

STATE AS 04-16-489605

State of Wisconsin
Department of Natural Resources

Substance Release Notification Form
Form 4400-91 (Rev. 12-01, e-form) Page 1 of 2

24-Hour Emergency Hotline Number: 1-800-943-0003

mf

Date & Military Time Of Incident: 3/7/2002 0715		Date & Military Time Reported: 3/7/2002 1030		Spill File # nor03072002_01 <i>04-16-408048</i>	
Person Reporting: Mark Sidek		Representing: Enbridge Energy		Phone # (715)394-1410 Fax # ()	
Responsible Party (RP) / Spiller: Enbridge Energy		RP Decision Based On:		Phone # () Fax # ()	
RP Address: 199 N 25th St E.				City State Zip Code Superior WI 54480	
RP Contact Name & Title: Mark Sidek				Phone # (715)394-1410 Fax # ()	
Substance Involved: Oil - <i>crude</i>		Amount & Units Released: estimated 1 barrel - <i>52</i> gallons		Amount & Units Recovered: unknown	
<input type="checkbox"/> Solid <input type="checkbox"/> Semisolid <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Gas		Color:		Odor:	
Exact Location Of Incident: (including street name, bldg. #, mileage, etc.) 2800 E. 21st St, at tank #8 in the tank farm.				Facility Name / Property Owner: Enbridge Energy	
<input checked="" type="checkbox"/> City <input type="checkbox"/> Village <input type="checkbox"/> Township Superior		County Douglas		Latitude/Longitude	
DNR Region: NOR		<i>NE 1/4 NE 1/4 Sec 36 T49N R14</i> <input type="checkbox"/> E <input checked="" type="checkbox"/> W		Weather Conditions:	
Cause Of Incident: Bad seal on a mixer on the side of a tank in the tank farm - about 1 barrel of oil was found to have leaked onto soil inside a tank dike. Personnel from Enbridge will soon be removing contaminated soil and completing repair of the seal.					
Spilled Substance Impact To: (check X all that apply)		Spill Cause/Site:		Action Taken By Spiller:	
<input type="checkbox"/> Air <input type="checkbox"/> Potential <input type="checkbox"/> Concrete/Asphalt <input type="checkbox"/> Potential <input checked="" type="checkbox"/> Contained/Recovered <input type="checkbox"/> Groundwater <input type="checkbox"/> Potential <input type="checkbox"/> Private Well <input type="checkbox"/> Potential <input type="checkbox"/> Sanitary Sewer <input type="checkbox"/> Potential <input checked="" type="checkbox"/> Soil <input checked="" type="checkbox"/> Potential <input type="checkbox"/> Storm Sewer <input type="checkbox"/> Potential <input type="checkbox"/> Surface Water <input type="checkbox"/> Potential Name: <input type="checkbox"/> Other:		<input type="checkbox"/> Ag Coop/Food Factory <input type="checkbox"/> Airport Facility <input type="checkbox"/> Railroad Facility <input type="checkbox"/> Construction, Excavation, Wrecking, Quarry, Mine <input type="checkbox"/> Gas/Service Station/Garage/Auto Dealer/Repair Shop <input type="checkbox"/> Hydraulic Line Break <input type="checkbox"/> Industrial Facility <input type="checkbox"/> Paper Mill <input type="checkbox"/> Chemical Co. <input checked="" type="checkbox"/> Pipeline/Terminal/Tank Farm/Oil Jobber/Wholesaler <input type="checkbox"/> Private Property (home/farm) <input type="checkbox"/> Public Property (city, state, church, school, etc.) <input type="checkbox"/> Transportation Accident, Fuel Tank Spill <input type="checkbox"/> Transportation Accident, Load Spill <input type="checkbox"/> Utility Co. Power Generating/Transfer Facility Other:		<input checked="" type="checkbox"/> Cleanup Method: <input type="checkbox"/> Absorbent <input checked="" type="checkbox"/> Excavation <i>7yds</i> <input type="checkbox"/> <input checked="" type="checkbox"/> Containment <input type="checkbox"/> Contractor Hired Name: <input type="checkbox"/> Monitor <input type="checkbox"/> No Action Needed <input type="checkbox"/> No Action Taken <input checked="" type="checkbox"/> Waste Destination: <i>Timberline Trail</i> <input type="checkbox"/> Other:	
Injuries? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes how many?		Has An Evacuation Occurred? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Potential? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Are There Any Resource Damages? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Potential What Kind?					
Other Agencies Notified: (check first column, if notified; check both columns, if on the scene)				Incident Commander:	
<input type="checkbox"/> Fire Department <input checked="" type="checkbox"/> Local DNR <input type="checkbox"/> EPA <input type="checkbox"/> Local Law Enforcement <input type="checkbox"/> Div. Emerg. Mgt. <input type="checkbox"/> Nat'l Resp Ctr 800-442-8802 <input type="checkbox"/> LEPC or Local Emer. Mgt. <input type="checkbox"/> Coast Guard <input type="checkbox"/> Chemtrec 800-424-9300 <input type="checkbox"/> Level A/Level B Team <input type="checkbox"/> DHFS 608-258-0099 <input type="checkbox"/> Other:				Phone # ()	
Prepared By: Tom Collier		Phone # 608-267-0844		Date: 3/7/2002	
Person Notified: left message for		Phone # 715-		Date:	
Investigated By: <i>Kevin John A.</i>		Sign: <i>[Signature]</i>		Date: <i>03-14-02</i>	
Spill Coordinator Signoff: <i>Norman Dunbar</i>		Date: <i>5/29/02</i>		Incident Closed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Date: <i>5/29/02</i>	
		Transferred To: ERP <input type="checkbox"/> DATCP <input type="checkbox"/> Date: Case #		NFA Letter Sent? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Spill Packet Sent? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No To:	
<input type="checkbox"/> See Additional Comments On Reverse Please, print page 2 of 2					



Natural Resources Engineering Company

Thirteen West Superior Street

Duluth, Minnesota 55802

Tel (218) 722-9554 Facsimile [218] 722-9562

April 2, 2002

Mr. Norm Dunbar
WDNR
107 Sutliff Ave.
Rhineland, WI 54501

**RE: 45 – Day update for Enbridge Energy Company's release on March 7, 2002 (Spill #
Not assigned)**

Dear Mr. Dunbar,

On March 7, 2002 a crude oil release was discovered at Tank #8 at Enbridge Energy Company's Superior Terminal. Approximately 1-barrel (42-gallons) was released from a leaking mixer at Tank #8.

Upon discovery of the release, the leaking mixer was shut down and initial response efforts on March 7, 2002 were conducted. Impacted soil was excavated based on the presence of visual staining. Approximately 7 cubic yards of impacted soil from the excavation was hauled off-site and disposed of at Waste Management's Timberline Trail Landfill in Weyerhaeuser, WI.

Upon completion of the remedial excavation, confirmatory soil samples were collected from the excavation limits and submitted to En Chem Inc. in Superior, WI. for analysis. We received analytical sample results on March 20, 2002. A formal report will be submitted in late April or early May.

If you have any questions, please call me at (218) 722-9554.

218-393-2755

Sincerely,


David J. Hodek, E.I.T.
Geological Engineer

cc: Scott Lounsbury – EEC Duluth
Mark Sitek – EEC Superior
Barry Power - NRE



Natural Resources Engineering Company

Thirteen West Superior Street

Duluth, Minnesota 55802

Tel (218) 722-9554 Facsimile [218] 722-9562

May 1, 2002



Norm Dunbar
Wisconsin Department of Natural Resources
Remediation and Redevelopment
107 Sutliff Avenue
Rhinelander, WI 54501

RE: Enbridge Energy Douglas County Terrace III Expansion Route Map

Dear Mr. Dunbar:

Enclosed is a copy of Enbridge's Terrace III expansion route map that you requested. Please note that existing Enbridge pipelines outside the Terrace III corridor are shown in red. Additionally, if interested, I can send you a copy of this map in Adobe (.pdf) format.

I also show that I faxed you a copy of the analytical soil sampling results from the 1/20/2002 release soil stockpile in February. If you need further information, a copy of the analytical results, or have questions regarding the maps - I can be reached at (218) 722-9554.

Sincerely,

David J. Hodek, E.I.T.
Geological Engineer

cc: Scott Lounsbury—Enbridge Energy Duluth
Barry Power—NRE

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



May 24, 2002

Mr. Norm Dunbar
Wisconsin Department of Natural Resources
107 Sutliff Avenue
Rhineland, WI 54501

**RE: Remedial Action Report
Superior Terminal – Tank #8 Release
March 7, 2002**

Dear Mr. Dunbar:

Enclosed is a report outlining the remedial actions taken in response to the above referenced incident. If you have any questions or comments, please call me – I can be reached at (218) 725-0143.

Sincerely,

A handwritten signature in black ink, appearing to read 'Barry F. Power', written over a horizontal line.

Barry F. Power, P.E.
Environmental Engineer

jam

Enclosure

c: Mark Sitek / Al Aleknavicius – EEC Superior
Scott Lounsbury – EEC Duluth

5/28/02
no

I. INTRODUCTION

A. BACKGROUND

On March 7, 2002 a crude oil release was discovered at Tank #8 at Enbridge Energy Company's Superior Terminal (from hereon referred to as "Site"). The Site is located at Enbridge's Milepost 1098.1 in Superior, Wisconsin. The location of the Site is shown on Figure 1. Approximately 1-barrel (42 gallons) of crude oil was released from a leaking mixer at Tank #8. The majority of the released crude oil was confined to the area adjacent to Tank #8 within the secondary containment structure.

Upon discovery of the release, the State Duty Officer was notified. In addition, the leaking mixer was shut down and initial response efforts were conducted. These consisted of containment of the oil using absorbent booms and making repairs to the leaking mixer.

The following is a chronology of events at the Site:

- March 7, 2002 – The release were discovered;
- March 7, 2002 – The leaking mixer was shut down and initial cleanup efforts begin. The release was estimated to be 1-barrel (42-gallons) in volume;
- March 7, 2002 – Impacted soil about leaking mixer area was scraped and composite samples were collected for headspace screening from within the scraped area;
- March 7, 2002 – Soil samples were collected from the scraped area and submitted to En Chem Inc. in Superior, Wisconsin for analysis of concentrations of diesel range organics (DRO), petroleum volatile organic compounds (PVOCs), and polynuclear aromatic compounds (PAHs);
- March 7, 2002 – A total of 7 cubic yards of soil were removed and disposed of at Waste Management's Timberline Trail Landfill in Weyerhaeuser, WI; and
- March 7, 2002 - The excavation was backfilled with clean fill.

B. PURPOSE/CONTENT

This report serves to detail environmental repair activities conducted in response to the crude oil release at the Site and to document existing subsurface conditions at the Site.

Including this section, the report is divided into five parts. Section II summarizes the local topography, near surface geology, and hydrologic setting. Section III details remediation at the Site. Section IV provides conclusions and sets forth recommendations. Section V contains a list of references.

II. PHYSICAL SETTING

A. HYDROLOGY

The area around the Site is characterized by the flat ancient lakebed of Glacial Lake Duluth and deeply incised ravines and river valleys. Surface drainage from the Site is to the east, ultimately discharging to the Nemadji River, a low energy river that flows north to Superior Bay. The slope across the Site is generally less than 0.5%, but steepens to over 15% along the Nemadji River valley. Average annual precipitation in the area is on the order of 28 inches, with approximately 1 to 2 inches (per year) seeping into the ground, 6 inches (per year) as run off, and the remainder lost to evapotranspiration (Young et al., 1974).

B. HYDROGEOLOGY

Regionally, the near-surface geology is composed of greater than 300 feet of red, plastic, fat clay with a USCS designator of CL (Olcott et al., 1978). This clay was deposited on the bottom of Glacial Lake Duluth during the Holocene/Pleistocene epochs when the Lake was at a higher stand, and is common at lower elevations throughout the Western Lake Superior Basin. Locally, the near-surface geology has been modified by the inclusion of fill materials – an artifact of the Site's industrial setting.

At the Site, groundwater flows to the east toward the Nemadji River (a regional sink for shallow groundwater flow) under unconfined conditions, with a southerly variation in flow direction across the central portion of the Site due to deeply incised ravines south of the Terminal. Depth to groundwater across the Site varies from a minimum of approximately 6 feet to over 15 feet below grade in response to topographic and piezometric relief across the Site.

C. GROUNDWATER RECEPTOR SURVEY

The Nemadji River located approximately ¼-mile east of the release location, is the closest surface water and groundwater receptor. There are no known drinking water supply wells located within 1,200 feet of the Site.

III. SITE REMEDIATION

A. SOIL CLEANUP

Upon discovery of the release, initial response efforts consisted of containment, repair of the leaking mixer, and removal of impacted soil about Tank #8. Soils were scraped to a depth of 1 – 2 inches based on the presence of visual staining. The locations and final dimensions of the scraped area are shown on Figure 2. Approximately 7 cubic yards of impacted soil were hauled off-site and disposed of at Waste Management's Timberline Trail Landfill in Weyerhaeuser, Wisconsin. Soil disposal records are included as Appendix A. Upon completion of the soil removal, clean fill was used to backfill the excavated areas.

B. SOIL SAMPLING AND ANALYSIS

When the removal of visibly impacted soil had been completed, soil samples for headspace screening were collected from the scraped area. The sampling locations are shown on Figure 2. Samples were screened in the field for concentrations of organic vapors using a photoionization detector (PID) calibrated to an isobutylene standard. Table 1 summarizes the headspace screening results. A sample for laboratory analysis was collected at the location of the highest headspace concentration. The sample was submitted to En Chem Inc. in Superior, Wisconsin for analysis of diesel range organics (DRO), petroleum volatile organic compounds (PVOCs), and polynuclear aromatic compounds (PAHs) concentrations. Analytical results are summarized in Table 2 and laboratory reports are included as Appendix B.

C. RESULTS

Results from sample location OF-3 did not exceed the generic NR 720 RCLs. In addition, PAHs concentrations did not exceed the Suggested Generic Soil Cleanup Levels for the groundwater pathway or the Industrial Direct Contact Standards.

IV. CONCLUSIONS AND RECOMMENDATIONS

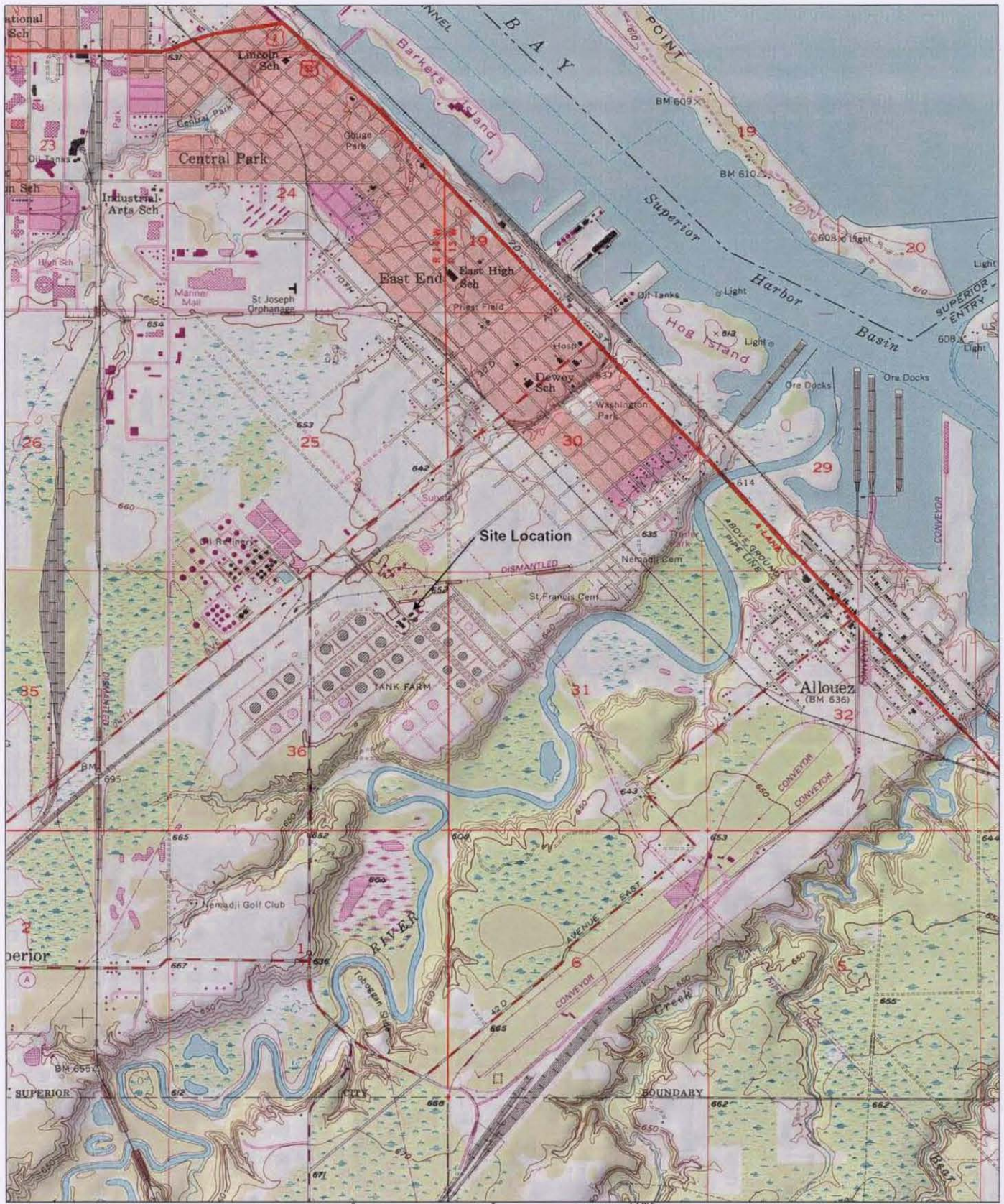
The following is a summary of conclusions and recommendations drawn upon the findings of the initial response and remediation activities at the Site.

A. CONCLUSIONS

- On March 7, 2002, approximately 1-barrel (42-gallons) of crude oil was released from a leaking mixer at Tank #8 in Enbridge's Superior, WI Terminal;
- The released oil was contained in the secondary containment area for Tank #8;
- Near-surface geology at the Site consists of red clay with a USCS designator of CL;
- The Nemadji River, approximately ¼-mile east of the release location, is the closest surface water and groundwater receptor;
- There are no known drinking water supply wells within 1,200 feet of the Site;
- Approximately 7 cubic yards of impacted soil were excavated and disposed of at Waste Management's Timberline Trail Landfill in Weyerhaeuser, Wisconsin;
- PVOCs and DRO concentrations did not exceed the generic NR 720 RCLs. PAHs were below the Suggested Generic Soil Cleanup Levels for the groundwater pathway and the Industrial Direct Contact pathway;
- Clean fill was used to backfill excavation; and
- Given the physical setting and remedial actions taken, it is not likely that petroleum hydrocarbons from this release could have impacted, or will impact surface or groundwater receptors in the area.

B. RECOMMENDATIONS

Based on the environmental setting of the Site, and the fact that there are no immediate groundwater receptors or drinking water wells, residual crude oil contaminants pose little (if any) risk to human health or the environment and we are requesting closure of the Site under the provisions of NR 720. The WDNR Case Summary and Close Out Form is included as Appendix C.



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Site Location Map
Enbridge Energy Company - Superior Terminal

Natural Resources Engineering Company
13 West Superior Street, Duluth, MN 55802



May-02
Figure 1