

Endsley, Erin A - DNR

From: DNRRNR700Reporting@wisconsin.gov
Sent: Tuesday, January 27, 2015 4:32 PM
To: ree@barr.com
Cc: Endsley, Erin A - DNR
Subject: WDNR NR700 Semi-Annual Report Confirmation

Thank you for submitting your NR700 semi-annual progress report. The DNR Project Manager for this site has been notified of your report submittal. If final case closure has not been granted for this Activity before the next reporting period, you will receive a system-generated email reminder and link to report for the next period.

The contents of your report is included below for your records:

Report ID: 150155899163062
BRRTS No.: 02-16-558991
PECFA No: --
Activity Name: ENBRIDGE ENERGY - LINE 6
Address: 2800 E 21ST ST, SUPERIOR
Reporting Period: 7/1/2014 - 12/31/2014

Submitted On: 01/27/2015

Status: Conditionally Closed

Comments:
Site closure pending WDNR Enbridge Superior Terminal facility-wide agreement.

PECFA Eligible? No

Endsley, Erin A - DNR

From: DNRRNR700Reporting@wisconsin.gov
Sent: Wednesday, August 06, 2014 2:41 PM
To: rerickson@barr.com
Cc: Endsley, Erin A - DNR
Subject: WDNR NR700 Semi-Annual Report Confirmation

Thank you for submitting your NR700 semi-annual progress report. The DNR Project Manager for this site has been notified of your report submittal. If final case closure has not been granted for this Activity before the next reporting period, you will receive a system-generated email reminder and link to report for the next period.

The contents of your report is included below for your records:

Report ID: 140755899141214
BRRTS No.: 02-16-558991
PECFA No: --
Activity Name: ENBRIDGE ENERGY - LINE 6
Address: 2800 E 21ST ST, SUPERIOR
Reporting Period: 1/1/2014 - 6/30/2014

Submitted On: 08/06/2014

Status: Conditionally Closed

Comments:

The Line 6 site is awaiting WDNR approval of the pending Enbridge Superior Terminal facility-wide Site Investigation and Response Action Plan. A report has been submitted and no additional response action is planned.

PECFA Eligible? No

Enbridge Pipelines (Lakehead) L.L.C.
Environment Department
1320 Grand Avenue
Superior, WI 54880
Tel 715 394 1400
Fax 715 394 1500

Shane Yokom
Joseph Peterson
Cheryl Urie
Jim Snider
Rhonda O'Leary
James Anklam
Karl Beaster
Stacey Frerich
Derek Senn
Kelli Nelson
Bryan Sederberg
Alex Smith
Greg St. Onge
Julie O'Brien

Manager, Environment Operations
Supervisor, Region Operations
Supervisor, Programs
Environmental Specialist
Sr. Air Compliance Specialist
Sr. Environmental Analyst
Environmental Analyst II
Environmental Analyst II
Environmental Analyst II
Environmental Analyst II
Environmental Analyst II
Environmental Analyst II
ER Preparedness Coordinator
Environmental Assistant



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January 29, 2014

Erin Endsley
Wisconsin Department of Natural Resources - Northern Region
Remediation and Redevelopment
1701 N 4th St
Superior, WI 54880

Re: Line 6 Hydrotest Crude Oil Impacts
Excavation Report Memo
Enbridge Energy Superior Terminal
Superior, Wisconsin

Dear Ms. Endsley:

Please find attached report regarding the clean-up of crude oil impacts discovered during the Line 6 Hydrotest project in 2012. Based on the findings presented in this report, we are requesting no further action in regards to this historical release.

Please contact me if you have any questions or comments regarding this project.

Sincerely,
Enbridge Energy

A handwritten signature in blue ink that reads 'Karl F. Beaster'.

Karl F. Beaster, P.G.
Environmental Analyst

Enclosure

cc: Ryan Erickson, Barr Engineering

Endsley, Erin A - DNR

From: Ryan E. Erickson <RErickson@barr.com>
Sent: Wednesday, January 29, 2014 1:46 PM
To: Endsley, Erin A - DNR
Subject: Line 6 Hydrotest Excavation memo

Follow Up Flag: Follow up
Flag Status: Flagged

Erin,
The Line 6 Hydrotest Excavation memo has been added to the Barr ftp site for you to review. Please let me know if you have any questions. Thank you.

Ryan E. Erickson, PG

Geologist
Duluth office: 218.529.7112
fax: 218.529.8202
cell: 612.418.0166
rerickson@barr.com
www.barr.com

resourceful. naturally.



From: Endsley, Erin A - DNR [mailto:Erin.Endsley@wisconsin.gov]
Sent: Tuesday, January 28, 2014 1:22 PM
To: Ryan E. Erickson
Subject: RE: WDNR project info request

Thanks, Ryan. I was able to access the two reports.

From: Ryan E. Erickson [mailto:RErickson@barr.com]
Sent: Monday, January 27, 2014 2:20 PM
To: Endsley, Erin A - DNR; karl.beaster@enbridge.com
Subject: RE: WDNR project info request

Erin,
The Line 6 Valve release memo has also been added to the Barr ftp site for you review. Please let me know if you have any file access questions.

Ryan E. Erickson, PG

Geologist
Duluth office: 218.529.7112
fax: 218.529.8202
cell: 612.418.0166
rerickson@barr.com



From: Ryan E. Erickson
Sent: Monday, January 27, 2014 2:03 PM
To: 'Endsley, Erin A - DNR'; karl.beaster@enbridge.com
Subject: RE: WDNR project info request

Erin,

The Enbridge Terminal Office Electrical Rack memo (associated with BRRTS #02-16-558988) has been added to the Barr ftp site for your review. Please let me know when you have had a chance to download the file. Thank you.

Ryan E. Erickson, PG

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From: Endsley, Erin A - DNR [<mailto:Erin.Endsley@wisconsin.gov>]
Sent: Wednesday, January 22, 2014 1:51 PM
To: Ryan E. Erickson; karl.beaster@enbridge.com
Subject: RE: WDNR project info request

Hello Ryan and Karl –

Thanks for the additional information. I will look over the reports and the comments below, and let you know if I have any questions. Hopefully I can provide you with a determination on each notification by the end of the week. Thanks!

Erin

From: Ryan E. Erickson [<mailto:RErickson@barr.com>]
Sent: Wednesday, January 22, 2014 1:11 PM
To: karl.beaster@enbridge.com; Endsley, Erin A - DNR
Subject: FW: WDNR project info request

Karl and Erin,
The responses to the Erin's project questions are below in red.

The Tank 11 and Tank 21 Ring Road project memos have been also been added to my Barr ftp site to enable WDNR access/submittal due to the DNR email size limits. I will notify both of you if additional memo's from Alex Smith projects are added. Instructions for accessing the ftp site are below.

Accessing ftp site:

Type or Copy and paste into the address bar of Windows Explorer:

ftp://user.barr.com

Press *Enter*

Username: ree

Password: ftpre

Please let me know if you have any questions or comments or need additional information.

Thank you,

Ryan E. Erickson, PG

Geologist

Duluth office: 218.529.7112

fax: 218.529.8202

cell: 612.418.0166

rerickson@barr.com

www.barr.com



From: Karl Beaster [<mailto:Karl.Beaster@enbridge.com>]

Sent: Monday, January 20, 2014 9:43 AM

To: Ryan E. Erickson

Subject: FW: Enbridge Superior Terminal

Ryan – see message below from Erin. Please add some text in red font after each bullet item with the requested information and reply back to me.

Thanks,

Karl

Karl F. Beaster, PG

Environmental Analyst II, LP Environment

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1320 Grand Ave, Superior, WI 54880

www.enbridgeUS.com

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From: Endsley, Erin A - DNR [<mailto:Erin.Endsley@wisconsin.gov>]

Sent: Thursday, January 16, 2014 1:16 PM

To: Karl Beaster

Subject: RE: Enbridge Superior Terminal

Hello Karl –

As a follow up to your email, I wanted to summarize the pending notifications and open ERP sites for Enbridge, so that we can move forward on some of these sites.

- Notification dated 10/2/13 – Tank 11 – sample TK 11 Road-B-1 has groundwater pathway exceedances for several compounds, but no direct contact exceedances. This sample was from 3' bgs. Can you confirm if this sample location was removed during site excavation? The map shows the sample location in an area that was excavated, but I do not have information indicating the depth of excavation

Sample TK11 Road-B-1 was collected from the final excavation extent at 3 feet bgs. Only a small volume of residual crude oil impacted soil (PID >10 ppm) was left in place due to the presence of buried cathodic lines around the tank. The analyte concentrations in soil left in place did not exceed the industrial direct contact RCL and the impacted soil was covered with a geotechnical fabric and 2' of clean backfill. The road material and employee awareness will limit exposure.

The groundwater pathway for the terminal is currently being reviewed by the WDNR on a case-by-case basis, pending the a negotiated agreement for a facility-wide approach to groundwater. If the WDNR agrees that the risk to the groundwater pathway associated with this historical release can be addressed using the facility-wide approach, no further response action for groundwater or documentation for the WDNR will be required.

- Notification dated 10/14/13 – Tank 21 Ring Road – sample TANK21ROAD-B-3 (1.8' bgs) has direct contact and groundwater pathway exceedances, and the map indicates impacted soil left in place at all three sample locations. Could you provide additional info describing site conditions?

Sample Tank21ROAD-B-3 was collected from the final excavation extent at 1.8 feet bgs. Additional remedial excavation activity at this location, and the other two locations, was limited by the presence of buried tank infrastructure and cathodic lines. The residual impacts were covered with a geotechnical fabric and 2' of clean backfill. The road material and employee awareness will limit direct contact exposure.

The observed residual soil contamination further documents the magnitude of contamination left in place following a historical Tank 21 release (BRRTS #02-16-178165), which was previously addressed as part of the original site closure, and does not represent a new or changed condition. No new or additional risks to receptors were identified. On this basis, Barr believes there is no need for the WDNR to reopen this site and recommend no further action at this time.

- Notification dated 12/3/13 – Tank 5 Valve Platform Installation – this site has some groundwater pathway exceedances but no direct contact exceedances. Under the proposed negotiated agreement, we would not require further action at this site. We could wait until the agreement is finalized before making a determination on this one. In the meantime, please confirm whether or not any structural impediments exist that prevented investigation or soil removal.

The impacted soil was located along the base of the tank and additional remedial excavation activities below the tank were limited due to the presence of tank infrastructure.

- Notification dated 12/20/13 – Pump House 5 Maintenance Excavation – could you please provide additional information on this activity, including field screening results from the locations shown on the map, excavation depth, any visual indications of contamination, possible

structural impediments, etc.? Given the values, we would not require further action at this site according to the proposed negotiated agreement.

Field screening data and observations are included in the attached documents. Excavation depth was approximately 8 feet bgs. Structural impediments are shown on Figure 2 (red Pipeline Infrastructure lines) and on Figure 3 (visible buildings shown in aerial imagery). The contaminated soil landfill summary is also attached.

A project memo will be submitted to the WDNR upon completion of the infrastructure maintenance work in the spring of 2014.

- Notification dated 1/2/14 – Valve 2515 and 2605 Maintenance Excavation – please confirm whether or not any structural impediments exist that prevented investigation or soil removal. If no impediments exist, no further action is required for this site.

The contaminated soil was excavated to the extent possible. Soil with a sheen was left in place at 13' bgs due to the presence of pipeline infrastructure; however, analyte concentrations detected in the soil sample collected from that depth (UPI Valve-B-1) did not exceed the WDNR groundwater RCL or the industrial direct contact RCL and samples passed the Cumulative Hazard Index criteria.

In general, for all of the above sites, if contaminated soil was removed, also provide documentation of volume removed and soil documentation. Some of the emails that accompanied the original notifications indicated that additional reports would be submitted, but I have not received any additional reports for the above notifications. If these are pending, I assume the additional information provided in the reports will answer most of the question I have above. I will wait until I receive additional information before I make a determination on any of the above.

Enbridge is in the process of reviewing each of the above emails and the contaminated soil volume summaries are included in each memo. Enbridge will submit the project memos to the WDNR as soon as they are ready.

Open ERP sites:

- 02-16-560657 – Superior Terminal Facility Wide – we will be getting some information to you soon regarding clarifications on confirmation sampling and definition of degree and extent that came up during our last conversation. If not this week, then hopefully next week at the latest.
- 02-16-560716 – Tank 8 – I just need to clarify one thing on this activity. Can you please confirm whether or not structural impediments exist that prevented soil investigation or removal around the perimeter of the tank? The report indicates that there are residual soil impacts, but I want to confirm the possibility of a structural impediment before moving forward.

Additional remedial excavation activities were limited by tank infrastructure and two cathodic lines that are buried beneath the ring road.

- 02-16-558991 – Line 6 – per our previous conversations, we are awaiting the approval of the negotiated agreement before moving forward this site. Will need a GIS packet prepared for structural impediment, most likely.
- 02-16-558993 – Tank 5 – industrial direct contact value for benzene has changed from 1.1 to 7.41 ppm, so under revised NR 720 values, soil exceedances fall between gw pathway and direct

contact standards. Per previous communication, we also decided to wait on this one until negotiated agreement is finalized, and no further action will be required.

Please let me know if you have any questions on the above items. Sorry again about the delay in getting this information to you. Thanks!

Erin

From: Karl Beaster [<mailto:Karl.Beaster@enbridge.com>]
Sent: Wednesday, January 15, 2014 10:53 AM
To: Endsley, Erin A - DNR
Subject: Enbridge Superior Terminal

Erin,

Now that the new year is upon us I just wanted to check in with you regarding a few ongoing projects at the Superior Terminal and some other administrative items.

1. Do you have any comments on the reports and/or notifications that we have been submitting? Is there anything we (or Barr) can do differently to maximize efficiency with site reporting?
2. We plan to submit a 2nd draft of the SIR / RAP to WDNR by the end of January reflecting the discussion and comments received during the meeting held at the Terminal on September 26th and the recent monitoring well installation and groundwater sampling event.
3. Enbridge Operations is planning to move forward on another expansion project at the Terminal consisting of a rigorous tank pipe replacement project Terminal wide. Enbridge Environment will be supporting this as we did the Pipe Rack project when historical impacts are discovered during excavation activities. We would propose to the WDNR that we handle this project similar to the Pipe Rack project whereas we treat the project collectively and report to the WDNR upon project completion, as opposed to writing separate reports for each area of historical impacts discovered during project execution. Samples would be collected every 25 feet along impacted sidewalls.

Let me know if you have any comments to these items.

Thanks!

Karl

Karl F. Beaster, PG
Environmental Analyst II, LP Environment

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02-16-558991 ENBRIDGE ENERGY - LINE 6

Location Name: ENBRIDGE ENERGY CO **Activity Start Date:** 2012-05-31 **Activity End Date:**
Address: 2800 E 21ST ST **Activity Type:** ERP
Muni: SUPERIOR **Zip:** 54880 **File Location:**
Region: NO **Region of Management:** NO **DSPS No:**
County: Douglas **DATCP Case No:** **DATCP Spill No:**
FID: 816010580 **EPA Cerclis ID:** **Acres:** Right-of-Way Acres > 100

Activity Address: NW OF TERMINAL OFFICE

PLSS: NW 1/4 of the NE 1/4 of Sec 36, T49N, R14W **Latitude:** 46.6896496 **Longitude:** -92.061058

Location Comment: LQG PER HW GENERATOR CHANGES FOR 2011; VSQG FOR 2010 PER EXEMPTION FORM AND MANIFEST CHECK 03/15/2011 MKP; VSQG FOR 2009 ONLY PER EXEMPTION FORM & MANIFEST CHECK - SLB; ENBRIDGE ENERGY CO CHANGE PER 2005 REPORT10/04/2006,MKP, ENBRIDGE ENERGY LTD PARTNERSHIP/LAKEHEAD CHANGED PER 2001 HW ANNUAL REPORTFKA: LAKEHEAD PIPELINE CO LP; SQG PER E-MAIL REQUEST, ANNUAL REPORT 1998 & SAL 3/5/99/LQG/STATUS CH FORM 9/20/94

Activity Comment:

- Transferred to DSPS Transferred to DATCP Transferred to WMM Tracked by DSPS Created by DSPS
- PECFA Eligible PECFA 80K PECFA 80K Failure Above Ground Storage Tank Co-Contamination
- VPLE at Location VPLE Inactive General Property at Location Drycleaner Superfund Superfund NPL
- Status Unclear (Mask BOTW) Geo-Located On GIS Registry

Other Activities at this Location

Activity Detail No	Type	Activity Detail Name	Start Date	End Date
01-16-561125		ENBRIDGE ENERGY - TANK 11		
01-16-561126		ENBRIDGE ENERGY - TANK 21 RING RD		
04-16-042495	SPILL	ENBRIDGE ENERGY - PUMP STATION	1988-01-11	1988-01-12
02-16-178165	ERP	LAKEHEAD PIPELINE - TANK 21 CRUDE OIL	1997-08-13	1998-03-16
02-16-176579	ERP	LAKEHEAD PIPELINE CO L P	1997-11-18	2003-10-23
02-16-183249	ERP	LAKEHEAD PIPELINE - MANIFOLD 3	1998-02-02	2004-04-15
04-16-202351	SPILL	LAKEHEAD PIPELINE - TANK 22	1998-08-28	1999-05-12
04-16-220589	SPILL	LAKEHEAD PIPELINE - TANK 11	1999-03-19	1999-05-13
02-16-220009	ERP	LAKEHEAD PIPELINE - CRUDE OIL TANK 22	1999-05-12	2003-10-23
02-16-275100	ERP	LAKEHEAD PIPELINE - TANK 24	1999-08-30	2004-02-02
04-16-275096	SPILL	LAKEHEAD PIPELINE - TANK 24	1999-08-30	2001-07-18
04-16-232151	SPILL	LAKEHEAD PIPELINE - TANK 23	1999-09-20	1999-10-19
04-16-251372	SPILL	LAKEHEAD PIPELINE - TANK PAD 12	2000-02-26	2000-03-01
02-16-279246	ERP	LAKEHEAD PIPELINE CO L P	2000-07-27	2005-08-16
04-16-256902	SPILL	LAKEHEAD PIPELINE CO L P	2000-07-27	2001-08-21
04-16-390497	SPILL	LAKEHEAD PIPELINE	2000-09-23	2002-06-10
04-16-427625	SPILL	LAKEHEAD PIPELINE	2001-06-23	2001-11-29
02-16-338051	ERP	LAKEHEAD PIPELINE - BOOSTER PUMP #56	2002-01-20	2006-07-14
04-16-338044	SPILL	LAKEHEAD PIPELINE - BOOSTER PUMP 56	2002-01-20	2003-01-07
04-16-408048	SPILL	ENBRIDGE ENERGY - TANK 8	2002-03-07	2002-05-29
04-16-408780	SPILL	ENBRIDGE ENERGY	2002-03-07	2002-05-29
04-16-489609	SPILL	ENBRIDGE ENERGY - TANK 8 FARM	2002-03-07	2002-05-29
04-16-403150	SPILL	ENBRIDGE ENERGY	2002-04-04	2002-11-08
04-16-403142	SPILL	ENBRIDGE ENERGY TERMINAL	2002-07-17	2002-11-05
04-16-402258	SPILL	ENBRIDGE ENERGY	2002-08-26	2002-09-26
04-16-403133	SPILL	ENBRIDGE ENERGY - PIPELINE ENTERING FROM SW	2002-09-12	2002-11-20
04-16-518737	SPILL	ENBRIDGE ENERGY - LINE 14 BOOSTER PUMP	2002-11-28	2003-12-18
04-16-454807	SPILL	ENBRIDGE ENERGY - NEMADJI RIVER	2003-01-24	2003-10-01
02-16-513788	ERP	ENBRIDGE ENERGY - NEMADJI RIVER	2003-01-25	2010-03-24
04-16-522605	SPILL	ENBRIDGE ENERGY - MANIFOLD 1	2003-04-08	2004-01-12
04-16-518579	SPILL	ENBRIDGE ENERGY TERMINAL	2003-11-10	2003-12-12
04-16-529969	SPILL	ENBRIDGE ENERGY - MANIFOLD #1 BLDG	2004-03-10	2004-06-08
04-16-526914	SPILL	ENBRIDGE ENERGY - N SIDE OF MANIFOLD 1	2004-03-18	2004-06-01
04-16-526925	SPILL	ENBRIDGE ENERGY - PIPE A	2004-04-02	2004-06-01
04-16-527008	SPILL	ENBRIDGE ENERGY - DENOSTOMETER BLDG	2004-04-08	2004-06-01

02-16-558991 ENBRIDGE ENERGY - LINE 6

Activity Detail No	Type	Activity Detail Name	Start Date	End Date
04-16-527017	SPILL	ENBRIDGE ENERGY - SAMPLING BLDG	2004-04-14	2004-06-01
04-16-527028	SPILL	ENBRIDGE ENERGY	2004-04-16	2004-06-01
04-16-529990	SPILL	ENBRIDGE ENERGY - TANK 13	2004-05-13	2004-07-27
04-16-537774	SPILL	ENBRIDGE ENERGY - BOOSTER PUMP 25	2004-06-03	2004-10-18
04-16-544785	SPILL	ENBRIDGE ENERGY - CRUDE OIL TERMINAL	2005-10-03	2006-01-23
04-16-548608	SPILL	ENBRIDGE ENERGY - TANK 1	2006-01-01	2006-11-28
04-16-547783	SPILL	ENBRIDGE ENERGY	2006-02-09	2006-03-08
04-16-548152	SPILL	ENBRIDGE ENERGY - GRAVEL ROAD IN TERMINAL	2006-05-22	2006-05-30
04-16-551607	SPILL	ENBRIDGE ENERGY - LINE 6	2007-03-19	2007-08-09
04-16-550837	SPILL	ENBRIDGE ENERGY - LINE 1 MANIFOLD BLDG	2007-10-30	2008-01-23
04-16-552902	SPILL	ENBRIDGE ENERGY TERMINAL	2008-08-25	2008-11-18
04-16-553271	SPILL	ENBRIDGE ENERGY - PIG LAUNCHER	2009-02-12	2009-02-13
04-16-553390	SPILL	ENBRIDGE ENERGY - TANK FARM	2009-03-22	2009-03-23
04-16-554022	SPILL	ENBRIDGE ENERGY - LINE 61 PUMP UNIT	2009-04-25	2009-08-18
04-16-554023	SPILL	ENBRIDGE ENERGY - TANK FARM	2009-05-21	2009-08-18
02-16-556786	ERP	ENBRIDGE ENERGY - TANK 22	2009-10-09	2011-09-19
04-16-556812	SPILL	ENBRIDGE ENERGY - TANK 22	2009-10-09	2011-09-19
10-16-556810	REMOVED	ENBRIDGE ENERGY SPILL	2009-10-09	2011-03-11
04-16-556107	SPILL	ENBRIDGE ENERGY	2010-01-06	2010-09-29
04-16-556109	SPILL	ENBRIDGE ENERGY - TANK 15	2010-03-12	2010-09-29
04-16-555211	SPILL	ENBRIDGE ENERGY - LINE 2 BLDG	2010-04-30	2010-04-30
04-16-556000	SPILL	ENBRIDGE ENERGY - CONTAINMENT FACILITY	2010-06-02	2010-09-20
04-16-560095	SPILL	ENBRIDGE ENERGY SPILL	2011-04-04	2013-02-15
04-16-558331	SPILL	ENBRIDGE ENERGY - TANK 12	2011-08-17	2012-12-03
02-16-558329	ERP	ENBRIDGE ENERGY - TANK 12	2011-08-18	2012-12-03
02-16-558649	ERP	ENBRIDGE ENERGY - LINE 14 BOOSTER PUMP	2011-09-25	2012-12-27
04-16-558652	SPILL	ENBRIDGE ENERGY - LINE 14 BOOSTER PUMP SPILL	2011-09-25	2012-12-27
04-16-560096	SPILL	FUTURE ENVIRONMENTAL SPILL	2011-12-02	2013-02-15
04-16-558766	SPILL	ENBRIDGE ENERGY - TANK 16	2012-05-24	2012-05-25
10-16-558757	REMOVED	ENBRIDGE ENERGY - TANK 16	2012-05-24	2012-07-17
02-16-558989	ERP	ENBRIDGE ENERGY - TANK 23	2012-05-31	2013-11-18
02-16-558990	ERP	ENBRIDGE ENERGY - TANK 19	2012-05-31	2012-09-04
02-16-558992	ERP	ENBRIDGE ENERGY - TANK 20 VALVE	2012-05-31	2012-09-04
02-16-558993	ERP	ENBRIDGE ENERGY - TANK 5	2012-05-31	
02-16-558988	ERP	ENBRIDGE ENERGY - OFFICE EXCAVATION	2012-06-04	2012-09-04
02-16-558987	ERP	ENBRIDGE ENERGY - TANK 9	2012-07-02	2012-09-04
10-16-558986	REMOVED	ENBRIDGE ENERGY - TANK 16	2012-07-02	
02-16-560841	ERP	ENBRIDGE ENERGY TERMINAL - LINE 5 PIG TRAP	2013-04-22	2013-09-03
10-16-559678	REMOVED	ENBRIDGE ENERGY TERMINAL - DV 566 VALVE	2013-06-04	2013-06-05
02-16-560657	ERP	ENBRIDGE ENERGY -SUPERIOR TERM FACILITY WIDE	2013-06-27	
02-16-560716	ERP	ENBRIDGE ENERGY - TANK 8	2013-07-18	
04-16-560863	SPILL	ENBRIDGE ENERGY CO SPILL	2013-08-15	2013-08-21

Actions

Action Date	Code	Action Name / Comment	Audit
2012-05-31	99	Miscellaneous LAB RESULTS REC'D	Added 12/11/2012 by SHAFEK
2012-05-31	1	Notification	Added 12/11/2012 by SHAFEK
2012-12-11	2	RP Letter Sent	Added 12/18/2012 by SHAFEK

Documents**Energy Act Details****Impacts**

02-16-558991 ENBRIDGE ENERGY - LINE 6

Free Product

Added 12/11/2012 by SHAFEK

Soil Contamination

Added 12/11/2012 by SHAFEK

Priority

Risk

High

Assigned: 12/11/2012

Added 12/11/2012 by SHAFEK

Substances

Category: Petroleum

Crude Oil

Added 12/11/2012 by SHAFEK

Category: VOC

VOC

Added 12/11/2012 by SHAFEK

Who

Responsible Party is ENBRIDGE ENERGY

Title:

Phone: (715) 398-4751

Address: 1320 GRAND AVE

Fax: () -

E-Mail:

SUPERIOR WI 54880

Project Manager is ERIN ENDSLEY

Title: HYDROGEOLOGIST

Phone: (715) 392-3126

Address: 1701 N 4TH ST

Fax: (715) 392-7993

E-Mail: erin.endsley@wi.gov

SUPERIOR WI 54880

Consultant is HANS WRONKA

Title:

Phone: (218) 529-8208

Address: 332 W SUPERIOR ST, SUITE 600

Fax: () -

E-Mail: hwronka@barr.com

BARR ENGINEERING CO
DULUTH MN 55802

RP Contact/Agent is KARL BEASTER

Title:

Phone: (715) 398-4754

Address: 1320 GRAND AVE

Fax: () -

E-Mail: karl.beaster@enbridge.com

ENBRIDGE ENERGY LLC
SUPERIOR WI 54880

Associated with:

ENBRIDGE ENERGY
1320 GRAND AVE

Phone: (715) 398-4751

Fax: () -

SUPERIOR, WI 54880-

COPY



December 11, 2012

Karl Beaster
Enbridge Energy
1320 Grand Ave
Superior WI 54880

Subject: Reported Contamination at Enbridge Energy – Line 6, Superior, WI
WDNR BRRTS Activity # 02-16-558991
WDNR FID # 816010580

Dear Mr. Beaster:

On June 19, 2012, Enbridge Energy notified the Wisconsin Department of Natural Resources (“WDNR”) that crude oil had been detected at the site described above.

Based on the information that has been submitted to the WDNR regarding this site, we believe you are responsible for investigating and restoring the environment at the above-described site under Section 292.11, Wisconsin Statutes, known as the hazardous substances spills law.

This letter describes the legal responsibilities of a person who is responsible under section 292.11, Wis. Stats., explains what you need to do to investigate and clean up the contamination.

Legal Responsibilities:

Your legal responsibilities are defined both in statute and in administrative codes. The hazardous substances spill law, Section 292.11 (3) Wisconsin Statutes, states:

- **RESPONSIBILITY.** A person who possesses or controls a hazardous substance which is discharged or who causes the discharge of a hazardous substance shall take the actions necessary to restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands, or waters of the state.

Wisconsin Administrative Code chapters NR 700 through NR 749 establish requirements for emergency and interim actions, public information, site investigations, design and operation of remedial action systems, and case closure. Wisconsin Administrative Code chapter NR 140 establishes groundwater standards for contaminants that reach groundwater.

Steps to Take:

The longer contamination is left in the environment, the farther it can spread and the more it may cost to clean up. Quick action may lessen damage to your property and neighboring properties and reduce your

costs in investigating and cleaning up the contamination. To ensure that your cleanup complies with Wisconsin's laws and administrative codes, you should hire a professional environmental consultant who understands what needs to be done. These are the first steps to take:

1. Within the next **30 days**, by January 15, 2013, you should submit written verification (such as a letter from the consultant) that you have hired an environmental consultant. If you do not take action within this time frame, the WDNR may initiate enforcement action against you.
2. Within the next **60 days**, by February 15, 2013, your consultant should submit a work plan and schedule for the investigation. The consultant must comply with the requirements in the NR 700 Wis. Adm. Code rule series and should adhere to current WDNR technical guidance documents.

In addition, within 30 days of completion of the site investigation, your consultant should submit a Site Investigation Report to the WDNR or other agency with administrative authority.

Sites where discharges to the environment have been reported are entered into the Bureau for Remediation and Redevelopment Tracking System ("BRRTS"), a version of which appears on the WDNR's internet site. You may view the information related to your site at any time (<http://dnr.wi.gov/botw/SetUpBasicSearchForm.do>) and use the feedback system to alert us to any errors in the data.

If you want a formal written response from the department on a specific submittal, please be aware that a review fee is required in accordance with ch. NR 749, Wis. Adm. Code. If a fee is not submitted with your reports, you should proceed under the advice of your consultant to complete the site investigation and cleanup to maintain your compliance with the spills law and chapters NR 700 through NR 749. **Do not delay the investigation of your site by waiting for an agency response.** We have provided detailed technical guidance to environmental consultants. Your consultant is expected to know our technical procedures and administrative rules and should be able to answer your questions on meeting cleanup requirements.

All correspondence regarding this site should be sent to me at the Superior office. Unless otherwise requested, please send only one copy of plans and reports. In addition to the paper copy, an electronic copy may also be submitted. To speed processing, correspondence should reference the BRRTS and FID numbers (if assigned) shown at the top of this letter.

Site Investigation and Vapor Pathway Analysis

As you develop the site investigation work plan, we want to remind you to include an assessment of the vapor intrusion pathway. Chapter NR 716, Wisconsin Administrative Code outlines the requirements for investigation of contamination in the environment. Specifically, s. NR 716.11(3)(a) requires that the field investigation determine the "nature, degree and extent, both areal and vertical, of the hazardous substances or environmental pollution in all affected media". In addition, section NR 716.11(5) specifies that the field investigation include an evaluation of the "pathways for migration of the contamination, including drainage improvements, utility corridors, bedrock and permeable material or soil along which vapors, free product or contaminated water may flow".

You will need to include documentation with the Site Investigation Report that explains how the assessment was done. If the pathway is being ruled out, then the report needs to provide the appropriate justification for reaching this conclusion. If the pathway cannot be ruled out, then investigation and, if appropriate, remedial action must be taken to address the risk presented prior to submitting the site for closure. The WDNR has developed guidance to help responsible parties and their consultants comply with the requirements described above. The guidance includes a detailed explanation of how to assess the vapor intrusion pathway and provides criteria which identify when an investigation is necessary. The guidance is available at: <http://dnr.wi.gov/files/PDF/pubs/rr/RR800.pdf>.

Additional Information for Site Owners:

We encourage you to visit our website at <http://dnr.wi.gov/topic/Brownfields/>, where you can find information on selecting a consultant, financial assistance and understanding the cleanup process. You will also find information there about liability clarification letters, post-cleanup liability and more.

If you have questions, contact me at 715-392-3126 or via email at erin.endsley@wisconsin.gov for more information or visit the RR web site at the address above.

Thank you for your cooperation.

Sincerely,



Erin Endsley
Hydrogeologist
Remediation & Redevelopment Program

cc: Hans Wronka, Barr Engineering

RECEIVED

02.16.558991

State of Wisconsin
Department of Natural Resources
dnr.wi.gov

JUN 18 2012

Notification

DNR - SUPERIOR
Emergency Discharges / Spills should be reported via the 24

2 options
** try to close now - will need addtl borings to define dte; ALS - Str. imp.*
** wait for Neg. Agr (now) close out, soil < D.C., ALS for str. imp.; no addtl borings needed*

Notice: Hazardous substance discharges must be reported immediately according to s. 292.11(2), Wis. Stats. Hazardous substance discharges may be reported by telefaxing or e-mailing a completed report to the Department office in person. If you choose to notify the Department by telefax or by email, you must include the following information: (a) Name of the discharger; (b) Location of the discharge; (c) Date of the discharge; (d) Description of the discharge; (e) Estimated quantity of the discharge; (f) Estimated cost of cleanup; (g) Name and address of the responsible party; (h) Name and address of the contact person; (i) Name and address of the owner; (j) Name and address of the municipality; (k) Name and address of the county; (l) Name and address of the state; (m) Name and address of the federal government; (n) Name and address of the local government; (o) Name and address of the local government; (p) Name and address of the local government; (q) Name and address of the local government; (r) Name and address of the local government; (s) Name and address of the local government; (t) Name and address of the local government; (u) Name and address of the local government; (v) Name and address of the local government; (w) Name and address of the local government; (x) Name and address of the local government; (y) Name and address of the local government; (z) Name and address of the local government. Under s. 292.11(2), Wis. Stats., shall be no less than \$10 nor more than \$5000 for each separate offense. It is not the Department's intention to use any personally identifiable information for program administration. However, information submitted on this form may also be subject to the Freedom of Information Act (ss. 19.31 - 19.39, Wis. Stats.).

Confirmatory laboratory data should be included with this form, to assist the DNR in its investigation. Notification.

Complete this form. **TYPE or PRINT LEGIBLY.** NOTIFY appropriate DNR region (see map) of potential release from (check one):

- Underground Petroleum Storage Tank System (additional information may be required)
- Aboveground Petroleum Storage Tank System
- Dry Cleaner Facility
- Other - Describe: Enbridge Superior Terminal - Line 6 Hydrotest Excavation

ATTN DNR: **R & R Program Associate**

Date DNR Notified: 05/31/2012

1. Discharge Reported By

Name Karl Beaster	Firm Enbridge Energy	Phone No. (include area code) (715) 398-4754
Mailing Address 1320 Grand Ave., Superior, WI 54880		Email Address karl.beaster@enbridge.com

2. Site Information

Name of site at which discharge occurred. Include local name of site/business, not responsible party name, unless a residence/vacant property. Enbridge Superior Terminal - Line 6 NW of Terminal Office

Location: Include street address, not PO Box. If no street address, describe as precisely as possible, i.e., 1/4 mile NW of CTHs 60 & 123 on E side of CTH 60. 2800 East 21st Street, Superior, WI 54880

Municipality: (City, Village, Township) Specify municipality in which the site is located, not mailing address/city.

Superior

County: Douglas	Legal Description: NE 1/4 NE 1/4 Sec 36 Tn 49N Range 14 C E <input checked="" type="radio"/> W	WTM: X 362408 Y 692739
--------------------	---	---------------------------

3. Responsible Party (RP) and/or RP Representative

Responsible Party Name: Business or owner name that is responsible for cleanup. If more than one, list all. Attach additional pages as necessary.

Enbridge Energy

- Reported in compliance with s. 292.11(2), Wis. Stats., by a local government exempt from liability under s. 292.11(9)(e), Wis. Stats. For more information see <http://dnr.wi.gov/org/law/rr/lgu/liability.htm>.

Contact Person Name (if different) Karl Beaster	Phone Number (715) 398-4757	Email Address karl.beaster@enbridge.com	
Mailing Address 1320 Grand Ave., Superior, WI 54880	City Superior	State WI	ZIP Code 54880

Property owner if Different From RP: Business or owner name that is responsible for cleanup. If more than one, list all. Attach additional pages as necessary.

Contact Person Name (if different)	Phone Number	Email Address	
Mailing Address	City	State	ZIP Code

(continued)

Notification For Hazardous Substance Discharge (Non-Emergency Only)

Form 4400-225 (05/12) Page 2 of 2

4. Hazardous Substance Information

Identify hazardous substance discharged (check all that apply):

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> VOC's | <input type="checkbox"/> Diesel | <input type="checkbox"/> PERC (Dry Cleaners) |
| <input type="checkbox"/> PAH's | <input type="checkbox"/> Fuel Oil | <input type="checkbox"/> RCRA Hazardous Waste |
| <input type="checkbox"/> Metals (specify): _____ | <input type="checkbox"/> Gasoline | <input type="checkbox"/> Leachate |
| <input type="checkbox"/> Arsenic | <input type="checkbox"/> Hydraulic Oil | <input type="checkbox"/> Fertilizer |
| <input type="checkbox"/> Chromium | <input type="checkbox"/> Jet Fuel | <input type="checkbox"/> Pesticide/Herbicide/Insecticide(s) |
| <input type="checkbox"/> Cyanide | <input type="checkbox"/> Mineral Oil | <input checked="" type="checkbox"/> Other (specify): <u>Crude oil</u> |
| <input type="checkbox"/> Lead | <input type="checkbox"/> Waste Oil | <input type="checkbox"/> Unknown |
| <input type="checkbox"/> PCB's | <input type="checkbox"/> Petroleum-Unknown Type | |

5. Impacts to the Environment Information

Enter "K" for known/confirmed or "P" for potential for all that apply.

- | | | |
|---|---|--|
| <input type="checkbox"/> Air Contamination | <input type="checkbox"/> Sanitary Sewer Contamination | <input checked="" type="checkbox"/> Soil Contamination |
| <input type="checkbox"/> Co-Contamination (Petroleum & Non-Petroleum) | <input type="checkbox"/> Contamination in Right of Way | <input type="checkbox"/> Storm Sewer Contamination |
| <input type="checkbox"/> Contamination Within 1 Meter of Bedrock | <input type="checkbox"/> Fire Explosion Threat | <input type="checkbox"/> Surface Water Contamination |
| <input type="checkbox"/> Contaminated Private Well | <input checked="" type="checkbox"/> Free Product | <input type="checkbox"/> Within 100 ft of Private Well |
| <input type="checkbox"/> Contaminated Public Well | <input checked="" type="checkbox"/> Groundwater Contamination | <input type="checkbox"/> Within 1000 ft of Public Well |
| <input type="checkbox"/> Contamination in Fractured Bedrock | <input type="checkbox"/> Off-Site Contamination | |
| | <input type="checkbox"/> Other (specify): _____ | |

Contamination was discovered as a result of:

- | | | |
|--|--|---|
| <input type="checkbox"/> Tank closure assessment | <input type="checkbox"/> Site assessment | <input checked="" type="checkbox"/> Other - Describe: <u>Hydrotest Dig Excavation</u> |
| Date <input type="text"/> | Date <input type="text"/> | Date <u>05/08/2012</u> |

Lab results: Lab results will be faxed upon receipt Lab results are attached

Additional Comments: Include a brief description of immediate actions taken to halt the release and contain or cleanup hazardous substances that have been discharged.

Water with hydrocarbon contamination was pumped out of the excavation into a frac tank. Hydrocarbon contaminated soil removed from the excavation was segregated from clean soil and handled in accordance with WDNR regulations.

6. Federal Energy Act Requirements (Section 9002(d) of the Solid Waste Disposal Act (SWDA))

For all confirmed releases from UST's occurring after 9/30/2007 please provide the following information:

- | | Source | Cause |
|---|---|---|
| <input type="checkbox"/> Tank | <input type="checkbox"/> Tank | <input type="checkbox"/> Spill |
| <input checked="" type="checkbox"/> Piping | <input checked="" type="checkbox"/> Piping | <input type="checkbox"/> Overfill |
| <input type="checkbox"/> Dispenser | <input type="checkbox"/> Dispenser | <input type="checkbox"/> Corrosion |
| <input type="checkbox"/> Submersible Turbine Pump | <input type="checkbox"/> Submersible Turbine Pump | <input checked="" type="checkbox"/> Physical or Mechanical Damage |
| <input type="checkbox"/> Delivery Problem | <input type="checkbox"/> Delivery Problem | <input type="checkbox"/> Installation Problem |
| <input type="checkbox"/> Other (specify): _____ | | <input type="checkbox"/> Other (does not fit any of above) |
| | | <input type="checkbox"/> Unknown |

Does not apply.

Contact information to report non-emergency releases in DNR's five regions are as follows:

Northeast Region (FAX: 920-662-5197); Attention -- R&R Program Associate: DNRRRNER@wisconsin.gov

Brown, Calumet, Door, Fond du Lac (except City of Waupun - see South Central Region), Green Lake, Kewaunee, Manitowoc, Marinette, Marquette, Menominee, Oconto, Outagamie, Shawano, Sheboygan, Waupaca, Waushara, Winnebago counties

Northern Region (FAX: 715-623-6773); Attention -- R&R Program Associate: DNRRRNOR@wisconsin.gov

Ashland, Barron, Bayfield, Burnett, Douglas, Forest, Florence, Iron, Langlade, Lincoln, Oneida, Polk, Price, Rusk, Sawyer, Taylor, Vilas, Washburn counties

South Central Region (FAX: 608-273-5610); Attention -- R&R Program Associate: DNRRRSCR@wisconsin.gov

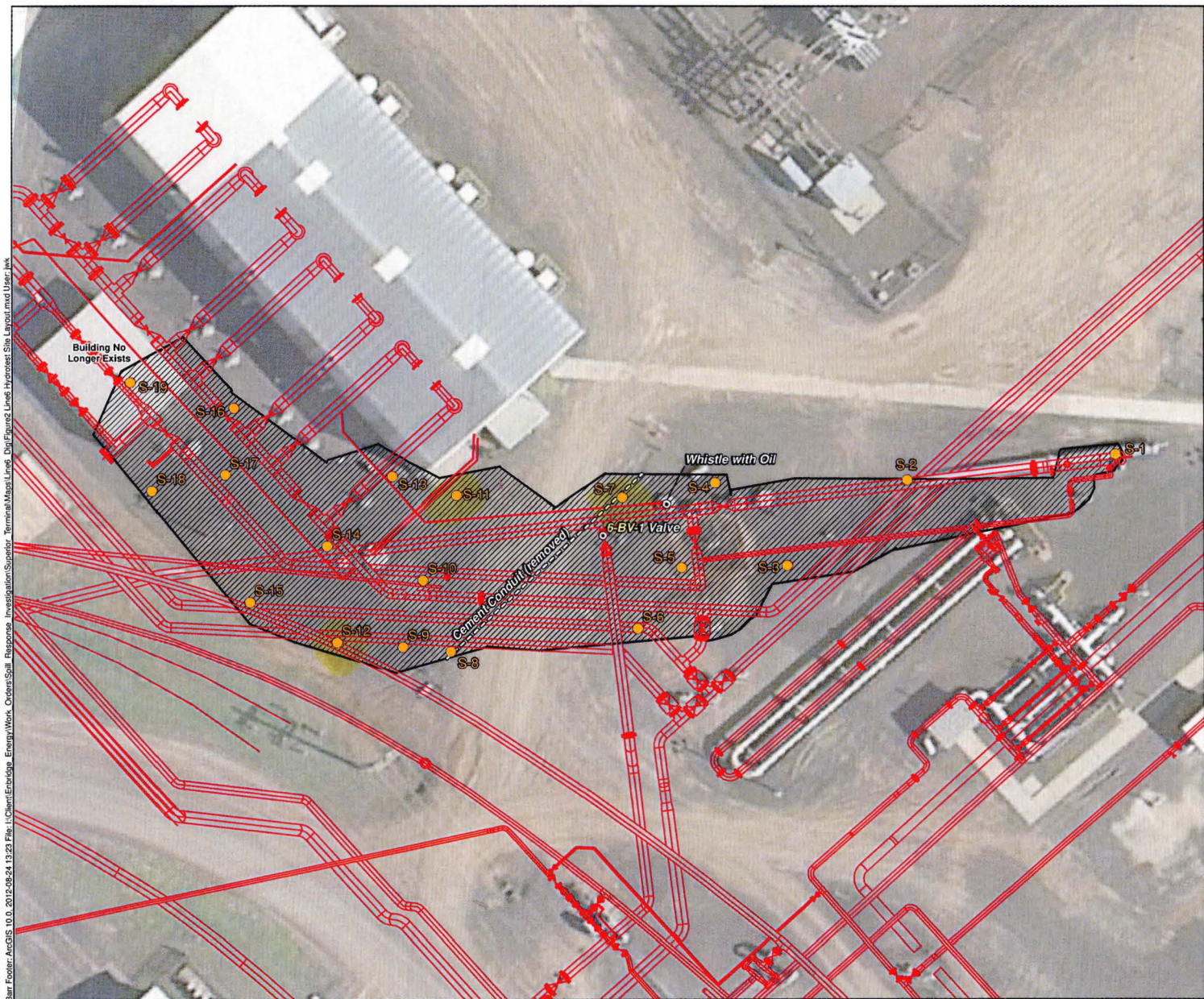
Columbia, Dane, Dodge, Fond du Lac (City of Waupun only), Grant, Green, Iowa, Jefferson, Lafayette, Richland, Rock, Sauk, Walworth counties

Southeast Region (FAX: 414-263-8550); Attention -- R&R Program Associate: DNRRRSER@wisconsin.gov

Kenosha, Milwaukee, Ozaukee, Racine, Washington, Waukesha counties

West Central Region (FAX: 715-839-6076); Attention -- R&R Program Associate: DNRRRWCR@wisconsin.gov

Adams, Buffalo, Chippewa, Clark, Crawford, Dunn, Eau Claire, Jackson, Juneau, LaCrosse, Marathon, Monroe, Pepin, Pierce, Portage, St. Croix, Trempealeau, Vernon, Wood counties



Bar Footer: ArcGIS 10.0, 2012-08-24 13:23 File: \\Client\Enbridge_Energy\Work_Order\Spill_Response_Investigation\Superior_Terminal\Map\Line6_Dist\Figure2\Line6_Hydrotest_Site_Layout.mxd User: jmk



- Excavation Soil Sample Location
- Cement Conduit
- Pipeline Infrastructure
- Excavation Areas

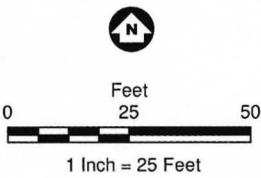


Figure 2
SITE LAYOUT MAP
 Line 6 Hydrotest Excavation
 Enbridge Superior Terminal
 Superior, Wisconsin

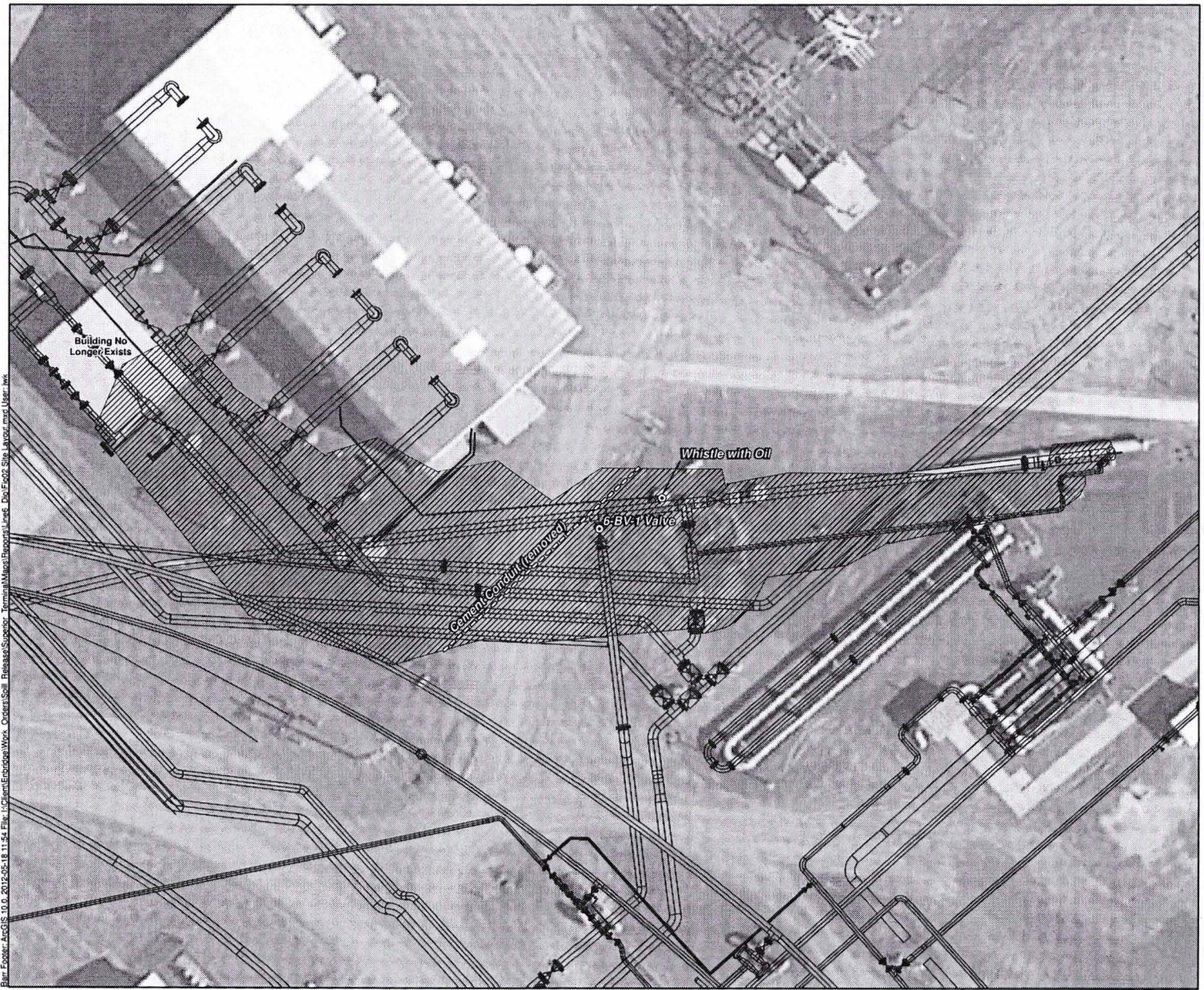


TABLE 1

**Soil Analytical Data Summary
PVOC and DRO
Line 6 Hydrotest Dig
Enbridge Energy Terminal - Superior, Wisconsin**

Concentrations in mg/kg

Chemical Name	Effective Date	Exceedance Key		Solids, percent	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	Benzene	Ethyl benzene	Toluene	Xylenes, total	Diesel Range Organics
Wisconsin Generic Residual Contaminant Levels NR 720.09	09/01/2007	Bold					0.0055	2.9	1.5	4.1	250
Wisconsin Soil Screening Levels for Ingestion (Carcinogenic)		No Exceed					104				
Wisconsin Soil Screening Levels for Ingestion (Non-Carcinogenic)		No Exceed						102000	81800	204000	
Sys Loc Code	Depth Interval (ft)	Sample Date	Sys Sample Code								
Bottom Samples											
B-5	15 - 15	5/11/2012	LINE 6 - B5_15-15'	70.7 %	< 0.071	< 0.071	< 0.071	< 0.071	< 0.071	< 0.21	< 12.8
B-14	15 - 15	5/14/2012	LINE 6 - B14_15-15'	81.6 %	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060	< 0.18	< 12.8
B-17	8 - 8	5/14/2012	LINE 6 - B17_8-8'	82 %	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.19	< 9.7
Sidewall Samples											
S-1	2 - 2	5/11/2012	LINE 6 - S1_2-2'	86.3 %	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.17	< 10.6
S-2	5 - 5	5/11/2012	LINE 6 - S2_5-5'	92.6 %	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.18	< 9.4
S-3	8 - 8	5/11/2012	LINE 6 - S3_8-8'	77.5 %	< 0.066	< 0.066	< 0.066	< 0.066	< 0.066	< 0.20	< 13.8
S-4	2 - 2	5/11/2012	LINE 6 - S4_2-2'	78.2 %	< 0.064	< 0.064	< 0.064	< 0.064	< 0.064	< 0.19	< 13.5
S-6	5 - 5	5/11/2012	LINE 6 - S6_5-5'	80.6 %	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060	< 0.18	< 12.7
S-7	6 - 6	5/11/2012	LINE 6 - S7_6-6'	96.6 %	10.6	5.6	0.28	1.6	0.43	11.6	7960
S-8	4 - 4	5/11/2012	LINE 6 - S8_4-4'	94 %	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.17	46.5
S-9	7 - 7	5/11/2012	LINE 6 - S9_7-7'	79.2 %	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060	< 0.18	< 12.1
S-10	12 - 12	5/14/2012	LINE 6 - S10_12-12'	79.7 %	< 0.074	< 0.074	< 0.074	< 0.074	< 0.074	< 0.22	< 10.5
S-11	3 - 3	5/14/2012	LINE 6 - S11_3-3'	77.2 %	< 0.063	< 0.063	0.18	< 0.063	< 0.063	< 0.19	< 14.2
S-12	5 - 5	5/14/2012	LINE 6 - S12_5-5'	96.4 %	18.2	11.4	< 1.1	1.3	1.8	32.6	5500
S-13	12 - 12	5/14/2012	LINE 6 - S13_12-12'	73.2 %	< 0.076	< 0.076	< 0.076	< 0.076	< 0.076	< 0.23	< 13.3
S-15	2 - 2	5/14/2012	LINE 6 - S15_2-2'	76.5 %	< 0.067	< 0.067	< 0.067	< 0.067	< 0.067	< 0.20	< 13.4
S-16	4 - 4	5/14/2012	LINE 6 - S16_4-4'	87.5 %	< 0.055	< 0.055	< 0.055	< 0.055	< 0.055	< 0.17	40.9
S-18	6 - 6	5/14/2012	LINE 6 - S18_6-6'	84.9 %	< 0.060	< 0.060	< 0.060	< 0.060	< 0.060	< 0.18	< 11.8
S-19	7 - 7	5/14/2012	LINE 6 - S19_7-7'	83.5 %	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.19	< 11.3



- Cement Conduit
- Pipeline Infrastructure
- ▨ Excavation Areas

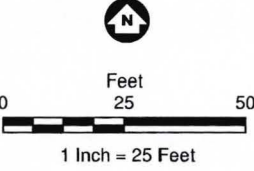


Figure 2

SITE LAYOUT MAP
 Line 6 Hydrotest Excavation
 Enbridge Superior Terminal
 Superior, Wisconsin

Imagery Source: LMIC 2009 Duluth Imagery.



Blair, Foster, ArcGIS, 10.0, 2012-05-18 11:45, File: I:\Client\Enbridge\Work_Cadent\Soil_Release\Superior_Terminal\Map\Enbridge\Line_6\Doc\Fig02_Site_Layout.mxd, User: bwa

Live 6 NW of Terminal Office



88 Empire Drive
St Paul, MN 55103
Tel: 651-642-1150
Fax: 651-642-1239



88 Empire Drive
St Paul, MN 55103
Tel: 651-642-1150
Fax: 651-642-1239

May 14, 2012

Ms. Andrea Nord
Barr Engineering Co.
4700 W 77th St
Minneapolis, MN 55435

Work Order Number: 1202137
RE: 49161092

Enclosed are the results of analyses for samples received by the laboratory on 05/10/12. If you have any questions concerning this report, please feel free to contact me.

All samples will be retained by LEGEND, unless consumed in the analysis, for 30 days from the date of this report and then discarded unless other arrangements are made.

WI Certification #998022410

Prepared by,
LEGEND TECHNICAL SERVICES, INC

Bach Pham
Client Manager I
bpham@legend-group.com

Tyler Jones
Chemist I
tjones@legend-group.com

Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435	Project: 49161092 Project Number: 49161092 LN6 Hydrotest Stockpile Project Manager: Ms. Andrea Nord	Work Order #: 1202137 Date Reported: 05/14/12
---	---	--

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Line6-Stockpile-1	1202137-01	Soil	05/08/12 16:35	05/10/12 08:55
Line6-Stockpile-2	1202137-02	Soil	05/08/12 16:40	05/10/12 08:55
Line6-Stockpile-3	1202137-03	Soil	05/08/12 16:45	05/10/12 08:55
Trip Blank	1202137-04	Methanol	05/08/12 00:00	05/10/12 08:55

Shipping Container Information

Default Cooler Temperature (°C): 12.3

Received on ice: Yes Temperature blank was present Received on ice pack: No

Received on melt water: No Ambient: No Acceptable (I/H/ISO only): No

Custody seals: No

Case Narrative:

The DRO chromatograms are attached for all the samples.

3 stockpile samples
DRO 340, 500, 250;
BTEX exceedances



88 Empire Drive
St Paul, MN 55103
Tel: 651-642-1150
Fax: 651-642-1239

Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435	Project: 49161092 Project Number: 49161092 LN6 Hydrotest Stockpile Project Manager: Ms. Andrea Nord	Work Order #: 1202137 Date Reported: 05/14/12
---	---	--

DRO/8015B
Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Line6-Stockpile-1 (1202137-01) Soil Sampled: 05/08/12 16:35 Received: 05/10/12 8:55										
Diesel Range Organics	340	11	1.8	mg/kg dry	1	B2E1103	05/11/12	05/12/12	WI(95) DRO	D-04
Surrogate: C-30	78.7			70-130 %						
Line6-Stockpile-2 (1202137-02) Soil Sampled: 05/08/12 16:40 Received: 05/10/12 8:55										
Diesel Range Organics	500	12	1.9	mg/kg dry	1	B2E1103	05/11/12	05/12/12	WI(95) DRO	D-04
Surrogate: C-30	87.6			70-130 %						
Line6-Stockpile-3 (1202137-03) Soil Sampled: 05/08/12 16:45 Received: 05/10/12 8:55										
Diesel Range Organics	250	8.3	1.3	mg/kg dry	1	B2E1103	05/11/12	05/12/12	WI(95) DRO	D-04
Surrogate: C-30	88.5			70-130 %						

Legend Technical Services, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



88 Empire Drive
St Paul, MN 55103
Tel: 651-642-1150
Fax: 651-642-1239

Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435	Project: 49161092 Project Number: 49161092 LN6 Hydrotest Stockpile Project Manager: Ms. Andrea Nord	Work Order #: 1202137 Date Reported: 05/14/12
---	---	--

WI(95) GRO/8015B
Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Line6-Stockpile-1 (1202137-01) Soil Sampled: 05/08/12 16:35 Received: 05/10/12 8:55										
Benzene	2.1	0.030	0.0045	mg/kg dry	1	B2E1010	05/10/12	05/10/12	WI(95) GRO	
Ethylbenzene	1.2	0.030	0.0056	mg/kg dry	1					
Toluene	2.6	0.030	0.0029	mg/kg dry	1					
Xylenes (total)	5.5	0.089	0.014	mg/kg dry	1					
Surrogate: 4-Fluorochlorobenzene	140			80-150 %						
Line6-Stockpile-2 (1202137-02) Soil Sampled: 05/08/12 16:40 Received: 05/10/12 8:55										
Benzene	2.9	0.036	0.0055	mg/kg dry	1	B2E1010	05/10/12	05/10/12	WI(95) GRO	
Ethylbenzene	0.33	0.036	0.0068	mg/kg dry	1					
Toluene	1.1	0.036	0.0035	mg/kg dry	1					
Xylenes (total)	1.3	0.11	0.017	mg/kg dry	1					
Surrogate: 4-Fluorochlorobenzene	105			80-150 %						
Line6-Stockpile-3 (1202137-03) Soil Sampled: 05/08/12 16:45 Received: 05/10/12 8:55										
Benzene	1.9	0.031	0.0047	mg/kg dry	1	B2E1010	05/10/12	05/10/12	WI(95) GRO	
Ethylbenzene	0.28	0.031	0.0058	mg/kg dry	1					
Toluene	0.10	0.031	0.0030	mg/kg dry	1					
Xylenes (total)	1.3	0.093	0.015	mg/kg dry	1					
Surrogate: 4-Fluorochlorobenzene	99.2			80-150 %						
Trip Blank (1202137-04) Methanol Sampled: 05/08/12 00:00 Received: 05/10/12 8:55										
Benzene	<0.025	0.025	0.0038	mg/kg wet	1	B2E1010	05/10/12	05/10/12	WI(95) GRO	
Ethylbenzene	<0.025	0.025	0.0047	mg/kg wet	1					
Toluene	<0.025	0.025	0.0024	mg/kg wet	1					
Xylenes (total)	<0.075	0.075	0.012	mg/kg wet	1					
Surrogate: 4-Fluorochlorobenzene	97.7			80-150 %						

Legend Technical Services, Inc.

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Technical Services, Inc.

www.legend-group.com

88 Empire Drive
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Tel: 651-642-1150
Fax: 651-642-1239

Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435	Project: 49161092 Project Number: 49161092 LN6 Hydrotest Stockpile Project Manager: Ms. Andrea Nord	Work Order #: 1202137 Date Reported: 05/14/12
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PERCENT SOLIDS Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Line6-Stockpile-1 (1202137-01) Soil	Sampled: 05/08/12 16:35 Received: 05/10/12 8:55									
% Solids	78			%	1	B2E1108	05/11/12	05/11/12	% calculation	
Line6-Stockpile-2 (1202137-02) Soil	Sampled: 05/08/12 16:40 Received: 05/10/12 8:55									
% Solids	69			%	1	B2E1108	05/11/12	05/11/12	% calculation	
Line6-Stockpile-3 (1202137-03) Soil	Sampled: 05/08/12 16:45 Received: 05/10/12 8:55									
% Solids	81			%	1	B2E1108	05/11/12	05/11/12	% calculation	

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DRO/8015B - Quality Control Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC Limits	%RPD Limit	Notes
Batch B2E1103 - Sonication (Wisc DRO)									
Blank (B2E1103-BLK1)					Prepared: 05/11/12 Analyzed: 05/12/12				
Diesel Range Organics	< 8.0	8.0	1.3	mg/kg wet					
Surrogate: C-30	12.9			mg/kg wet	16.0	80.9	70-130		
LCS (B2E1103-BS1)					Prepared: 05/11/12 Analyzed: 05/12/12				
Diesel Range Organics	46.2	8.0	1.3	mg/kg wet	64.0	72.2	70-120		
Surrogate: C-30	13.0			mg/kg wet	16.0	81.3	70-130		
LCS Dup (B2E1103-BSD1)					Prepared: 05/11/12 Analyzed: 05/12/12				
Diesel Range Organics	47.7	8.0	1.3	mg/kg wet	64.0	74.6	70-120	3.18	20
Surrogate: C-30	12.9			mg/kg wet	16.0	80.3	70-130		

Legend Technical Services, Inc.

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Barr Engineering Co. Project: 49161092
 4700 W 77th St Project Number: 49161092 LN6 Hydrotest Stockpile Work Order #: 1202137
 Minneapolis, MN 55435 Project Manager: Ms. Andrea Nord Date Reported: 05/14/12

WI(95) GRO/8015B - Quality Control
 Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
Batch B2E1010 - EPA 5035 Soil (Purge and Trap)											
Blank (B2E1010-BLK1)											
Prepared & Analyzed: 05/10/12											
Benzene	< 0.025	0.025	0.0038	mg/kg wet							
Ethylbenzene	< 0.025	0.025	0.0047	mg/kg wet							
Toluene	< 0.025	0.025	0.0024	mg/kg wet							
Xylenes (total)	< 0.075	0.075	0.012	mg/kg wet							
Surrogate: 4-Fluorochlorobenzene	23.4			ug/L	25.0		93.7	80-150			
LCS (B2E1010-BS1)											
Prepared & Analyzed: 05/10/12											
Benzene	92.6			ug/L	100		92.6	80-120			
Ethylbenzene	102			ug/L	100		102	80-120			
Toluene	96.3			ug/L	100		96.3	80-120			
Xylenes (total)	312			ug/L	300		104	80-120			
Surrogate: 4-Fluorochlorobenzene	25.4			ug/L	25.0		102	80-150			
LCS Dup (B2E1010-BSD1)											
Prepared & Analyzed: 05/10/12											
Benzene	93.6			ug/L	100		93.6	80-120	0.992	20	
Ethylbenzene	100			ug/L	100		100	80-120	1.23	20	
Toluene	96.9			ug/L	100		96.9	80-120	0.606	20	
Xylenes (total)	315			ug/L	300		105	80-120	0.894	20	
Surrogate: 4-Fluorochlorobenzene	26.5			ug/L	25.0		106	80-150			
Matrix Spike (B2E1010-MS1)											
Source: 1202137-02 Prepared & Analyzed: 05/10/12											
Benzene	130			ug/L	100	38.8	91.5	80-120			
Ethylbenzene	104			ug/L	100	4.42	99.9	80-120			
Toluene	110			ug/L	100	14.3	95.8	80-120			
Xylenes (total)	331			ug/L	300	17.5	104	80-120			
Surrogate: 4-Fluorochlorobenzene	26.8			ug/L	25.0		107	80-150			

Barr Engineering Co. Project: 49161092
 4700 W 77th St Project Number: 49161092 LN6 Hydrotest Stockpile Work Order #: 1202137
 Minneapolis, MN 55435 Project Manager: Ms. Andrea Nord Date Reported: 05/14/12

PERCENT SOLIDS - Quality Control
 Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
Batch B2E1108 - General Preparation											
Duplicate (B2E1108-DUP1)											
Source: 1202140-06 Prepared & Analyzed: 05/11/12											
% Solids	73.0			%			71.0		2.78	20	
Duplicate (B2E1108-DUP2)											
Source: 1202154-01 Prepared & Analyzed: 05/11/12											
% Solids	89.0			%			90.0		1.12	20	

Barr Engineering Co. Project: 49161092
 4700 W 77th St Project Number: 49161092 LN5 Hydrotest Stockpile Work Order #: 1202137
 Minneapolis, MN 55435 Project Manager: Ms. Andrea Nord Date Reported: 05/14/12

Notes and Definitions

- D-04 The hydrocarbons present are a complex mixture of diesel range and heavy oil range organics.
- < Less than value listed
- dry Sample results reported on a dry weight basis
- NA Not applicable. The %RPD is not calculated from values less than the reporting limit.
- MDL Method Detection Limit
- RL Reporting Limit
- RPD Relative Percent Difference
- LCS Laboratory Control Spike = Blank Spike (BS) = Laboratory Fortified Blank (LFB)
- MS Matrix Spike = Laboratory Fortified Matrix (LFM)

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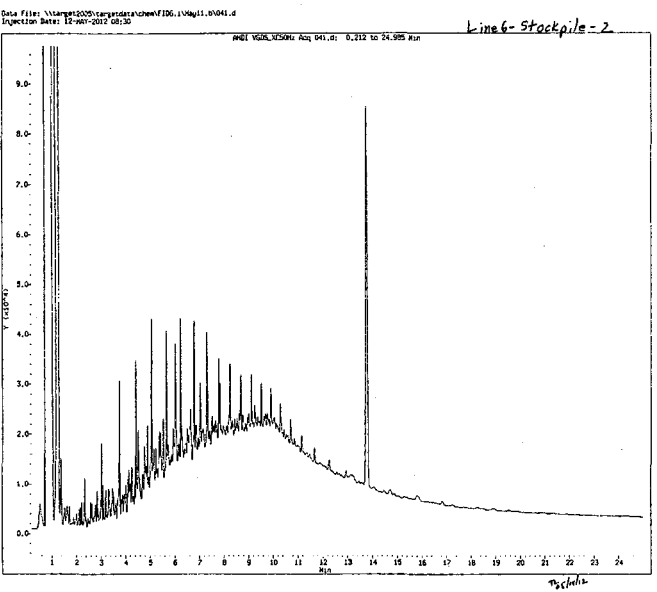
Chain of Custody		Number of Containers/Packages		DOC # 101							
BARR		Wet	Dry	Project Manager: <u>HAW, REE</u>							
Project Number: <u>49161092</u>				Project CC Contact: <u>ANBRO</u>							
Project Name: <u>Embargo Line Co Hydrotest Dia - Stockpile</u>				Sampled by: <u>REE</u>							
Sample Originates From: <u>MI</u> (see two letter postal state abbreviation)				Laboratory: <u>Legend</u>							
DOC Number: <u>NO 32208</u>											
Location	Start Date/Depth	Depth Unit	Collection Date	Collection Time	Matrix	Type	Container	Package	Number of Containers/Packages	Remarks	
01 <u>Embargo Stockpile - 1</u>			<u>5/8/12</u>	<u>1635</u>	<u>X</u>	<u>X</u>				<u>3</u>	<u>BS, Oils, Amine</u>
02 <u>Embargo Stockpile - 2</u>				<u>1640</u>							
03 <u>Embargo Stockpile - 3</u>				<u>1645</u>							
04 <u>Tap Blank</u>			<u>5/8/12</u>								<u>ASAP TAT</u>
5.											
6.											
7.											
8.											
9.											
10.											

Common Parameters/Container - Preservation Key
 #1 - Volatiles Organics = BTEX, CHX, TPH, RSO, PAF, LHL
 #2 - Semivolatile Organics = PAHs, PCB, HCB, BZD
 #3 - Gaseous = H₂, CH₄, C₂H₆, C₃H₈, Ethylene, TCE
 #4 - Inorganics = CO₂, TOC, Fluoride, Ammonia
 #5 - Metals = TMM, TMM, TMM

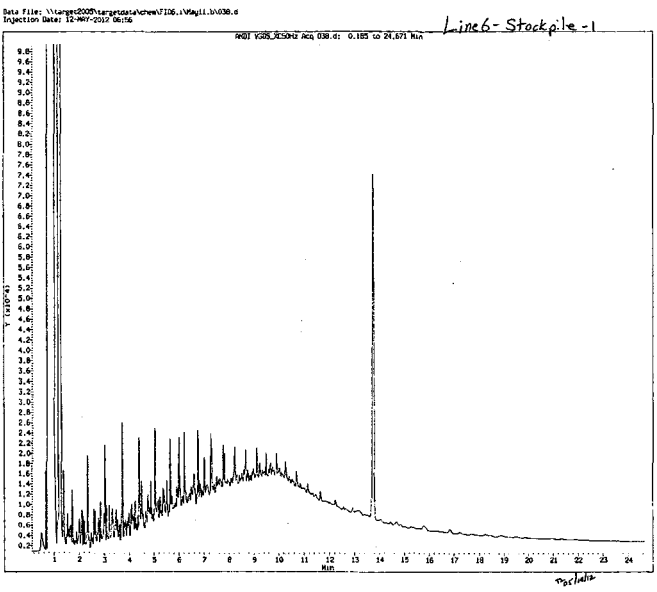
Received by: REE Date: 5/14/12 Time: 1530
 Received by: REEFORBER Date: 5/10/12 Time: 1530

Sample Shipped Via: Air Freight Federal Express Courier Other

Destination: White-Original Yellow-Field Copy Pink - Lab Coordinator



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