



Petroleum-Contaminated Soil Management Plan

Fond du Lac Line 4 Project

June 2020

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ACRONYMS AND ABBREVIATIONS

CSMP	Contaminated Sites Management Plan
Enbridge	Enbridge Energy, Limited Partnership
Line 3R	Line 3 Replacement Project
Project	Fond du Lac Line 4 Project

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”). The proposed Project route is shown on Figure 1.0-1. The purpose of this CSMP is to present key procedural guidance for managing contaminated material that may be encountered during Project work. Any potential safety requirements that may apply when managing contaminated materials are addressed in other Project related documents separate from this CSMP.

2.0 APPLICABILITY

This CSMP applies to contaminated material that may be encountered along the Project route as a result of historical activities or events that occurred prior to the Project commencing. Contamination may be associated with petroleum products, agricultural chemicals, asbestos, or other man-made materials that are present.

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, 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; and/or
- Evidence of land use associated with potential contamination (landfills, waste treatment plants, agricultural pesticide storage facilities, storage ponds, septic fields, drains, culverts, etc.).

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Figure 1.0-1 General Project Location Map



2.2 OTHER MATERIAL

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

In addition, natural organic (i.e., biogenic) sheens may be encountered where the Project route crosses wetlands, ditches, or other water-saturated surfaces. 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 petroleum contamination. If the sheen quickly coalesces or exhibits a typical rainbow petroleum-type sheen on the surface of the water, the material will be considered contaminated.

Additional assessment will be conducted if there is any doubt as to whether material encountered is contaminated, as explained in Section 4.0.

2.3 PROJECT RELATED SPILLS

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

3.0 ROLES AND RESPONSIBILITIES

Enbridge is committed to achieving a high standard of environmental protection and proper management of unanticipated environmental conditions. Enbridge's expectations during the Project are to conduct all work activities safely and effectively according to the scope while complying with applicable regulations.

The following section provides a summary of roles and responsibilities as they pertain to contaminated site management during the Project.

3.1 PROJECT TEAM

Multiple parties will be working together to ensure the Project is successfully executed. Enbridge and its Contractors are expected to have a major role in maintaining environmental compliance and properly managing contaminated materials. Contact information for key personnel is included in the attached Contact List (Attachment A).

3.1.1 Enbridge Major Projects Environmental Staff

The Enbridge Major Projects Environmental Staff associated with this Project will:

- 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.

3.1.2 Environmental Inspector

Environmental Inspectors on the Project are considered Enbridge Major Projects Environmental Staff and the Environmental Inspectors will:

- 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 Environmental Inspector Contaminated Site Response Form (Attachment B) when contamination or suspected contamination is encountered during the Project.

3.1.3 Enbridge Liquid Pipelines Environmental Staff

The Enbridge Liquid Pipelines Environmental Staff are experienced in managing contaminated sites in Minnesota. The Enbridge Liquid Pipelines Environmental Staff will:

- direct activities specifically associated with the CSMP for the Project;
- serve as the primary point of contact with regulators when addressing contaminated sites;
- 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 Attachment 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 Chief Inspector will provide notification to the Enbridge Environmental Inspector upon discovery of any type of contamination or, suspected contamination.

3.1.5 Project Contractor

The Project Contractor reports to the Chief Inspector and will:

- 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 or containment, and transport of contaminated materials offsite for proper disposal.

4.0 INITIAL RESPONSE ACTIONS

In the event that contaminated material is encountered, the Project will take the response actions listed below which are also summarized in the Contaminated Materials Management Flowchart (Attachment D).

1. Cease Work
 - The Project Contractor will cease work activity in the vicinity of the contamination.
2. Address Safety
 - 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
 - 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.
 - The Major Projects Environmental Staff will notify Enbridge Liquid Pipelines Environmental Staff.
 - Enbridge's on-site Environmental Inspector will complete the Environmental Inspector Contaminated Site Response Form (Attachment B) documenting response actions and estimated impacts.
 - 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

At the direction of Enbridge's Liquid Pipelines Environmental 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

At the direction of Enbridge's Liquid Pipelines Environmental 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 or other site location details and identified by the 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 material, such as soil or debris, will be placed on plastic sheeting or into a roll-off dumpster or, other suitable containment structure, and then covered.
- Contaminated water that needs to be removed from the excavation for construction purposes, will be pumped into a vac truck, frac tank or, other containment.
 - 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 water.
 - To the extent possible, free phase petroleum product should be removed with a vac truck or sorbent pads, boom, etc., and stored separately from any water that is contained.
- Contaminated hydrovac slurry and drilling mud will be placed into a water tight roll-off dumpster or other suitable containment structure and then covered.
 - Mud and slurry will be solidified only with approval from, 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

- Enbridge Liquid Pipelines Environment Staff will coordinate disposal of contaminated material at properly permitted facilities.
- Enbridge Liquid Pipelines Environment Staff may need to collect samples from the contaminated material for waste characterization and disposal purposes.
- 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.

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- The Project Contractor will arrange for transportation of contaminated material to one of the disposal facilities listed on Table 4.0-1. Note, additional disposal facilities may be utilized depending on the type and volume of contaminated material as well as logistical or other considerations that may arise.
- The Project Contractor will maintain records of shipping and waste disposal, and will provide copies of them to the Enbridge Liquid Pipelines Environment Staff.

7. Assist with Environmental Documentation

- Depending on the characteristics of the contamination encountered, Enbridge Liquid Pipelines Environment Staff may collect additional samples from the excavation bottom and sidewalls before backfilling occurs.
- The Project Contractor will assist the Enbridge Liquid Pipelines Environment Staff in this effort.

8. Backfill the trench with clean borrow material

- Clean borrow material must be approved by Enbridge Liquid Pipelines Environment Staff prior to backfilling.
- Do not backfill with contaminated material.
- Document the source of the clean borrow material.

Waste Type	Facility	Address	Phone Number	Website
Soil	Vonco V Landfill	1100 W Gary St. Duluth, MN 55808	218-626-3830	https://www.voncousa.com/
Soil	Vonco II Landfill	15301 Sherburne Ave. Becker, MN 55308	763-262-8662	https://www.voncousa.com/
Soil	Mar/Kit Landfill	2650 290th Ave. Hallock, MN 56728	218-754-4581	https://www.co.kittson.mn.us/2157/Environmental-Services
Water	Western Lake Superior Sanitary District	2626 Courtland St. Duluth, MN 55806	218-722-3336	https://wssd.com/
Water	LePier Oil Co., Inc	320 E 1st St Hwy 2 Fosston, MN 56542	218-435-1040	https://www.lepier.com/

Note: Additional provisions may apply on a case-by-case basis to determine the most suitable disposal options, as well as the potential for disposal at other facilities that may not be listed above.

**Attachment A
Contact List**

**Attachment A
Contact List
Contaminated Sites Management Plan – Minnesota**

Contact	Company	Role	Phone (office)	Phone (cell)	Email
Bobby Hahn	Enbridge	Environmental Technical Manager	218-522-4751	218-269-6377	Bobby.Hahn@enbridge.com
Karl Beaster	Enbridge	Senior Environmental Advisor, LP US Environment Operations	218-464-5623	715-718-1040	Karl.Beaster@enbridge.com
		Environmental Inspector TBD			
		Environmental Inspector TBD			
		Chief Inspector TBD			
		Project Contractor TBD			

Attachment B

Environmental Inspector Contaminated Site Response Form

**Attachment B
Environmental Inspector Contaminated Site Response Form
Contaminated Sites Management Plan – Minnesota**

Name: _____
Date: _____ **Time:** _____
Milepost: _____ **Stationing:** _____

Potential Contamination Observed (check all that apply):

- Petroleum odors in soil or water
- Visual 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
- Presence of man-made hills, depressions, or waste piles or evidence of dumping or other waste disposal
- Stressed or dead vegetation
- Soil that is discolored compared to adjacent or nearby soils
- Evidence of present or past chemical storage or use, including tanks, drums or containers
- Active or closed buildings and 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.)
- Other (describe)

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.

**Attachment B
Environmental Inspector Contaminated Site Response Form
Contaminated Sites Management Plan – Minnesota**

Are any impacts observed in the nearest surface water body?
Describe:

**Attachment B
Environmental Inspector Contaminated Site Response Form
Contaminated Sites Management Plan – Minnesota**

Project Contractor Contaminated Site Response Actions:

Attachment C

Site Investigation Field Sampling and Screening Log

Attachment D

Contaminated Materials Management Flowchart

**Attachment D
Contaminated Materials Management Flowchart
Contaminated Sites Management Plan - Minnesota**

