of a record that you withhold, we specifically request a particularized description of the basis for withholding it.

Because FLOW is a Michigan nonprofit corporation researching public water and related policy for the benefit of Michigan and Great Lakes region, and working for the public interest, we request that fees be waived pursuant to Section 4 of the Freedom of Information Act (MCL 15.234(1)). A copy of 501(c)(3) letter is attached. This request for fee waiver should not be understood as consent to any extension to the statutory time period for responding to this request.

As I am sure you are aware, a response to a request under the FOIA must be completed within five business days. Because of the numerous items requested, within 5 days of this request please contact my office and advise if additional time is needed.

I thank you in advance for your cooperation and attention to this matter.

Sincerely,

[Signature]

Elizabeth R. Kirkwood
Executive Director, FLOW
September 14, 2001

Craig Outwater
Michigan Department of Environmental Quality

Subject: Enbridge Energy Partners (formerly Lakehead Pipe Line) shuts down Michigan liquid petroleum pipeline for unscheduled maintenance.

Enbridge Energy Partners (formerly Lakehead Pipe Line) operates a 645-mile liquid petroleum pipeline from Superior, WI to Sarnia, Ontario. This pipeline, also referred to as Line 5 transports crude oil and natural gas liquids in batches and is routed across the Upper Peninsula of Michigan. The 30-inch pipeline then splits into two 20-inch pipelines for the underwater crossing at the Straits of Mackinac.

This notice is to inform you of some unscheduled maintenance work on the two parallel 20-inch liquid petroleum pipelines at the Straits. A routine scheduled inspection of the underwater crossing of Line 5 identified a loss of existing support to some segments of the pipeline due to lakebed erosion. While the company is still completing underwater inspections, we have initiated a plan to expedite needed repairs to replace supports under the pipe segments. These repairs will require the line to be shutdown for the next four to seven days, weather and equipment dependent.

While Enbridge does not anticipate a problem and there has been no incident or leakage, this advisory seemed appropriate, as we believe you may receive questions from the public in light of the visibility of the barges completing the maintenance. As well, today the company filed a "Safety Related Condition" report with the U.S. Department of Transportation, Office of Pipeline Safety.

We do not expect the need for any response action on your part during the repair work and this advisory is for your information only.

An effort is underway to move a batch of natural gas liquid to displace the crude oil. This both reduces the stress load on the pipelines and lowers the environmental risk. A barge and other equipment are enroute to the area and will begin work once the NGL is locked into place and the pipeline shutdown beginning late afternoon today.

As always, we are available should you have any questions. I can be reached at (715) 394-0410.

Sincerely,

[Signature]

Mark Sipek
Regional Manager
September 14, 2001

Mr. John Arevalo
Michigan Department of Environmental Quality
Gaylord District
2100 West M-32
Gaylord, MI 49735

Re: Enbridge Energy’s Joint Permit Application for Repair Work to be Completed on Crude Oil Transmission Pipelines Located in the Straits of Mackinac.

Dear Mr. Arevalo:

As follow-up to our telephone conversation held yesterday regarding the above referenced project, enclosed is a Joint Permit Application for repair work to be conducted on Enbridge’s (formerly Lakehead Pipeline) two 20-inch diameter pipelines. We have been in contact with the U.S. Army Corp of Engineers and they will be issuing a permit for this repair work today. They have assigned case number 880161211 to the project. **These emergency preventative maintenance repairs must be completed as soon as possible. We are scheduled to begin repair work on Sunday morning, September 16, 2001.**

We appreciate your work to expedite the approval process. If you have any questions or comments, please feel free to contact me at (218) 725-0548.

Sincerely,

Adam J. Erickson
Engineer

Enclosure: Joint Permit Application
Indications map

c: John Sobojinski – LPL
   Grant Henningsen – LPL
   Barry Power – LPL
Michigan Department of Environmental Quality (MDEQ)

AGENCY USE

US Army Corps of Engineers (USACE)

Previous USACE Permit or File Number

USACE File Number

LAGE MICHIGAN BETWEEN UPPER & LOWER PENINSULA

City/Village

County(ies)

Property Tax Identification Number(s)

Name of Waterbody

Project Name or Job Number

Subdivision/Plat

Lot Number

Private Claim

Project types (check all that apply)

- private
- public/government
- building addition
- new building or structure
- industrial
- building renovation or restoration
- commercial
- river restoration
- multi-family
- single-family

The proposed project is on, within, or involves (check all that apply)

- a stream
- a pond (less than 5 acres)
- a river
- a channel/canal
- a ditch or drain
- an inland lake (more than 5 acres)
- a floodway area
- a 100-year floodplain

- a legally established County Drain (date established)
- a Great Lake or Section 10 Waters
- a natural river
- a designated high risk erosion area
- a dam
- a structure removal
- a designated critical dune area
- a wetland
- a utility crossing
- a designated environmental area
- 500 feet of an existing waterbody

2 DESCRIBE PROPOSED PROJECT AND ASSOCIATED ACTIVITIES, AND THE CONSTRUCTION SEQUENCE AND METHODS

- Attach separate sheets, as needed, including necessary drawings, sketches, or plans.

- Project is to provide support underneath our pipelines in sections where the pipeline spans un-supported over too great a distance. Grout bags will be placed beneath the unsupported sections then filled with grout via a pumping rig located on barges or at the surface. Grout hoses will be connected by divers.

3 APPLICANT, AGENT/CONTRACTOR, AND PROPERTY OWNER INFORMATION

- The applicant can be either the property owner or the person or company that proposes to undertake the activity.

- If the applicant is a corporation, both the corporation and its owner must provide a written document authorizing the agent/contractor to act on their behalf.

Applicant (individual or corporate name)

ENBRIDGE ENERGY LIMITED PARTNERSHIP

Mailing Address

21 WEST SUPERIOR STREET

City

DULUTH

State

MN

Zip Code

55802

Daytime Telephone Number with Area Code

(218) 725-0548

Fax

(218) 725-0564

E-mail

AAM.ERICKSON@USPL.ENBRIDGE.COM

Agent/Contractor (firm name and contact person)

Address

City

State

Zip Code

Daytime Telephone Number with Area Code

Fax

E-mail

Is the applicant the sole owner of all property on which this project is to be constructed and all property involved or impacted by this project?  

- No  
- Yes  

(If No, provide a letter signed by the property owner authorizing the agent/contractor to act on his or her behalf or a copy of easements or right-of-ways. If multiple owners, please attach all property owners' names, mailing addresses, and telephone numbers.)

Property Owner's Name (if different from applicant)

Mailing Address

Daytime Telephone Number with Area Code

City

State

Zip Code

4 PROPOSED PROJECT PURPOSE, INTENDED USE, AND ALTERNATIVES CONSIDERED (Attach additional sheets if necessary)

- The purpose must include any new development or expansion of an existing land use.

- Include a description of alternatives considered to avoid or minimize resource impacts. Include factors such as, but not limited to, alternative construction technologies; alternative project layout and design; alternative locations; local land use regulations and infrastructure; and pertinent environmental and resource issues.

- For utility crossings, include both alternative routes and alternative construction methods.

- In order to maintain pipeline integrity & safety - these maintenance repairs can wait no longer. This method of repair is the most environmentally friendly method which we are aware of.
5. LOCATING YOUR PROJECT SITE
   • Provide the requested information listed below that will help staff in locating your project site.
   • Attach a copy of a map, such as a plat, county, or USGS topographic map, clearly showing the site location and include an arrow indicating the north direction.

   Is there an access road to the project?  ☐ No  ☐ Yes (If Yes, type of road, check all that apply)  ☐ private  ☐ public  ☐ improved  ☐ unrepaired
   Name of roads at closest main intersection
   Directions from main intersection
   Style of house or other building on site  ☐ ranch  ☐ 2-story  ☐ cape cod  ☐ bi-level  ☐ cottage/cabin  ☐ pole barn  ☐ none  ☐ other (describe)
   Color of adjacent property house and/or buildings
   House number  [ ] Address is visible on  ☐ house  ☐ garage  ☐ mailbox  ☐ sign  ☐ other
   Street name  ☐ Fire lane number  ☐ Lot number
   How can your site be identified if there is no visible address?
   Provide directions to the project site, with distances from the best and nearest visible landmark and waterbody

   Does project cross boundaries of two or more political jurisdictions? (City/Township, Township/Township, County/County, etc.)
   ☐ No  ☐ Yes (If Yes, list jurisdiction names.)  UNKNOWN

   List all other federal, interstate, state, or local agencies authorizations required for the proposed activity, including all approvals or denials received.
   Agency
   Type approval
   Identification number
   Date applied
   Date approved/denied
   If denied, reason for denial

   If a permit is issued, date activity will commence (MDY)  9-15-01  P.E.
   Proposed completion date (MDY)  10-15-01
   If Yes, identify the portion(s) underway or completed on drawings or
   attach project specifications and give completion date(s) (MDY)
   Are you aware of any unresolved violations of environmental law or litigation involving the property?  ☐ No  ☐ Yes (If Yes, please explain)

   PUBLIC NOTIFICATION (Attach additional sheets if necessary)
   • Complete information for all adjacent and impacted property owners and the lake association or established lake board including the contact person's name.
   • If you own the adjacent lot, provide the requested information for the first adjacent parcel beyond your property line.

   Property Owner's Name
   Mailing Address
   City  State  Zip Code

   Name of  ☐ Established Lake Board  ☐ or Lake Association
   Mailing Address
   City  State  Zip Code
   and the Contact Person's Name  Telephone Number

   APPLICANT’S CERTIFICATION
   READ CAREFULLY BEFORE SIGNING
   I am applying for a permit to authorize the activities described herein. I certify that I am familiar with the information contained in this application, that it is true and accurate, and, to the best of my knowledge, is in compliance with the State Coastal Zone Management Program and the National Flood Insurance Program. I understand that there are penalties for submitting false information and that any permit issued pursuant to this application may be revoked if information on this application is untrue.
   I certify that I have the authority to undertake the activities proposed in this application. By signing this application, I agree to allow representatives of the MDEQ and the USACE to enter upon said property in order to inspect the proposed activity site and the completed project. I understand that I must obtain all other necessary local, county, state, or federal permits and that the granting of other permits by local, county, state, or federal agencies does not release me from the requirements of obtaining the permit requested herein before commencing the activity. I understand that the payment of the application fee does not guarantee the issuance of a permit.
   • All applicants must complete all the items in Sections 1 through 9 on pages 1 and 2 of this application.
   • Complete those items in Sections 10 through 21 that apply to your project. It is necessary to submit only those pages where you have provided information.
   • Please list here the application page numbers being submitted and a brief description of other attachments included with your application.

   Property Owner
   ☐ Agent/Contractor
   ☐ Corporation – Title
   Printed Name  Signature  Date

   Joint Permit Application  B-10  Page 2 of 7  February 2001
### A. PROJECTS REQUIRING FILL (See All Sample Drawings)
- To calculate volume in cubic yards (cu yd), multiply the average length in feet (ft) times the average width (ft) times the average depth (ft) and divide by 27.

<table>
<thead>
<tr>
<th>Description</th>
<th>Fill volume (cu yd)</th>
<th>Fill dimensions (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grout bags</td>
<td>250</td>
<td>Length: 5, Width: 7, Maximum depth: 1.5</td>
</tr>
</tbody>
</table>

Type of clean fill: [ ] pea stone [ ] sand [ ] gravel [ ] wood chips [ ] other [ ] Grout

Source of clean fill: [ ] on-site, if on-site, show location on site plan [ ] commercial [ ] other

Fill will extend 0 feet into the water from the shoreline and upland. VARIETY OF LOCATIONS UNDER PIPELINE.

Will filter fabric be used under proposed fill? [ ] No [ ] Yes (If Yes, Grout Bag)

### B. PROJECTS REQUIRING DREDGING OR EXCAVATION (See All Sample Drawings)
- To calculate volume in cubic yards (cu yd), multiply the average length in feet (ft) times the average width (ft) times the average depth (ft) and divide by 27.
- Attach both plan and cross-section views to scale showing maximum and average dredge or excavation dimensions.

<table>
<thead>
<tr>
<th>Description</th>
<th>Method and equipment for dredging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dredge volume (cu yd)</td>
<td>Sand cell [ ] other [ ] grout bags [ ] pump [ ] barge [ ] other</td>
</tr>
</tbody>
</table>

### C. PROJECTS REQUIRING RIPRAP (See Sample Drawings 2, 3, 8, 12, 14, 17, 22, and 23. Others may apply)

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions (ft)</th>
<th>Volume (cu yd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riprap waterward of the shore [ ] ordinary high water mark [ ] shoreline</td>
<td>Length: width: depth:</td>
<td></td>
</tr>
<tr>
<td>Riprap landward of the shore [ ] ordinary high water mark [ ] shoreline</td>
<td>Length: width: depth:</td>
<td>Volume (cu yd)</td>
</tr>
</tbody>
</table>

Type of riprap: [ ] fieldstone [ ] other [ ] angular rock [ ] other

Will filter fabric be used under proposed riprap? [ ] No [ ] Yes (If Yes, type)

### D. SHORE PROTECTION PROJECTS (See Sample Drawings 2, 3, and 17)

### E. DOCK - PIER - MOORING PILINGS (See Sample Drawing 10)

<table>
<thead>
<tr>
<th>Description</th>
<th>Seasonal structure?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type [ ] open pile [ ] filled [ ] crib [ ] other</td>
<td>[ ] No [ ] Yes</td>
</tr>
</tbody>
</table>

Proposed structure dimensions (ft): length: width:

Dimensions of nearest adjacent structures (ft): length: width:

### F. BOAT WELL (No Sample Drawing available)

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions (ft)</th>
<th>Number of boats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of bank stabilization [ ] wood [ ] steel [ ] concrete [ ] vinyl [ ] riprap [ ] other</td>
<td>Length: width: depth:</td>
<td>Number of boats</td>
</tr>
</tbody>
</table>

Volume of backfill behind sidewalk stabilization (cu yd)

### G. BOAT LAUNCH (No Sample Drawing available)

<table>
<thead>
<tr>
<th>Description</th>
<th>Dimensions (ft)</th>
<th>Number of skid piles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall boat launch dimensions (ft): length: width:</td>
<td>Length: width: depth:</td>
<td>Number of skid piles</td>
</tr>
</tbody>
</table>

Distances of launch from both property lines (ft):

### H. BOAT HOIST (No Sample Drawing available)

<table>
<thead>
<tr>
<th>Description</th>
<th>Skid pier dimensions (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall boat launch dimensions (ft): length: width: depth:</td>
<td>Length: width: depth:</td>
</tr>
</tbody>
</table>

Distances of launch from both property lines (ft):

### I. BOARDWALKS AND DECKS IN WETLANDS OR FLOODPLAINS (See Sample Drawings 5 and 6)

<table>
<thead>
<tr>
<th>Description</th>
<th>Boardwalk or deck is on [ ] fill [ ] piling</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Check all that apply) [ ] boardwalk [ ] deck [ ] wetlands [ ] floodplain [ ]</td>
<td>Boardwalk or deck is on [ ] fill [ ] piling</td>
</tr>
</tbody>
</table>

Joint Permit Application Page 3 of 7 February 2001
October 2, 2001

Mr. John Arevalo
Michigan Department of Environmental Quality
Gaylord District
2100 West M-32
Gaylord, MI 49735

Re: Final phase of indications requiring repair work on Enbridge Energy’s Crude Oil Transmission Pipelines Located in the Straits of Mackinac.

Dear Mr. Arevalo:

Enbridge Energy has recently located the final eight indications along our pipeline where additional support is required beneath our pipelines which cross the Straits of Mackinac. Each of these indications have unsupported spans exceeding 130 feet and are in need of repair. As with the earlier indications, these repairs will be completed through the use of grout bags. This work will be conducted coincident with our on-going repair program in the Straits as previously documented in our September 14, 2001 letter to the MDEQ. We are requesting authorization under our existing permit (01-24-0046-P) which was issued on September 17, 2001.

These preventative maintenance repairs must be completed as soon as possible. We are scheduled to begin repair work on these final eight indications on Wednesday or Thursday, October 3 & 4, 2001. This is the last set of indications requiring repair on the unsupported sections of pipeline. Upon completion of these eight repairs, we will submit a notice of project completion to your office.

We appreciate your work to expedite the approval process. If you have any questions or comments, please feel free to contact me at (218) 725-0143.

Sincerely,

Barry F. Power, P.E.
Engineer

Enclosure: Indications map
Span locations

c: John Sobojinski – Enbridge Energy
Grant Henningsen – Enbridge Energy
Adam Erickson – Enbridge Energy
December 5, 2001

Mr. John Arevalo
Michigan Department of Environmental Quality
Gaylord District
2100 West M-32
Gaylord, MI 49735

Re: Temporary completion of repairs on indications requiring work on Enbridge Energy’s crude oil transmission pipelines located in the Straits of Mackinac.

Dear Mr. Arevalo:

Enbridge Energy has finished the 2001 repairs on indications along our pipeline where additional support was required beneath our pipelines which cross the Straits of Mackinac. However, this notification does not serve as the project Notice of Completion. Once we determine additional locations requiring repair, we will resume activities during 2002. Prior to initiating the 2002 repairs, we will submit a map showing the target locations and request for authorization to complete repairs.

If you have any questions or comments, please feel free to contact me at (218) 725-0143.

Sincerely,

[Signature]

Barry F. Power, P.E.
Environmental Engineer

C: John Sobojinski – EEP
   Grant Henningsen – EEP
   Adam Erickson - EEP
   Scott Lounsbery – EEP
Re: Enbridge Energy’s Joint Permit Application for Repair Work to be Completed on Crude Oil Transmission Pipelines Located in the Straits of Mackinac.
MDEQ Permit Number: 01-24-0046-P

Dear Mr. Arevalo:

Enbridge Energy has recently located sections along our pipeline where additional support is required beneath our pipelines which cross the Straits of Mackinac. Each of these indications have un-supported spans that are in need of repair. These repairs will be completed through the use of the augered supports we discussed in our phone conversation several months ago. Figures depicting repair locations and the equipment to be used are included with this letter. We are requesting either a new authorization or a revised Joint Permit Application Approval for Permit number 01-24-0046-P.

We are scheduled to begin repair work on these additional indications in June of this year. If additional un-supported sections of pipeline requiring repair are located, we will issue an additional map indicating their locations. Please note that we are also seeking approval from the U.S. Army Corp. of Engineers.

We appreciate your work to expedite the approval process. If you have any questions or comments, please feel free to contact me at (715) 394-1548.

Sincerely,

Adam J. Erickson
Engineer

Enclosure: Repair Locations Map
Typical Suspension Support Sketches
Joint Permit Application

c: John Sobojinski - Enbridge
Grant Henningsen - Enbridge
bc: Law
March 14, 2005

Mr. John Arevalo  
Michigan Department of Environmental Quality  
Land and Water Management Division  
Gaylord District  
2100 M-32 West  
Gaylord, MI 49735  

Re:  Enbridge Energy’s Joint Permit Application for Repair Work to be Completed on Crude Oil Transmission Pipelines Located in the Straits of Mackinac.

MDEQ Permit Number: 01-24-0046-P

Dear Mr. Arevalo:

Enbridge Energy is planning to repair sections along our pipeline where additional support is required beneath our pipelines which cross the Straits of Mackinac. Each of these indications have un-supported spans that are in need of repair. These repairs will be completed through use of the augered supports we have utilized the past few years. Figures depicting repair locations and the equipment to be used are included with this letter. We are requesting a new Joint Permit Application Approval for this project.

We are scheduled to begin repair work on these additional indications in June of this year. If additional un-supported sections of pipeline requiring repair are located or revised during our ROV (Remote Operating Vehicle) inspection, we will issue another map indicating their locations prior to initiating the repairs. Please note that we are also seeking approval from the U.S. Army Corp. of Engineers. Attached are three copies of the enclosures for distribution within the agency. A check in the amount of $500 is included with this letter to cover the permit application filing fee.

We appreciate your assistance with approval of this project. If you have any questions or comments, please feel free to contact me at (715) 394-1548.

Sincerely,

Adam J. Erickson  
Engineer

Enclosure:  Repair Locations Map  
           Typical Suspension Support Sketches  
           Joint Permit Application  

C:  John Sobolewski – Enbridge  
    Grant Henningsen – Enbridge
April 13, 2005

Mr. John Gustafson
Permit Consolidation Unit
Michigan Department of Environmental Quality
Land and Water Management Division
P.O. Box 30204
525 W. Allegan Street
Lansing, MI 48909-7704

Re: Application Correction Request for Enbridge Energy's Repair Work to be Completed on Crude Oil Transmission Pipelines Located in the Straits of Mackinac.

MDEQ File Number: 05-24-0013-P

Dear Mr. Gustafson:

This letter is an addendum to our previous submittal and serves to address the comments detailed in your March 28, 2005 letter (attached) requesting additional information regarding the above referenced project. Each of the items discussed in that letter are addressed below:

1. Section 3 of the joint permit application has been completed that indicates who the sole property owner is. Since the work to be completed will take place in Lake Michigan, the State of Michigan is considered the property owner. The joint permit application reflecting this information is included with this letter.

2. The property owners where the pipeline enters/exits the shoreline of Lake Michigan in both Emmet and Mackinac counties are included in Section 8 of the joint permit application.

3. The supports will be drilled approximately six feet into the lake bottom. A typical support structure is five feet wide by five feet tall, plus an anchor length of approximately six feet. There are two 20-inch crude oil transmission pipelines that will be worked on/supported.

We appreciate your assistance with approval of this project. If you have any questions or comments, please feel free to contact me at (715) 394-1548.

Sincerely,

[Signature]

[Name]

Engineer

Enclosures: Application Correction Request Letter
Joint Permit Application

c: John Sobojinski – Enbridge
Grant Hemingsen – Enbridge
John Korienek - NREC

be: Law
The purpose of this project is to provide support beneath our pipelines in sections where the pipeline span is unsupported over too great a distance. Support will be placed around the unsupported sections of the pipeline and will then be asgered into the sediment. A certified diver will be deployed to oversee the installation.

3 APPLICANT, AGENT/CONTACTOR, AND PROPERTY OWNER INFORMATION

- The applicant can be either the property owner or the person or company that proposes to undertake the activity.
- If the applicant is a corporation, both the corporation and its owner must provide a written document authorizing the agent/contractor to act on their behalf.

Applicant (individual or corporate name) Enbridge Energy, Limited Partnership
Agent/Contractor (firm name and contact person)
Mailing Address 119 North 25th Street East
City
State WI
Zip Code 54880
Daytime Telephone Number with Area Code (715) 394-1400
Fax (715) 394-1400
E-mail Adams.Erickson@enbridge.com

Is the applicant the sole owner of all property on which this project is to be constructed and all property involved or impacted by this project? No Yes

If No, provide a letter signed by the property owner authorizing the agent/contractor to act on his or her behalf or a copy of easements or right-of-ways. If multiple owners, please attach of property owners' names, mailing addresses, and telephone numbers.

Property Owner's Name (If different from applicant)
Mailing Address
Daytime Telephone Number with Area Code
City State Zip Code

4 PROPOSED PROJECT PURPOSE, INTENDED USE, AND ALTERNATIVES CONSIDERED (Attach additional sheets if necessary)

- The purpose must include any new development or expansion of an existing land use.
- Include a description of alternatives considered to avoid or minimize resource impacts. Include factors such as, but not limited to, alternative construction technologies; alternative project layout and design; alternative locations; local land use regulations and infrastructure; and pertinent environmental and resource issues.
- For utility crossings, include both alternative routes and alternative construction methods.

In order to maintain pipeline integrity and safety, additional supports are necessary under unsupported spans of pipeline. Indications of the span locations are shown in the enclosed map. Depictions of the casing method, equipment utilized as well as the structure of the supports themselves are located in the attachments. This support method is the most environmentally friendly method of which we are aware. There will be no expansion of existing land use. This project is not for the installation of a new utility crossing.
LOCATING YOUR PROJECT SITE

- Attach a map of your site, showing the location and size of the project area.
- Provide a description of the construction activities planned.
- Identify the type of project and its purpose.

Is there an access road to the project?
- Yes
- No

Name of roads at closest main intersection:

All applicants and/or their agents or contractors to enter upon said property:

How can your site be identified if there is no visible address?

Provide the address information:

1. Address:
2. City:
3. State:
4. Zip Code:

1. Property Owner's Name:
2. City:
3. State:
4. Zip Code:

USACE

- Army Corps of Engineers (USACE)
- Michigan Department of Environmental Quality (MDEQ)

APPLICANT'S CERTIFICATION

I certify that I have read and understand the requirements of the permit and that the information submitted in this application is true and complete. I understand that any false or misleading statements or omissions may be cause for denial or revocation of the permit.

By signing this application, I agree to allow representatives of the MDEQ, USACE, and/or their agents or contractors to enter upon said property in order to inspect the proposed activity site and the completed project.

I understand that I must obtain all necessary local, county, state, or federal permits and that the granting of other permits by local, county, state, or federal agencies does not guarantee the issuance of a permit.

- All applicants must complete the forms in Sections 1 through 9 on pages 1 and 2 of this application.
- Complete the forms in Sections 10 through 21 that apply to your project. Submit only the pages where you have provided information.
- Please list any other attached forms or drawings that are not submitted.

Please list the application page numbers being submitted and a brief description of any attachments included with your application.

Your permit decision will be delayed if forms are incomplete or maps and/or drawings are not submitted.
### A. PROJECTS REQUIRING FILL (See All Sample Drawings)
- To calculate volume in cubic yards (cu yd), multiply the average length in feet (ft) times the average width (ft) times the average depth (ft) and divide by 27.
- Attach both plan and cross-section views to scale showing minimum and average fill dimensions.

<table>
<thead>
<tr>
<th>Fill dimensions (ft)</th>
<th>Fill volume (cu yd)</th>
<th>Maximum water depth in fill area (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>Width</td>
<td>Maximum depth</td>
</tr>
</tbody>
</table>

Type of clean fill: 
- sea stone
- sand
- gravel
- wood chips
- other

Will filter fabric be used under proposed fill?
- No
- Yes

### B. PROJECTS REQUIRING DREDGING OR EXCAVATION (For dredging projects, see Sample Drawing 7, for excavation, see other applicable Sample Drawings)
- To calculate volume in cubic yards (cu yd), multiply the average length in feet (ft) times the average width (ft) times the average depth (ft) and divide by 27.
- Attach both plan and cross-section views to scale showing minimum and average dredge or excavation dimensions.

<table>
<thead>
<tr>
<th>Dredge/excavation volume (cu yd)</th>
<th>Method and equipment for dredging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>Width</td>
</tr>
</tbody>
</table>

Has proposed dredge/mooring basin been tested for contaminants?
- No
- Yes

Will dredged or excavated spoils be placed on site or off-site?
- No
- Yes

Has this area been previously dredged?
- No
- Yes (If Yes, show location plan and identification number/mass balance)

If Yes, are you proposing to enlarge the previously dredged area?
- No
- Yes

Is long-term maintenance dredging planned?
- No
- Yes (If Yes, when, and how much?)

### C. PROJECTS REQUIRING RIPRAP (See Sample Drawings 2, 3, 8, 12, 14, 17, 22, and 23. Others may apply)

<table>
<thead>
<tr>
<th>Riprap seaward of the shoreline or ordinary high water mark</th>
<th>Volume (cu yd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (ft)</td>
<td>Length</td>
</tr>
</tbody>
</table>

Type of riprap: 
- field stone
- angular rock
- other

Will filter fabric be used under proposed riprap?
- No
- Yes

### D. SHORE PROTECTION PROJECTS (See Sample Drawings 2, 3, 8, and 17)

<table>
<thead>
<tr>
<th>Seasonal structure</th>
<th>Dimensions of nearest adjacent structures (ft)</th>
</tr>
</thead>
</table>

### E. DOCK - PIER - MOORING PLUGINS (See Sample Drawing 15)

<table>
<thead>
<tr>
<th>Proposed structure dimensions (ft)</th>
<th>Number of boats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>Width</td>
</tr>
</tbody>
</table>

### G. BOAT LAUNCH (No Sample Drawing Available)

<table>
<thead>
<tr>
<th>Volume of backfill behind seawall stabilization (cu yd)</th>
<th>Number of boats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>Width</td>
</tr>
</tbody>
</table>

### H. BOAT HOIST (No Sample Drawing Available)

<table>
<thead>
<tr>
<th>Dimensions of property lines (ft)</th>
<th>Number of boats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>Width</td>
</tr>
</tbody>
</table>
### PROJECTS IMPACTING WETLANDS OR FLOODPLAINS OR LOCATED ON AN INLAND LAKE OR STREAM OR A GREAT LAKE

#### J. INTAKE PIPES (See Sample Drawing 16) [OUTLET PIPES (See Sample Drawing 22)]

<table>
<thead>
<tr>
<th>Type</th>
<th>Purpose of Intake</th>
</tr>
</thead>
<tbody>
<tr>
<td>headwall</td>
<td>funging</td>
</tr>
<tr>
<td>end section</td>
<td>navigation</td>
</tr>
<tr>
<td>pipe</td>
<td></td>
</tr>
<tr>
<td>other</td>
<td></td>
</tr>
</tbody>
</table>

If outlet pipe, discharge is to wetland, island, lake

#### Dimensions of headwall and end section (ft)

<table>
<thead>
<tr>
<th>Length</th>
<th>Width</th>
<th>Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Number of pipes

Pipe diameters and mound elevations

#### K. MOoring and Navigation Buoy(s) (No Sample Drawing available)

- Provide an overall site plan showing the distances between each buoy, distances from the shore to each buoy, and depth of water at each buoy in feet.
- Provide cross-section drawings showing anchoring systems and dimensions.

Number of buoys

Type of anchor system

Number of buoys

Dimensions of buoys (ft)

Do you own the property along the shoreline? [No] [Yes]

#### L. GROUNDS (No Sample Drawing available)

- Provide an overall site plan showing the distances (ft) of the outermost graded area from the property lines, distances between groins, length and width of each groin, and the distance from the existing toe to the landward end of the groins.
- If existing groins or located on adjacent properties, provide distances (ft) from closest neighboring groins to your property lines on the site plan.
- Provide cross-section view showing the length and height of each groin and the height of groins above the observed water level (date and time). If step-down type, show the height of each section above the observed water level.

Number of groins

Type of groin

Will groin be placed on a foundation? [No] [Yes]

#### M. FENCES IN WETLANDS, STREAMS, OR FLOODPLAINS (No Sample Drawing available)

- Provide an overall site plan showing the proposed fenc ing through wetlands, streams, or floodplains.
- Provide drawing of fence profile showing the design, dimensions, post spacing, board spacing, and distance from ground to bottom of fence if in a floodplain.

(check all that apply)

- [ ] wetlands
- [ ] streams
- [ ] floodplains

Fence height (ft)

Fence type and material

#### N. OTHER - e.g., structure removal, marine railway, see sand lump well, breakwater, and structural foundations in wetlands or floodplains

Please see Section 4 for a detailed description of this pipeline support project.

### EXPANSION OF AN EXISTING OR CONSTRUCTION OF A NEW LAKE OR POND

(See Sample Drawings 4 and 15)

Which best describes your proposed waterbody use (check all that apply)

- [ ] detention basin
- [ ] stormwater detention basin
- [ ] recreation
- [ ] wastewater basin
- [ ] other

Water source for lake/pond

- [ ] groundwater
- [ ] natural springs
- [ ] Inland Lake or Stream
- [ ] stormwater runoff
- [ ] pump
- [ ] sewage
- [ ] other

Location of the lake/pond

- [ ] floodplain
- [ ] wetland
- [ ] adjacent

Will project involve construction of a dam, dike, outlet control structure, or spillway? [No] [Yes] (If Yes, complete Section 17)

### ACTIVITIES THAT MAY IMPACT WETLANDS

- For information on the MDEQ's Wetland Assessment Program, please visit the LWAQ website or call 517-241-8485.

(check all that apply)

- [ ] ditch (Section 10A)
- [ ] dredging or excavation (Section 10B)
- [ ] bridge or dock (Section 10C)
- [ ] fence (Section 10M)
- [ ] bridge and culverts (Section 14)
- [ ] discharging surface water
- [ ] other

Has a professional wetland delineation been conducted for this parcel? [No] [Yes] (If Yes, please provide a copy; if Federal method was used, supply data sheets)

Is there a recorded MDEQ easement on the property? [No] [Yes] (If Yes, please provide the number)

Has the MDEQ conducted a wetland assessment for this parcel? [No] [Yes] (If Yes, please provide a copy)

Describe the wetland impacts, proposed use or development, and efforts to avoid/minimize impacts. Describe the wetland alternatives and provide the type and amount of mitigation proposed if more than 1/3 acre is to be impacted.

In any grading or mechanized land clearing proposed? [No] [Yes]

Has any of the proposed grading or mechanized land clearing been completed? [No] [Yes]

If grading, please show locations on site plan

Complete the wetland dredging and/or fill information for each impacted wetland. Attach additional sheets as necessary and label the impacted wetland areas on a site plan drawn to scale. Please attach at least one typical cross-section for each wetland dredge and/or fill area. (See Sample Drawings 8 & 9)

- Also complete Section 10A for WW and Section 10B for dredge or excavation activities.
- If dredge material will be disposed of on site, please show the location on site plan in an splashed area and include soil erosion and sedimentation control measures.

#### Wetland dredge dimensions

<table>
<thead>
<tr>
<th>maximum length (ft)</th>
<th>maximum width (ft)</th>
<th>average depth (ft)</th>
<th>dredge volume (cu yd)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total wetland dredge area

<table>
<thead>
<tr>
<th>acres</th>
<th>sq ft</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total wetland fill area

<table>
<thead>
<tr>
<th>acres</th>
<th>sq ft</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The proposed project will be supervised by [ ] public sewer

[ ] private septic system (if septic system, show existing and new or expanded system on plan)

If septic system, has application been made to the County Health Department for a permit? [No] [Yes]

If Yes, has permit been issued? [No] [Yes]

#### RECEIVED

APR 11 2005

[ ]� [ ]  

[ ]� [ ]  

[ ]� [ ]

[ ]� [ ]
July 22, 2005

Mr. John Arevalo
Michigan Department of Environmental Quality
Gaylord District
2100 West M-32
Gaylord, MI 49735

RE: MDEQ Permit Number 05-24-0013-P

Dear Mr. Arevalo:

This letter serves as a Notice of Completion for Enbridge Pipelines (Lakehead) LLC project involving the installation of support structures on our crude oil transmission pipeline in Lake Huron at St. Ignace, Michigan. The project was completed on July 1, 2005. **We will notify the MDEQ prior to initiating our 2006 project.**

In the event you have questions or comments, please feel free to give me a call. I can be reached at (715) 395-5680 Ext. 120.

Sincerely,

John J. Korienek, P.E.
Environmental Engineer

cc:  Adam Erickson – Enbridge: Superior Region
May 3, 2006

Ms. Wendy Fitzner
Michigan Department of Environmental Quality
WMD - PCU
P.O. Box 30204
Lansing, MI 48909-7704

RE: Joint Permit Application for Pipeline Inspection and Repair Activities to be Conducted Along Pipeline Crossing at the Straits of Mackinac

Dear Ms. Fitzner:

Please see attached Joint Application for coverage of proposed pipeline maintenance activities. Currently Enbridge has coverage for similar maintenance work under permit #05-24-0013, however, because the current permit expires prior to the planned execution of the proposed activities and because the number of additional locations identified for repair is deemed significant by the Agency, Enbridge has been requested to resubmit a Joint Permit Application to cover the additional repairs.

As I discussed with the Agency contact (John Arevalo) earlier this week, the proposed project is similar in terms of method to that previously covered under the existing permit. As shown on the attached figures, the proposed work involves conducting underwater inspections along the pipeline and installing a brace over the pipe, secured by anchors augured into the lake bed at twenty locations (refer to Project Location Map). The work will be conducted using a barge platform to lower the weights which will be installed by a certified diver. The proposed project execution date is scheduled for June 1st with an anticipated completion date of June 15th, contingent on maritime conditions.

I appreciate your assistance with this request. Please feel free to contact me if you have any questions or require further information at (715) 394-1572 or by email at Kris.Benson@Enbridge.com.

Sincerely,

Kris Benson
Environmental Analyst II, CHMM

Enclosures: Proposed Project Locations Site map
             Project Schematics (3)

c: Dan Klarnet – Enbridge Regional Engineer
is not for the pipeline. Indications of the span locations are shown in the enclosed map. Depictions of the augering method, equipment utilized as well as the structure of the supports themselves are located in the attachments. This support method is the most environmentally friendly method of which we are aware. There will be no expansion of existing land use. This project is not for the installation of a new utility crossing.
LOCATING YOUR PROJECT SITE

- Provide the requested information listed below that will help staff in locating your project site.
- Attach a copy of a map, such as a plat, county, or USGS topographic map, clearly showing the site location and include an arrow indicating the north direction.

Is there an access road to the project? ☒ No ☐ Yes (If Yes, type of road, check all that apply) ☐ private ☐ public ☐ improved ☐ unimproved

Name of roads at closest main intersection

Directions from main intersection

Style of house or other building on site ☐ ranch ☐ 2-story ☐ cape cod ☐ bi-level ☐ cottage/cabin ☐ pole barn ☐ none ☐ other (describe)

Color ☐ Color of adjacent property house and/or buildings

House number Address is visible on ☐ house ☐ garage ☐ mailbox ☐ sign ☐ other

Street name ☐ Fire lane number ☐ Lot number

How can your site be identified if there is no visible address?

Provide directions to the project site, with distances from the best and nearest visible landmark and waterbody. It is located between the Upper and Lower Peninsula’s of Michigan in the Straits of Mackinac. Please refer to the enclosed map.

Does project cross boundaries of two or more political jurisdictions? (City/Township, Township/Township, County/County, etc.)

☐ No ☐ Yes (If Yes, list jurisdiction names.) Unknown

List all other federal, interstate, state, or local agency authorizations required for the proposed activity, including all approvals or denials received.

Agency Type Approval Identification number Date applied Date approved/denied If denied, reason for denial

USACE Nationwide Permit NW03 May 20, 2003 May 27, 2003

If a permit is issued, date activity will commence (M/D/Y) 06/01/2005

Proposed completion date (M/D/Y) 10/31/2005

Has any construction activity commenced or been completed in a regulated area? ☒ No ☐ Yes

If Yes, identify the portion(s) underway or completed on drawings or attach project specifications and give completion date(s) (M/D/Y)

Were the regulated activities conducted under a MDEQ permit?

☐ No ☐ Yes

If Yes, list the MDEQ permit number

Are you aware of any unresolved violations of environmental law or litigation involving the property? ☒ No ☐ Yes (If Yes, please explain)

PUBLIC NOTIFICATION (Attach additional sheets if necessary)

- Complete information for all adjacent and impacted property owners and the lake association or established lake board including the contact person’s name.
- If you own the adjacent land, provide the requested information for the first adjacent parcel beyond your property line.

Property Owner’s Name Mailing Address City State Zip Code

City of St. Ignace 396 North State Street St. Ignace MI 49781


Todd & Shirley Harburn 4060 Leeward Drive Okemos MI 48864

Neil & Jeannette Downing 6819 David Drive Box Mackinaw MI 49701

Elizabeth J. Hayes & Richard L. Hayes 747 14029 - 16th Court SE Mill Creek WA 98012

Name of ☐ Established Lake Board ☐ Lake Association and the Contact Person’s Name, telephone number, and mailing address N/A

APPLICANTS CERTIFICATION

- I am applying for a permit(s) to authorize the activities described herein. I certify that I am familiar with the information contained in this application, that it is true and accurate, and, to the best of my knowledge, is in compliance with the State Coastal Zone Management Program and the National Flood Insurance Program. I understand that there are penalties for submitting false information and that any permit issued pursuant to this application may be revoked if information on this application is untrue. I certify that I have the authority to undertake the activities proposed in this application. By signing this application, I agree to allow representatives of the MDEQ, USACE, and/or their agents or contractors to enter upon said property in order to inspect the proposed activity site and the completed project. I understand that I must obtain all other necessary local, county, state, or federal permits and that the granting of other permits by local, county, state, or federal agencies does not release me from the requirements of obtaining the permit requested herein before commencing the activity. I understand that the payment of the application fee does not guarantee the issuance of a permit.

- All applicants must complete all the items in Sections 1 through 9 on pages 1 and 2 of this application.
- Complete those items in Sections 10 through 21 that apply to your project. Submit only those pages where you have provided information.
- Please list here the application page numbers being submitted and a brief description of other attachments included with your application.
- Your permit decision will be delayed if forms are incomplete or maps and/or drawings are not submitted.

☐ Property Owner ☐ Agent/Contractor ☒ Corporation - Title Engineer

Printed Name Adam Erickson Signature

Joint Permit Application (Word 164k)
From: Wendy Fitzner
To: John Gustafson
Date: 5/9/06 11:42AM
Subject: Fwd: Re: Request for Permit Extension (#05-24-0013)

John, this just came in as 06-24-0016. Can you process it within the next couple of days? Thanks.

>>> John Arevalo 05/02/06 2:47 PM >>>
Dear Ms. Benson: We have discussed this matter internally. The work which you are requesting will require a new permit application, site plans, $500 fee and public noticing. This is consistent with what we are doing statewide, and the new work exceeds (by two times) the work permitted under 05-24-0013-P. Note that this email was cc’d to Wendy Fitzner, LWMD, Permit Consolidation Unit Chief. It should be a simple matter for you to submit a new application by updating/revising your ’05 app. You already have the site plans in your PDF file. Wendy advised that if you submit a completed app. + fee, she anticipates being able to prepare the public notice within a few days after that. The public notice period comment period lasts 20 days. If Wendy assigns the file to me, I should be able to issue a permit for Enbridge in time for them to begin work by 6/1/06. Applications can also be submitted on-line. Feel free to contact Wendy for assistance w/that process. If you do not have a copy of your ’05 application form and materials, let me know, and I will fax them to you. Wendy’s tx number is 517-373-8798.

>>> <Kristen.Benson@enbridge.com> 05/02/06 1:21 PM >>>
Mr. Arevalo,

As we discussed this morning, please see attached letter requesting an extension of Permit #05-24-0013. As noted in the letter, the proposed project involves work identical to that already covered in the permit, although at an additional 20 locations. Should you have any questions or need additional clarification, please do not hesitate to contact me at the number listed below.

Kris H. Benson
Environmental Analyst II, CHMM
Enbridge Energy, Superior Office
Phone: 715-394-1572
Fax: 715-394-1570

* * * * * * * * * * * * * * * * * * * IMPORTANT NOTICE* * * * * * * * * * * * * * * * * * * *

Unless otherwise indicated or obvious from the nature of the transmittal, the information contained in this email message is CONFIDENTIAL information intended for the use of the individual or entity named herein. If the reader of this message is not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please immediately notify the sender using the above contact information or by return email and delete this message and any copies from your computer system. Thank you.

John Arevalo
Cadillac District Supervisor
Land and Water Management Division
Gaylord Phone: 989-705-3450
The purpose of this project is to enhance support beneath the pipelines where the span is currently unsupported for extended distances. The work will involve the installation of a brace and anchoring system over each proposed location to increase support; the anchors will be augered directly into the lake bed. A certified diving contractor will be employed to oversee the installation.

4. PROPOSED PROJECT PURPOSE, INTENDED USE, AND ALTERNATIVES CONSIDERED (Attach additional sheets if necessary)

- The purpose must include any new development or expansion of an existing land use.
- Include a description of alternatives considered to avoid or minimize resource impacts. Include factors such as, but not limited to, alternative construction technologies; alternative project layout and design; alternative locations; local land use regulations and infrastructure; and pertinent environmental and resource issues.
- For utility crossings, include both alternative routes and alternative construction methods.

In order to maintain pipeline integrity, installation of additional supports to minimize the distance between presently unsupported pipeline spans. The proposed locations for installation of the anchoring structures are provided on the attached map. Schematics showing the auguring apparatus and method as well as equipment utilized for installation are included with the attachments. The support method is anticipated to incur minimal or no environmental impact. Note: This project is considered pipeline maintenance and is not associated with a new utility installation.
LOCATING YOUR PROJECT SITE

- Provide the requested information listed below to help staff locate your project site.
- Attach a copy of a map, such as a plat, county, or USGS topographic map, clearly showing the site location and include an arrow indicating the north direction.
- Project area must be staked at the time of application submittal.

Is there an access road to the project? □ No □ Yes (If Yes, type of road, check all that apply) □ private □ public □ improved □ unimproved

Name of roads at closest main intersection _______ N/A - work entirely conducted in and ________

Directions from main intersection

Style of house or other building on site □ ranch □ 2-story □ cape cod □ bi-level □ cottage/cabin □ pole barn □ none □ other (describe) _______

Color _______ Color of adjacent property house and/or buildings _______

House number _______ Address is visible on □ house □ garage □ mailbox □ sign □ other _______

Street name _______ Fire lane number _______ Lot number _______

How can your site be identified if there is no visible address?

Provide directions to the project site, with distances from the best and nearest visible landmark and waterbody.

Project locations (20) all located within the Straits of Mackinaw in Lake Michigan; all work will be conducted along underwater pipeline crossing _______

Does project cross boundaries of two or more political jurisdictions? (City/Township, Township/Township, County/County, etc.) □ No □ Yes (If Yes, list jurisdiction names) Unknown _______

List all other federal, interstate, state, or local agency authorizations required for the proposed activity, including all approvals or denials received.

<table>
<thead>
<tr>
<th>Agency</th>
<th>Type approval</th>
<th>Identification number</th>
<th>Date applied</th>
<th>Date approved/denied</th>
<th>If denied, reason for denial</th>
</tr>
</thead>
<tbody>
<tr>
<td>USACE</td>
<td>Nationwide Permit</td>
<td>NW03</td>
<td>3/14/2005</td>
<td>4/13/2005</td>
<td></td>
</tr>
</tbody>
</table>

If a permit is issued, date activity will commence (MDY) 06/01/2006

Proposed completion date (MDY) 07/01/2007

If Yes, identify the portion(s) underway or completed on drawings or attach project specifications and give completion date(s) (MDY) _______

Are you aware of any unresolved violations of environmental law or litigation involving the property? □ No □ Yes (If Yes, explain) _______

PUBLIC NOTIFICATION (Attach additional sheets if necessary)

- Complete information for all adjacent and impacted property owners and the lake association or established lake board, including the contact person's name.
- If you own the adjacent lot, provide the requested information for the first adjacent parcel beyond your property line.

Property Owner's Name _______ Mailing Address _______ City _______ State _______ Zip Code _______

Name of □ Established Lake Board □ or Lake Association _______

and the contact person's name, phone number, and mailing address _______

APPLICANT'S CERTIFICATION

I am applying for a permit(s) to authorize the activities described herein. I certify that I am familiar with the information contained in this application, that it is true and accurate, and, to the best of my knowledge, is in compliance with the State Coastal Zone Management Program and the National Food Insurance Program. I understand that there are penalties for submitting false information and that any permit issued pursuant to this application may be revoked if information on this application is untrue. I certify that I have the authority to undertake the activities proposed in this application. By signing this application, I agree to allow representatives of the MDEQ, USACE, and/or their agents or contractors to enter upon said property in order to inspect the proposed activity site and the completed project. I understand that I must obtain all other necessary local, county, state, or federal permits and that the granting of other permits by local, county, state, or federal agencies does not release me from the requirements of obtaining the permit requested herein before commencing the activity. I understand that the payment of the application fee does not guarantee the issuance of a permit.

- All applicants must complete all of the items in Sections 1 through 9 on pages 1 and 2 of this application.
- Complete those items in Sections 10 through 21 that apply to the project. Submit only those pages where you have provided information.
- Your application will not be processed if the application form is not completely filled out.
- List here the application page numbers being submitted and a brief description of other attachments included with your application.
- Submit 8.5" by 11" 8.5" by 14" or 11" by 17" size drawings with 4 copies. The USACE requires one set of drawings on 8.5" x 11" paper, with all notations clearly legible. Larger copies may be submitted in addition to the standard size copies.
- A letter of authorization from the owner must be included if not signed below by the owner.

□ Property Owner □ Agent/Contractor □ Corporation - Title _______ Engineer _______ Printed Name _______ Signature _______ Date 5-3-06

Land & Water Mgt. Div.
Enbridge Energy
119 North 25th Street East
Superior, WI 54880

Permit No. 06-24-0016-P
Issued June 8, 2006
Extended Revised Expires June 8, 2007

Under the provisions of the Natural Resources and Environmental Protection Act 451, PA 1994, as amended and specifically:

☐ Part 301 Inland Lakes and Streams  ☐ Part 315 Dam Safety
☒ Part 325 Great Lakes Submerged Lands  ☐ Part 323 Shorelands Protection and Management
☐ Part 303 Wetland Protection  ☐ Part 353 Sand Dune Protection and Management
☐ Part 31 Floodplain/Water Resources Protection

Permission is hereby granted, based on permittee assurance of adherence to State requirements and permit conditions to:

Auger 20 five by five foot support structures into the lakebed in the Straits of Mackinaw to hold two existing 20 inch pipelines in place, in accordance with attached plans and following conditions.

Water Course Affected: Lake Michigan
Property Location: Emmet County, Wawatam Township, Section 10 11
Town/Range 39N, 4W

Authority granted by this permit is subject to the following limitations:
A. Initiation of any work on the permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of this permit.
B. The permittee in exercising the authority granted by this permit shall not cause unlawful pollution as defined by Part 31, Floodplain/Water Resources Protection of the Natural Resources and Environmental Protection Act 451, PA 1994, as amended.
C. This permit shall be kept at the site of the work and available for inspection at all times during the duration of the project or until its date of expiration.
D. All work shall be completed in accordance with the plans and the specifications submitted with the application and/or plans and specifications attached hereto.
E. No attempt shall be made by the permittee to forbid the full and free use by the public of public waters at or adjacent to the structure or work approved herein.
F. It is made a requirement of this permit that the permittee give notice to public utilities in accordance with Act 53 of the Public Act of 1974 and comply with each of the requirements of that act.
G. This permit does not convey property rights in either real estate or material, nor does it authorize any injury to private property or invasion of public or private rights, nor does it waive the necessity of seeking federal assent, all local permits or complying with other state statutes.
H. This permit does not prejudice or limit the right of a riparian owner or other person to institute proceedings in any circuit court of this state when necessary to protect his rights.
I. Permittee shall notify the Department of Environmental Quality within one week after the completion of the activity authorized by this permit, by completing and forwarding the attached, preaddressed post card to the office addressed thereon.
J. This permit shall not be assigned or transferred without the written approval of the Department of Environmental Quality.
K. Failure to comply with conditions of this permit may subject the permittee to revocation of permit and criminal and/or civil action as cited by the specific State Act, Federal Act and/or Rule under which this permit is granted.
L. Work to be done under authority of this permit is further subject to the following special instructions and specifications:
Dear Mr. Klamer:

Reference your application for a Department of the Army permit to repair a pipeline in Lake Michigan at Straits of Mackinac, St. Ignace, Michigan (Section 10, 11, 23-26, Township 39N, 40N, Range 4W).

We have verified that the project is authorized by nationwide permit as published in the Federal Register. As indicated on the enclosed plans prepared May 3, 2006, the following work is authorized under NW03:

Install support harnesses with anchors at 20 locations along a submerged oil pipeline. The support structures will be installed using hydraulically driven auger heads supported by a barge mounted power supply.

This authorization is contingent upon compliance with the following terms and conditions:

a. The enclosed nationwide permit(s) and the general conditions.

b. The following special conditions:

1. The permittee shall contact the U.S. Coast Guard so that a notice to mariners can be circulated prior to commencement of the work.

2. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby,
without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

We also direct your attention to Paragraph D.2 under Further Information, which states, "NWPs do not obviate the need to obtain other Federal, state, or local permits, approvals, or authorizations required by law." We suggest that you contact the Michigan Department of Environmental Quality, Lansing, Michigan, telephone 517-373-9244, to determine if state approval is required. Work should not commence until State approval is obtained.

Any construction activity other than that shown on the plans may not qualify for the authorization. If you contemplate any changes or additional activities from those depicted on the plans, please submit them to this office for authorization review prior to any construction. Upon completion of the work, fill in and return the enclosed COMPLETION REPORT.

This verification is valid until the NWP is modified, reissued, or revoked. All existing NWPs are scheduled to be modified, reissued, or revoked prior to March 18, 2007. It is incumbent on you to remain informed of changes to the NWPs. We will issue a public notice when the NWPs are reissued. If you commence or are under contract to commence this activity before the date that the relevant nationwide permit is modified or revoked, you will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this NWP. If you have any questions on this matter, contact me at (313) 226-3396 and refer to File Number: 88-016-121-4.

Sincerely,

ORIGINAL SIGNED BY

James D. Luke
Project Manager
Permit Evaluation Branch A

Enclosures

Copy Furnished

MDEQ, Upper Peninsula District Office (06-24-16), w/encl. ✓
Sault Ste. Marie Field Office, w/encl.
NOAA, w/print
DEQ Review - Conveyance Issue.pdf

Department of Environmental Quality
Land and Water Management Division

PROJECT REVIEW REPORT

Name of reviewer: Arceto
Date of field review: 6/8/06

GENERAL INFORMATION:

1. Name of applicant: Enbridge Energy

2. Name of property owner:

3. Waterbody type: ☐ Wetland ☐ Warm water stream ☑ Great Lake ☐ Canal (Great Lake)
   (check all that apply) ☐ Floodplain ☐ Cold water stream ☐ Inland lake ☐ Canal (Inland lake or stream)

4. Jurisdictional determination (for Part 303):
   a. Is the wetland contiguous, as defined in Section 303? ☐ Yes ☐ No
   b. Approximate size of wetland = _______ acres
   c. Is the project within a county with a population > 100,000? ☐ Yes ☐ No

5. A permit is required under: ☐ Part 301 ☐ Part 303 ☐ Part 323 ☑ Part 325 ☐ Part 31 ☐ Sec. 404 ☐

6. Is the application drawing complete and accurate? ☑ Yes ☐ No If no, why?

FIELD REVIEW (for Part 303):

7. Total wetland acreage owned by property owner = _______ acres

8. Total wetland acreage to be impacted by proposed activity = _______ acres

DESCRIPT HYDROLOGIC INDICATORS:

GENERAL FIELD NOTES/COMMENTS: (Attach other page(s) for additional notes/comments)

See earlier files 01-24-96 P, 02-24-96 P, 03-24-96 P, 05-24-96 P, for similar reviews. This in-office review was simple for addition sites where the applicant needed to hold the existing pipeline on to the labeled Twin Island, Ameren Transmission P.O. Box 2220, Kingsford, MI 49803, +1-906-396-1566, asked to be cut with permit. They have pipelines nearby.

EQ 2725-1
(Revised April 2000)
**FILE REVIEW:**

<table>
<thead>
<tr>
<th></th>
<th>9. Is there reasonable potential for impacts to state or federally listed threatened or endangered species?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes ☐ No ☐</td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>If yes, has the MDNR and/or US FWS reviewed and signed off on potential impacts?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes ☐ No ☐</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Would the project adversely affect fish and wildlife?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes ☐ No ☐</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Would the project adversely affect recreation and aesthetics?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes ☐ No ☐</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Would the project adversely affect navigation?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes ☐ No ☐</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Would the project adversely affect historic or archeological sites?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes ☐ No ☐</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Would the project comply with state Water Quality Standards?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes ☐ No ☐</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Would the project comply with the Michigan Natural Rivers Act?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes ☐ No ☐</td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>Would the project comply with NREPA, Part 323 (Shorelands Protection and Management)?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes ☐ No ☐</td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>Would the project comply with the Michigan Coastal Zone Management Program?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes ☐ No ☐</td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>If the project is proposed under Part 301 or 325:</td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td>Would the project adversely affect riparian rights?</td>
<td>Yes ☐ No ☐</td>
</tr>
<tr>
<td>b.</td>
<td>Would the project adversely affect the public trust?</td>
<td>Yes ☐ No ☐</td>
</tr>
<tr>
<td>c.</td>
<td>Would the project adversely affect other criteria listed in Section 30106 or 32515 as appropriate?</td>
<td>Yes ☐ No ☐</td>
</tr>
<tr>
<td>d.</td>
<td>Would the project involve work on state-owned bottomlands of the Great Lakes?</td>
<td>Yes ☐ No ☐</td>
</tr>
<tr>
<td>e.</td>
<td>If yes, would a conveyance be required?</td>
<td>Yes ☐ No ☐</td>
</tr>
<tr>
<td>f.</td>
<td>Would the project be consistent with similar structures or other permitted projects in the area?</td>
<td>Yes ☐ No ☐</td>
</tr>
<tr>
<td>19.</td>
<td>If the project is proposed under Part 303:</td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td>Would the activity be in the public interest?</td>
<td>Yes ☐ No ☐</td>
</tr>
<tr>
<td>b.</td>
<td>Is a permit necessary to realize the benefits derived from the activity?</td>
<td>Yes ☐ No ☐</td>
</tr>
<tr>
<td>c.</td>
<td>Would adverse secondary or cumulative effects occur due to the probable impacts of the proposed project in addition to the existing and anticipated activities in the watershed?</td>
<td>Yes ☐ No ☐</td>
</tr>
<tr>
<td>d.</td>
<td>Is the activity otherwise lawful?</td>
<td>Yes ☐ No ☐</td>
</tr>
<tr>
<td>e.</td>
<td>Has the applicant shown that an unacceptable disruption to the aquatic resources would not result?</td>
<td>Yes ☐ No ☐</td>
</tr>
<tr>
<td>f.</td>
<td>Has the applicant shown that the proposed activity is wetland dependent, OR</td>
<td>Yes ☐ No ☐</td>
</tr>
<tr>
<td></td>
<td>Has the applicant shown that no feasible and prudent alternatives exist?</td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>If the project is proposed as a Minor Project (Part 301 or 325) or General Permit (Part 303):</td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td>Is the activity listed by the Department as a category for a minor project or under a general permit?</td>
<td>Yes ☐ No ☐</td>
</tr>
<tr>
<td>b.</td>
<td>Would the activity have only minimal adverse environmental effects when performed separately?</td>
<td>Yes ☐ No ☐</td>
</tr>
<tr>
<td>c.</td>
<td>Would the activity have only minimal adverse environmental effects cumulatively?</td>
<td>Yes ☐ No ☐</td>
</tr>
<tr>
<td>d.</td>
<td>If proposed under a GP, would the activity comply with Part 303 review criteria in #20 a-f?</td>
<td>Yes ☐ No ☐</td>
</tr>
</tbody>
</table>

**EXPLANATION OF FINDINGS AND RECOMMENDATION:** (Attach other page(s) for additional explanation)

Minimal environmental impact. Same activities authorized previously.

**Recommendation:** ☐ Issue ☐ Deny ☐ Modify

**Date of review completion:** 6/8/06

B-34
<table>
<thead>
<tr>
<th>INVOICE NUMBER</th>
<th>INVOICE DATE</th>
<th>DESCRIPTION</th>
<th>DISCOUNT</th>
<th>NET AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>02-MAY-2006</td>
<td>02-MAY-06</td>
<td>MDEQ PERMIT</td>
<td>0.00</td>
<td>500.00</td>
</tr>
</tbody>
</table>

```
PAY TO NAME: MICHIGAN
DISCOUNT TOTAL: 0.00
NET TOTAL: 500.00

PAY: Five Hundred Dollars And 00 Cents

TO THE ORDER OF: MICHIGAN
DEPT OF ENVIRONMENTAL QUALITY
CASHIERS OFFICE
PO BOX 30657
LANSING, MI 48909-8157

Original not received yet

RECEIVED
MAY 06 2006
MDEQ LWMD
MIT CONSOLIDATION UNIT

LASALLE BANK NA.
CHICAGO, IL 60601
ENBRIDGE ENERGY PARTNERS
1100 LOUISIANA, SUITE 3300
HOUSTON, TEXAS 77002
713-650-3900

ENBRIDGE
1100 LOUISIANA, SUITE 3300
HOUSTON, TEXAS 77002
713-650-3900

AMOUNT OF CHECK: 500.00
Read this, and add it to Enbridge’s file. I hope that the information is something that you don’t need, but you need to know.

John Arevalo, PWS Water Resource Cadillac District Supervisor Water Resources Division Michigan Department of Natural Resources and Environment Gaylord Field Office 989-705-3450 arevaloj@michigan.gov

Transmission of crude oil through pipelines is regulated by the Pipeline Hazardous Materials Safety Administration which is housed in the Department of Transportation. If a spill should occur in the Great Lakes (probably all section 10 waters), the Coast Guard would be the primary emergency responder and would establish the incident command structure. If the spill occurs inland affecting surface waters, then EPA would be the primary emergency responder and would establish the incident command structure. In either case, the State would be involved within the established command structure to ultimately ensure that all state regulations are adhered to as well. Helpful?

Our permit was issued Friday, so we’re all set for now. Given your experience w/the Marshall spill, I was hoping that you could give information regarding who reviews the inspection information obtained by Enbridge for their Straits crossing. Since it runs from WI to Sarnia, Mary Dettloff thought that PHMSA would be involved. I am interested in who has oversight, and the chain of command should there be a spill someday. I anticipate more inquiries similar to the letter to our file which you read. Although it does not come under our jurisdiction, I would like more information for myself, just so I know. The other WRD staff who are working w/NDPES permitting for Enbridge will (hopefully) continue to keep me in the loop regarding Enbridge’s app. w/them. Thanks.

John Arevalo, PWS Water Resource Cadillac District Supervisor
Great Lakes Environmental Law Center, West Michigan Environmental Action Council, Natural Resources Defense Council, National Wildlife Federation, Tip of the Mitt Watershed Council, Sierra Club

September 14, 2010

VIA ELECTRONIC MAIL and U.S. MAIL

Scott Rasmusson
Michigan Department of Natural Resources and Environment
Land and Water Management Division
2100 West M-32
Gaylord, MI 49735-9282
989-731-4920
rasmussons@mi.gov

Re: Comments on Draft Permit to Drill Support Structures in the Great Lakes, File No. 10-24-0035P, Enbridge Pipelines (Lakehead), LLC

Dear Mr. Rasmusson,

Please accept these comments submitted on behalf of the Great Lakes Environmental Law Center, West Michigan Environmental Action Council, Natural Resources Defense Council, National Wildlife Federation, Tip of the Mitt Watershed Council, and Sierra Club regarding the Michigan Department of Natural Resources and Environment ("MDNRE") draft Permit to Drill, File No. 10-24-0035P ("Draft Permit"), for the T39N, R04W, Section 10, Wawatam Township, Emmet County, MI proposed by Enbridge Pipelines (Lakehead), LLC. ("Enbridge")

For the reasons set forth below, we request that the MDNRE only approve this permit after ensuring that all safety measures and best management practices are in place to protect Michigan's fragile fresh water ecosystem. Public notice for the Draft Permit states that written comments will be accepted 20 days after August 27, 2010. Therefore, these comments are timely submitted.

I. INTRODUCTION

Enbridge is seeking a permit to drill support structures on the bottom of Lake Michigan to maintain the integrity and safety of existing pipeline structures. A permit is required before Enbridge takes any action pursuant to part 325 of the Submerged Lands Act. Under the Submerged Lands Act, a permit is necessary to protect the waters of the Great Lakes and the Great Lakes bottomlands. Enbridge is seeking to conduct maintenance on an oil/gas pipeline that runs under the Straits of Mackinac. Following the known failures of Enbridge to comply with federal pipeline maintenance recommendations and the subsequent multiple and devastating infractions against our fresh water resources, MDNRE must proceed with all precautionary measures at its disposal to require that any pipeline maintenance in these submerged waters, subject to the Public Trust, be carried out in the safest possible fashion. In light of the valid
concerns about the safety and lack of maintenance on decades old, Enbridge-owned and/or operated pipelines, to protect the ecological health of the Great Lakes and the health and safety of the surrounding communities, this pipeline must be shut down and flushed prior to any maintenance operations and MDNRE must require strict safety measures and adoption of best management practices.

II. Pipes Act of 2006 – Nine Elements of Effective Damage Prevention

In 2006 President Bush signed the PIPES Act to strengthen and improve Federal and State pipeline safety programs. The Pipes Act specifies nine elements which should be implemented to prevent pipeline damage. These nine elements (including Damage Prevention and Corrosion Control) are considered consistent and congruent with the Common Ground Alliance (CGA) Best Practices. MDNRE must require Enbridge to adopt the nine elements in its safety program to ensure the protection of the Great Lakes.

III. Best Management Practices

In 1999, the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (“PHMSA”) published the Common Ground Study of One-Call Systems and Damage Prevention Best Practices. (The Best Practices have since been updated, most recently in 2010). The Common Ground Best Practices are intended to be shared among stakeholders involved with and dependent upon the safe and reliable operation, maintenance, construction, and protection of underground facilities, including oil and gas pipelines. The MDNRE should determine if Enbridge has adopted the Common Ground Alliance Best Practices, and if not, encourage Enbridge to adopt the Best Practices as appropriate. The PHMSA has stated that excavation damage continues to be the leading cause of serious pipeline incidents. To prevent the potential damage caused by any excavation on this project, the MDNRE must require Enbridge to adopt the damage prevention practices as set forth by the PHMSA.

IV. Risk Assessments and Safety Inspections

To help ensure the reliability and integrity of oil pipelines, the industry has taken a risk management approach. The American Petroleum Institute has developed the API 1160 Managing System Integrity for Hazardous Liquid Pipelines. The API 1160 is a key industry standard which lays out a framework for conducting risk assessments for pipeline systems. The MDNRE must ensure Enbridge has adopted the API 1160 risk assessments and, if not, require its incorporation. MDNRE must inquire as to what risk assessments and/or safety inspections Enbridge and the PHMSA have conducted on the Lakehead pipeline system and scrutinize the results, particularly anomalies found in the proposed project area, prior to making a determination on this permit request. MDNRE must also inquire as to what other problems or concerns were detected along this section of the pipeline in Enbridge’s pipeline integrity management program. Finally, MDNRE should take action to ensure that any anomalies in the pipeline identified as potential risks to the watershed are addressed as part of the proposed project and subsequent permit.

---

V. Corrosion

The PHMSA has determined that corrosion accounts for 25% of all significant pipeline incidents.\(^4\) Corrosion is a serious issue and any corrosion of the pipeline at issue should be investigated by MDNRE prior to making a determination on Enbridge’s permit application. Corrosion can affect all types of pipelines, including pipelines submerged in fresh water. Without proper maintenance, corrosion can completely deteriorate a pipeline causing significant damage. Pipeline support structures are the main areas where pipe corrosion becomes a problem. Corrosion at support structures is commonplace because support saddles create crevices which can, over time, undermine the structural integrity of the pipe. If not addressed immediately, corrosion can undercut paint film and eventually cause rapid pipe wall loss. There is available technology that can reduce the likelihood of corrosion at support structures. These technologies include, but are not limited to, protective coatings and linings, cathodic protection, materials selection, and inhibitors.\(^5\)

These best practices are widely adopted by the industry, and MDNRE must evaluate the tools and technologies that Enbridge plans to utilize in anchoring down the pipes on the Great Lakes bottomlands. Economics and cost savings must not be the only driving force in Enbridge’s choice of anchoring systems. MDNRE must ensure that Enbridge has considered the possibility of other, safer, anchoring systems that limit pipe corrosion.

VI. Emergency Preparedness

There are additional questions about the scope of proposed work on the pipeline that were not addressed in the permit application. What contingency plans have been adopted in case of an oil leak or spill during the pipeline anchoring? Have on-site and off-site emergency preparedness plans been filed with state and local government and first responders? MDNRE officials must be on-site for the duration of the project to ensure compliance with applicable federal and state laws and regulations.

CONCLUSION

For all of the above reasons, we respectfully request that the Michigan Department of Natural Resources and Environment fulfill its duty to protect the environment and health of Michigan’s residents by closely scrutinizing this permit application, requiring stringent safety measures, utilizing the most environmentally protective best management practices, and requiring this pipeline to be shut down and flushed prior to any maintenance operations.


\(^5\) [http://www.nace.org/content.cfm?parentId=1046&currentID=1424](http://www.nace.org/content.cfm?parentId=1046&currentID=1424)
Submitted on this 14th day of September, 2010.

Nick Schroeck
Executive Director
Great Lakes Environmental Law Center
440 Burroughs St. Box 70
Detroit, MI 48202
313-820-7797
nschroeck@wayne.edu

Jennifer Baggiani
Student Attorney
Great Lakes Environmental Law Center

Rachel Hood
Executive Director
West Michigan Environmental Action Council

Thom Cmar
Midwest Program Attorney
Natural Resources Defense Council

Marc Smith
Senior Policy Manager
National Wildlife Federation

Grenetta Thomasse, PhD
Program Director
Tip of the Mitt Watershed Council

Anne Woivode
State Director
Sierra Club, Michigan Chapter
DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT

PERMIT

ISSUED TO:

Enbridge Energy
Attn: Jacob Jorgensen, Assoc. Engineer
1320 Grand Avenue
Superior, WI 54880

Permit No. 10-24-0035-P
Issued September 17, 2010
Revised
Expires September 17, 2015

This permit is being issued by the Michigan Department of Natural Resources and Environment (MDNRE) under the provisions of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA) and specifically:

☐ Part 301 Inland Lakes and Streams
☒ Part 325 Great Lakes Submerged Lands
☐ Part 303 Wetlands Protection
☐ Part 31 Floodplain/Water Resources Protection
☐ Part 315 Dam Safety
☐ Part 323 Shorelands Protection and Management
☐ Part 353 Sand Dune Protection and Management

Permission is hereby granted, based on permittee assurance of adherence to State requirements and permit conditions to:

Place helical anchoring structures approximately five feet wide, saddle mounted around two existing 20 inch diameter pipelines and augured into the lake bed in at least ten locations to maintain the integrity of the pipelines, as shown on the attached plans.

Water Course Affected: Lake Michigan
Property Location: Emmet County, Wawatam Township, Section 10 11
Town/Range 39N, 4W

Authority granted by this permit is subject to the following limitations:

A. Initiation of any work on the permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of this permit.
B. The permittee in exercising the authority granted by this permit shall not cause unlawful pollution as defined by Part 31, Floodplain/Water Resources Protection of the NREPA.
C. This permit shall be kept at the site of the work and available for inspection at all times during the duration of the project or until its date of expiration.
D. All work shall be completed in accordance with the plans and the specifications submitted with the application and/or plans and specifications attached hereto.
E. No attempt shall be made by the permittee to forbid the full and free use by the public of public waters at or adjacent to the structure or work approved herein.
F. It is made a requirement of this permit that the permittee give notice to public utilities in accordance with Act 53 of the Public Act of 1974 and comply with each of the requirements of that act.
G. This permit does not convey property rights in either real estate or material, nor does it authorize any injury to private property or invasion of public or private rights, nor does it waive the necessity of seeking federal assent, all local permits or complying with other state statutes.
H. This permit does not prejudice or limit the right of a riparian owner or other person to institute proceedings in any circuit court of this state when necessary to protect his rights.
I. Permittee shall notify the MDNRE within one week after the completion of the activity authorized by this permit, by completing and forwarding the attached, preaddressed post card to the office addressed thereon.
J. This permit shall not be assigned or transferred without the written approval of the MDNRE.
K. Failure to comply with conditions of this permit may subject the permittee to revocation of permit and criminal and/or civil action as cited by the specific State Act, Federal Act and/or Rule under which this permit is granted.
L. Work to be done under authority of this permit is further subject to the following special instructions and specifications:
1. Enbridge and/or its consultants shall provide the MDNRE a site map showing the total number and locations of the anchoring structures that were installed under this permit. This information can be emailed to rasmussons@michigan.gov.

2. Authority granted by this permit does not waive any jurisdiction of the U.S. Corps of Engineers (USACE) or the need for a federal permit, if required.

3. In issuing this permit, the MDNRE has relied on the information and data which permittee has provided in connection with the permit application. If, subsequent to the issuance of this permit, such information and data prove to be false, incomplete, or inaccurate, the MDNRE may modify, revoke, or suspend the permit, in whole or in part, in accordance with the new information.

4. The authority to conduct the activity as authorized by this permit is granted solely under provisions of the governing act as identified above. This permit does not convey, provide, or otherwise imply approval of any other governing act, ordinance, or regulation, nor does it waive the permittee's obligation to acquire any local, county, state or federal approval or authorizations necessary to conduct the activity.

5. The permittee shall indemnify and hold harmless the State of Michigan and its departments, agencies, officials, employees, agents and representatives for any and all claims or causes of action arising from acts or omissions of the permittee, or employees, agents, or representatives of the permittee, undertaken in connection with this permit. This permit shall not be construed as an indemnity by the State of Michigan for the benefit of the permittee or any other person.

6. If any change or deviation from the permitted activity becomes necessary, the permittee shall request, in writing, a revision of the permitted activity and/or mitigation plan from the MDNRE. Such revision requests shall include complete documentation supporting the modification and revised plans detailing the proposed modification. Proposed modifications must be approved, in writing, by the MDNRE prior to being implemented.

7. This permit is being issued for the maximum time allowed under Part 325, Great Lakes Submerged Lands, of the Natural Resources and Environmental Protection Act, PA 451 of 1994, as amended, including all permit extensions allowed under the administrative rule R322.1011(f), as determined by the MDEQ. Therefore, no extensions of this permit will be granted. Initiation of the construction work authorized by this permit indicates the permittee's acceptance of this condition. The permit, when signed by the MDEQ, will be for a five-year period beginning at the date of issuance.

Rebecca A. Humphries, Director
Michigan Department of Natural Resources and Environment

By/Scott Rasmusson
Water Resources Division
989-705-3437

cc: Wawatam Township
    Moran Township
    Barr Engineering
    Ms. Gina Nathan, USACE, Detroit (LRE-2010-00463-56)
    Mr. Steve Casey, MDNRE
Read Instructions pages i - iii. All of the following boxes below must be checked and information provided for the application to be processed:

- All items in Sections 1 through 9 are completed
- Items in Sections 10 through 21 that apply to the project are completed
- Dimensions, volumes and calculations are provided
- Reproducible location map, site plan(s), cross sections and photographs are provided, one set must be black and white on 8½ by 11 inch paper.
- List any additional attachments, tables, etc.,

1) PROJECT LOCATION INFORMATION

- Refer to your property's legal description for the Township, Range, and Section information, and your property tax bill for your Property Tax Identification Number(s).

- Site location Address (road, if no street address)
  - Lake Michigan (all in-water work) between upper and lower Peninsula

- City/Village
  - N/A

- County(ies)
  - Mackinac and Emmet (in Straights)

- Property Tax Identification Number(s)
  - N/A

- Name of Waterbody
  - Lake Michigan

- Project Name or Job Number

- Pipeline Inspection

- Subdivision/Plat
  - N/A

- Lot Number

- Private Claim
  - N/A

- The proposed project is on, within, or involves (check all that apply)
  - a stream
  - a pond (less than 5 acres)
  - a river
  - a channel/canal
  - a ditch or drain
  - an inland lake (5 acres or more)
  - a floodway area
  - a 100-year floodplain

- The project is being built to or impacted by this project
  - a legally established County Drain (date established) (M/D/Y)
  - a Great Lake or Section 10 Waters
  - a natural river
  - a new marina
  - a designated high risk erosion area
  - a dam
  - a structure removal
  - a designated critical dune area
  - a wetland
  - a utility crossing
  - a designated environmental area
  - 500 feet of an existing waterbody

2) DESCRIBE PROPOSED PROJECT AND ASSOCIATED ACTIVITIES, AND THE CONSTRUCTION SEQUENCE AND METHODS (attached additional sheets)

Written summary of all proposed activities. See Attached

Construction Sequence and Methods.

3) APPLICANT, AGENT/CONTRACTOR, AND PROPERTY OWNER INFORMATION

- Owner/Applicant
  - Enbridge Energy, Limited Partnership
  - Enbridge Energy, Limited Partnership

- Mailing Address
  - 1320 Grand Avenue

- City
  - Superior

- State
  - WI

- Zip Code
  - 54880

- Daytime Phone Number with Area Code
  - 715-394-1551

- Cell Phone Number
  - 218-248-0808

- Fax
  - 832-325-5602

- E-mail
  - Jacob. Jorgensen@enbridge.com

- Agent/Contractor
  - (firm name and contact person)

- Property Owner's Name
  - Jacob Jorgensen

- Mailing Address
  - 1320 Grand Avenue

- Address

- City
  - Superior

- State
  - WI

- Zip Code
  - 54880

- Daytime Phone Number with Area Code
  - 715-394-1551

- Cell Phone Number
  - 218-248-0808

- Fax
  - 832-325-5602

- E-mail
  - Jacob Jorgensen@enbridge.com

- Yes / No

- Is the applicant the solo owner of all property on which this project is to be constructed and all property involved or impacted by this project?

- If property owner authorizing the agent/contractor/other owner to act on his or her behalf or a copy of easements or right-of-ways must be provided. If multiple property owners, also attach a list of all owners along with their names, mailing addresses, and telephone numbers. If the applicant is a corporation, a corporate officer must provide written document authorizing any agent/contractor listed above to act on its behalf. A letter of authorization must be provided from an owner receiving dredge spoils on their property, or where access through their property is required.
PROPOSED PROJECT PURPOSE, INTENDED USE, AND ALTERNATIVES CONSIDERED (Attach additional sheets if necessary)

Purpose/Intended Use: The purpose must include any new development or expansion of an existing land use. See attached.

Alternatives: Include a description of alternatives considered to avoid or minimize resource impacts. Include factors such as, but not limited to, alternative construction technologies; alternative project layout and design; and alternative locations. For utility crossings, include both alternative routes and alternative project layout and design.

LOCATING YOUR PROJECT SITE

Attach a black and white, legible copy of a map that clearly shows the site location and road from the nearest major intersection, and includes a home site plan.

Is there an access road to the project? ☐ No ☐ Yes (If Yes, type of road, check all that apply) ☐ private ☐ public ☐ improved ☐ unimproved

Name of roads at closest main intersection N/A - work conducted entirely in water

Directions from main intersection

Style of house or other building on site: ☐ ranch ☐ 2-story ☐ cape cod ☐ bi-level ☐ cottage/cabin ☐ pole barn ☐ none ☐ other (describe)

Color of adjacent property house and/or buildings

Fire lane number

Lot number

Address is visible on: ☐ house ☐ garage ☐ mailbox ☐ sign ☐ other (describe)

How can your site be identified if there is no visible address?

Provide directions to the project site, with distances from the best and nearest visible landmark and waterbody. Project locations all located within the Straits of Mackinac in Lake Michigan; all work will be conducted along underwater pipelines crossing.

Does the project cross the boundaries of two or more political jurisdictions? (City/Township, Township/Township, County/County, etc.) ☐ No ☐ Yes ☐ If yes, list jurisdictions: Unknown

List all other federal, interstate, state, or local agency authorizations required for the proposed activity, including all approvals or denials received.

US Coast Guard Notification

Mackinac Bridge Authority Notification

COMPLIANCE

If a permit is issued, date activity will commence (M/D/Y) / / Proposed completion date (M/D/Y) / /

Has any construction activity commenced or been completed in a regulated area? ☐ No ☐ Yes

☐ If Yes, identify the portion(s) underway or completed on drawings or attach project specifications and give completion date(s) (M/D/Y) / /

Were the regulated activities conducted under a MDEQ permit? ☐ No ☐ Yes If Yes, list the MDEQ permit number / /

Are you aware of any unresolved violations of environmental law or litigation involving the property? ☐ No ☐ Yes (If Yes, explain)

ADJACENT/IMPACTED OWNERS (Attach additional sheets if necessary)

☐ Complete information for all adjacent and impacted property owners and the lake association or established lake board, including the contact person’s name.

☐ If you own the adjacent lot, provide the requested information for the first adjacent parcel that is not owned by you.

Property Owner’s Name

Mailing Address

City

State

Zip Code

See attached for landowners information.

Name of ☐ Established Lake Board ☐ or Lake Association and the Contact Person’s name, phone number, and mailing address

APPLICANT’S CERTIFICATION

READ CAREFULLY BEFORE SIGNING

I am applying for a permit(s) to authorize the activities described herein. I certify that I am familiar with the information contained in this application; that it is true and accurate; and, to the best of my knowledge, that it is in compliance with the State Coastal Zone Management Program. I understand that there are penalties for submitting false information and that any permit issued pursuant to this application may be revoked if information on this application is untrue. I certify that I have the authority to undertake the activities proposed in this application. By signing this application, I agree to allow representatives of the MDEQ, USACE, and/or their agents or contractors to enter upon said property in order to inspect the proposed activity site and the completed project. I understand that I must obtain all other necessary local, county, state, or federal permits and that the granting of other permits by local, county, state, or federal agencies does not release me from the requirements of obtaining the permit requested herein before commencing the activity. I understand that the payment of the application fee does not guarantee the issuance of a permit.

☐ Property Owner

☐ Agent/Contractor

☐ Corporation/Public Agency

Title/Associate Region

Printed Name

Signature

Date (M/D/Y)

03/25/2010
### 15 DRAWDOWN OF AN IMPoundMENT

- If wetlands will be impacted, also complete Section 12.

**Type of drawdown**
- [ ] over winter
- [ ] temporary
- [ ] one-time event
- [ ] annual event
- [ ] permanent (dam removal)
- [ ] other

**Reason for drawdown**

**Has there been a previous drawdown?**
- [ ] No
- [ ] Yes (If Yes, provide date (M/D/Y)

**Does waterbody have established legal lake level?**
- [ ] No
- [ ] Yes
- [ ] Not Sure

**Extent of vertical drawdown** (ft)

**Date drawdown would start (M/D/Y)**

**Date refilling would start (M/D/Y)**

**Type of outlet discharge structure to be used**

**Impoundment area at normal water level (acres)**

**Sediment depth behind impoundment discharge structure (ft)**

**Datum used**

- [ ] COMPLETE
- [ ] Previous MDEQ permit number, if known

---

### 17 DAM, EMBANKMENT, DIKE, SPILLWAY, OR CONTROL STRUCTURE ACTIVITIES (See Sample Drawing 15)

- For more information go to [www.michigan.gov/dredgessafety](http://www.michigan.gov/dredgessafety)
- If wetlands will be impacted, also complete Section 12.
- Attach site-specific conceptual plans for construction of a new dam, reconstruction of a failed dam, or enlargement of an existing dam for resource impact review.
- Detailed engineering plans are required once the activity has been determined to be permitable from an environmental standpoint.

**Which one best describes your project?**

- [ ] new dam construction
- [ ] reconstruction of a failed dam
- [ ] enlargement of an existing dam
- [ ] dam repair
- [ ] dam alteration
- [ ] dam abandonment
- [ ] dam removal
- [ ] other

**Dam ID Number**

- [ ] Known

**Type of outlet discharge structure**

- [ ] surface
- [ ] bottom
- [ ] mid-depth

**Will proposed activities require a drawdown of the waterbody to complete the work?**
- [ ] No
- [ ] Yes (If Yes, also complete Section 16)

**Riprap**

- [ ] Dredging/Excavation
- [ ] Volume (cu yd)

**Fill Volume**

- [ ] (cu yd)

**Does structure allow complete drainage of waterbody?**
- [ ] No
- [ ] Yes

**Describe benchmark and show on plans**

**Have you engaged the services of a Licensed Professional Engineer?**
- [ ] No
- [ ] Yes

**If Yes, provide name, registration number, and mailing address.**

**Name**

**Registration Number**

**Mailing Address**

---

### COMPLETE THE FOLLOWING FOR A NEW DAM, RECONSTRUCTION OF A FAILED DAM, OR ENLARGEMENT OF AN EXISTING DAM

**Describe the type of dam and how you will design the dam and embankment to control seepage through and underneath the dam.**

**Embankment top elevation (ft)**

**Streambed elevation at downstream embankment toe (ft)**

**Structural height (difference between embankment top elevation and streambed elevation at downstream embankment toe) (ft)**

**Embankment length (ft)**

**Embankment top width (ft)**

**Embankment bottom width (ft)**

**Embankment slopes (vertical / horizontal)**

**Proposed normal pool elevation (ft)**

**Impoundment flood elevation (ft)**

**Maximum vertical drawdown capability (ft)**

**Have soil borings been taken at dam location?**
- [ ] No
- [ ] Yes

**Will a cold water underspill be provided?**
- [ ] No
- [ ] Yes

**Do you have flowage rights to all proposed flooded property at the design flood elevation?**
- [ ] No
- [ ] Yes

---

### 18 UTILITY CROSSINGS (See Sample Drawings 12 and 13, and EZ Guide)

- If side casting is required, complete Sections 10A and 10B. If spoil will be placed in wetlands or wetlands may be impacted, complete Section 12.
- Attach additional sheets or tables with the requested information as needed for multiple crossings.

**What method will be used to construct the crossings?**

- [ ] Flume
- [ ] Flow
- [ ] Open trench
- [ ] Jack and bore
- [ ] Directional drilling

**Type**

- [ ] Sanitary sewer
- [ ] Storm sewer
- [ ] Watermain
- [ ] Cable
- [ ] Oil/gas pipeline

**Number of wetland crossings**

**Number of inland lake or stream crossings**

**Pipe diameter (in)**

**Pipe length per crossing (ft)**

**Distance below streambed or wetland (in)**

**Trench width (ft)**

- [ ] 20" 21,000
Project Description

2 – Describe proposed project and associated activities, and the construction sequence and methods.
The purpose of the project will be to perform visual inspection of the existing 20-inch pipelines installed beneath the Straits of Mackinac and install support structures in 10 locations along the pipeline. The most of the location of the existing pipelines is shown on the attached site location Figures 1, 2, 3, & 4 in attachment “FIGURES AND CONSTRUCTION TYPICALS”. The work will involve the installation of a helical anchoring system with saddle mounted about the pipeline in each proposed location to increase support; the anchors will be augered directly into the lake bed. The proposed locations for installation of the anchoring structures are provided on the attached map. During the underwater inspection additional location requiring maintenance may be identified. Installation of support structures in these locations would occur during this project. Schematics showing the auguring apparatus and method as well as equipment utilized for installation are included with the attachments.

Work will be conducted from barges and a certified diving contractor will be employed to oversee the installation. Work is scheduled to begin September 17, 2010 and is expected to take 10 days at the minimum with very good weather conditions and up to 30 days with poor weather conditions.

4 – Proposed project purpose, intended use, and alternative considered.
In order to maintain pipeline integrity, installation of additional supports to minimize the distance between presently unsupported pipeline spans is necessary. The proposed locations for installation of the anchoring structures are provided on the attached map. Schematics showing the auguring apparatus and method as well as equipment utilized for installation are included with the attachments. The support method is anticipated to incur minimal or no environmental impact. This project is considered pipeline maintenance and is not associated with a new utility installation.

The proposed work is necessary to provide better overall pipeline integrity and safety. Do nothing or the no-build alternative presents a future risk to the pipeline. The no-build is not a viable option.
**PROJECT REVIEW REPORT**

**Name of reviewer:** Scott Rasmusson  
**Date of field review:** Desktop

### GENERAL INFORMATION:

<table>
<thead>
<tr>
<th>1. Name of applicant:</th>
<th>Enbridge Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Name of property owner:</td>
<td>various</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Waterbody type:</th>
<th>Wetland</th>
<th>Warm water stream</th>
<th>Great Lake</th>
<th>Canal (Great Lake)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(check all that apply)</td>
<td>Floodplain</td>
<td>Cold water stream</td>
<td>Inland lake</td>
<td>Canal (Inland lake)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. Jurisdictional determination (for Part 303):</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Is the wetland contiguous, as defined in Section 30301?</td>
</tr>
<tr>
<td>b. Approximate size of wetland =</td>
</tr>
<tr>
<td>c. Is the project within a county with a population &gt; 100,000?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5. A permit is required under:</th>
<th>Part 301</th>
<th>Part 303</th>
<th>Part 323</th>
<th>Part 325</th>
<th>Part 31</th>
<th>Sec. 404</th>
</tr>
</thead>
</table>

| 6. Is the application drawing complete and accurate? | Yes | No |

### FIELD REVIEW (for Part 303):

<table>
<thead>
<tr>
<th>7. Total wetland acreage owned by property owner =</th>
<th>acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Total wetland acreage to be impacted by proposed activity =</td>
<td>acres</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dominant plants</th>
<th>Indicator status</th>
<th>Other plants</th>
<th>Indicator status</th>
<th>Soils (description)</th>
<th>Depth</th>
</tr>
</thead>
</table>

### DESCRIBE HYDROLOGIC INDICATORS:

### GENERAL FIELD NOTES/COMMENTS: (Attach other page(s) for additional notes/comments)

*Project is for up to 10 anchoring structures, to hold the pipeline along the bottom of Lake Michigan.*

*Several other permits have been issued by this office for maintenance of this and other pipelines in the area.*
Arevalo, John (DNRE)

From: Arevalo, John (DNRE)
Sent: Tuesday, September 07, 2010 8:27 AM
To: Kristen Benson
Cc: 'Alina M. Heydt'; Tammy Leinweber
Subject: RE: Straits of Mackinac project (MDNRE File #10-24-0035-P)

Because you have crossing easements which presumably have language about maintaining the pipelines, you could provide me with those specific pages of the easement documents in lieu of getting letters of authorization to act as the riparian owner’s agent in this matter. I do not need copies of the entire easement documents, just pertinent language regarding Enbridge’s ability to maintain the pipeline.

John Arevalo, PWS
Water Resource Cadillac District Supervisor
Water Resources Division
Michigan Department of Natural Resources and Environment
Gaylord Field Office
989-705-3450
arevaloj@michigan.gov

From: Kristen Benson [mailto:Kristen.Benson@enbridge.com]
Sent: Thursday, September 02, 2010 1:42 PM
To: Arevalo, John (DNRE)
Cc: 'Alina M. Heydt'; Tammy Leinweber
Subject: RE: Straits of Mackinac project (MDNRE File #10-24-0035-P)

John,

No, these properties are not Enbridge owned although we do have crossing easements. I believe the property ownership on the UP is city-owned and on the lower side, county-owned, as I believe it is noted in the application.

Please let me know if you need any additional information. If you have any questions specific to the application, you may contact Alina Heydt at Barr Engineering; she is cc’d on this note so you have her email; her phone # is 218-343-7777.

Sincerely,

Kris Benson
Senior Environmental Analyst
Enbridge
119 n. 28th St. E.
Superior, WI. 54880
Office: 715-394-1572
Cell: 218-348-1177

9/7/2010
From: Arevalo, John (DNRE) [mailto:AREVALOJ@michigan.gov]
Sent: Thursday, September 02, 2010 12:35 PM
To: Kristen Benson
Subject: Straits of Mackinac project (MDNRE File #10-24-0035-P)

Ms. Benson: is Enbridge Energy the riparian owner in the upper and lower peninsulas of Michigan where the pipelines come ashore? FYI, your file is now here in my office in Gaylord. Thank you.

John Arevalo, PWS
Water Resource Cadillac District Supervisor
Water Resources Division
Michigan Department of Natural Resources and Environment
Gaylord Field Office
989-705-3450
arevaloj@michigan.gov

******************************************************************************* IMPORTANT NOTICE*******************************************************************************
Unless otherwise indicated or obvious from the nature of the transmittal, the information contained in this email message is CONFIDENTIAL information intended for the use of the individual or entity named herein. If the reader of this message is not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please immediately notify the sender using the above contact information or by return email and delete this message and any copies from your computer system. Thank you.

9/7/2010
Because Enbridge does not own the two properties, I would like you to mail me written authorization from the two affected prop. owners giving Enbridge the authorization to be their agent to apply for this permit, since they are the riparian owners. I understand that you have an easement, but this letter of authorization would suffice. Thank you.

-----Original Message-----
From: Kristen Benson [mailto:Kristen.Benson@enbridge.com]
Sent: Thu 9/2/2010 1:42 PM
To: Arevalo, John (DNRE)
Cc: 'Alina M. Heydt'; Tammy Leinweber
Subject: RE: Straits of Mackinac project (MDNRE File #10-24-0035-P)

John,

No, these properties are not Enbridge owned although we do have crossing easements. I believe the property ownership on the UP is city-owned and on the lower side, county-owned, as I believe it is noted in the application.

Please let me know if you need any additional information. If you have any questions specific to the application, you may contact Alina Heydt at Barr Engineering; she is cc'd on this note so you have her email; her phone # is 218-343-7777.

Sincerely,

Kris Benson
Senior Environmental Analyst
Enbridge
119 n. 28th St. E.
Superior, WI. 54880
Office: 715-394-1572
Cell: 218-348-1177

From: Arevalo, John (DNRE) [mailto:AREVALOJ@michigan.gov]
Sent: Thursday, September 02, 2010 12:35 PM  
To: Kristen Benson  
Subject: Straits of Mackinac project (MDNRE File #10-24-0035-P)

Ms. Benson: Is Enbridge Energy the riparian owner in the upper and lower peninsulas of Michigan where the pipelines come ashore? FYI, your file is now here in my office in Gaylord. Thank you.

John Arevalo, PWS  
Water Resource Cadillac District Supervisor Water Resources Division Michigan  
Department of Natural Resources and Environment Gaylord Field Office 989-705-3450  
arevaloj@michigan.gov

*************************************************************************** IMPORTANT NOTICE***************************************************************************

******Unless otherwise indicated or obvious from the nature of the transmittal, the information contained in this email message is CONFIDENTIAL information intended for the use of the individual or entity named herein. If the reader of this message is not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please immediately notify the sender using the above contact information or by return email and delete this message and any copies from your computer system. Thank you.******
### 1. PROJECT LOCATION INFORMATION

- **Site Location Address** (road, if no street address)
  - Lake Michigan (all in-water work) between Upper and Lower Peninsula

- **City/Village**
  - N/A

- **County(ies)**
  - Mackinac and Emmet (in Straights)

- **Name of Waterbody**
  - Lake Michigan

- **Project Name or Job Number**
  - Pipeline Inspection

- **Subdivision/Plat**
  - N/A

- **Lot Number**
  - N/A

- **Private Claim**
  - N/A

- **Property Tax Identification Number(s)**
  - N/A

- **Property Tax Identification Number(s)**
  - N/A

- **Project types**
  - Private
  - Public/Government
  - Building addition
  - New building or structure
  - Project is receiving federal transportation funds
  - Industrial
  - Building renovation or restoration
  - River restoration
  - Single-family
  - Multi-family
  - Other

- **The proposed project is on, within, or involves (check all that apply)**
  - Yes
  - A stream
  - A pond (less than 5 acres)
  - A Great Lake or Section 10 Waters
  - A natural river
  - An inland lake (5 acres or more)
  - A designated critical dune area
  - A wetland
  - A floodplain
  - A designated environmental area
  - 500 feet of an existing waterbody

### 2. DESCRIBE PROPOSED PROJECT AND ASSOCIATED ACTIVITIES, AND THE CONSTRUCTION SEQUENCE AND METHODS (attached additional sheets)

**Written Summary of All Proposed Activities. See Attached**

**Construction Sequence and Methods.**

### 3. APPLICANT, AGENT/CONTRACTOR, AND PROPERTY OWNER INFORMATION

- **Owner/Applicant**
  - Enbridge Energy, Limited Partnership
  - Jacob Jorgensen, Associate Region Engineer

- **Mailing Address**
  - 1320 Grand Avenue

- **City**
  - Superior

- **State**
  - WI

- **Zip Code**
  - 54880

- **Daytime Phone Number with Area Code**
  - 715-394-1551

- **Cell Phone Number**
  - 218-248-0808

- **Fax**
  - 832-325-5602

- **E-mail**
  - Jacob.Jorgensen@enbridge.com

- **Agent/Contractor**
  - Firm name and contact person

- **Property Owner's Name**
  - (if different from applicant)

- **Daytime Phone Number with Area Code**
  - -

- **Cell Phone Number**
  - -

- **City**
  - -

- **State**
  - -

- **Zip Code**
  - -
US Army Corps of Engineers (USACE)

Michigan Department of Environmental Quality (MDEQ)

☐ No  ☐ Yes  Is there a MDEQ conservation easement or other easement, deed restriction, lease, or other encumbrance upon the property in the project area?

☐ If yes, attach a copy.

☐ PROPOSED PROJECT PURPOSE, INTENDED USE, AND ALTERNATIVES CONSIDERED (Attach additional sheets if necessary)

Purpose/Intended Use: The purpose must include any new development or expansion of an existing land use. See attached.

Alternatives: Include a description of alternatives considered to avoid or minimize resource impacts. Include factors such as, but not limited to, alternative construction technologies; alternative project layout and design; and alternative locations. For utility crossings, include both alternative routes and alternative methods of construction. See attached.

☐ LOCALLING YOUR PROJECT SITE

☐ Attach a black and white, legible copy of a map that clearly shows the site location and road from the nearest major intersection, and includes a scale of measurement.

Is there an access road to the property? ☐ No  ☐ Yes (If Yes, type of road, check all that apply) ☐ private ☐ public ☐ improved ☐ unimproved

Name of roads at closest main intersection N/A - work conducted entirely in water

☐ Directions from main intersection

Style of house or other building on site ☐ ranch ☐ 2-story ☐ cape cod ☐ bungalow ☐ cottage/cabin ☐ polo barn ☐ none ☐ other (describe)

Color of adjacent property house and/or buildings

Color of adjacent property house and/or buildings

House number

Street name

Fire lane number

Lot number

Address is visible on ☐ house ☐ garage ☐ mailbox ☐ sign ☐ other (describe)

How can your site be identified if there is no visible address?

Provide directions to the project site, with distances from the best and nearest visible landmark and waterbody. Project locations all located within the Straits of Mackinac in Lake Michigan: all work will be conducted along underwater pipelines crossing.

Does the project cross the boundaries of two or more political jurisdictions? (City/Township, Township/Township, County/County, etc.) ☐ No  ☐ Yes ☐ If Yes, list jurisdictions: Unknown

☐ List all other federal, interstate, state, or local agency authorities required for the proposed activity, including all approvals or denials received.

Agency

Type of approval

Identification number

Date applied

Date approved/denied

If denied, reason for denial

☐ Michigan Bridge Authority

☐ Notification

☐ Compliance

If a permit is issued, date activity will commence (M/D/Y) / / Proposed completion date (M/D/Y) / /

Has any construction activity commenced or been completed in a regulated area? ☐ No  ☐ Yes

☐ If Yes, identify the portion(s) underway or completed on drawings or attach project specifications and give completion date(s) (M/D/Y) / /

☐ Are you aware of any unresolved violations of environmental law or litigation involving the property? ☐ No  ☐ Yes (If Yes, explain)

☐ Adjacent/Property and Impacted Owners (Attach additional sheets if necessary)

☑ Complete information for all adjacent and impacted property owners and the lake association or established lake board, including the contact person’s name.

☑ If you own the adjacent lot, provide the requested information for the first adjacent parcel that is not owned by you.

Property Owner’s Name

Mailing Address

City

State

Zip Code

See attached for landowner information.

Name of ☐ Established Lake Board ☐ or Lake Association and the Contact Person’s name, phone number, and mailing address

☐ Applicant’s Certification

☐ READ CAREFULLY BEFORE SIGNING

I am applying for a permit(s) to authorize the activities described herein. I certify that I am familiar with the information contained in this application; that it is true and accurate; and, to the best of my knowledge, that it is in compliance with the State Coastal Zone Management Program. I understand that there are penalties for submitting false information and that any permit issued pursuant to this application may be revoked if information on this application is untrue. I certify that I have the authority to undertake the activities proposed in this application. By signing this application, I agree to allow representatives of the MDEQ, USACE, and/or their agents or contractors to enter upon said property in order to inspect the proposed activity site and the completed project. I understand that I must obtain all other necessary local, county, state or federal permits and that the granting of other permits by local, county, state, or federal agencies does not release me from the requirements of obtaining the permit requested herein before commencing the activity. I understand that the payment of the application fee does not guarantee the issuance of a permit.

☐ Property Owner

☐ Agent/Contractor

☐ Corporation/Public Agency – Title: Associate Region Engineer

Printed Name

Signature

Date (M/D/Y)

08/25/2010
16. **DRAWDOWN OF AN IMPOUNDMENT**

- If wetlands will be impacted, also complete Section 12.

<table>
<thead>
<tr>
<th>Type of drawdown</th>
<th>over winter</th>
<th>temporary</th>
<th>one-time event</th>
<th>annual event</th>
<th>permanent (dam removal)</th>
<th>other</th>
</tr>
</thead>
</table>

Reason for drawdown

- Has there been a previous drawdown? [ ] No [ ] Yes (If Yes, provide date [M/D/Y])

- Does waterbody have established legal lake level? [ ] No [ ] Yes [ ] Not Sure

<table>
<thead>
<tr>
<th>Extent of vertical drawdown (ft)</th>
<th>Impoundment design head (ft)</th>
<th>Number of adjacent or impacted property owners</th>
</tr>
</thead>
</table>

- Date drawdown would start (M/D/Y)
- Date drawdown would stop (M/D/Y)

<table>
<thead>
<tr>
<th>Date refill would start (M/D/Y)</th>
<th>Date refill would end (M/D/Y)</th>
<th>Relief of drawdown (ft)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Type of outlet discharge structure to be used</th>
<th>Impoundment area at normal water level (acres)</th>
<th>Sediment depth behind impoundment discharge structure (ft)</th>
</tr>
</thead>
</table>

- Which one best describes your project? [ ] new dam construction [ ] reconstruction of a failed dam [ ] enlargement of an existing dam

<table>
<thead>
<tr>
<th>Dam ID Number</th>
<th>Type of outlet discharge structure</th>
</tr>
</thead>
</table>

- Dredging/Excavation

<table>
<thead>
<tr>
<th>Riprap Volume (cu yd)</th>
<th>Fill volume (cu yd)</th>
<th>Does structure allow complete drainage of waterbody? [ ] No [ ] Yes</th>
</tr>
</thead>
</table>

- Have you engaged the services of a Licensed Professional Engineer? [ ] No [ ] Yes If Yes, provide name, registration number, and mailing address.

<table>
<thead>
<tr>
<th>Benchmark elevation (ft)</th>
<th>Datum used</th>
<th>Describe benchmark and show on plans</th>
</tr>
</thead>
</table>

- Will water diversion during construction be required? [ ] No [ ] Yes If Yes, describe how the stream flow will be controlled through the dam construction area during the proposed project activities:

**COMPLETE THE FOLLOWING FOR A NEW DAM, RECONSTRUCTION OF A FAILED DAM, OR ENLARGEMENT OF AN EXISTING DAM**

- Describe the type of dam and how you will design the dam and embankment to control seepage through and underneath the dam.

<table>
<thead>
<tr>
<th>Embankment top elevation (ft)</th>
<th>Streambed elevation at downstream embankment toe (ft)</th>
<th>Structural height (difference between embankment top elevation and streambed elevation at downstream embankment toe) (ft)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Embankment length (ft)</th>
<th>Embankment top width (ft)</th>
<th>Embankment bottom width (ft)</th>
<th>Embankment slopes (vertical / horizontal)</th>
<th>Upstream Downstream</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Proposed normal pool elevation (ft)</th>
<th>Impoundment flood elevation (ft)</th>
<th>Maximum vertical drawdown capability (ft) (Attach operational procedure of the proposed structure, if available)</th>
</tr>
</thead>
</table>

- Have soil borings been taken at dam location? [ ] No [ ] Yes [ ] If Yes, attach results.

- Will a cold water underspill be provided? [ ] No [ ] Yes [ ] If Yes, invert elevation (ft)

- Have you flowed rights to all proposed flooded property at the design flood elevation? [ ] No [ ] Yes

17. **DAM, EMBANKMENT, DIKE, SPILLWAY, OR CONTROL STRUCTURE ACTIVITIES** (See Sample Drawing 15)

- For more information go to www.michigan.gov/legendsafety
- If wetlands will be impacted, also complete Section 12.
- Attach site-specific conceptual plans for construction of a new dam, reconstruction of a failed dam, or enlargement of an existing dam for resource impact review.
- Detailed engineering plans are required once the activity has been determined to be permitable from an environmental standpoint.
- Attach detailed engineering plans for a dam repair, dam alteration, dam abandonment, or dam removal.

<table>
<thead>
<tr>
<th>Dam ID Number</th>
<th>Type of outlet discharge structure</th>
</tr>
</thead>
</table>

- Dredging/Excavation

<table>
<thead>
<tr>
<th>Riprap Volume (cu yd)</th>
<th>Fill volume (cu yd)</th>
<th>Does structure allow complete drainage of waterbody? [ ] No [ ] Yes</th>
</tr>
</thead>
</table>

- Have you engaged the services of a Licensed Professional Engineer? [ ] No [ ] Yes If Yes, provide name, registration number, and mailing address.

<table>
<thead>
<tr>
<th>Benchmark elevation (ft)</th>
<th>Datum used</th>
<th>Describe benchmark and show on plans</th>
</tr>
</thead>
</table>

- Will a water diversion during construction be required? [ ] No [ ] Yes If Yes, describe how the stream flow will be controlled through the dam construction area during the proposed project activities:

**COMPLETE THE FOLLOWING FOR A NEW DAM, RECONSTRUCTION OF A FAILED DAM, OR ENLARGEMENT OF AN EXISTING DAM**

- Describe the type of dam and how you will design the dam and embankment to control seepage through and underneath the dam.

<table>
<thead>
<tr>
<th>Embankment top elevation (ft)</th>
<th>Streambed elevation at downstream embankment toe (ft)</th>
<th>Structural height (difference between embankment top elevation and streambed elevation at downstream embankment toe) (ft)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Embankment length (ft)</th>
<th>Embankment top width (ft)</th>
<th>Embankment bottom width (ft)</th>
<th>Embankment slopes (vertical / horizontal)</th>
<th>Upstream Downstream</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Proposed normal pool elevation (ft)</th>
<th>Impoundment flood elevation (ft)</th>
<th>Maximum vertical drawdown capability (ft) (Attach operational procedure of the proposed structure, if available)</th>
</tr>
</thead>
</table>

- Have soil borings been taken at dam location? [ ] No [ ] Yes [ ] If Yes, attach results.

- Will a cold water underspill be provided? [ ] No [ ] Yes [ ] If Yes, invert elevation (ft)

- Have you flowed rights to all proposed flooded property at the design flood elevation? [ ] No [ ] Yes

18. **UTILITY CROSSINGS** (See Sample Drawings 12 and 13, and EZ Guide)

- If side casting is required, complete Sections 10A and 10B. If spoils will be placed in wetlands or wetlands may be impacted, complete Section 12.
- Attach additional sheets or tables with the requested information as needed for multiple crossings.

<table>
<thead>
<tr>
<th>What method will be used to construct the crossings?</th>
<th>Number of wellhead crossings</th>
<th>Number of inland lake or stream crossings</th>
<th>Pipe diameter (in)</th>
<th>Pipe length per crossing (ft)</th>
<th>Distance below streambed or wetland (in)</th>
<th>Trench width (ft)</th>
</tr>
</thead>
</table>

- Sanitary sewer
- Storm sewer
- Watermain
- Cable
- Oil/gas pipeline

<table>
<thead>
<tr>
<th>Type</th>
<th>Number of wellhead crossings</th>
<th>Number of inland lake or stream crossings</th>
<th>Pipe diameter (in)</th>
<th>Pipe length per crossing (ft)</th>
<th>Distance below streambed or wetland (in)</th>
<th>Trench width (ft)</th>
</tr>
</thead>
</table>

- Oil/gas pipeline

<table>
<thead>
<tr>
<th>Pipe diameter (in)</th>
<th>Pipe length per crossing (ft)</th>
</tr>
</thead>
</table>

- 20" 21,000
MDNRE and USACE - Joint Permit Application  
Enbridge Pipelines (Lakehead), L.L.C.  
Straits of Mackinac Maintenance and Inspection Project, Line 5  
Mackinac and Emmet Counties, Michigan  

Project Description

2. Describe proposed project and associated activities, and the construction sequence and methods.  
The purpose of the project will be to perform visual inspection of the existing 20-inch pipelines installed beneath the Straits of Mackinac and install support structures in more than 10 locations along the pipeline. The most of the location of the existing pipelines is shown on the attached site location Figures 1, 2, 3, & 4 in attachment “FIGURES AND CONSTRUCTION TYPICALS”. The work will involve the installation of a helical anchoring system with saddle mounted about the pipeline in each proposed location to increase support; the anchors will be augered directly into the lake bed. The proposed locations for installation of the anchoring structures are provided on the attached map. During the underwater inspection additional location requiring maintenance may be identified. Installation of support structures in these locations would occur during this project. Schematics showing the auguring apparatus and method as well as equipment utilized for installation are included with the attachments.

Work will be conducted from barges and a certified diving contractor will be employed to oversee the installation. Work is scheduled to begin September 17, 2010 and is expected to take 10 days at the minimum with very good weather conditions and up to 30 days with poor weather conditions.

4. Proposed project purpose, intended use, and alternative considered.  
In order to maintain pipeline integrity, installation of additional supports to minimize the distance between presently unsupported pipeline spans is necessary. The proposed locations for installation of the anchoring structures are provided on the attached map. Schematics showing the auguring apparatus and method as well as equipment utilized for installation are included with the attachments. The support method is anticipated to incur minimal or no environmental impact. This project is considered pipeline maintenance and is not associated with a new utility installation.

The proposed work is necessary to provide better overall pipeline integrity and safety. Do nothing or the no-build alternative presents a future risk to the pipeline. The no-build is not a viable option.
Hi All,

Enbridge submitted an application for coverage under a general NPDES permit to discharge any petroleum impacted dewatering wastewater generated from the maintenance project proposed for the pipeline crossing the Straits. The application is currently on hold at the request of Enbridge. The NPDES permit (if issued) can deal only with potential impacts resulting from the dewatering discharge. Although it is not exactly clear from these notes what special safety requirements and additional information the public would like to see brought into the DNRE's regulatory process, it is unlikely that the NPDES permit can deal with them. Jerry Saalfeld or Sean Syts can provide more info if needed.

The WRD also administers Part 5, Spillage of Oil and Polluting Materials, but this appears to deal only with on land storage facilities. Pete Ostlund is looking into this more closely to determine for sure whether we have/don't have some leverage (i.e. for safety) under this Part. He is in a meeting all day today so he will get back to everyone tomorrow or Monday.

Dina

-----Original Message-----
From: Graf, Tom (DNRE)
Sent: Wednesday, September 15, 2010 2:26 PM
To: Fitzner, Wendy (DNRE); Dettloff, Mary (DNRE); Rasmusson, Scott (DNRE); Arevalo, John (DNRE)
Cc: Klemans, Diana (DNRE)
Subject: RE: More reporter questions

Mary -

Scott hit the nail on the head - we can only react to the work proposed in the permit application and evaluate the impacts of the proposed work pursuant to Part 325. We do not have authority under Part 325 to regulate the operation of the pipeline. Might