

**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]**

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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](#)).

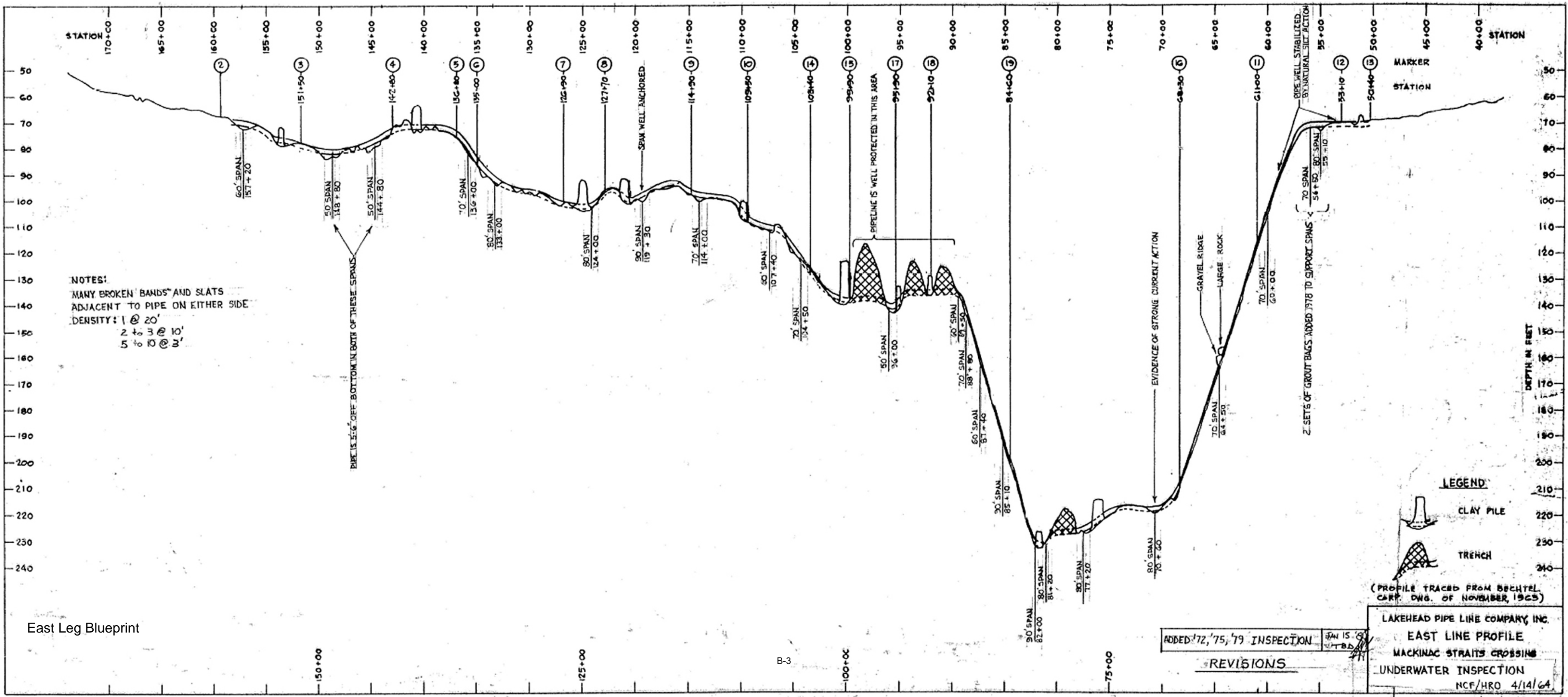
Enbridge engineers have clearly recognized the hazard the lack of proper supports poses. They repeatedly said the situation was urgent, and there were no other alternatives. Nevertheless, installation was not always done promptly.

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 1: Summary of Enbridge Requests for Installation of Supports – 2001 to 2010

Permit Request Date	Notice of Completion	Type of Support	Number of Supports	Comments - Urgency as Expressed by Enbridge
9/14/2001	12/5/2001	Grout bags	n/a	“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.”
10/2/2001	12/5/2001	Grout bags?	8	“These emergency preventative maintenance repairs must be completed as soon as possible.” “We appreciate your work to expedite the process.”
05/20/2003	n/a	Auger	n/a	“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.”
03/14/2005	7/22/2005	Auger	10	“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.”
05/03/2006	n/a	Auger	20	“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.”
08/26/2010	n/a	Auger	10+	“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.”
9/16/2010				“The application is currently on hold at the request of Enbridge.”

¹ Enbridge's term “Indications” signifies problems or potential problems.



STATION

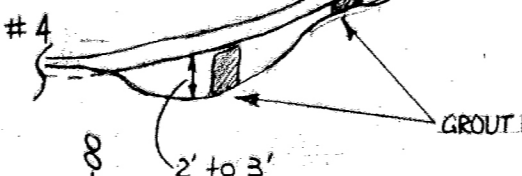
STATION

NOTES:

MANY BROKEN BANDS AND SLATS
ADJACENT TO PIPE ON EITHER SIDE
DENSITY: 1 @ 20'

2 to 3 @ 10'
5 to 10 @ 3'

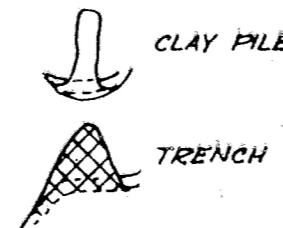
DETAILS



West Leg Blueprint

B-4

LEGEND



(PROFILE TRACED FROM BECHTEL
CORP. DWG. OF NOV. 1963)

LAKEHEAD PIPE LINE CO., INC.

WEST LINE PROFILE

MACKINAC STRAITS CROSSING

UNDERWATER INSPECTION

NCF/JCS 4/16/64

ADDED '72, '75, '79 INSPECTION

JAN 15 1980
TBD

REVISIONS

153 ½ E. Front Street | Suite 203C | Traverse City, MI 49684 | 231.944.1568

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,



Elizabeth R. Kirkwood
Executive Director, FLOW

01 24 0046 Initial Supports\Supports 09 14 01 A

Enbridge Energy Company, Inc.
Lake Superior Place
21 West Superior Street
Duluth, MN 55802-2067
Tel 218 725 0100
Fax 218 725 0564
www.enbridgepartners.com

ENBRIDGE

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,

Mark Sitek
Regional Manager

Enbridge Energy Company, Inc.
Lake Superior Place
21 West Superior Street
Duluth, MN 55802-2067
www.enbridgepartners.com

Grant P. Henningsen
Supervisor, Civil/Mechanical Engineering
Adam J. Erickson
Engineer
Tel 218 725 0548
Fax 218 725 0564
adam.erickson@enbridge-us.com



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,

A handwritten signature in red ink that reads 'Adam Erickson'.

Adam J. Erickson
Engineer

Enclosure: Joint Permit Application
Indications map

c: John Sobojinski – LPL
Grant Henningsen – LPL
Barry Power – LPL

US Army Corps of Engineers (USACE)		Michigan Department of Environmental Quality (MDEQ)		DEQ
AGENCY USE	Previous USACE Permit or File Number	Date Received	Land and Water Management Division, MDEQ File Number	
	USACE File Number		01-24-0046P	
	Marina Operating Permit Number			
		Fee received \$		
		\$50.00		#833

• Print in black, blue, or red ink and complete all items in Sections 1 through 9 and those items in Sections 10 through 21 that apply to your proposed project.

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).				
Address LAKE MICHIGAN BETWEEN UPPER & LOWER PENINSULA		Township Name(s) N/A	Township(s) 39N	Range(s) 3W
City/Village N/A	County(ies) N/A	Property Tax Identification Number(s) N/A		
Name of Waterbody LAKE MICHIGAN	Project Name or Job Number SCN 8122	Subdivision/Plat N/A	Lot Number	Private Claim
Project types (check all that apply)		<input type="checkbox"/> private <input type="checkbox"/> building addition <input type="checkbox"/> other (explain)		
<input type="checkbox"/> public/government <input type="checkbox"/> new building or structure		<input checked="" type="checkbox"/> industrial <input type="checkbox"/> building renovation or restoration		
<input type="checkbox"/> a stream <input type="checkbox"/> a river <input type="checkbox"/> a ditch or drain <input type="checkbox"/> a floodway area		<input type="checkbox"/> a pond (less than 5 acres) <input type="checkbox"/> a channel/canal <input type="checkbox"/> an inland lake (more than 5 acres) <input type="checkbox"/> a 100-year floodplain		
<input type="checkbox"/> a legally established County Drain (date established) <input checked="" type="checkbox"/> a Great Lake or Section 10 Waters <input type="checkbox"/> a designated high risk erosion area <input type="checkbox"/> a designated critical dune area <input type="checkbox"/> a designated environmental area		<input type="checkbox"/> a natural river <input type="checkbox"/> a dam <input type="checkbox"/> a welland <input type="checkbox"/> 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 A BARGE 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		Agent/Contractor (firm name and contact person)		
Mailing Address 21 WEST SUPERIOR STREET		Address		
City DULUTH	State MN	Zip Code 55802	City	State
Daytime Telephone Number with Area Code (218) 725-0548		Daytime Telephone Number with Area Code		
Fax (218) 725-0564	E-mail ADAM.ERKKSON@USPL.ENBRIDGE.COM	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? <input type="checkbox"/> No <input checked="" type="checkbox"/> 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 ☐ unimproved

Name of roads at closest main intersection 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

IT IS LOCATED BETWEEN THE
UPPER & LOWER PENINSULA OF
MICHIGAN AT THE MACKINAC
STRAITS.

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

6 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
USACE	NATIONWIDE PERMIT	NW03	9-12-01	9-14-01	

7 If a permit is issued, date activity will commence (M/D/Y) 9-15-01 P.E.

Proposed completion date (M/D/Y) 10-15-01

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)

8 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
N/A				

Name of <input type="checkbox"/> Established Lake Board <input type="checkbox"/> or Lake Association and the Contact Person's Name	Telephone Number	Mailing Address	City	State	Zip Code

9 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, 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 Enbridge Energy, Limited Partnership Printed Name Adam Erickson

Signature Adam Erickson

Date 9/14/01

**10. PROJECTS IMPACTING WETLANDS OR FLOODPLAINS OR LOCATED ON AN INLAND LAKE OR STREAM OR A GREAT LAKE**

- Check boxes A through N that may be applicable to your project and provide the requested information.
- If your project may affect wetlands, also complete Section 12. If your project may impact regulated *floodplains*, also complete Section 13.
- Provide an overall site plan showing existing lakes, streams, wetlands, and other water features; existing *structures*; and the location of all proposed *structures*, land change activities and *soil erosion and sedimentation control measures*. Please review sample drawings for guidance in completing site-specific drawings for your project.
- On a Great Lake use *IGLD 85* ☒ surveyed ☐ converted from observed still water elevation. On inland waters, ☐ NGVD 29 ☐ local datum ☐ other
Observed water elevation (ft) 584.203, date of observation (M/D/Y)

☒ **A. PROJECTS REQUIRING FILL** (See All Sample Drawings) GROUT BAGS

- 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 fill dimensions.

(Check all that apply) ☐ floodplain fill ☐ wetland fill ☐ riprap ☐ seawall, bulkhead, or revetment ☐ bridge or culvert
☐ boat launch ☐ off-shore swim area ☐ beach sanding ☐ boatwell ☐ crib dock ☐ other

Fill dimensions (ft)
 Length 5 width 7 maximum depth 1.5 Fill volume (cu yd) 2 EACH Maximum water depth in fill area (ft) 250

Type of clean fill ☐ pea stone ☐ sand ☐ gravel ☐ wood chips ☒ other GROUT Will filter fabric be used under proposed fill?
☐ No ☐ Yes (If Yes, type) GROUT BAG

Source of clean fill ☐ on-site, If on-site, show location on site plan ☐ commercial ☒ other, If other, attach description of location PUMPED FROM BARGE

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

☐ **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.
- The applicant will be notified if sediment sampling will be required.

(Check all that apply) ☐ floodplain excavation ☐ wetland dredge or draining ☐ seawall, bulkhead, or revetment
☐ navigation ☐ boat well ☐ boat launch ☐ other

Dredge volume (cu yd) Method and equipment for dredging

Has proposed dredge material been tested for contaminants? ☐ No ☐ Yes (If Yes, attach testing results)

Has this same area been previously dredged? ☐ No ☐ Yes (If Yes, provide date and permit number, if available) (M/D/Y)

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)

Riprap waterward of the ☐ shoreline OR ☐ ordinary high water mark Dimensions (ft) length width depth Volume (cu yd)

Riprap landward of the ☐ shoreline OR ☐ ordinary high water mark Dimensions (ft) length width depth Volume (cu yd)

Type of riprap ☐ field stone ☐ 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)

(check all that apply) ☐ riprap ☐ seawall/bulkhead ☐ revetment

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

Type ☐ open pile ☐ filled ☐ crib Seasonal structure? ☐ No ☐ Yes

Proposed structure dimensions (ft) length width Dimensions of nearest adjacent structures (ft) length width

☐ **F. BOAT WELL** (No Sample Drawing available)

Type of bank stabilization ☐ wood ☐ steel ☐ concrete ☐ vinyl ☐ riprap ☐ other

Boat well dimensions (ft) Length width depth Number of boats

Volume of backfill behind
sidewall stabilization (cu yd) Distances of boat well
from adjacent property lines (ft)

☐ **G. BOAT LAUNCH** (No Sample Drawing available)

(check all that apply) ☐ new ☐ existing ☐ public ☐ private ☐ commercial Type of material ☐ concrete ☐ wood ☐ stone ☐ other

Overall boat launch dimensions (ft) Length width depth Boat launch dimensions (ft) below ordinary high water mark length width depth

Distances of launch from both property lines (ft) Number of skid piers Skid pier dimensions (ft) width length

☐ **H. BOAT HOIST** (No Sample Drawing available)

(Check all that apply) ☐ seasonal ☐ permanent ☐ cradle ☐ side lifter ☐ other located on ☐ seawall ☐ dock ☐ bottomlands

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

(Check all that apply) ☐ boardwalk ☐ deck ☐ wetlands ☐ floodplain Boardwalk or deck is on ☐ fill ☐ piling

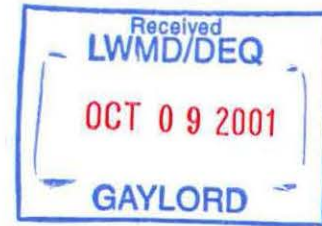
Enbridge (U.S.) Inc.
Lake Superior Place
21 West Superior Street
Duluth, Minnesota 55802
Telephone: (218) 725-0100
Fax: (218) 725-0564
www.enbridge.com

Dana A. Slade Environmental Analyst II
Scott Lounsbury Supervisor, Environment
Barry F. Power Environmental Engineer



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 un-supported 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 un-supported 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,

A handwritten signature in blue ink that reads 'Barry Power'.

Barry F. Power, P.E.
Engineer

Enclosure: Indications map
Span locations

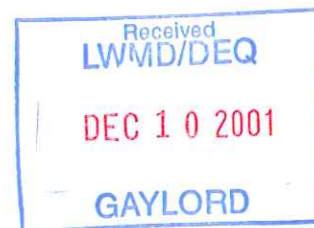
c: John Sobojinski – Enbridge Energy
Grant Henningsen – Enbridge Energy
Adam Erickson – Enbridge Energy

Enbridge Energy Company, Inc.
Lake Superior Place
21 West Superior Street
Duluth, MN 55802-2067
Tel 218 725 0100
Fax 218 725 0139
www.enbridgepartners.com

Scott W. Lounsbury Supervisor, Environment
Dana A. Slade Senior Environmental Analyst
Kris H. Benson Environmental Analyst
Barry F. Power Environmental Engineer



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,

A handwritten signature in black ink, appearing to read 'Barry Power'.

Barry F. Power, P.E.
Environmental Engineer

c: John Sobojinski – EEP
Grant Henningsen – EEP
Adam Erickson - EEP
Scott Lounsbury – EEP

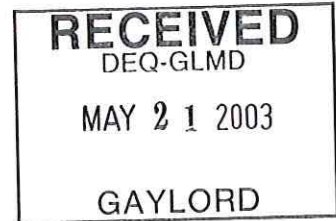
[Faint, illegible text, likely a carbon copy or bleed-through from the reverse side of the page.]

Letter to add supports 05 20 03

Enbridge Pipelines (Lakehead) L.L.C. Grant P. Henningsen
Supervisor, Civil/Mechanical Engineering
119 N. 25th Street East Adam J. Erickson
Superior, WI 54880 Engineer
www.enbridgepartners.com Tel 715 394 1548
Fax 715 394 1564
adam.erickson@enbridge.com



May 20, 2003



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 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

JOHN - I WAS
NOT SURE IF
I SHOULD
INCLUDE THE
\$50 APPLICATION
FEE (IF RENEWAL)
(IF REVISED)
PLEASE CALL
IF NEEDED ADAM

Support Letter 03 14 05

Enbridge Pipelines (Lakehead) L.L.C.
Superior Region Office
119 North 25th Street East
Superior, WI 54880-5247
www.enbridgepartners.com

Adam J. Erickson
Region Engineer
Tel 715 394 1548
Fax 715 394 1405
adam.erickson@enbridge.com



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,

A handwritten signature in black ink that reads 'Adam J. Erickson'.

Adam J. Erickson
Engineer

Received
LWMD/DEQ

MAR 21 2005

GAYLORD FIELD OFFICE

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

c: John Sobojinski – Enbridge
Grant Henningsen – Enbridge

Support Letter 04 13 05

Enbridge Pipelines (Lakehead) L.L.C. Adam J. Erickson Superior Region Engineer
119 N. 25th Street East
Superior, WI 54880
Tel 715 394 1400
Fax 715 394 1570
www.enbridgepartners.com



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

RECEIVED

APR 19 2005

MDEQ/LWMD
PERMIT CONSOLIDATION UNIT

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,

A handwritten signature in black ink that reads 'Adam J. Erickson'.

Adam J. Erickson
Engineer

Enclosures: Application Correction Request Letter
Joint Permit Application

c: John Sobojinski – Enbridge
Grant Henningsen – Enbridge
John Korienek – NREC
bc: Law

 US Army Corps of Engineers (USACE)		Michigan Department of Environmental Quality (MDEQ) 		
AGENCY USE	Previous USACE Permit or File Number	Received  MAR 21 2005 GAYLORD FIELD OFFICE	Land and Water Management Division, MDEQ File Number 05-24-0013P	AGENCY USE
	USACE File Number		Marina Operating Permit Number	
			Fee received \$ 500.00 # 2035	

- Complete all items in Sections 1 through 9 and those items in Sections 10 through 21 that apply to your proposed project.

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).

Address <i>Lake Michigan between Upper and Lower Peninsula</i>		Township Name(s) <i>N/A</i>	Township(s) <i>39N</i>	Range(s) <i>3W</i>	Section(s) <i>N/A</i>
City/Village <i>N/A</i>	County(ies) <i>N/A</i>	Property Tax Identification Number(s) <i>N/A</i>			
Name of Waterbody <i>Lake Michigan</i>	Project Name or Job Number <i>Underwater Inspections</i>	Subdivision/Plat <i>N/A</i>	Lot Number <i>N/A</i>	Private Claim <i>N/A</i>	
Project types (check all that apply) <input type="checkbox"/> private <input type="checkbox"/> public/government <input type="checkbox"/> building addition <input type="checkbox"/> new building or structure <input type="checkbox"/> other (explain)		<input checked="" type="checkbox"/> industrial <input type="checkbox"/> building renovation or restoration		<input type="checkbox"/> commercial <input type="checkbox"/> river restoration <input type="checkbox"/> multi-family <input type="checkbox"/> single-family	
The proposed project is on, within, or involves (check all that apply) <input type="checkbox"/> a stream <input type="checkbox"/> a pond (less than 5 acres) <input type="checkbox"/> a river <input type="checkbox"/> a channel/canal <input type="checkbox"/> a ditch or drain <input type="checkbox"/> an inland lake (5 acres or more) <input type="checkbox"/> a floodway area <input type="checkbox"/> a 100-year floodplain					
<input type="checkbox"/> a legally established County Drain (date established) <input checked="" type="checkbox"/> a Great Lake or Section 10 Waters <input type="checkbox"/> a natural river <input type="checkbox"/> a new marina <input type="checkbox"/> a designated high risk erosion area <input type="checkbox"/> a dam <input type="checkbox"/> a structure removal <input type="checkbox"/> a designated critical dune area <input type="checkbox"/> a wetland <input type="checkbox"/> a utility crossing <input type="checkbox"/> a designated environmental area <input type="checkbox"/> 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.
- 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. Supports will be placed around the unsupported sections of the pipeline and will then be augered into the sediment. A certified diver will be deployed to oversee the installation.*

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) <i>Enbridge Energy, Limited Partnership</i>			Agent/Contractor (firm name and contact person)		
Mailing Address <i>119 North 25th Street East</i>			Address		
City <i>Superior</i>	State <i>WI</i>	Zip Code <i>54880</i>	City	State	Zip Code
Daytime Telephone Number with Area Code <i>(715) 394-1400</i>			Daytime Telephone Number with Area Code		
Fax <i>(715) 394-1405</i>	E-mail <i>Adam.Erickson@enbridge.com</i>		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? <input type="checkbox"/> No <input type="checkbox"/> 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 and safety, additional supports are necessary under lengthy unsupported spans of 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.*

**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 ☐ unimproved

Name of roads at closest main intersection 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 *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*

6 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	

7 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)

8 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
City of St. Ignace	396 North State Street	St. Ignace	MI	49781
Edison Sault Electric Company	725 East Portage Ave.	Sault Ste. Marie	MI	49783
Todd & Shirley Harburn	4060 Leeward Drive	Okemos	MI	48864
Neil & Jeannette Downing	6819 David Drive Box 747	Mackinaw City	MI	49701
Elizabeth J. Hayes & Richard L. Hayes	14029 - 16 th Court SE	Mill Creek	WA	98012

Name of ☐ Established Lake Board ☐ or Lake Association

and the Contact Person's Name, telephone number, and mailing address *N/A*

9 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, 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*

B-18

Signature

Adam Erickson

MDEQ/LWMD
PERMIT COORDINATOR
2003/04/19/05

APR 19 2005

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**10 PROJECTS IMPACTING WETLANDS OR FLOODPLAINS OR LOCATED ON AN INLAND LAKE OR STREAM OR A GREAT LAKE**

- Check boxes A through N that may be applicable to your project and provide the requested information.
 - If your project may affect wetlands, also complete Section 12. If your project may impact regulated *floodplains*, also complete Section 13.
 - Provide an overall site plan showing existing lakes, streams, wetlands, and other water features; existing *structures*; and the location of all proposed *structures*, land change activities and *soil erosion and sedimentation control measures*. Please review sample drawings for guidance in completing site-specific drawings for your project.
 - Some projects on the Great Lakes require an application for conveyance prior to Joint Permit Application completeness. Call 517-373-3894 for applicability.
 - On a Great Lake use IGLD 85 ☒ surveyed ☐ converted from observed still water elevation. On inland waters, ☐ NGVD 29 ☐ local datum ☐ other
- Observed water elevation (ft) _____, date of observation (M/D/Y) _____

☐ 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 maximum and average fill dimensions.

(Check all that apply) ☐ floodplain fill ☐ wetland fill ☐ riprap ☐ seawall, bulkhead, or revetment ☐ bridge or culvert
☐ boat launch ☐ off-shore swim area ☐ beach sanding ☐ boatwell ☐ crib dock ☐ other

Fill dimensions (ft)
length _____ width _____ maximum depth _____

Fill volume (cu yd) _____

Maximum water depth in fill area (ft) _____

Type of clean fill ☐ pea stone ☐ sand ☐ gravel ☐ wood chips ☐ other _____

Will filter fabric be used under proposed fill?

☐ No ☐ Yes (If Yes, type) _____Source of clean fill ☐ on-site, If on-site, show location on site plan ☐ commercial ☐ other, If other, attach description of location

Fill will extend _____ feet into the water from the shoreline and upland _____ feet out of the water.

☐ 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 maximum and average dredge or excavation dimensions.
- The applicant will be notified if sediment sampling will be required.

(Check all that apply) ☐ floodplain excavation ☐ wetland dredge or draining ☐ seawall, bulkhead, or revetment
☐ navigation ☐ boat well ☐ boat launch ☐ other

Dredge/excavation volume (cu yd) _____

Dimensions (ft)

length _____ width _____ depth _____

Method and equipment for dredging _____

Has proposed dredge material been tested for contaminants?

☐ No ☐ Yes (If Yes, attach testing results)Will dredged or excavated spoils be placed ☐ on-site ☐ off-site?

Attach a detailed disposal area site plan and location map.

Has this same area been previously dredged? ☐ No ☐ Yes (If Yes, provide date and permit number, if available) (M/D/Y)If Yes, are you proposing to enlarge the previously dredged area? ☐ No ☐ YesIs 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)

Riprap waterward of the ☐ shoreline OR ☐ ordinary high water mark

Dimensions (ft)

length _____ width _____ depth _____

Volume (cu yd) _____

Riprap landward of the ☐ shoreline OR ☐ ordinary high water mark

Dimensions (ft)

length _____ width _____ depth _____

Volume (cu yd) _____

Type of riprap ☐ field stone ☐ 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)

(check all that apply)

☐ riprap – length _____ ft. ☐ seawall/bulkhead – length _____ ft. ☐ revetment – length _____ ft.Distances of project
from both property lines (ft)**☐ E. DOCK - PIER - MOORING PILINGS** (See Sample Drawing 10)Type ☐ open pile ☐ filled ☐ cribSeasonal structure? ☐ No ☐ Yes

Proposed structure dimensions (ft) length _____ width _____

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

☐ F. BOAT WELL (No Sample Drawing available)Type of bank stabilization ☐ wood ☐ steel ☐ concrete ☐ vinyl ☐ riprap ☐ other _____

Boat well dimensions (ft)

length _____ width _____ depth _____

Number of boats _____

Volume of backfill behind
sidewall stabilization (cu yd)Distances of boat well
from adjacent property lines (ft)**☐ G. BOAT LAUNCH** (No Sample Drawing available) (check all that apply) ☐ new ☐ existing ☐ public ☐ private ☐ commercial ☐ replacement

Proposed overall boat launch dimensions (ft)

length _____ width _____ depth _____

Type of material ☐ concrete ☐ wood ☐ stone ☐ other _____

Existing overall boat launch dimensions (ft)

length _____ width _____ depth _____

Boat launch dimensions (ft) below ordinary high water mark

length _____ width _____ depth _____

Distances of launch

from both property lines (ft)

Number of skid piers _____

Skid pier dimensions (ft)

☐ H. BOAT HOIST (No Sample Drawing available)(Check all that apply) ☐ seasonal ☐ permanent ☐ cradle ☐ side lifter ☐ other _____located on ☐ seawall ☐ dock ☐ bottomlands**☐ I. BOARDWALKS AND DECKS IN ☐ WETLANDS – OR – ☐ FLOODPLAINS** (See Sample Drawings 5 and 6)(Check all that apply) ☐ boardwalk ☐ deckBoardwalk or deck is on ☐ fill ☐ piling

Dimensions (ft) length _____ width _____

RECEIVED

APR 19 2005

MDEQ/LWMD
PERMITTING/CONSOLIDATION UNIT

10 Continued - 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)

Type <input type="checkbox"/> headwall <input type="checkbox"/> end section <input type="checkbox"/> pipe <input type="checkbox"/> other	If outlet pipe, discharge is to <input type="checkbox"/> wetland <input type="checkbox"/> inland lake <input type="checkbox"/> stream, drain, or river <input type="checkbox"/> Great Lake <input type="checkbox"/> other	
Dimensions of headwall OR end section (ft) length width depth	Number of pipes	Pipe diameters and invert elevations

☐ **K. MOORING AND NAVIGATION BUOYS** (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 drawing(s) showing anchoring system(s) and dimensions.

Number of buoys	Type of anchor system	Purpose of buoy <input type="checkbox"/> mooring <input type="checkbox"/> navigation
Dimensions of buoys (ft) width height	Do you own the property along the shoreline? <input type="checkbox"/> No <input type="checkbox"/> Yes (If No, you must provide an authorization letter from the property owner(s))	

☐ **L. GROINS** (No Sample Drawing available)

- Provide an overall site plan showing the distances (ft) of the outermost groins from the property lines, distances between groins, length and width of each groin, and the distance from the existing toe of the bluff to the lakeward end of the groins.
- If existing groins are located on adjacent properties, provide distances (ft) from closest neighboring groin to your property lines on the site plan. Provide cross-section views showing the length and height of each groin and the height of groin ends 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 <input type="checkbox"/> steel <input type="checkbox"/> wood <input type="checkbox"/> other	Will groin be placed on a foundation? <input type="checkbox"/> No <input type="checkbox"/> Yes (If Yes, dimensions of foundation (ft)) length width height
------------------	--------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------

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

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

(check all that apply) <input type="checkbox"/> wetlands <input type="checkbox"/> streams <input type="checkbox"/> floodplains	Total length (ft) of fence through wetlands streams floodplains	Fence height (ft)	Fence type and material
-----------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------	-------------------	-------------------------

☒ **N. OTHER** - e.g., structure removal, marine railway, low sand trap wall, breakwater, and structural foundations in wetlands or floodplains

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

11 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)

☐ wildlife ☐ stormwater retention basin ☐ stormwater detention basin ☐ recreation ☐ wastewater basin ☐ other

Water source for lake/pond

☐ groundwater ☐ natural springs ☐ Inland Lake or Stream ☐ stormwater runoff ☐ pump ☐ sewage ☐ otherLocation of the lake/basin/pond ☐ floodplain ☐ wetland ☐ uplandWill project involve construction of a dam, dike, outlet control structure, or spillway? ☐ No ☐ Yes (If Yes, complete Section 17)**12 ACTIVITIES THAT MAY IMPACT WETLANDS**

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

(check all that apply) ☐ fill (Section 10A) ☐ dredge or excavation (Section 10B) ☐ boardwalk or deck (Section 10I)
☐ fences (Section 10M) ☐ bridges and culverts (Section 14) ☐ draining surface water ☐ otherHas 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)Applicant purchased property
☐ before OR ☐ after October 1, 1980.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.

Is any grading or mechanized land clearing proposed? ☐ No ☐ Yes
(If Yes, please show locations on site plan)Has any of the proposed grading or mechanized land clearing been completed?
☐ No ☐ Yes (If Yes, please label and show locations on site plan)

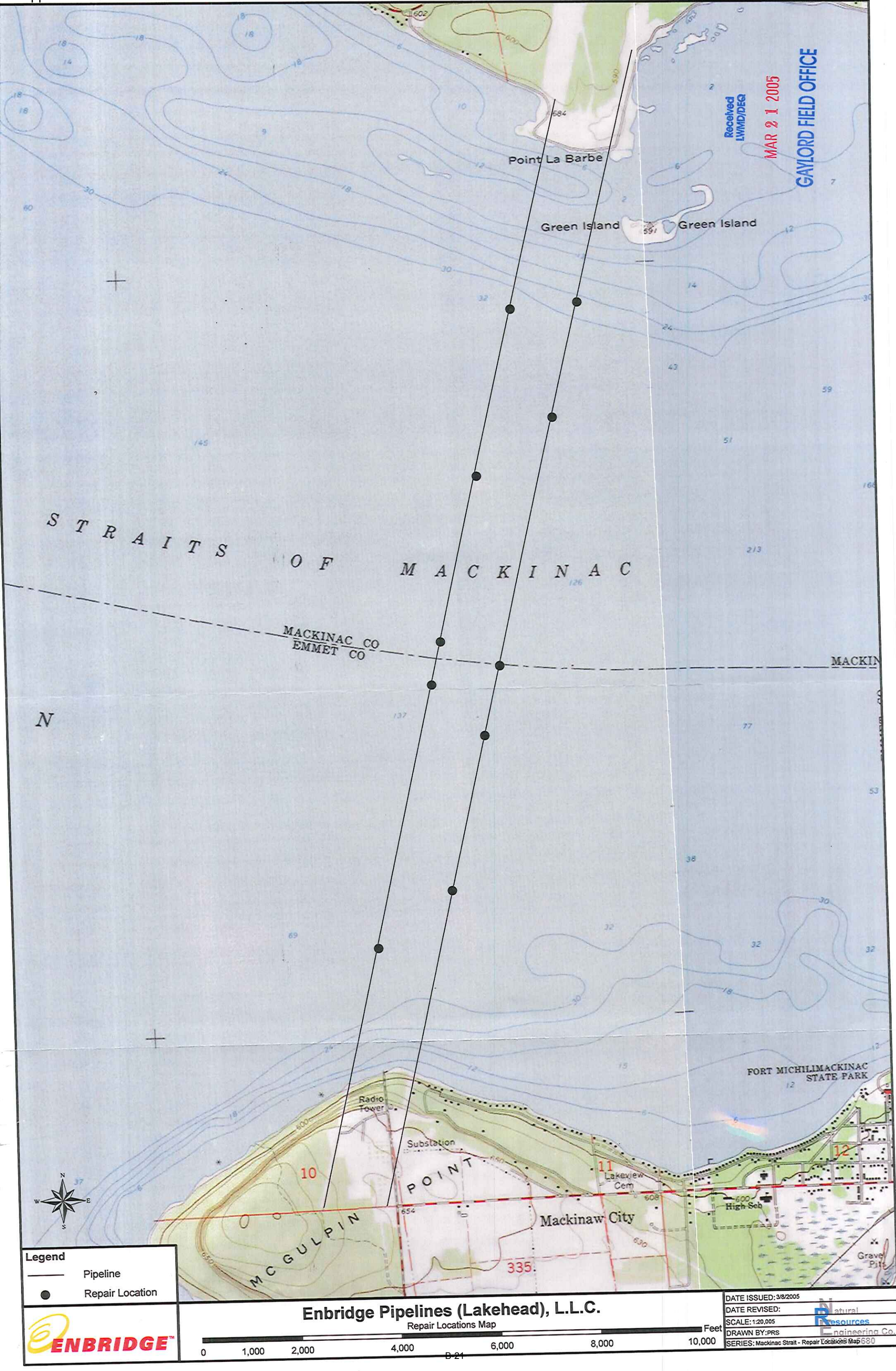
- Complete the wetland dredge and wetland fill dimension information for each impacted wetland area. Attach additional sheets if necessary and label the impacted wetland areas on a site plan drawn to scale. Please attach at least one typical cross-section for each wetland dredge and/or fill area. (See Sample Drawings 8 & 9)
- Also complete Section 10A for fill 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 upland area and include soil erosion and sedimentation control measures.

Wetland dredge dimensions	maximum length (ft)	maximum width (ft)	dredge area <input type="checkbox"/> acres <input type="checkbox"/> sq ft	average depth (ft)	dredge volume(cu yd)
Wetland fill dimensions	maximum length (ft)	maximum width (ft)	fill area <input type="checkbox"/> acres <input type="checkbox"/> sq ft	average depth (ft)	fill volume(cu yd)
Total wetland dredge area <input type="checkbox"/> acres <input type="checkbox"/> sq ft			Total wetland dredge volume (cu yd)		
Total wetland fill area <input type="checkbox"/> acres <input type="checkbox"/> sq ft			Total wetland fill volume (cu yd)		
The proposed project will be serviced by <input type="checkbox"/> public sewer <input type="checkbox"/> private septic system (If septic system, show existing and new or expanded system on plans)			If septic system, has application been made to the County Health Department for a permit? <input type="checkbox"/> No <input type="checkbox"/> Yes		If Yes, has permit been issued? <input type="checkbox"/> No <input type="checkbox"/> Yes (If Yes, provide copy)

RECEIVED

APR 19 2005

MDEQ/LWMD
PERMIT CONSOLIDATION UNIT



GAYLORD FIELD OFFICE

MAR 21 2005

Received
LWMD/DEQ

S T R A I T S O F M A C K I N A C

MACKINAC CO
EMMET CO

MACKINAC

N

FORT MICHILIMACKINAC
STATE PARK



- Legend**
- Pipeline
 - Repair Location



Enbridge Pipelines (Lakehead), L.L.C.
Repair Locations Map



DATE ISSUED: 3/8/2005	
DATE REVISED:	
SCALE: 1:20,005	
DRAWN BY: PRS	
SERIES: Mackinac Strait - Repair Locations Map 680	



Natural Resources Engineering Company
69 North 28th Street - Suite 27
Superior, Wisconsin 54880
Telephone (715) 395-5680

Fax [715] 395-5681

file

July 22, 2005

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

Received
LWMD/DEQ

JUL 26 2005

GAYLORD FIELD OFFICE

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,

A handwritten signature in black ink that reads 'John J. Korienek'.

John J. Korienek, P.E.
Environmental Engineer

cc: Adam Erickson – Enbridge: Superior Region

Supports 05 03 06

Enbridge Pipelines (Lakehead) L.L.C.
119 N. 25th Street East
Superior, WI 54880
Tel 715 394 1400
Fax 715 394 1570
www.enbridgepartners.com

Scott W. Lounsbury Supervisor, Environment
Kris H. Benson Environmental Analyst II
Paul R. Meneghini Sr. Environmental Analyst
Rachael A. Shetka Environmental Analyst
David M. Hoffman Sr. Environmental Analyst
Joseph P. Peterson Environmental Analyst II



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,

A handwritten signature in black ink that reads 'Kris Benson'.

Kris Benson
Environmental Analyst II, CHMM

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

c: Dan Klarner – Enbridge Regional Engineer

Land & Water Mgt. Div.
MAY 11 2006
Permit Consolidation Unit

US Army Corps of Engineers (USACE)		Michigan Department of Environmental Quality (MDEQ)	
AGENCY USE	Previous USACE Permit or File Number	Received LWMD/DEQ MAR 21 2005 GAYLORD FIELD OFFICE	Land and Water Management Division, MDEQ File Number 05-24-0013P
	USACE File Number		Marina Operating Permit Number
			Fee received \$ 500.00 # 2035
AGENCY USE			

- Complete all items in Sections 1 through 9 and those items in Sections 10 through 21 that apply to your proposed project.

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).

Address Lake Michigan between Upper and Lower Peninsula		Township Name(s) N/A	Township(s) 39N	Range(s) 3W	Section(s) N/A
City/Village N/A	County(ies) N/A	Property Tax Identification Number(s) N/A			
Name of Waterbody Lake Michigan	Project Name or Job Number Underwater Inspections	Subdivision/Plat N/A	Lot Number N/A	Private Claim N/A	
Project types (check all that apply)					
<input type="checkbox"/> private <input type="checkbox"/> building addition <input type="checkbox"/> other (explain)		<input checked="" type="checkbox"/> industrial <input type="checkbox"/> building renovation or restoration			
<input type="checkbox"/> public/government <input type="checkbox"/> new building or structure		<input type="checkbox"/> commercial <input type="checkbox"/> river restoration			
		<input type="checkbox"/> multi-family <input type="checkbox"/> single-family			

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

<input type="checkbox"/> a stream	<input type="checkbox"/> a pond (less than 5 acres)	<input checked="" type="checkbox"/> a Great Lake or Section 10 Waters	<input type="checkbox"/> a natural river	<input type="checkbox"/> a new marina
<input type="checkbox"/> a river	<input type="checkbox"/> a channel/canal	<input type="checkbox"/> a designated high risk erosion area	<input type="checkbox"/> a dam	<input type="checkbox"/> a structure removal
<input type="checkbox"/> a ditch or drain	<input type="checkbox"/> an inland lake (5 acres or more)	<input type="checkbox"/> a designated critical dune area	<input type="checkbox"/> a wetland	<input type="checkbox"/> a utility crossing
<input type="checkbox"/> a floodway area	<input type="checkbox"/> a 100-year floodplain	<input type="checkbox"/> a designated environmental area	<input type="checkbox"/> 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.

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. Supports will be placed around the unsupported sections of the pipeline and will then be augered into the sediment. A certified diver will be deployed to oversee the installation.

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			Agent/Contractor (firm name and contact person)		
Mailing Address 119 North 25th Street East			Address		
City Superior	State WI	Zip Code 54880	City	State	Zip Code
Daytime Telephone Number with Area Code (715) 394-1400			Daytime Telephone Number with Area Code		
Fax (715) 394-1405	E-mail Adam.Erickson@enbridge.com		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? <input type="checkbox"/> No <input type="checkbox"/> 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 and safety, additional supports are necessary under lengthy unsupported spans of 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.

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 ☐ unimproved

Name of roads at closest main intersection 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 *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*

6 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	

7 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)

8 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
<i>City of St. Ignace</i>	<i>396 North State Street</i>	<i>St. Ignace</i>	<i>MI</i>	<i>49781</i>
<i>Edison Sault Electric Company</i>	<i>725 East Portage Ave.</i>	<i>Sault Ste. Marie</i>	<i>MI</i>	<i>49783</i>
<i>Todd & Shirley Harburn</i>	<i>4060 Leeward Drive</i>	<i>Okemos</i>	<i>MI</i>	<i>48864</i>
<i>Neil & Jeannette Downing</i>	<i>6819 David Drive Box 747</i>	<i>Mackinaw</i>	<i>MI</i>	<i>49701</i>
<i>Elizabeth J. Hayes & Richard L. Hayes</i>	<i>14029 - 16th Court SE</i>	<i>Mill Creek</i>	<i>WA</i>	<i>98012</i>

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

9 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, 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

Adam Erickson

MDEQ/LWMD
PERMIT COMPLAINT UNIT

RECEIVED

APR 19 2005

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



US Army Corps of Engineers (USACE)

Michigan Department of Environmental Quality (MDEQ) **DEQ**

AGENCY USE	Previous USACE Permit or File Number	Land & Water Mgt. Div. Date Received MAY 11 2006 Permit Consolidation Unit	Land and Water Management Division, MDEQ File Number 06-24-16-P	AGENCY USE
	USACE File Number		Marina Operating Permit Number	
	Gaylord - Arevalo		Fee received \$ 500 -	

• Complete all items in Sections 1 through 9 and those items in Sections 10 through 21 that apply to the project. Clear drawings and cross sections must be provided.

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).				
Address Lake Michigan (all in-water work) between Upper and Lower Peninsula		Township Name(s) N/A	Township(s) 39N	Range(s) 3W
City/Village N/A	County(ies) Mackinaw and Emmet (in Straits)	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 N/A	Private Claim N/A
Project types (check all that apply) <input type="checkbox"/> private <input type="checkbox"/> public/government <input type="checkbox"/> industrial <input type="checkbox"/> commercial <input type="checkbox"/> multi-family <input type="checkbox"/> building addition <input type="checkbox"/> new building or structure <input type="checkbox"/> building renovation or restoration <input type="checkbox"/> river restoration <input type="checkbox"/> single-family <input type="checkbox"/> other (explain)				
The proposed project is on, within, or involves (check all that apply) <input type="checkbox"/> a legally established County Drain (date established _____)				
<input type="checkbox"/> a stream <input type="checkbox"/> a pond (less than 5 acres) <input checked="" type="checkbox"/> a Great Lake or Section 10 Waters <input type="checkbox"/> a natural river <input type="checkbox"/> a new marina <input type="checkbox"/> a river <input type="checkbox"/> a channel/canal <input type="checkbox"/> a designated high risk erosion area <input type="checkbox"/> a dam <input type="checkbox"/> a structure removal <input type="checkbox"/> a ditch or drain <input type="checkbox"/> an inland lake (5 acres or more) <input type="checkbox"/> a designated critical dune area <input type="checkbox"/> a wetland <input type="checkbox"/> a utility crossing <input type="checkbox"/> a floodway area <input type="checkbox"/> a 100-year floodplain <input type="checkbox"/> a designated environmental area <input type="checkbox"/> 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, photographs, aeriels, or plans.				
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 augured directly into the lake bed. A certified diving contractor will be employed to oversee the installation.				
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		Agent/Contractor (firm name and contact person)		
Mailing Address 119 N. 25th St. E.		Address		
City Superior,	State WI	Zip Code 54880	City State Zip Code	
Daytime Phone Number with Area Code (715) 394-1414		Daytime Phone Number with Area Code Cell Phone Number		
Fax (715) 394-1405	E-mail Dan.Klamer@Enbridge.com		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? <input type="checkbox"/> No <input type="checkbox"/> 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, attach all property owners' names, mailing addresses, and telephone numbers. Disclose any DEQ conservation easements or other easements, deed restrictions, leases, or any other encumbrance upon the property in the project area. A copy of the land restriction must be provided.				
Property Owner's Name (If different from applicant)		Mailing Address		
Daytime Phone Number with Area Code Cell Phone Number		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, 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.				

**5 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 ☐ unimprovedName 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**6 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	3/14/2005	4/13/2005	

7 If a permit is issued, date activity will commence (M/D/Y) 06/01/2006Proposed completion date (M/D/Y) 07/01/2007Has 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)**8 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 _____

See attached word document for landowner informationName of ☐ Established Lake Board ☐ or Lake Association and the Contact Person's name, phone number, and mailing address _____**9 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, 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 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 **Dan Klamer**Signature *Daniel W. Klamer*Date **5-3-06**

Land & Water Mgt. Div.

MAY 11 2006

EQP 2731 Revised 12/2005

Consolidation Unit

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY PERMIT

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:

- | | |
|--------------------------------------------------------------------------|------------------------------------------------------------------------|
| <input type="checkbox"/> Part 301 Inland Lakes and Streams | <input type="checkbox"/> Part 315 Dam Safety |
| <input checked="" type="checkbox"/> Part 325 Great Lakes Submerged Lands | <input type="checkbox"/> Part 323 Shorelands Protection and Management |
| <input type="checkbox"/> Part 303 Wetland Protection | <input type="checkbox"/> Part 353 Sand Dune Protection and Management |
| <input type="checkbox"/> 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:

DEPARTMENT OF THE ARMY

DETROIT DISTRICT, CORPS OF ENGINEERS

BOX 1027

DETROIT, MICHIGAN 48231-1027

July 19, 2006

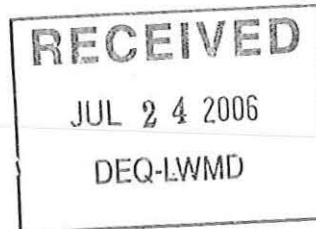
IN REPLY REFER TO

Engineering & Technical Services
Regulatory Office
File No. 88-016-121-4

Received
LWMD/DEQ

JUL 27 2006

GAYLORD FIELD OFFICE



Dan Klamer
Enbridge Energy Limited Partnership
119 North 25th Street East
Superior, Wisconsin 54880

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, "NWP's 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 NWP's 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 NWP's. We will issue a public notice when the NWP's 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,

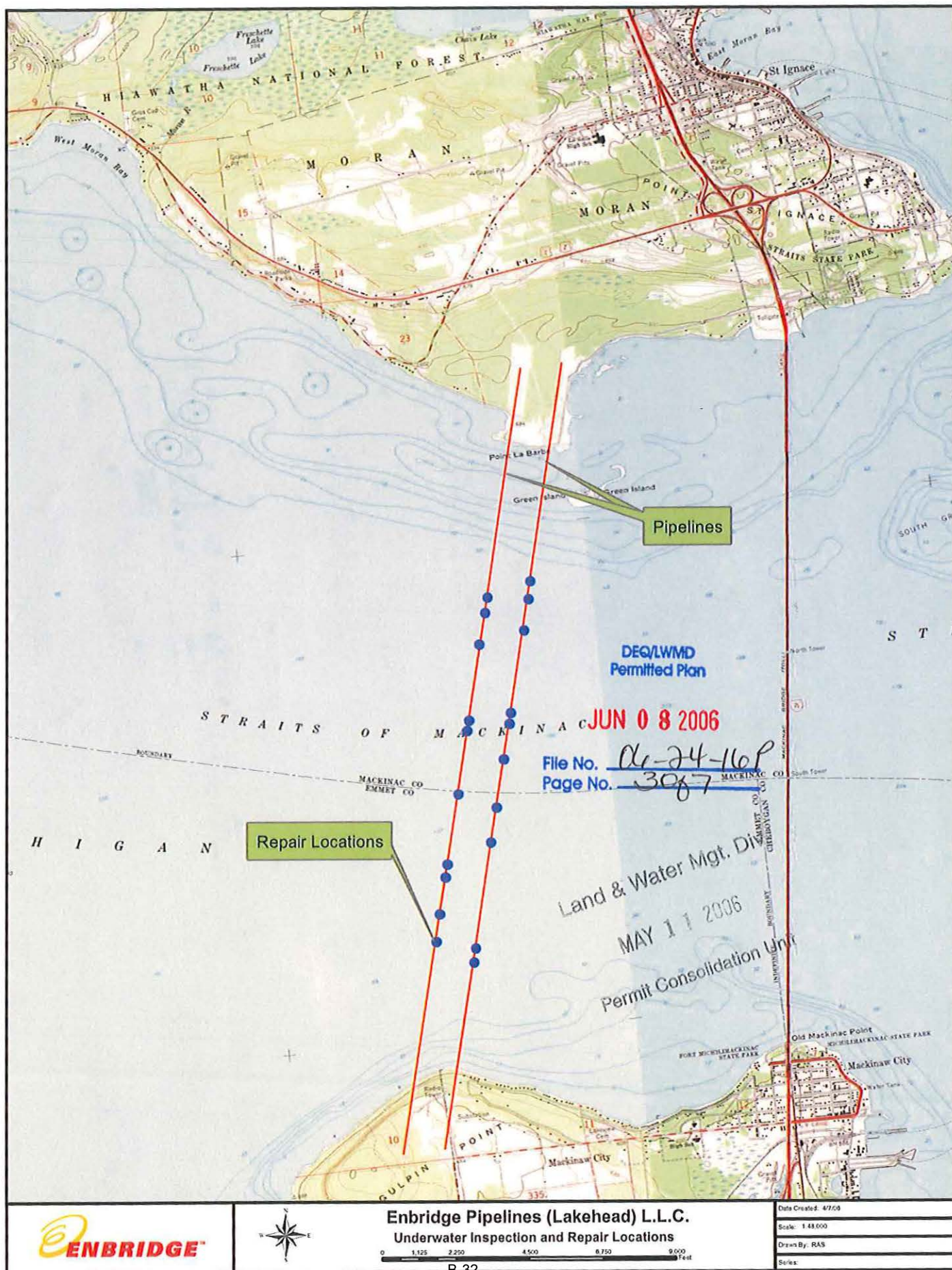
ORIGINAL SIGNED BY

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



PROJECT REVIEW REPORT

Date of field review: 6/8/06

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 303.1? ☐ 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? _____

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

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

Dominant plants	Indicator status	Other plants	Indicator status	Soils (description)	Depth

DESCRIBE HYDROLOGIC INDICATORS:

See earlier files 01-24-46-P, 02-24-44-P, 05-24-13-P, for similar reviews. This in-office review was simply for addition sites where the applicant needs to hold the existing pipelines on to the lakebed. Tim Gursland, American Transmission Co., P.O. Box 2220, Kingsford, MI 49802, tx # 906-396-1566, asked to be cc'd with permit. They have pipelines nearby.

FILE REVIEW:

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

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*

ENBRIDGE ENERGY PARTNERS
1100 LOUISIANA, SUITE 3300
HOUSTON, TEXAS 77002
713-650-8900

DATE 03-MAY-06

ENBRIDGE

CHECK NUMBER 1111103425

INVOICE NUMBER	INVOICE DATE	DESCRIPTION	DISCOUNT	NET AMOUNT
02-MAY-2006	02-MAY-06	MDEQ PERMIT	0.00	500.00
<div style="position: absolute; top: 10%; left: 10%; font-size: 4em; transform: rotate(-15deg); opacity: 0.5;"> Original not rec'd yet </div> <div style="position: absolute; top: 25%; left: 75%; text-align: center;"> RECEIVED MAY 03 2006 MDEQ/LWMD PERMIT CONSOLIDATION UNIT </div>				
PAY TO NAME			DISCOUNT TOTAL	NET TOTAL
MICHIGAN			0.00	500.00

LASALLE BANK NA.
CHICAGO, IL 60661

ENBRIDGE ENERGY PARTNERS
1100 LOUISIANA, SUITE 3300
HOUSTON, TEXAS 77002
713-650-8900

ENBRIDGE

CHECK NUMBER
1111103425
CHECK DATE
03-MAY-06

AMOUNT OF CHECK
*****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

Don C. [Signature]
[Signature]

1111103425 0719230221 559003000211

Rasmusson, Scott (DNRE)

From: Arevalo, John (DNRE)
Sent: Friday, October 01, 2010 10:46 AM
To: Rasmusson, Scott (DNRE)
Subject: FW: Enbridge

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
arevalo.j@michigan.gov

From: Masterson, Mike (DNRE)
Sent: Monday, September 20, 2010 9:11 AM
To: Arevalo, John (DNRE)
Subject: RE: Enbridge

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?

From: Arevalo, John (DNRE)
Sent: Monday, September 20, 2010 8:50 AM
To: Masterson, Mike (DNRE)
Subject: Enbridge

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

Received
LWMD/DEQ

SEP 17 2010

GAYLORD FIELD OFFICE

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.¹ 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.² 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.³ 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.

¹ CGA Best Practices, Version 7.0, March 2010. (www.commongroundalliance.com).

² http://www.commongroundalliance.com/Template.cfm?Section=Best_Practices.

³ <http://primis.phmsa.dot.gov/comm/DamagePrevention.htm?nocache=4560>

Received
LWMD/DEQ

SEP 17 2010

GAYLORD FIELD OFFICE

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, overtime, 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.

Received
LWMD/DEQ

SEP 17 2010

GAYLORD FIELD OFFICE

⁴ http://primis.phmsa.dot.gov/comm/reports/safety/SigPSIDet_2000_2009_US.html?nocache=3616#_liquid

⁵ <http://www.nace.org/content.cfm?parentid=1046¤tID=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 Thomassey, PhD
Program Director
Tip of the Mitt Watershed Council

Anne Woiwode
State Director
Sierra Club, Michigan Chapter

Received
LWMD/DEQ

SEP 17 2010

GAYLORD FIELD OFFICE

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:

- | | |
|--------------------------------------------------------------------------|------------------------------------------------------------------------|
| <input type="checkbox"/> Part 301 Inland Lakes and Streams | <input type="checkbox"/> Part 315 Dam Safety |
| <input checked="" type="checkbox"/> Part 325 Great Lakes Submerged Lands | <input type="checkbox"/> Part 323 Shorelands Protection and Management |
| <input type="checkbox"/> Part 303 Wetlands Protection | <input type="checkbox"/> Part 353 Sand Dune Protection and Management |
| <input type="checkbox"/> Part 31 Floodplain/Water Resources Protection | |

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



US Army Corps of Engineers (USACE)

Michigan Department of Environmental Quality (MDEQ)

AGENCY USE	Previous USACE Permit or File Number	Date Received RECEIVED AUG 26 2010 DNRE/WRD PERMIT CONSOLIDATION UNIT	Land and Water Management Division, MDEQ File Number 10-24-0035-P	AGENCY USE
	USACE File Number		Pre-application Number or Marina Operating Permit Number	
	District Office Gaylord-Scott Rasmussen		Fee received \$ 500 CC	

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 8 1/2 by 11 inch paper.
☐ List any additional attachments, tables, etc.:
- ☐ Date project was staked
☐ Application fee is attached
☐ All requested supplementary attachments (**) are included

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		Zip Code	Township Name(s)	Township(s) 40N & 39N	Range(s) 4W & 4W	Section(s) 25 & 10/11
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 N/A	Private Claim N/A	
Project types (check all that apply)	<input type="checkbox"/> private <input type="checkbox"/> building addition <input type="checkbox"/> project is receiving federal transportation funds	<input type="checkbox"/> public/government <input type="checkbox"/> new building or structure	<input type="checkbox"/> industrial <input type="checkbox"/> building renovation or restoration <input type="checkbox"/> other (explain)	<input type="checkbox"/> commercial <input type="checkbox"/> river restoration	<input type="checkbox"/> multi-family <input type="checkbox"/> single-family	
The proposed project is on, within, or involves (check all that apply)			<input type="checkbox"/> a legally established County Drain (date established) (M/D/Y) / / <input checked="" type="checkbox"/> a Great Lake or Section 10 Waters <input type="checkbox"/> a natural river <input type="checkbox"/> a dam <input type="checkbox"/> a designated high risk erosion area <input type="checkbox"/> a designated critical dune area <input type="checkbox"/> a wetland <input type="checkbox"/> a designated environmental area <input type="checkbox"/> 500 feet of an existing waterbody			
<input type="checkbox"/> a stream <input type="checkbox"/> a pond (less than 5 acres) <input type="checkbox"/> a river <input type="checkbox"/> a channel/canal <input type="checkbox"/> an inland lake (5 acres or more) <input type="checkbox"/> a ditch or drain <input type="checkbox"/> a floodway area <input type="checkbox"/> a 100-year floodplain			<input type="checkbox"/> a new marina <input type="checkbox"/> a structure removal <input type="checkbox"/> a utility crossing			
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 (individual or corporate name) Enbridge Energy, Limited Partnership Jacob Jorgensen, Associate Region Engineer			Agent/Contractor (firm name and contact person)			
Mailing Address 1320 Grand Avenue			Address			
City Superior State WI Zip Code 54880			City State Zip Code			
Daytime Phone Number with Area Code 715-394-1551 Cell Phone Number 218-248-0808			Daytime Phone Number with Area Code Cell Phone Number			
Fax 832-325-5602 E-mail Jacob.Jorgensen@enbridge.com			Fax E-mail			
<input type="checkbox"/> No <input type="checkbox"/> Yes 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? ➔ If no, attach letter(s) of authorization from all owners. A letter signed by each 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..						
Property Owner's Name (If different from applicant)			Mailing Address			
Daytime Phone Number with Area Code Cell Phone Number			City State Zip Code			



- ☐ 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.

4 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 existed 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 crossing.

See attached

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5 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 north arrow.

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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* 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 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 pipeline 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*

6 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
<i>US Coast Guard</i>	<i>Notification</i>				
<i>Mackinac Bridge Authority</i>	<i>Notification</i>				

7 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

Were the regulated activities conducted under a MDEQ permit? ☐ 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) / /

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)

8 ADJACENT/RIPARIAN 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

9 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
Jacob Jorgensen

Signature

Jacob P. Jorgensen

Date (M/D/Y)

08/26/2010



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16 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

DNRE/WRD
PERMIT CONSOLIDATION UNIT
Previous MDEQ permit
number, if knownHas 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

Dam ID Number, if known

Extent of vertical
drawdown (ft)Impoundment
design head (ft)Number of adjacent or
impacted property ownersDate drawdown would start
(M/D/Y) / /Date drawdown
would stop (M/D/Y) / /Rate of drawdown
(ft/day)Date refilling would start
(M/D/Y) / /Date refill
would end (M/D/Y) / /Rate of refill
(ft/day)Type of outlet discharge structure to be used
☐ surface ☐ bottom ☐ mid-depthImpoundment area at
normal water level (acres)Sediment depth behind impoundment
discharge structure (ft)**17 DAM, EMBANKMENT, DIKE, SPILLWAY, OR CONTROL STRUCTURE ACTIVITIES (See Sample Drawing 15)**

- For more information go to www.michigan.gov/deq/damsafety

- 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 permissible from an environmental standpoint.

➔ Attach detailed engineering plans for a dam repair, dam alteration, dam abandonment, or dam removal.

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 ☐ otherDam ID Number
If knownType of outlet discharge structure
☐ surface ☐ bottom ☐ mid depthWill proposed activities require a drawdown of the waterbody to complete the
work? ☐ No ☐ Yes (If Yes, also complete Section 16)Riprap
Volume (cu yd)Dredging/excavation
Volume (cu yd)Fill volume
(cu yd)Does structure allow complete
drainage of waterbody? ☐ No ☐ YesBenchmark
elevation (ft)

Datum used

☐ Local ☐ NGVD 29 ☐ other

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

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.

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 Upstream
(vertical / horizontal) DownstreamProposed normal
pool elevation (ft)

Impoundment flood elevation (ft)

Maximum vertical drawdown capability (ft) (Attach operational procedure of the
proposed structure, if available)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)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 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.

What method will be used to construct the crossings?

☐ flume ☐ plow ☐ open trench ☐ jack and bore ☐ directional drillingCrossing of ☐ Inland Lake or Stream ☐ floodplain☐ international waters ☐ wetlands (also complete Section 12)

Type

Number of
wetland crossingsNumber of inland lake or
stream crossingsPipe diameter
(in)Pipe length per
crossing (ft)Distance below streambed
or wetland (in)Trench width
(ft)☐ sanitary sewer☐ storm sewer☐ watermain☐ cable☒ oil/gas pipeline

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 CONTRUCTION TYPICALS".T he 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.

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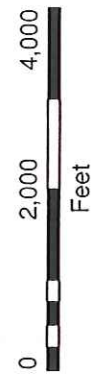
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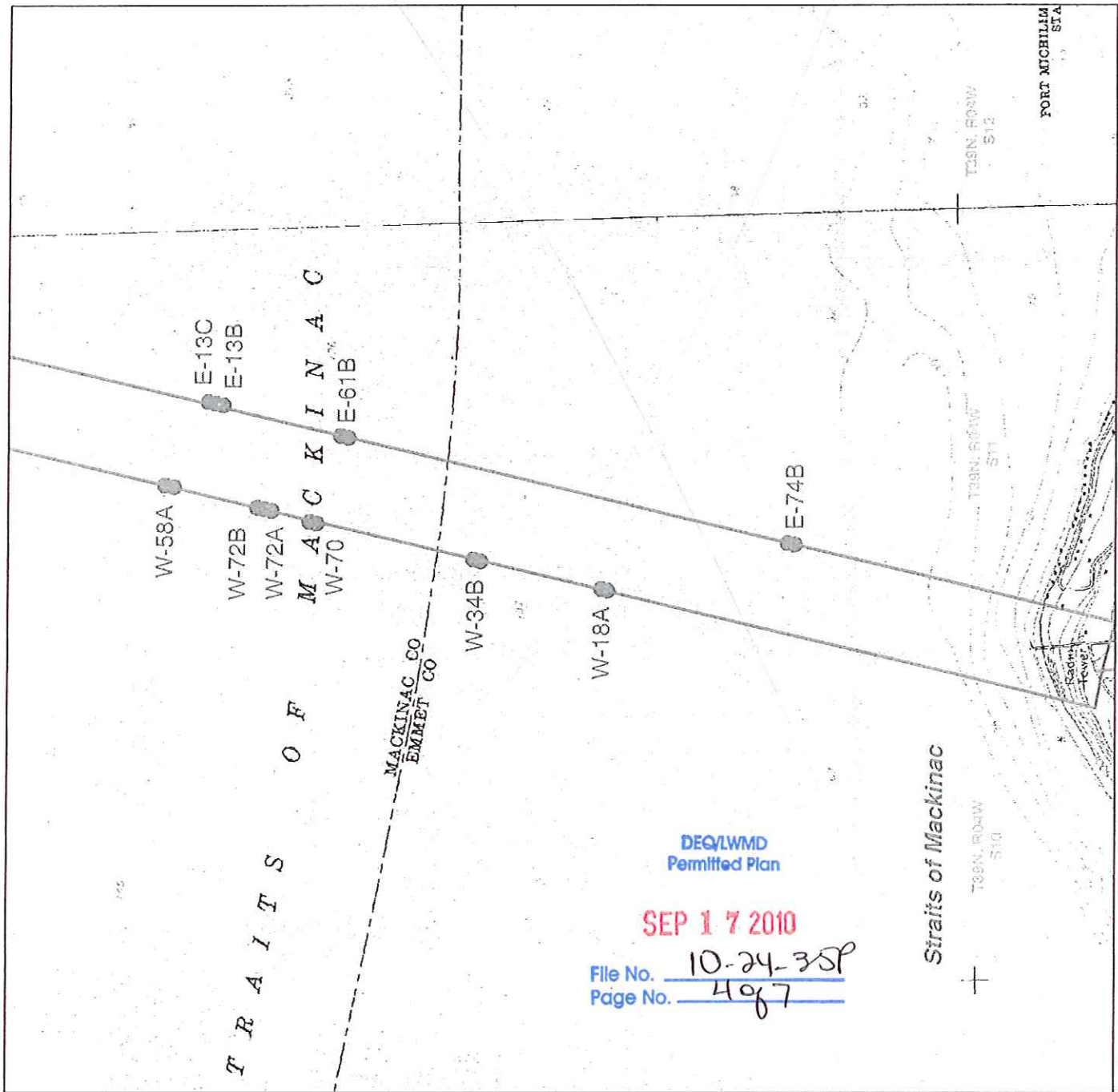
Proposed Anchor Locations
 Line 5

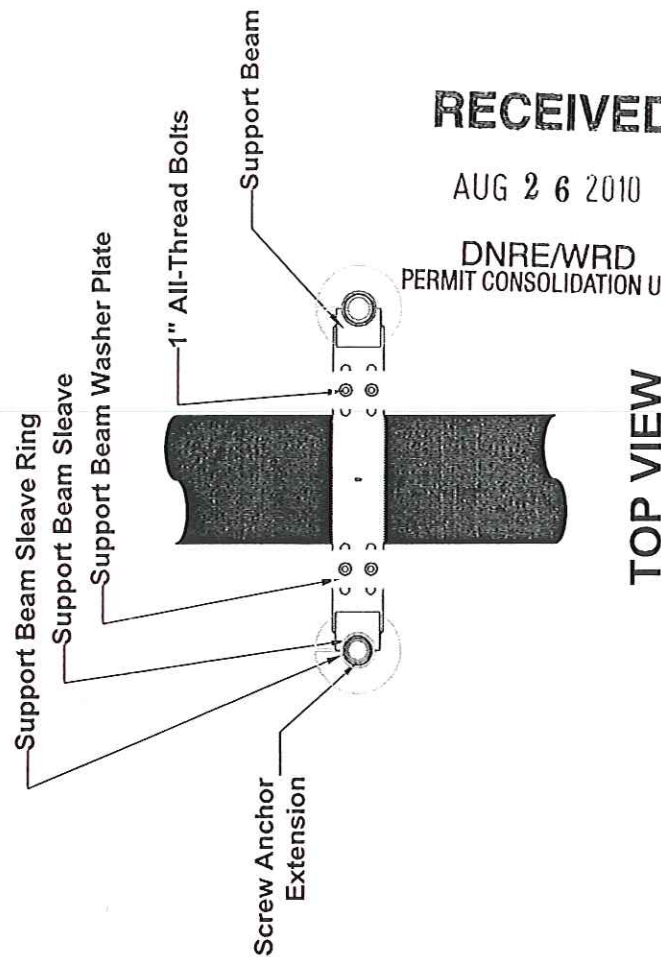
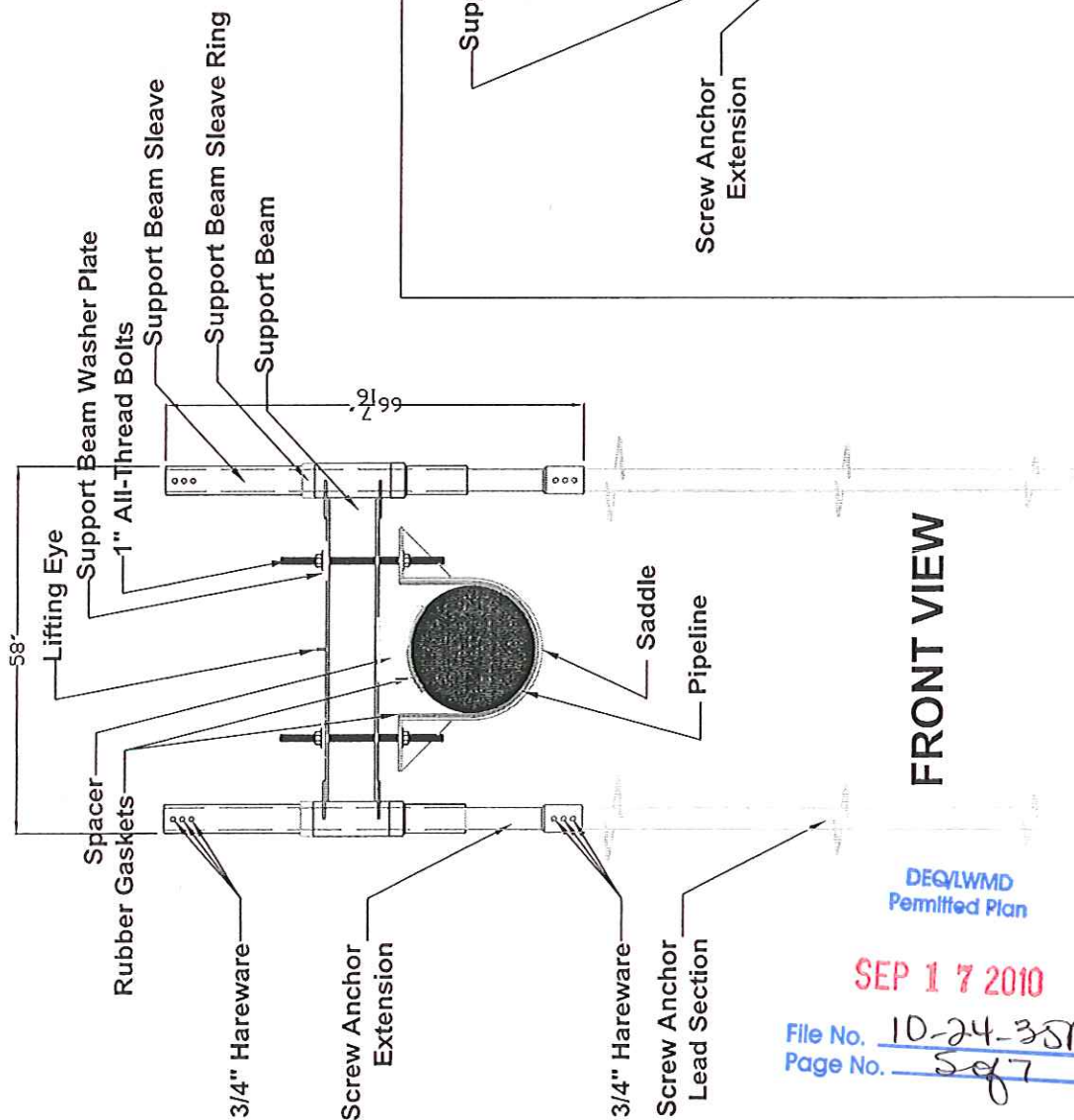


1 inch = 2,000 feet

Figure 3
 Maintenance Locations

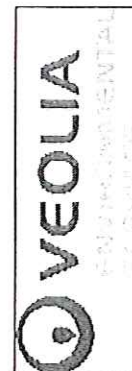
ENBRIDGE™





Enbridge Energy
Pipeline Anchoring
System
Straits of Mackinac

785 County CB
Neenah, WI 54956
Phone: (800) 932-6216
Fax: (920) 749-8110

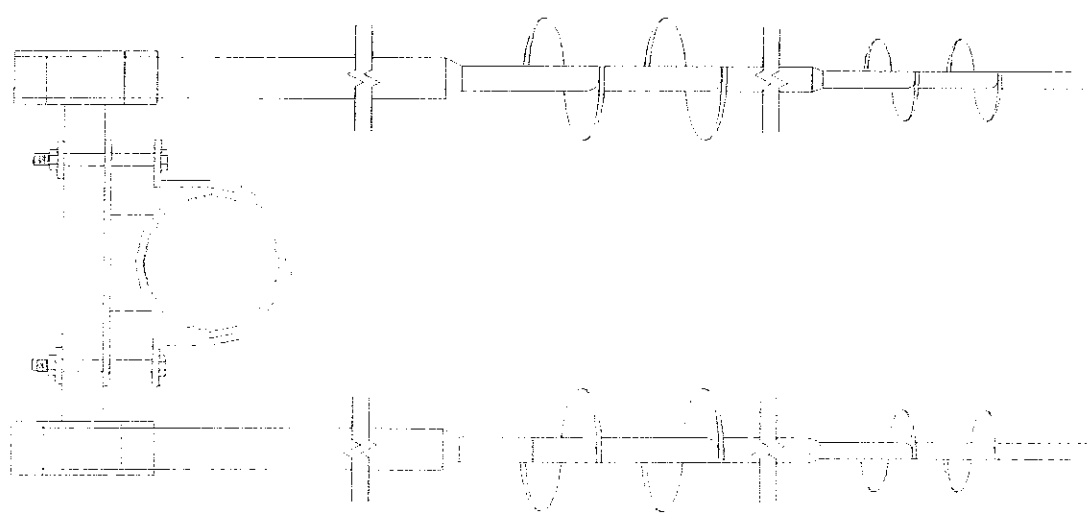
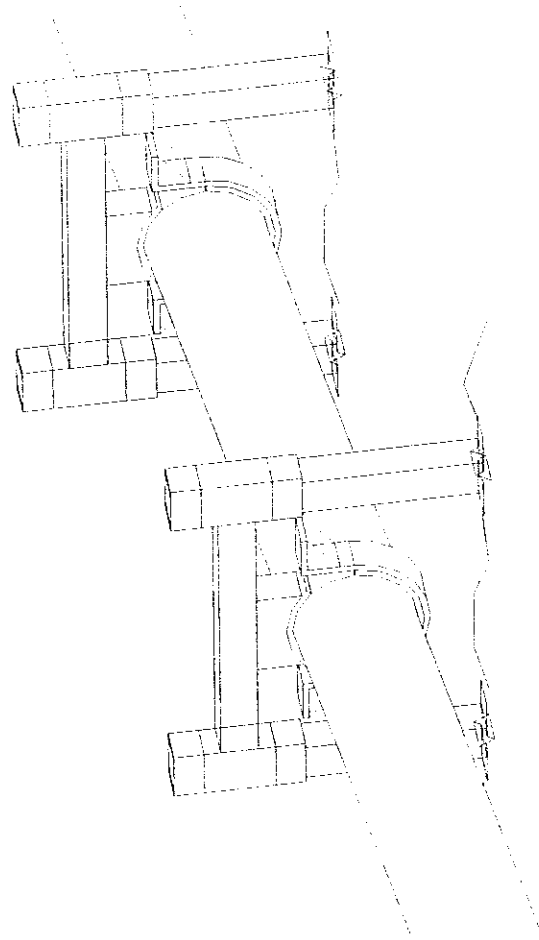


Drafter: Trent Nedens
File Name: Mack Screw Anchor Detail
Job #:
Date: August, 2010
Drawing: VES-SS - 001

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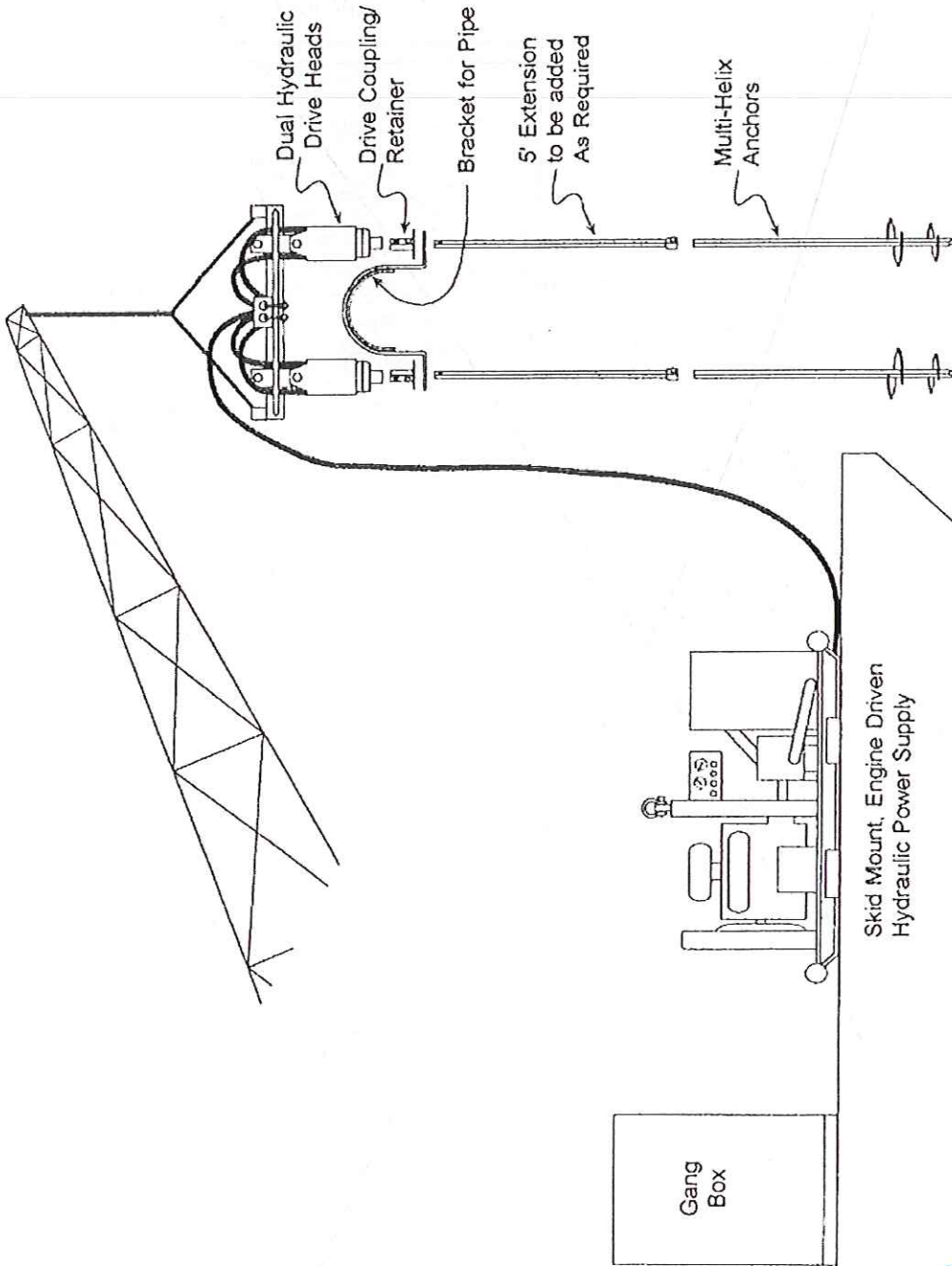


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DEQ/LWMD
Permitted Plan

SEP 17 2010

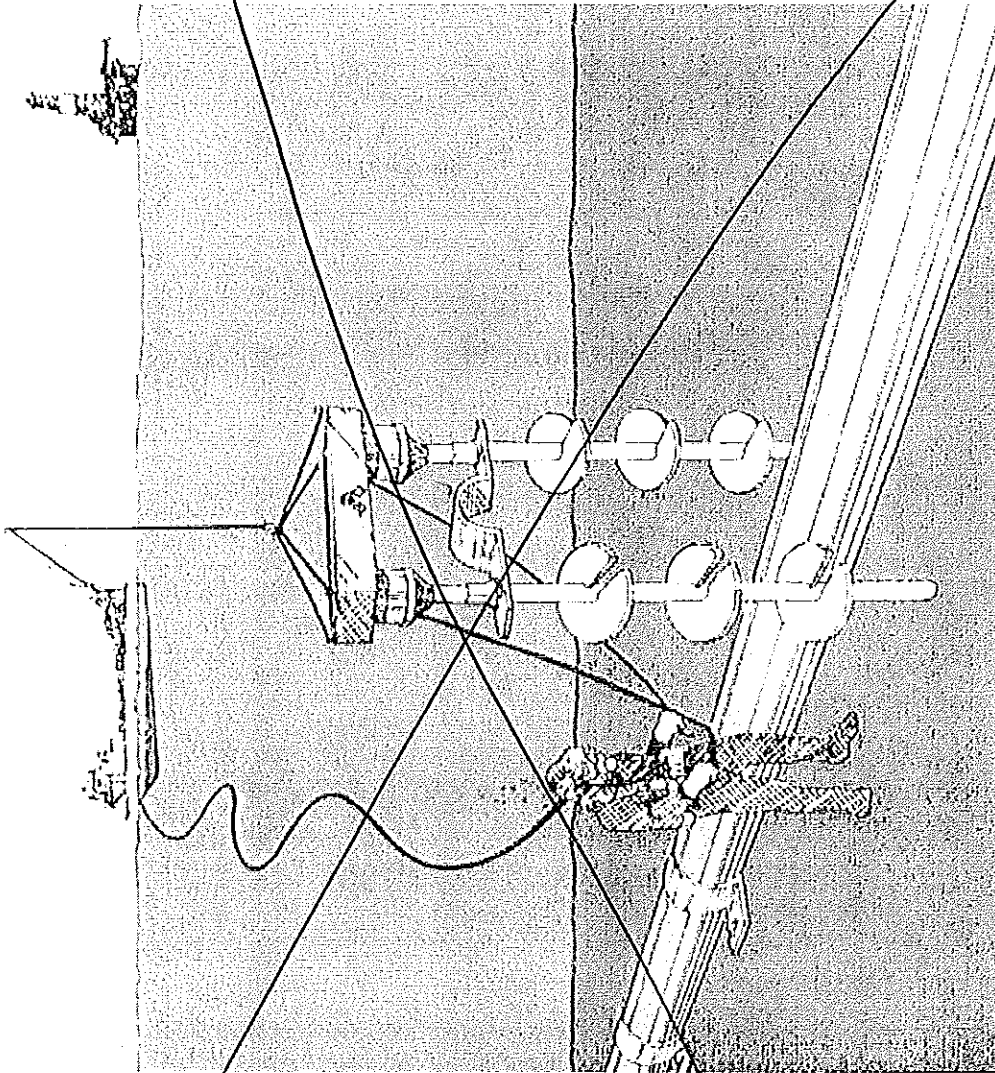
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Page No. 6 of 7

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PERMIT CONSOLIDATION UNIT

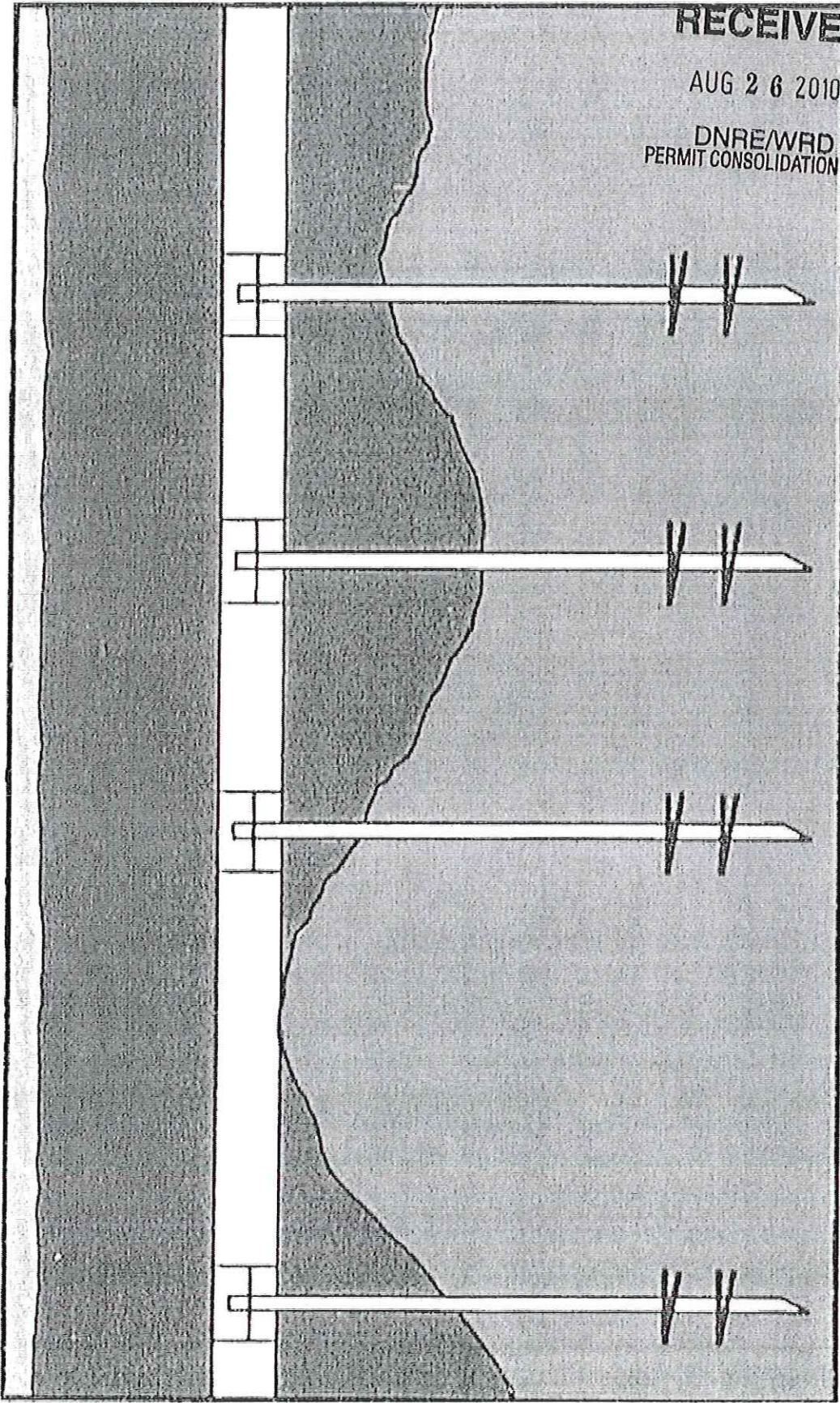


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DNRE/WRD
PERMIT CONSOLIDATION UNIT



DEQ/LWMD
Permitted Plan

SEP 17 2010

File No. 10-24-388
Page No. 787

ENBRIDGE

**Department of Natural Resources and Environment
Land and Water Management Division**

PROJECT REVIEW REPORT

File # 10-24-0035-P

Name of reviewer: Scott Rasmusson

Date of field review: Desktop

GENERAL INFORMATION:

1. Name of applicant: Enbridge Energy					
2. Name of property owner: various					
3. Waterbody type: (check all that apply)	<input type="checkbox"/> Wetland	<input type="checkbox"/> Warm water stream	<input checked="" type="checkbox"/> Great Lake	<input type="checkbox"/> Canal (Great Lake)	
	<input type="checkbox"/> Floodplain	<input type="checkbox"/> Cold water stream	<input type="checkbox"/> Inland lake	<input type="checkbox"/> Canal (Inland lake or	
4. Jurisdictional determination (for Part 303):					
a. Is the wetland contiguous, as defined in Section 30301?		<input type="checkbox"/> Yes	<input type="checkbox"/> No		
b. Approximate size of wetland =		acres			
c. Is the project within a county with a population > 100,000?		<input type="checkbox"/> Yes	<input type="checkbox"/> No		
5. A permit is required under: <input type="checkbox"/> Part 301 <input type="checkbox"/> Part 303 <input type="checkbox"/> Part 323 <input checked="" type="checkbox"/> Part 325 <input type="checkbox"/> Part 31 <input type="checkbox"/> Sec. 404 <input type="checkbox"/>					
6. Is the application drawing complete and accurate?		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> 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
Dominant plants	Indicator status	Other plants	Indicator status	Soils (description)	Depth	

DESCRIBE HYDROLOGIC INDICATORS:

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

<p>Project is for up to 10 anchoring structures, to hold the pipeline along the bottom of Lake Michigan.</p> <p>Several other permits have been issued by this office for maintenance of this and other pipelines in the area.</p>

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

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
arevalo.j@michigan.gov

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Arevalo, John (DNRE)

From: Arevalo, John (DNRE)
Sent: Friday, September 03, 2010 9:59 AM
To: Kristen Benson
Subject: RE: Straits of Mackinac project (MDNRE File #10-24-0035-P)

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.

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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
arevalo@j@michigan.gov

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

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US Army Corps of Engineers (USACE)

Michigan Department of Environmental Quality (MDEQ)

AGENCY USE	Previous USACE Permit or File Number	Date Received RECEIVED AUG 26 2010 DNRE/WRD PERMIT CONSOLIDATION UNIT	Land and Water Management Division, MDEQ File Number 10-24-0035-P	AGENCY USE
	USACE File Number		Pre-application Number or Marina Operating Permit Number	
	District Office Gaylord-Scott Rasmussen		Fee received \$ 500 CC	

Read Instructions pages i - iii. All of the following boxes below must be checked and information provided for the application to be processed:

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| <input type="checkbox"/> All items in Sections 1 through 9 are completed | <input type="checkbox"/> Date project was staked |
| <input type="checkbox"/> Items in Sections 10 through 21 that apply to the project are completed | <input type="checkbox"/> Application fee is attached |
| <input type="checkbox"/> Dimensions, volumes and calculations are provided | <input type="checkbox"/> All requested supplementary attachments (**) are included |
| <input type="checkbox"/> Reproducible location map, site plan(s), cross sections and photographs are provided, one set must be black and white on 8 1/2 by 11 inch paper. | |
| <input type="checkbox"/> 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		Zip Code	Township Name(s)	Township(s) 40N & 39N	Range(s) 4W & 4W	Section(s) 25 & 10/11
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 N/A	Private Claim N/A	
Project types (check all that apply)	<input type="checkbox"/> private <input type="checkbox"/> building addition <input type="checkbox"/> project is receiving federal transportation funds	<input type="checkbox"/> public/government <input type="checkbox"/> new building or structure	<input type="checkbox"/> industrial <input type="checkbox"/> building renovation or restoration <input type="checkbox"/> other (explain)	<input type="checkbox"/> commercial <input type="checkbox"/> river restoration	<input type="checkbox"/> multi-family <input type="checkbox"/> single-family	
The proposed project is on, within, or involves (check all that apply)			<input type="checkbox"/> a legally established County Drain (date established) (M/D/Y) / /			
<input type="checkbox"/> a stream	<input type="checkbox"/> a pond (less than 5 acres)	<input checked="" type="checkbox"/> a Great Lake or Section 10 Waters	<input type="checkbox"/> a natural river	<input type="checkbox"/> a new marina		
<input type="checkbox"/> a river	<input type="checkbox"/> a channel/canal	<input type="checkbox"/> a designated high risk erosion area	<input type="checkbox"/> a dam	<input type="checkbox"/> a structure removal		
<input type="checkbox"/> a ditch or drain	<input type="checkbox"/> an inland lake (5 acres or more)	<input type="checkbox"/> a designated critical dune area	<input type="checkbox"/> a wetland	<input type="checkbox"/> a utility crossing		
<input type="checkbox"/> a floodway area	<input type="checkbox"/> a 100-year floodplain	<input type="checkbox"/> a designated environmental area	<input type="checkbox"/> 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 (individual or corporate name) Enbridge Energy, Limited Partnership Jacob Jorgensen, Associate Region Engineer			Agent/Contractor (firm name and contact person)			
Mailing Address 1320 Grand Avenue			Address			
City Superior State WI Zip Code 54880			City State Zip Code			
Daytime Phone Number with Area Code 715-394-1551 Cell Phone Number 218-248-0808			Daytime Phone Number with Area Code Cell Phone Number			
Fax 832-325-5602 E-mail Jacob.Jorgensen@enbridge.com			Fax E-mail			
<input type="checkbox"/> No <input type="checkbox"/> Yes 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? ➔ If no, attach letter(s) of authorization from all owners. A letter signed by each 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..						
Property Owner's Name (If different from applicant)			Mailing Address			
Daytime Phone Number with Area Code Cell Phone Number			City State Zip Code			

☐ 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.

4 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 existed 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 construction methods.

See attached

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5 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 north arrow.

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* 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 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 pipeline 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*

6 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
<i>US Coast Guard</i>	<i>Notification</i>				
<i>Mackinac Bridge Authority</i>	<i>Notification</i>				

7 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

Were the regulated activities conducted under a MDEQ permit? ☐ 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) / /

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)

8 ADJACENT/RIPARIAN 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

9 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
Jacob Jorgensen

Signature
Jacob P. Jorgensen

Date (M/D/Y)
08/26/2010



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16 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

DNRE/WRD
PERMIT CONSOLIDATION UNIT
Previous MDEQ permit
number, if knownHas 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

Dam ID Number, if known

Extent of vertical
drawdown (ft)Impoundment
design head (ft)Number of adjacent or
impacted property ownersDate drawdown would start
(M/D/Y) / /Date drawdown
would stop (M/D/Y) / /Rate of drawdown
(ft/day)Date refilling would start
(M/D/Y) / /Date refill
would end (M/D/Y) / /Rate of refill
(ft/day)Type of outlet discharge structure to be used
☐ surface ☐ bottom ☐ mid-depthImpoundment area at
normal water level (acres)Sediment depth behind impoundment
discharge structure (ft)**17 DAM, EMBANKMENT, DIKE, SPILLWAY, OR CONTROL STRUCTURE ACTIVITIES (See Sample Drawing 15)**

- For more information go to www.michigan.gov/deq/damsafety

- 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 permissible from an environmental standpoint.

➔ Attach detailed engineering plans for a dam repair, dam alteration, dam abandonment, or dam removal.

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 ☐ otherDam ID Number
If knownType of outlet discharge structure
☐ surface ☐ bottom ☐ mid depthWill proposed activities require a drawdown of the waterbody to complete the
work? ☐ No ☐ Yes (If Yes, also complete Section 16)Riprap
Volume (cu yd)Dredging/excavation
Volume (cu yd)Fill volume
(cu yd)Does structure allow complete
drainage of waterbody? ☐ No ☐ YesBenchmark
elevation (ft)

Datum used

☐ Local ☐ NGVD 29 ☐ other

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

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.

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 Upstream
(vertical / horizontal) DownstreamProposed normal
pool elevation (ft)

Impoundment flood elevation (ft)

Maximum vertical drawdown capability (ft) (Attach operational procedure of the
proposed structure, if available)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)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 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.

What method will be used to construct the crossings?

☐ flume ☐ plow ☐ open trench ☐ jack and bore ☐ directional drillingCrossing of ☐ Inland Lake or Stream ☐ floodplain☐ international waters ☐ wetlands (also complete Section 12)

Type

Number of
wetland crossingsNumber of inland lake or
stream crossingsPipe diameter
(in)Pipe length per
crossing (ft)Distance below streambed
or wetland (in)Trench width
(ft)☐ sanitary sewer☐ storm sewer☐ watermain☐ cable☒ oil/gas pipeline

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 CONTRUCTION TYPICALS".T he 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.

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**DNRE/WRD
PERMIT CONSOLIDATION UNIT**

Arevalo, John (DNRE)

From: Klemans, Diana (DNRE)
Sent: Thursday, September 16, 2010 9:17 AM
To: Graf, Tom (DNRE); Fitzner, Wendy (DNRE); Dettloff, Mary (DNRE); Rasmusson, Scott (DNRE); Arevalo, John (DNRE)
Cc: Saalfeld, Jerry (DNRE); Ostlund, Peter (DNRE); Syts, Sean (DNRE)
Subject: RE: More reporter questions

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