

# Fond du Lac Line 4 Project

## Application for Pipeline Routing Permit and Partial Exemption

Minnesota Public Utilities Commission

Appendix H

## Contaminated Sites Management Plan



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# Contaminated Sites Management Plan

**Enbridge Energy, Limited Partnership • Fond du Lac Line 4 Project**

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## **1.0 INTRODUCTION**

This Contaminated Sites Management Plan (“CSMP”) has been prepared by Enbridge Energy, Limited Partnership (“Enbridge”) for the Fond du Lac Line 4 Project (“Project”) that will take place within the Fond du Lac Reservation in Minnesota. The proposed Project Preferred Route is shown on Figure 1. The purpose of the CSMP is to present guidance to Contractors for managing contaminated soil, water, debris or other materials which may be encountered during Project work based on the applicability described below. This CSMP does not address potential contractor safety requirements that may apply when managing contaminated materials.

## **2.0 APPLICABILITY**

This CSMP applies to contaminated material that may be encountered along the Project Preferred Route as a result of activities or events that occurred prior to the Project commencing (i.e., historical). Contamination may be caused by petroleum products, agricultural chemicals, asbestos, or other industrial byproducts that are present as a result of historical activities or events whether known or unknown.

### **2.1 CONTAMINATED MATERIAL**

For the purpose of this CSMP, “contaminated material” has one or more of the following characteristics:

- Petroleum odors in soil or water
- Petroleum staining in soil or on vegetation
- Petroleum free product or sheen (e.g., rainbow or bluish colors) on water, soil, or debris surfaces
- Evidence of improper waste disposal such as industrial garbage, scrap materials, used containers, or other by-product type wastes
- Evidence of man-made earthen features (hills, depressions, waste piles, etc.)
- Evidence of dumping or other waste disposal
- Vegetation that is stressed or dead
- Soil that is discolored compared to adjacent or nearby soils
- Evidence of present or past chemical storage or use, including tanks, drums or containers
- Buildings or structures that suggest current or past industrial activity
- Evidence of land use associated with potential contamination (landfills, waste treatment plants, agricultural pesticide storage facilities, storage ponds, septic fields, drains, culverts, etc.)

#### **2.1.1 Known**

Enbridge will conduct a review of data and information to identify sites with the potential to encounter contaminated material within 1,200 feet of the Project Preferred Route. If any sites with historical documentation of contaminated material are identified, they will be listed in Table 1, and locations will be shown on Figure 2.

## **2.1.2 Unknown**

It is possible that contaminated material may be encountered unexpectedly at locations along the Preferred Route where no historical information was available. Such locations will be considered previously unknown sites this CSMP will apply to such sites.

## **2.2 OTHER MATERIAL**

Material such as debris (e.g., common household waste, construction debris, old appliances, etc.) with no apparent signs of contamination may be encountered during the Project. The material will not be considered contaminated and will not be managed as part of this CSMP.

In addition, natural organic (i.e., biogenic) sheens where the Project route crosses wetlands, ditches, or other water-saturated surfaces may be encountered. A biogenic sheen can often be identified by breaking up the sheen with a stick and observing the sheen behavior. If the sheen remains broken into platelets and fails to re-coalesce quickly, it may be considered natural and not a source of hydrocarbon contamination. If the sheen quickly reforms or exhibits a typical rainbow petroleum-type sheen on the surface of the water, then the material will be considered contaminated.

Additional assessment will be conducted as explained in Section 4 if there is any doubt as to whether material encountered is contaminated.

## **2.3 PROJECT RELATED SPILLS**

Contaminated material that is generated during the Project as a result spills that occur during construction (e.g., equipment releases) will be managed in accordance with Enbridge's Environmental Protection Plan which has been developed separate from this CSMP.

## **3.0 ROLES AND RESPONSIBILITIES**

The following section provides a summary of roles and responsibilities as they pertain to contaminated site management during the Project. Enbridge is committed to achieving a high standard of environmental protection and is committed to the proper management of unanticipated environmental conditions, including contamination.

Enbridge's expectations for work during the Project include conducting all work activities safely and effectively while complying with regulations.

### **3.1 PROJECT TEAM**

Multiple parties will be working together to ensure the Project is executed according to scope. The parties expected to have a major role in maintaining environmental compliance and proper management of contaminated materials are Enbridge, its Contractors, and other stakeholders. Contact information for key personnel is included in the attached Contact List (Appendix A).

### **3.1.1 Enbridge Major Projects Environmental Staff**

The responsibilities of Enbridge Major Projects Environmental Staff associated with this project include:

- manage environmental permit compliance during the Project (does not include in-depth management of contaminated sites);
- serve as the interface between the Project Engineering staff, contractors, and the Liquid Pipelines Environmental Staff;
- oversee site-specific management and disposal of contaminated material that may be encountered during the Project; and
- track Project progress and advise Enbridge's Liquid Pipelines Environmental Staff if contamination is encountered at any given location.

### **3.1.2 Environmental Inspector**

Environmental Inspectors on the Project are considered Enbridge Major Projects Environmental Staff and the responsibilities of the Environmental Inspectors include:

- maintain overall environmental permit compliance during the Project (does not include comprehensive management of contaminated materials);
- serve as an on-site point of contact in the field during the Project;
- provide an initial assessment and on-site guidance regarding contamination or suspected contamination; and
- complete the attached Environmental Inspector Contaminated Site Response Form (Appendix B) when contamination or suspected contamination is encountered during the Project.

### **3.1.3 Enbridge Liquid Pipelines Environmental Staff**

The responsibilities of Enbridge Liquid Pipelines Environmental Staff associated with this project include:

- direct activities specifically associated with the CSMP for the Project;
- serve as the primary point of contact with regulators when addressing contaminated sites;
- provide advance notice to applicable regulatory agencies during the Project when excavation activities are within one day of a location of a known potentially contaminated site;
- oversee site-specific management and disposal of contaminated materials that may be encountered during the Project;
- document conditions at contaminated sites using appropriate field screening and analytical sampling methods (including completing Appendix C, Site Investigation Field Sampling and Screening Log);
- maintain a database of contaminated sites encountered during the Project;

- manage records associated with contaminated material management and disposal; and
- prepare site-specific memorandums and a final report of findings for sites addressed under the CSMP during the Project.

### **3.1.4 Chief Inspector**

The Chief Inspector reports directly to Enbridge and the responsibilities of the Chief Inspector include:

- notify the Enbridge Major Projects Environmental Staff when Project activities involving ground disturbance are two days out from work commencing at known potentially contaminated sites; and
- provide initial notification to the Enbridge Environmental Inspector upon discovery of any type of contamination at a site regardless of whether it is previously known or newly discovered (i.e., unknown site).

### **3.1.5 Project Contractor**

Project Contractor reports to the Chief Inspector and the responsibilities of the Project Contractor include:

- continually evaluate project activities for unanticipated conditions including potential contamination;
- provide the initial report to the Chief Inspector and cease work if contamination is encountered during Project activities; and
- work with Enbridge Liquid Pipelines Environmental Staff to arrange for proper removal, temporary storage/containment, and transport of contaminated materials offsite.

## **4.0 PROJECT CONTRACTOR RESPONSE ACTIONS**

In the event that contaminated soil, water, or debris is encountered, the Project Contractor will take the response actions listed below which are also summarized in the Contaminated Materials Management Flowchart (Appendix D).

1. Cease Work
  - i The Project Contractor will cease work activity in the vicinity of the contamination.
2. Address Safety
  - i The Project Contractor will refer to the Project Safety Plan and consult with Enbridge's Project Safety representatives to determine proper health and safety actions.
3. Notify Enbridge
  - i The Project Contractor will notify the Chief Inspector who will notify Enbridge's Compliance Manager and Enbridge Major Projects Environmental Staff as soon as possible after taking initial safety precautions.

- ii The Major Projects Environmental Staff will notify Enbridge Liquid Pipelines Environmental Staff.
  - iii Enbridge's on-site Environmental Inspector will complete the Environmental Inspector Contaminated Site Response Form (Appendix B) documenting response actions and estimated impacts.
  - iv Enbridge Liquid Pipelines Environmental Staff will make a determination as to whether the contamination is due to an active/ongoing release or a historical release.
4. Prevent Contaminant Migration
- i At the direction of Enbridge's Liquid Pipelines staff, the following actions may be taken:
    - Build earthen dams within the trench to isolate the contamination particularly if water is present; and/or
    - Deploy sorbent pads and booms to remove and isolate petroleum contamination that may be present on water in the trench.
5. Containerize Contaminated Material
- i At the direction of Enbridge's Liquid Pipelines staff, the Project Contractor will segregate contaminated material from clean material to the extent possible. The contaminated material will be clearly labeled with the milepost and date it was removed from the trench. The material will be stored at the job site until disposal at an offsite facility is approved.
    - Contaminated dry soil** and debris will be placed on plastic sheeting or within a roll-off dumpster or other suitable containment structure and covered with plastic sheeting.
    - Contaminated water** that needs to be dewatered from the excavation will be pumped into a frac tank or similar container.
      - The Project Contractor will make reasonable efforts to remove crude oil or other free phase petroleum product from the trench to prevent it from being mixed with containerized water.
      - Free phase petroleum product should be removed with a vac truck or sorbent pads, boom, etc. and stored or contained separately from
    - Contaminated hydrovac slurry and drilling mud** will be placed into a water tight roll-off dumpster or other suitable containment structure and covered.
      - Mud and slurry will be solidified only with approval, and, at the direction of Enbridge Liquid Pipelines Environment Staff.
      - Solidification materials may include dry saw dust wood pellets, Portland cement, bentonite, or other appropriate absorbent material that has been approved by Enbridge Liquid Pipelines Environment Staff.
6. Dispose of the Contaminated Material



- i Enbridge Liquid Pipelines Environment staff may need to collect samples from the contaminated material for waste characterization and disposal purposes.
  - ii Enbridge Liquid Pipelines Environment Staff will identify a proper disposal facility for the contaminated material and provide the Project Contractor with shipping papers for transportation to the disposal facility.
  - iii The Project Contractor will arrange for transportation of contaminated material to one of the disposal facilities listed on Table 2.
  - iv The Project Contractor will maintain records of shipping and waste disposal and provide copies them to the Enbridge Liquid Pipelines Environment Staff.
7. Assist with Environmental Documentation
- i Depending on the characteristics of the contamination encountered, Enbridge Liquid Pipelines Environment Staff may need to collect additional samples from the excavation bottom and sidewalls before backfilling occurs.
  - ii The Project Contractor will assist the Enbridge Liquid Pipelines Environment Staff in this effort.
8. Backfill the trench with clean borrow material
- i Backfill material must be approved by Enbridge Liquid Pipelines Environment Staff.
  - ii Do not backfill with contaminated material.
  - iii Document the source of the backfill material.

**Table 1 (to be completed prior to construction)**



**Table 2 Contaminated Material Disposal Facilities (to  
be completed prior to construction)**



**Figure 1 Route Overview**

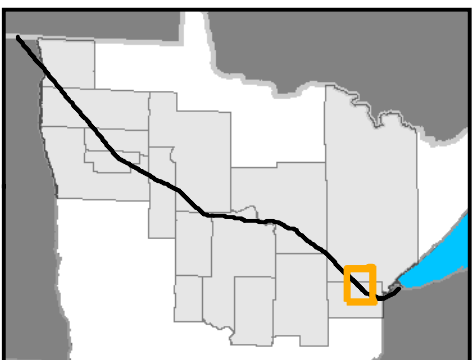
**Enbridge Mainline Corridor**

FOND DU LAC

ST. LOUIS COUNTY  
CARLTON COUNTY

MP 1060.0

MP 1070.0



**FOND DU LAC LINE 4 PROJECT**

- Line 4 Relocation
- Existing Line 4
- Fond du Lac

TSW  
Date: 1/25/2019

**Figure 2 (To be developed prior to construction)**



**Appendix A**  
**Contact List**

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**Appendix A  
Contact List  
Contaminated Sites Management Plan – Minnesota  
Fond du Lac Line 4 Project**

Contact	Company	Role	Phone (office)	Phone (cell)	Email
Julianne Motis	Enbridge	Senior Environmental Advisor, Major Projects Environment	218-522-4652	218-409-5239	<a href="mailto:Julianne.Motis@enbridge.com">Julianne.Motis@enbridge.com</a>
Karl Beaster	Enbridge	Senior Environmental Advisor, LP US Environment Operations	218-464-5623	715-718-1040	<a href="mailto:Karl.Beaster@enbridge.com">Karl.Beaster@enbridge.com</a>
		Environmental Inspector TBD			
		Environmental Inspector TBD			
		Chief Inspector TBD			
		Project Contractor TBD			

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**Appendix B**  
**Environmental Inspector Contaminated Site Response**  
**Form**

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**Appendix B**  
**Environmental Inspector Contaminated Site Response Form**  
**Contaminated Sites Management Plan – Minnesota**  
**Fond du Lac Line 4 Project**

**Name:** \_\_\_\_\_  
**Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_  
**Milepost:** \_\_\_\_\_ **Stationing:** \_\_\_\_\_

**Potential Contamination Observed (check all that apply):**

- |  |  |
|--|--|
| <input type="checkbox"/> Petroleum odors in soil or water<br><input type="checkbox"/> Visual petroleum staining in soil or on vegetation<br><input type="checkbox"/> Petroleum free product or sheen (e.g., rainbow or bluish colors) on water, soil, or debris surfaces<br><input type="checkbox"/> Evidence of improper waste disposal such as industrial garbage, scrap materials, used containers, or other by-product type wastes<br><input type="checkbox"/> Presence of man-made hills, depressions, or waste piles or evidence of dumping or other waste disposal<br><input type="checkbox"/> Stressed or dead vegetation<br><input type="checkbox"/> Soil that is discolored compared to adjacent or nearby soils | <input type="checkbox"/> Evidence of present or past chemical storage or use, including tanks, drums or containers<br><input type="checkbox"/> Active or closed buildings and structures that suggest current or past industrial activity<br><input type="checkbox"/> Evidence of land use associated with potential contamination (landfills, waste treatment plants, agricultural pesticide storage facilities, storage ponds, septic fields, drains, culverts, etc.)<br><input type="checkbox"/> Other (describe)<br>_____<br>_____<br>_____<br>_____ |
|--|--|

**Response Actions**

Has containment cell been constructed and lined with plastic? Yes / No
Containment Cell Dimensions (feet):
Quantity of Contaminated Soil Excavated and Stockpiled (cubic yards):

**Estimated Impacts**

Estimated Extent of Contaminated Soil (horizontal and vertical, in feet):
Has groundwater or surface water been impacted? Yes/No
Describe water impacts (sheen, free oil, etc.):
Nearest surface waterbody (name and distance):

Describe response action activities on reverse.

**Appendix B**  
**Environmental Inspector Contaminated Site Response Form**  
**Contaminated Sites Management Plan – Minnesota**  
**Fond du Lac Line 4 Project**

Are any impacts observed in the nearest surface water body?

Describe:



**Appendix B**  
**Environmental Inspector Contaminated Site Response Form**  
**Contaminated Sites Management Plan – Minnesota**  
**Fond du Lac Line 4 Project**

**Project Contractor Contaminated Site Response Actions:**

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## **Appendix C**

### **Site Investigation Field Sampling and Screening Log**

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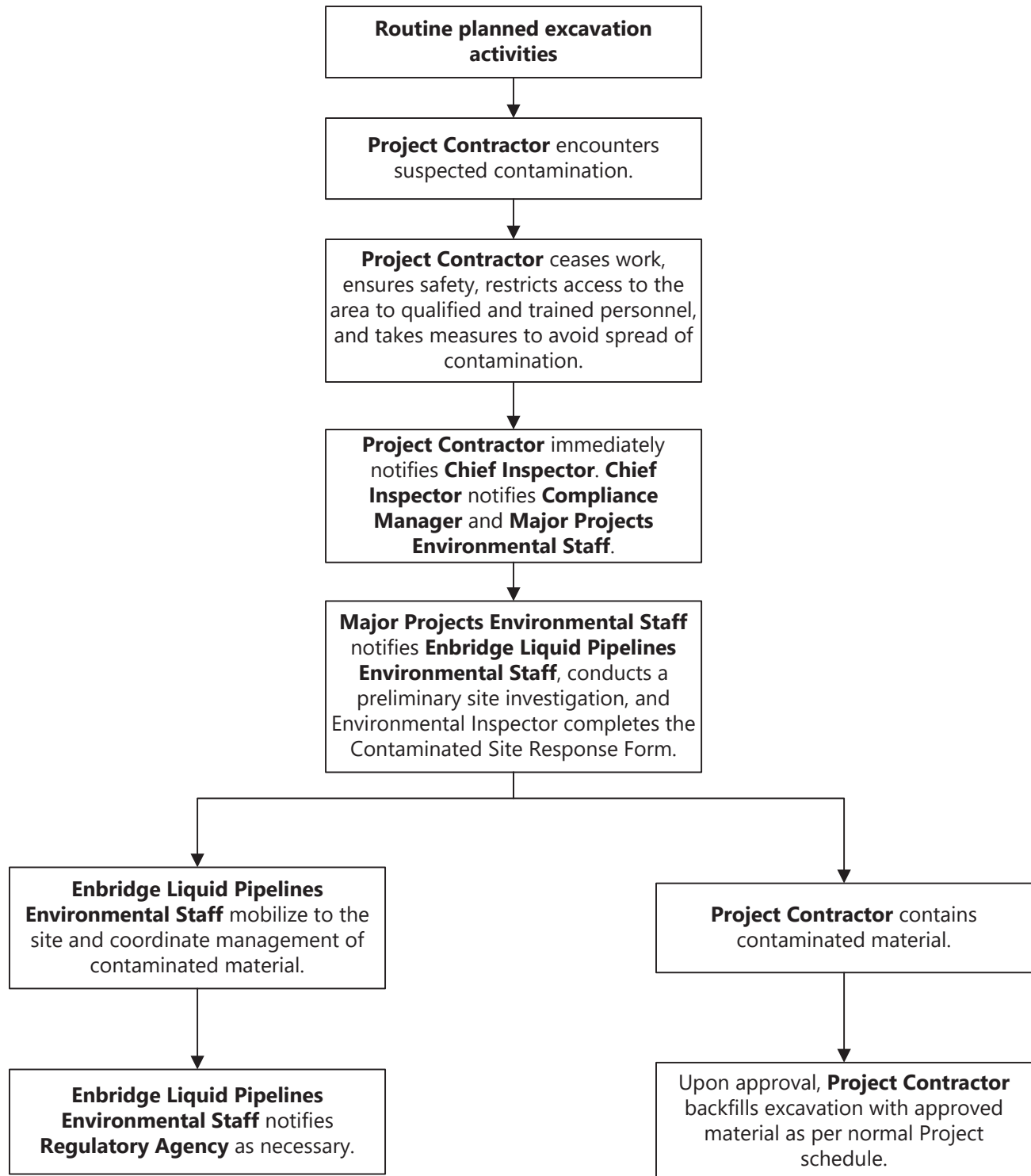
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**Appendix D**  
**Contaminated Materials Management Flowchart**

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Appendix D  
Contaminated Materials Management Flowchart  
Contaminated Sites Management Plan - Minnesota  
Fond du Lac Line 4 Project



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