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February 7, 2011

Mr. Bill Schultz  
Wisconsin Department of Natural Resources  
107 Sutliff Avenue  
Rhinelander WI 54501

Re: Enbridge Energy, Limited Partnership  
Enbridge Line 14, Milepost 85 Leaksite  
Rusk County, Wisconsin  
WDNR BRRTS# 02-55-548746

Dear Mr. Schultz:

Please find the enclosed *Quarterly Operation and Monitoring Report – Fourth Quarter 2010* prepared by Barr Engineering for the above referenced site. This report summarizes activities performed at the site between October and December 2010.

If you have any questions regarding this report or the project in general, please do not hesitate to contact me at (715) 394-1430.

Sincerely,  
Enbridge Energy

A handwritten signature in blue ink, appearing to read 'Karl F. Beaster'.

Karl F. Beaster, P.G.  
Environmental Analyst

Enclosure

cc: Mr. Hans Wronka, Barr Engineering

***Quarterly Operation and Monitoring Report  
Fourth Quarter 2010***

***Line 14, MP 85 Crude Oil Release  
Rusk County, Wisconsin***

***Prepared for  
Enbridge Energy, Limited Partnership***

***January 2011***

***Quarterly Operation and Monitoring Report  
Fourth Quarter 2010***

***Line 14, MP 85 Crude Oil Release  
Rusk County, Wisconsin***

***Prepared for  
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***January 2011***



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# Quarterly Operation and Monitoring Report Fourth Quarter 2010

## Line 14, MP 85 Crude Oil Release Rusk County, Wisconsin January 2011

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## **I. Technical Memorandum**



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Phone: 218-727-5218 • Fax: 218-727-6450 • [www.barr.com](http://www.barr.com) An EEO Employer

Minneapolis, MN • Hibbing, MN • Duluth, MN • Ann Arbor, MI • Jefferson City, MO • Bismarck, ND

**To:** Karl Beaster, Enbridge Energy  
**From:** Hans Wronka, Jon Aspie, P.G.  
**Subject:** MP85 System O & M and Groundwater Monitoring Report Summary, Fourth Quarter 2010  
**Date:** February 4, 2011  
**Project:** 49550029.00

Attached are WDNR Forms 4400-194, along with supporting tables, charts, and figures for quarterly reporting of remediation system operation in accordance with Wisconsin Administrative Code NR 724. A discussion of remediation progress and system operation is also presented in this memo.

### **Summary of System Operations and Operational Changes**

The soil vapor extraction (SVE) system was operated continually during the fourth quarter of 2011. Ten of the twelve SVE points were operated throughout the entire fourth quarter. Additionally, MW-33 was operated as an SVE point during the entire quarter. SVE points SVE-1, SVE-2, and SVE-3 were closed on April 27, 2010 due to low hydrocarbon recovery from those points based on field screening data, in an attempt to get higher airflow rates from points with higher hydrocarbon recovery rates. Also, changing airflow patterns causes a shift in locations of any stagnation zones in the subsurface allowing for more complete remediation of impacted soil. SVE point SVE-1 was reopened on August 16, 2010 based on field screening data and remained open throughout the fourth quarter.

Total VOC and benzene concentrations in the SVE emissions have remained below regulatory levels since the Cat-Ox emission treatment system was removed in May 2009. The fresh air dilution valve was closed on September 11, 2009, and has remained closed through the fourth quarter 2010. Monthly sampling of SVE emissions has been conducted to monitor that concentrations remain below regulatory levels and has been conducted in accordance with WDNR Guidelines.

The source area air sparge (AS) system operated continuously during fourth quarter 2010, except for approximately the last 12 days of December. The blower malfunctioned on about December 19, based on hour meter readings, and was repaired in January 2011. The airflow to the each of the AS points has been manually adjusted during site visits. During most of the fourth quarter 2010, most airflow (approximately 5 to 7 scfm per point) was directed to sparge points AS-1, AS-2, AS-3, AS-4, and AS-5, which are located

near the axis of the plume and the northern lateral edge of the plume. Points AS-6 and AS-7 were closed during most of the fourth quarter 2010, to allow more airflow to be directed to the center of the plume. Additionally, AS-6 and AS-7 could take a lot of airflow at low pressure, and appeared to be a preferred path for airflow over other points. Therefore, these points were shut off to allow more airflow to the other sparge points for this time period.

The supplemental air sparge system was manually shut off on March 24, 2009. Concentrations of dissolved phase hydrocarbons were less than detection limits in samples collected from wells located within, and up gradient of, the operational area of the supplemental sparge system. Concentrations have remained non-detectable in this area since the supplemental sparge system was shut off.

### **Free Product and Recovery**

Free product was present in well MW-7 at a thickness of 0.01 feet during only one site visit of the fourth quarter of 2010 – on October 25 when the water table was also at one of the lowest levels this quarter. Free product was present in RW-1 during the quarterly measurement in December at a thickness of 0.3 feet. No product was observed during fourth quarter at wells MW-11, RW-2, or RW-3, where product has historically been observed. Groundwater elevations continued to rise from third quarter levels during November, and were at the highest levels recorded during the investigation and remedial actions. Water levels declined slightly during December, but, were still at levels higher than at any other time during this project.

All of the wells with product are located within an area effectively influenced by the SVE system, as negative pressure is measured at all these wells. Additionally, free product is removed from the wells (other than RW-1 and RW-2) by bailing or with absorbent “socks” during each site visit when product is observed.

### **Trends in SVE Emissions**

Total volatile organic compounds (VOCs) (sampled as Total Petroleum Hydrocarbons) in SVE emissions continued to decline through the fourth quarter 2010. The dilution valve on the SVE system was closed throughout the period. Total VOC emissions were approximately 0.2 pounds per hour with the dilution valve closed in October 2010, and declined to less than 0.04 pounds per hour in December 2010. Benzene concentrations in the SVE emissions declined through the quarter to less than detection limits. Total

benzene discharged from the system during fourth quarter 2010 was approximately 0.7 pounds. Total benzene emissions for 2010 were approximately 18 pounds and were below the allowable emissions of 300 pounds per year. The high groundwater table elevation during this time period may have submerged some impacted soil remaining in the smear zone and hindered the removal of VOCs through SVE.

Oxygen and carbon dioxide concentrations in the SVE emissions indicate that biodegradation of petroleum compounds is occurring at a rate greater than the mass removal through SVE emissions, based on calculations provided in WDNR guidance documents (WDNR File Ref: 4440, Guidance on Air Sampling and Emission Monitoring at Petroleum Contaminated Soil and Groundwater Remediation Projects). Though VOC concentrations in the SVE emissions are declining, delivery of oxygen to the impacted area via operation of the system is providing effective treatment of residual petroleum through enhanced bioremediation.

### **Trends in Groundwater Quality**

Dissolved phase hydrocarbon concentrations declined or remained relatively stable at all monitoring wells sampled during the fourth quarter 2010. The concentration increased at MW-6 where the benzene concentration rose from less than detection limits to 1.7 micrograms per liter (ug/l) but remained lower than levels detected as recently as June 2010. The benzene concentration at MW-15 declined back to less than detection limits after a slight increase to 2.5 ug/l was observed during third quarter 2010.

Concentrations of target compounds were non-detectable in samples from all wells sampled south and east of the location of MW-15. In general, dissolved phase concentrations in samples collected from wells remained relatively stable during 2010, after significant declines in concentrations were observed during the period of 2007 to 2009 after the remediation system began operation.

### **Recommended System Operation**

The SVE and source area air sparge system should continue to be operated at full capacity. However, the configuration of SVE system operation may be altered to increase mass removal by closing SVE points that have low hydrocarbon concentrations in point emissions, as long as SVE emission rates can be maintained below allowable levels. SVE points with low hydrocarbon emissions may be periodically opened to alter subsurface flow regimes so stagnation zones do not become permanent, and to provide additional oxygen to areas of the subsurface and aid bioremediation activities.



To: Karl Beaster, Enbridge Energy  
From: Hans Wronka, Jon Aspie  
Subject: MP85 System O& M and Groundwater Monitoring Report, Fourth Quarter 2010  
Date: February 4, 2011  
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Air sparge points will continue to be manually cycled during each site visit to make sure each point is capable of getting air below the water table, and to make sure most sparge air is not being delivered to only a few points. Point operation will be altered on a regular basis to ensure that preferential airflow pathways are not created which may short circuit the sparge airflow.

System O&M and groundwater monitoring site visits will continue to be conducted on a biweekly basis. Analytical groundwater samples will be collected quarterly from select wells as part of remediation system monitoring.

## **II. WI DNR Form 4400-194**

**OPERATION, MAINTENANCE, MONITORING  
AND OPTIMIZATION REPORTING OF  
SOIL AND GROUNDWATER REMEDIATION SYSTEMS**

**PURPOSE AND APPLICABILITY OF THIS FORM:** Completion of this form is required under s. NR 724.13(e), Wis. Adm. Code. Use of this form is mandatory. Failure to submit this form as required is a violation of s. NR 724.13, Wis. Adm. Code, and is subject to the penalties in s. 144.99, Wis. Stats. This form must be submitted every six months for active soil and groundwater remediation projects and every twelve months for passive (natural attenuation) remediation projects that are regulated under the NR 700 series of Wis. Adm. Code. Specifically, for sites meeting any of the following criteria:

- Soil or groundwater remediation projects that report progress in accordance with s. NR 700.11(1), Wis. Adm. Code.
- Soil or groundwater remediation projects that report progress in accordance with s. NR 724.13(3), Wis. Adm. Code. (Note: s. NR 724.13(3) requires progress reports for operation and maintenance of active systems to be submitted every three months however the Department considers submittal of this form every six months to satisfy the requirements of the rules, unless otherwise directed by the Department on a site specific basis.)
- Soil or groundwater remediation projects that report progress in accordance with s. NR 724.17(3), Wis. Adm. Code. (Note: s. NR 724.17(3) requires progress reports every time that samples are collected however the Department considers submittal of this form every twelve months to satisfy the requirements of the rules for monitoring natural attenuation, unless otherwise directed by the Department on a site specific basis.)

Submittal of this form is not a substitute for reporting required by Department programs such as Wastewater or Air Management. Personally identifiable information on this form is not intended to be used for any other purpose than tracking progress of the remediation by the Bureau for Remediation and Redevelopment.

Please refer to the instructions that are attached to the back of these forms starting on page INS-1. In all cases, when asked to "explain," those explanations are to be included on separate sheets of paper. Explanations must include a title that refers to the page and item number, for example: Page GI-2, C.1 .a.

**A. GENERAL INFORMATION:**

1. Site name: Enbridge Energy, Limited Partnership, Line 14, MP-85 Crude Oil Release Site
2. Reporting period from: 10/01/10 To 12/31/10 Days in period: 92
3. Regulatory agency (enter DNR, DCOM, DATCP and/or other): DNR
4. DNR issued site number: WDNR BRRTS #02-55-548746
5. State reimbursement fund claim number and fund name (if not applicable, enter NA): NA
6. Site location:
  - a. DNR region and county: Rusk
  - b. Street address and municipality: 9150 Reichel Road, Bruce, WI 54819
  - c. Township, range, section and quarter quarter section: SW ¼ of NW ¼, Section 9, Township 36 N, Range 7 W
7. Responsible party:
  - a. Name: Enbridge Energy, Limited Partnership, attn: Robert Steede
  - b. Mailing address: 119 N 25 Street E, Superior, WI 54880
  - c. Phone number: 715-394-1433
8. Consultant:
  - a. Company name: Barr Engineering Co., attn: Hans Wronka
  - b. Mailing address: 332 W Superior St, Suite 600, Duluth, MN 55802
  - c. Phone number: 218-529-8200
9. Contaminants: Petroleum hydrocarbons related to crude oil.
10. Soil types (USCS or USDA): CL (0-5' bgs), SP - SM (5+ ft bgs)
11. Hydraulic conductivity (cm/sec): 120 feet/day
12. Average linear velocity of groundwater (ft/yr): 0.4 to 0.8 feet/day

### GENERAL SITE INFORMATION, CONTINUED

#### SITE NAME AND REPORTING PERIOD:

Site name: Enbridge Energy, Limited Partnership, Line 14, MP-85 Crude Oil Release Site

Reporting period from: 10/01/10 To: 12/31/10 Days in period: 92

#### A. GENERAL INFORMATION (CONTINUED):

13. If soil is treated ex situ, is the treatment location off site? (Y/N) If yes, give location: NA

a. DNR region and county: \_\_\_\_\_

b. Township, range, section and quarter quarter section: \_\_\_\_\_

#### B. REMEDIATION METHOD: Only submit pages that apply to an individual site. Check all that apply:

- Groundwater extraction (submit a completed page GW-1).
- Free product recovery (submit a completed page GW-1).
- In situ air sparging (submit a completed page GW-2).
- Groundwater natural attenuation (submit a completed page GW-3).
- Other groundwater remediation method (submit a completed page GW-4).
- Soil venting (including soil vapor extraction and bioventing, submit a completed page IS-1).
- Soil natural attenuation (submit a completed page IS-2).
- Other in situ soil remediation method (submit a completed page IS-3).
- Biopiles (submit a completed page ES-1).
- Landspreading/thinspreading of petroleum contaminated soil (submit a completed page ES-2).
- Other ex situ soil remediation method (submit a completed page ES-3).

#### C. GENERAL EFFECTIVENESS EVALUATION FOR ALL ACTIVE SYSTEMS: If the remediation is active (not natural attenuation), complete this subsection.

1. Is the system operating at design rates and specifications? (Y/N): Y

If the answer is no, explain whether or not modifications are necessary to achieve the goal that was previously established in design.

2. Are modifications to the system warranted to improve effectiveness? (Y/N) If yes, explain: N

3. Is natural attenuation an effective low cost option at this time? (Y/N): N

4. Is closure sampling warranted at this time? (Y/N): N

5. Are there any modifications that can be made to the remediation to improve cost effectiveness? (Y/N) If yes, explain: N

#### D. ECONOMIC AND COST DATA TO DATE:

1. Total investigation costs (\$): Costs are not provided at this time.

2. Implementation costs (design, capital and installation costs, excluding investigation costs) (\$): NA

3. Total costs during the previous reporting period (\$): NA

4. Total costs during this reporting period (\$): NA

5. Total anticipated costs for the next reporting period (\$): NA

6. Are any unusual or one-time costs listed in the reporting periods covered by D.3., D.4. or D.5. above? (Y/N) If yes explain: NA

7. If close out is anticipated within 12 months, estimated costs for project closeout (\$): NA

**GENERAL SITE INFORMATION, CONTINUED**

**SITE NAME AND REPORTING PERIOD:**

Site name: Enbridge Energy, Limited Partnership, Line 14, MP-85 Crude Oil Release Site

Reporting period from: 10/01/10 To: 12/31/10 Days in period: 92

**E. NAME(S), SIGNATURE(S) AND DATE OF PERSON(S) SUBMITTING FORM:** Legibly print name, date and sign. Only persons qualified to submit reports under ch. NR 712 Wis. Adm. Code are to sign this form.

**Registered Professional Engineers:**

I (print name) \_\_\_\_\_, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the rules of Professional Conduct in ch. A 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Signature, title, P.E. Number and date: \_\_\_\_\_

**Hydrogeologists:**

I (print name) \_\_\_\_\_, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03(1), Wis. Adm. Code, and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

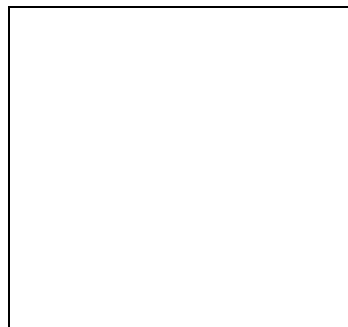
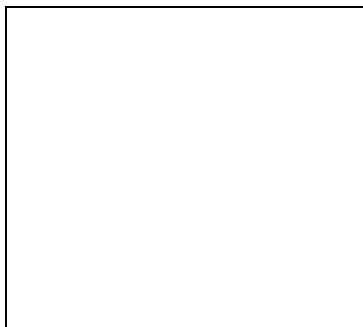
Signature, title and date: \_\_\_\_\_

**Scientists:**

I (print name) \_\_\_\_\_, hereby certify that I am a scientist as that term is defined in s. NR 712.03(3), Wis. Adm. Code, and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Signature, title and date: \_\_\_\_\_

**Professional Seal(s), if applicable:**



## IN SITU AIR SPARGING SYSTEMS

### SITE NAME AND REPORTING PERIOD:

Site name: Enbridge Energy, Limited Partnership, Line 14, MP-85 Crude Oil Release Site

Reporting period from: 10/01/10 To: 12/31/10 Days in period: 92

Date that the system was first started up: 3/10/08 (Line 3), 4/1/08 (Lines 1 and 2), 4/8/08 (Source Area)

### A. IN SITU AIR SPARGING SYSTEM OPERATION:

1. Number of air injection wells at the site and the number actually in use during the period: A total of 75 sparge points, including 68 points associated with the supplemental sparge system located downgradient of the source area, are present at the site. The source area sparge system contains 7 sparge points operating in conjunction with source area SVE system. The seven source area sparge points were operated continually or on a planned rotation based on field screening and analytical data during this quarter, except the system was down for approximately 12 days at the end of December. The blower malfunctioned on approximately December 19 based on the hours of operation. The blower was not repaired until January 2011. The supplemental sparge system was not operated during this quarter. The supplemental sparge system was manually turned off March 24, 2009 because dissolved phase hydrocarbon concentrations in groundwater were less than detection limits in the area of the supplemental sparge system.
2. Number of days of operation (only list the number of days the system actually operated, if unknown explain): Supplemental AS System: 0 days / Source Areas AS System: 79 days
3. System utilization in percent (days of operation divided by reporting time period multiplied by 100). If < 80%, explain: Supplemental AS System: 0% Source Areas AS System: 86%.

### B. SYSTEM EFFECTIVENESS EVALUATION:

1. If free product is not present, determine the single contaminant that requires the greatest percent reduction to achieve ch. NR 140 ES and PAL. Perform this calculation for all contaminants that were present at the site that have ch. NR 140 standards. Use the highest contaminant concentration measured in any sampling points during reporting period. If free product is present, write "FREE PRODUCT" in B.1.a.
  - a. Contaminant: Free Product
  - b. Percent reduction necessary to reach ch. NR 140 ES and PAL: NA
  - c. Maximum contaminant concentration level in any monitoring well ( $\mu\text{g/L}$ ): Benzene: 840  $\mu\text{g/L}$  at MW-33 during this reporting period (samples were not collected from wells with free product).
2. Is there any evidence that air is short circuiting through natural or man-made pathways? (Y/N) If so, explain: N
3. Is the size of the plume increasing, stabilized, or decreasing (if increasing, explain): Stabilized

### C. ADDITIONAL ATTACHMENTS: Attach the following to this form:

- Groundwater contour map.
- Groundwater contaminant distribution map (may be combined with contour map).
- When contaminants are aerobically biodegradable, attach a dissolved oxygen in groundwater map (dissolved oxygen may be combined with the contaminant data on a single map).
- Site map with all air injection wells and groundwater monitoring points.
- Graph of contaminant concentrations versus time for the contaminant listed in B.1 .a. (above) for the monitoring point with the greatest level of contamination.
- Groundwater contaminant chemistry table.
- Groundwater elevations table.
- System operational data table.

## SOIL VENTING (INCLUDING BOTH SOIL VAPOR EXTRACTION AND BIOVENTING)

### SITE NAME AND REPORTING PERIOD:

Site name: Enbridge Energy, Limited Partnership, Line 14, MP-85 Crude Oil Release Site

Reporting period from: 10/01/10 To: 12/31/10 Days in period: 92

Date that the system was first started up: 1/17/08

### A. SOIL VENTING SYSTEM OPERATION:

1. Number of air extraction wells available and number of wells actually in use during the period: 13 total SVE wells, including 12 dedicated SVE wells and one monitoring well connected to the SVE system. MW-33 was connected to the SVE line for SVE-7, and began operating on September 11, 2009. Both SVE-7 and MW-33 are operating on that line. All SVE wells, except SVE-2, and SVE-3 were operated continually during the quarter period. SVE-2 and SVE-3 are located on the upgradient side of the plume and were shut down on April 27, 2010 due to low hydrocarbon recovery based on field screening data.
2. Number of days of operation (only list the number of days the system actually operated, if unknown explain): 92
3. System utilization in percent (days of operation divided by reporting time period multiplied by 100). If less than 80%, explain: 100% - based on SVE system timer.
4. Average depth to groundwater: 35 feet (in the area of the SVE system)

### B. EFFECTIVENESS EVALUATION: [START HERE]

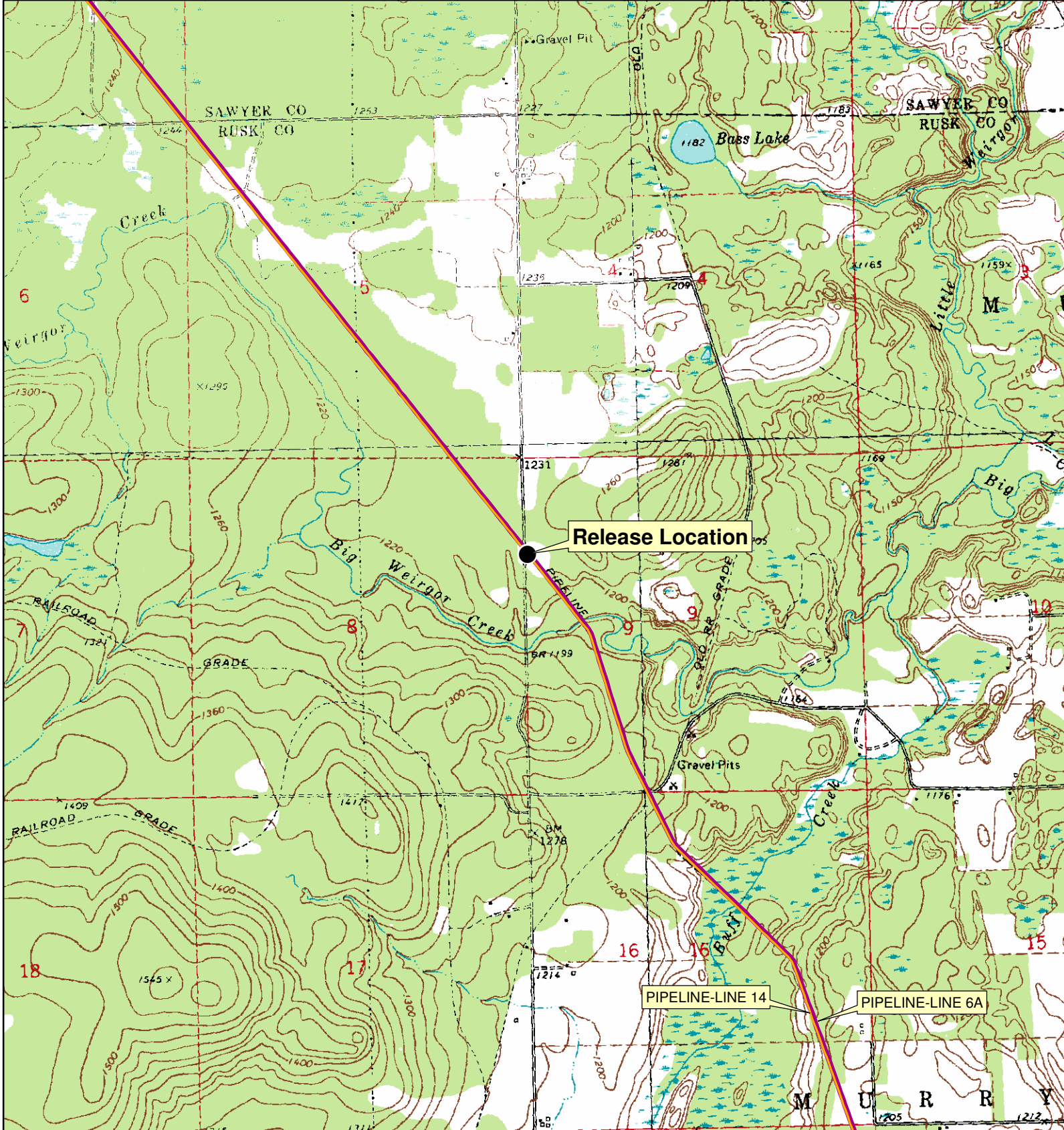
1. Average contaminant removal rate for the entire system (pounds per day): Direct SVE removal averaged 2.8 pounds per day during 4th quarter, plus an additional 133 pounds per day due to biodegradation
2. Average contaminant removal rate per well (pounds per day): 0.2 pounds per day per well by direct removal, plus an additional 10 pounds per day average per well for biodegradation.
3. If the average contaminant removal rate is less than one pound per day for the entire system, or if the average contaminant removal rate per well is less than one tenth of a pound per day, evaluate the following:
  - a. If contaminants are aerobically biodegradable and confirmation borings have not been drilled in the past year:
    - i. Oxygen levels in extracted air (percent): 14 to 20 %  
Methane levels in extracted air (ppm<sub>v</sub>) If over 10 ppm<sub>v</sub>, explain: N/A
    - iii. If methane is not present above 10 ppm<sub>v</sub> and if oxygen is greater than 20 percent in extracted air, you should either:
      - o Drill confirmation borings during the next reporting period, if the entire site should be considered for closure.
      - o Or, perform an in situ respirometry test in a zone of high contamination. Do not perform the test in an air extraction well, use a gas probe or water table well. If a zero order rate of decay based on oxygen depletion is less than 2 mg/kg per day, then you should drill confirmation borings, if the entire site should be considered for closure. If the rate of decay is between 2 and 10 mg/kg, operate for one more reporting period before evaluating further. If the zero order rate of decay is greater than 10 mg/kg total hydrocarbons, continue operating the system in a manner than maximizes aerobic biodegradation.
  - b. If contaminants are not aerobically biodegradable and confirmation borings have not been recently drilled during the past year, you should drill confirmation borings during the next reporting period if the entire site should be considered for closure.
  - c. If soil borings were drilled during the past year and soil contamination remains above acceptable levels, explain if the system effectiveness can be increased and/or if other options need to be considered to achieve cleanup criteria.

### C. ADDITIONAL ATTACHMENTS: Attach the following to this form:

- Well and soil sample location map indicating all air extraction wells. If forced air injection wells are also in use, identify those wells.
- If water table monitoring wells are present at the site, a map of well locations.
- Time versus vapor phase contaminant concentration graph.
- Time versus cumulative contaminant removal graph.
- Groundwater elevations table, if water table wells are present at the site; also list screen lengths and elevations.
- Table of soil contaminant chemistry data.
- Soil gas data, if gas probes are used to monitor subsurface conditions in locations other than where air is extracted.
- System operational data table.

### **III. Figures**





Release Location: NW 1/4, Section 9  
Township 36 N, Range 7 W

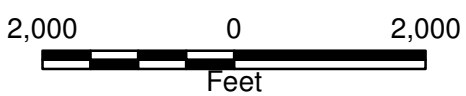
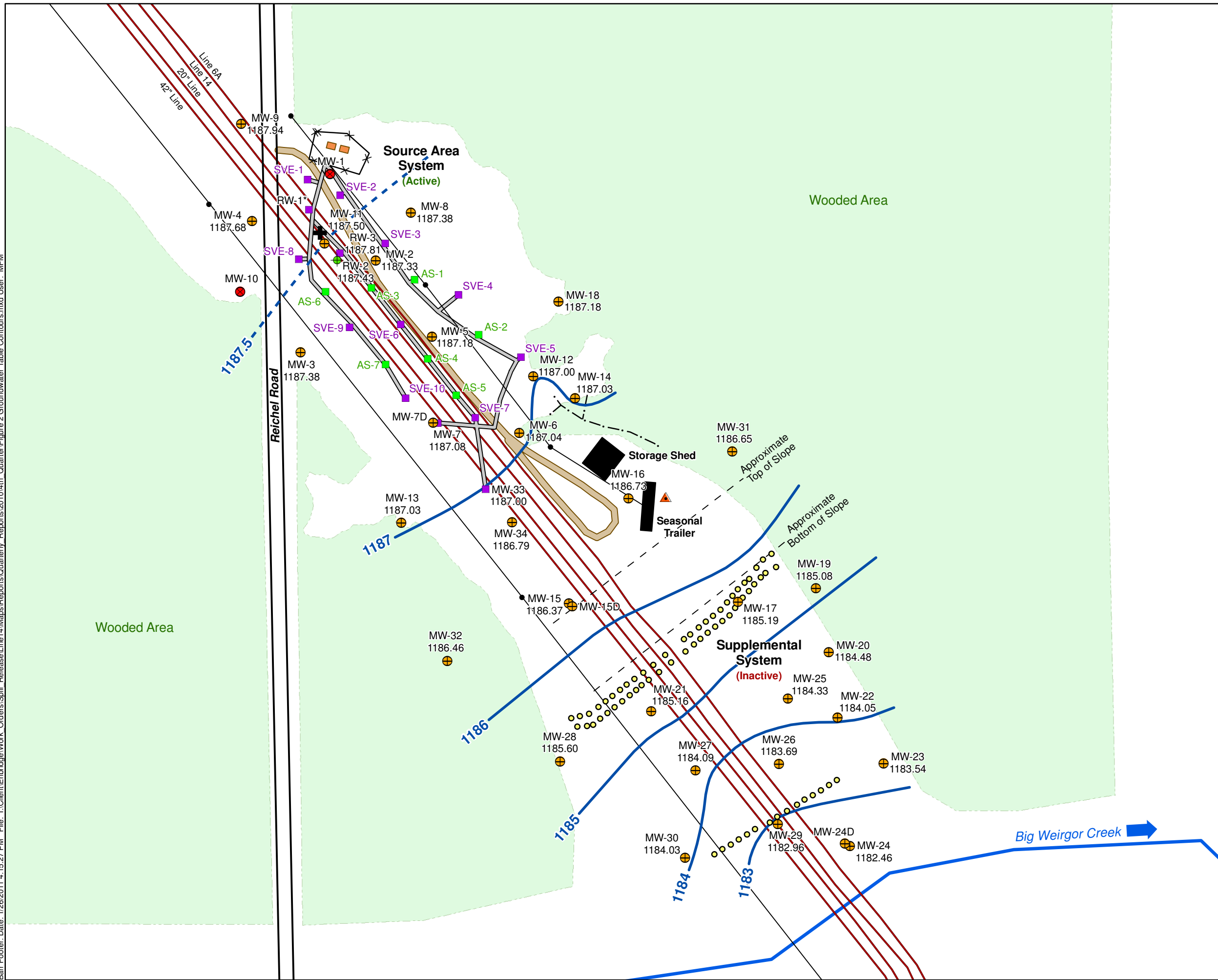


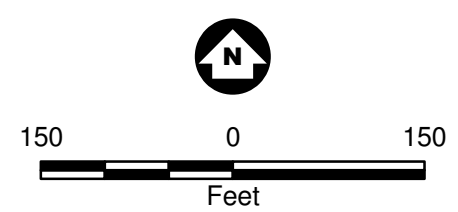
Figure 1

**SITE LOCATION MAP**  
Enbridge Energy, Limited Partnership  
Line 14, MP-85 Crude Oil Release Site  
Rusk County, Wisconsin

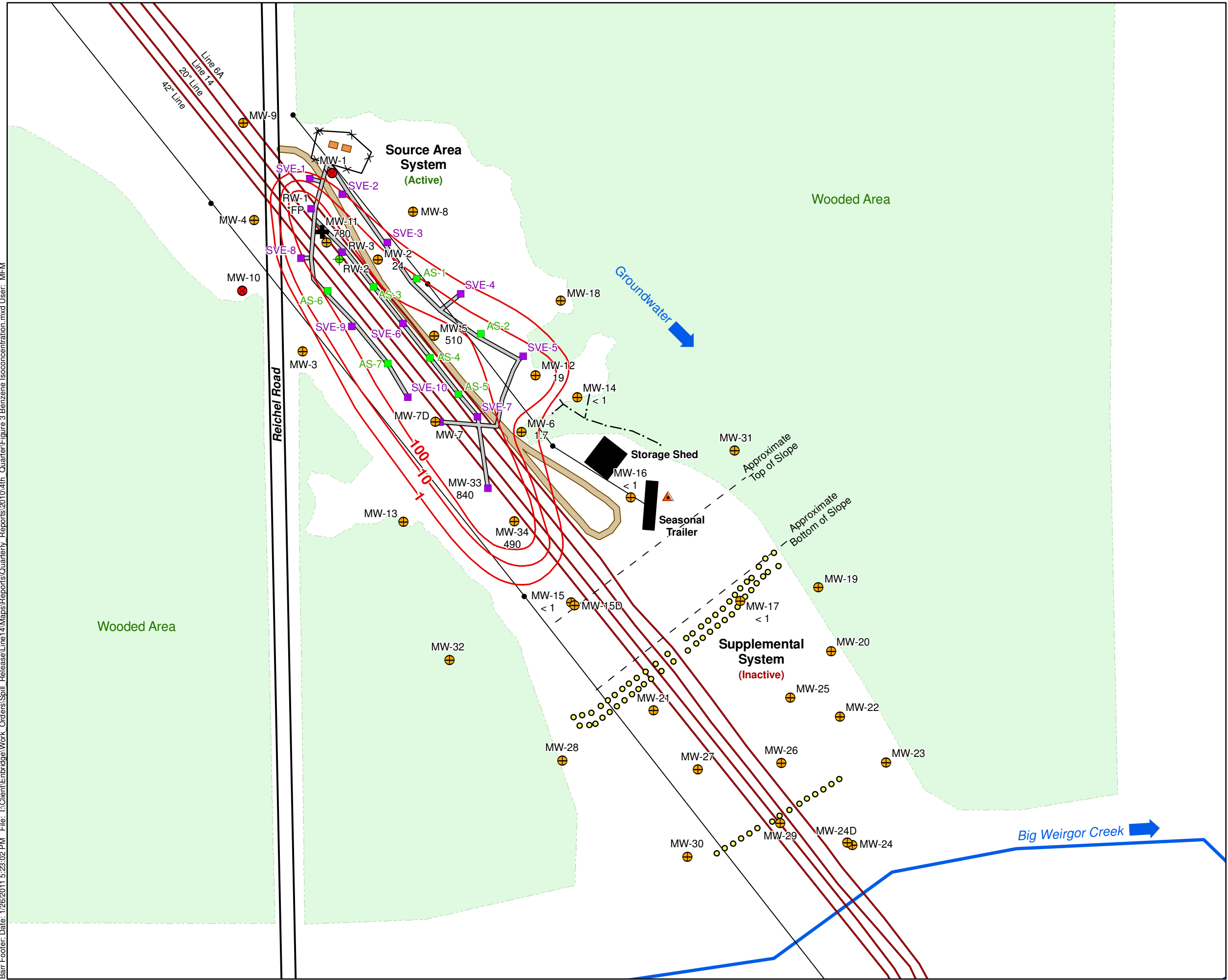
Barr Footer: Date: 1/26/2011 4:15:27 PM File: I:\Client\Enbridge\Work\_Orders\Spill\_Release\Line 14\Maps\Reports\Quarterly\_Reports\2010\4th\_Quarter\Figure 2 Groundwater Table Contours.mxd User: MFM



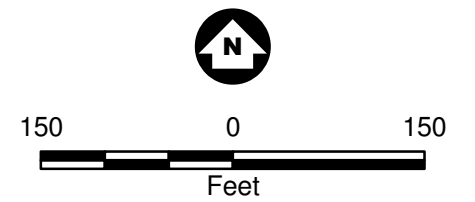
- Groundwater Table Contours  
Dashed at Intervals Less Than 1 Foot
- + Release Location
- ⊕ Monitoring Wells
- Abandoned Monitoring Wells
- ⊕ Recovery Wells
- Supplemental Sparge Wells
- ▲ Residential Well
- Source Area Sparge Wells
- SVE Points
- x—x Fence
- · - · - Ravine
- Approximate Pipeline Locations
- Overhead Powerlines and Poles
- Remediation System Sheds
- SVE / AS Trench
- Driveway
- Structures
- ➔ Approximate River Flow Direction
- 1186.25 Water Elevation in Well
- \* Free Product Present



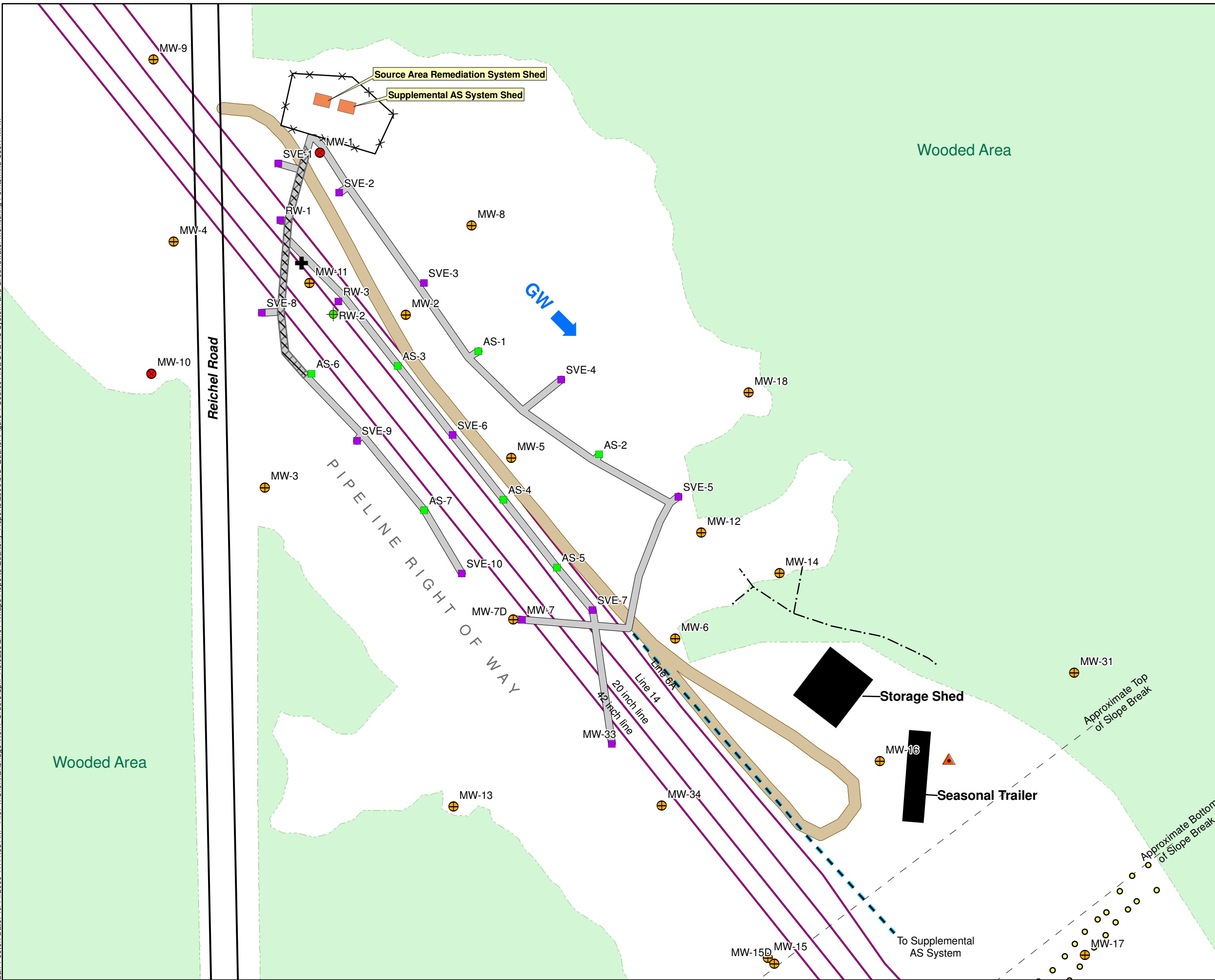
**Figure 2**  
**GROUNDWATER TABLE CONTOURS**  
 December 28, 2010  
 Enbridge Energy, Limited Partnership  
 Line 14, MP 85 Crude Oil Release Site  
 Rusk County, Wisconsin



- Benzene Isoconcentration Contours  
Micrograms per Liter (ug/L)
- + Release Location
- ⊕ Monitoring Wells
- Abandoned Monitoring Wells
- ⊕ Recovery Wells
- Supplemental Sparge Wells
- ▲ Residential Well
- Source Area Sparge Wells
- SVE Points
- ⌘ Fence
- · - · - Ravine
- Approximate Pipeline Locations
- Overhead Powerlines and Poles
- Remediation System Sheds
- SVE / AS Trench
- Driveway
- Structures
- ➔ Approximate Groundwater and River Flow Direction
- 680 Benzene Concentration in Water Sample from Well (ug/L)
- < 1 Concentration Less than Indicated Method Detection Limit (ug/L)
- \*FP Free Product Present



**Figure 3**  
**BENZENE ISOCONCENTRATION**  
 December 28, 2010  
 Enbridge Energy, Limited Partnership  
 Line 14, MP 85 Crude Oil Release Site  
 Rusk County, Wisconsin



- Release Location
- Monitoring Well
- Abandoned Monitoring Well
- Recovery Well
- Supplemental Sparge Well
- Residential Well
- Source Area Sparge Well
- SVE Point
- Approximate Supplemental AS System Trench Location
- Fence
- Ravine
- Approximate Pipeline Location
- Remediation System Sheds
- SVE/AS Trench
- Insulated Portion of SVE/AS Trench
- Driveway
- Structures
- Approximate Groundwater Flow Direction

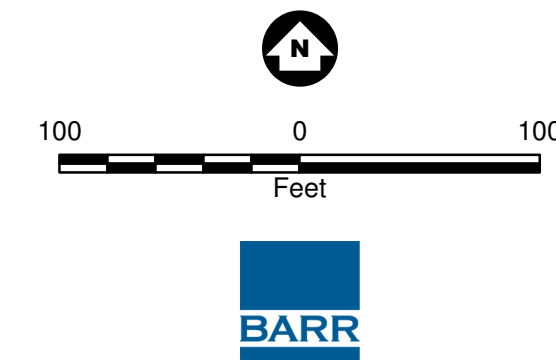
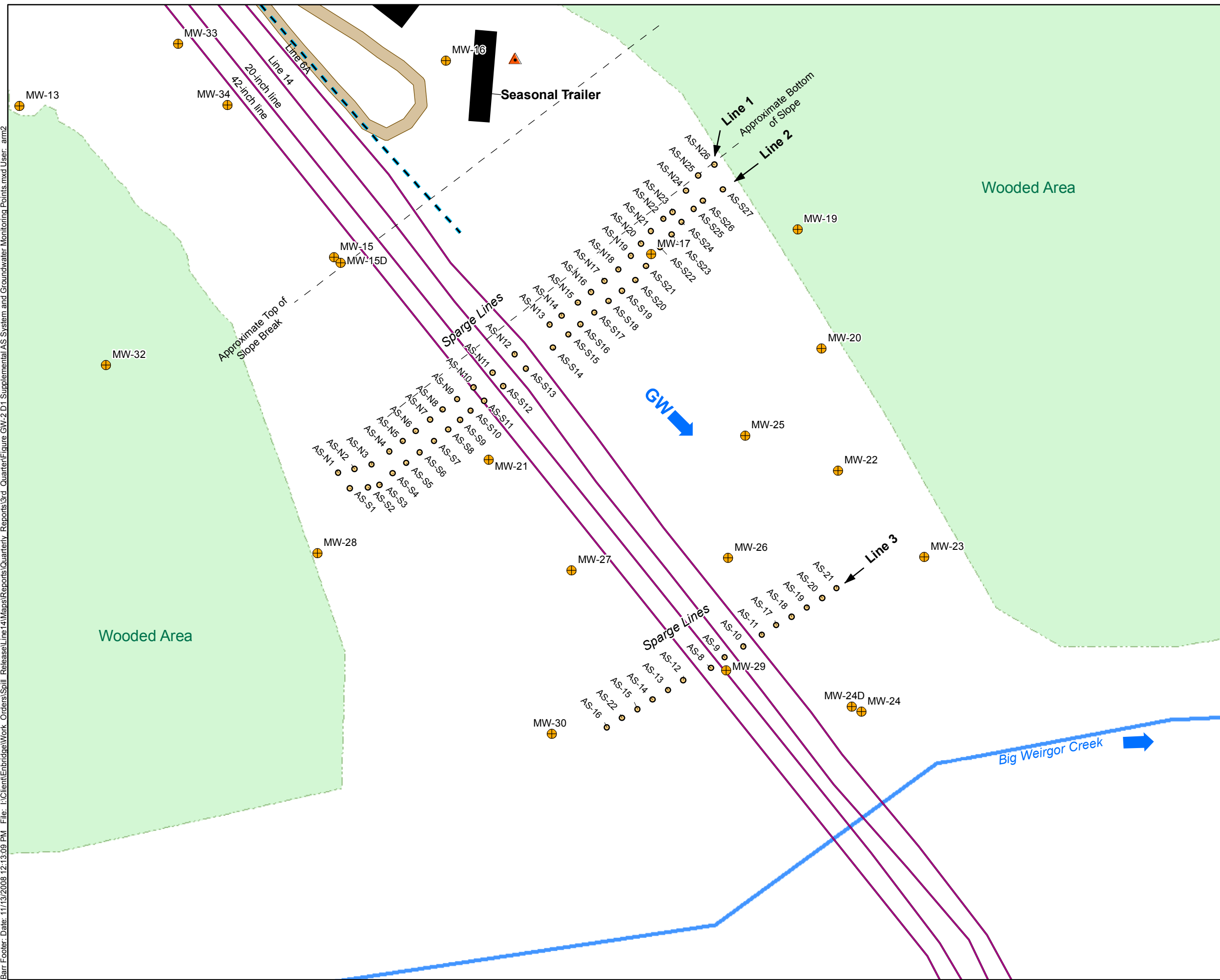


Figure 4  
SOURCE AREA SVE/AS SYSTEM AND  
GROUNDWATER MONITORING POINTS  
Enbridge Energy, Limited Partnership  
Line 14, MP-85 Crude Oil Release Site  
Rusk County, Wisconsin



- Monitoring Well
- Supplemental Sparge Well
- Residential Well
- Approximate Supplemental AS System Trench Location
- Approximate Pipeline Location
- Driveway
- Structures
- Approximate Groundwater and River Flow Direction

Note: Supplemental AS System piping is above ground and not shown.

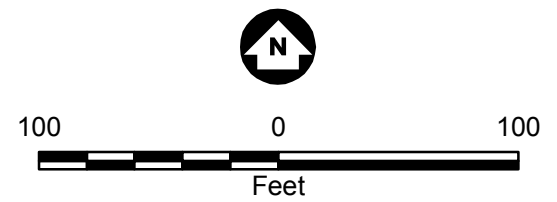
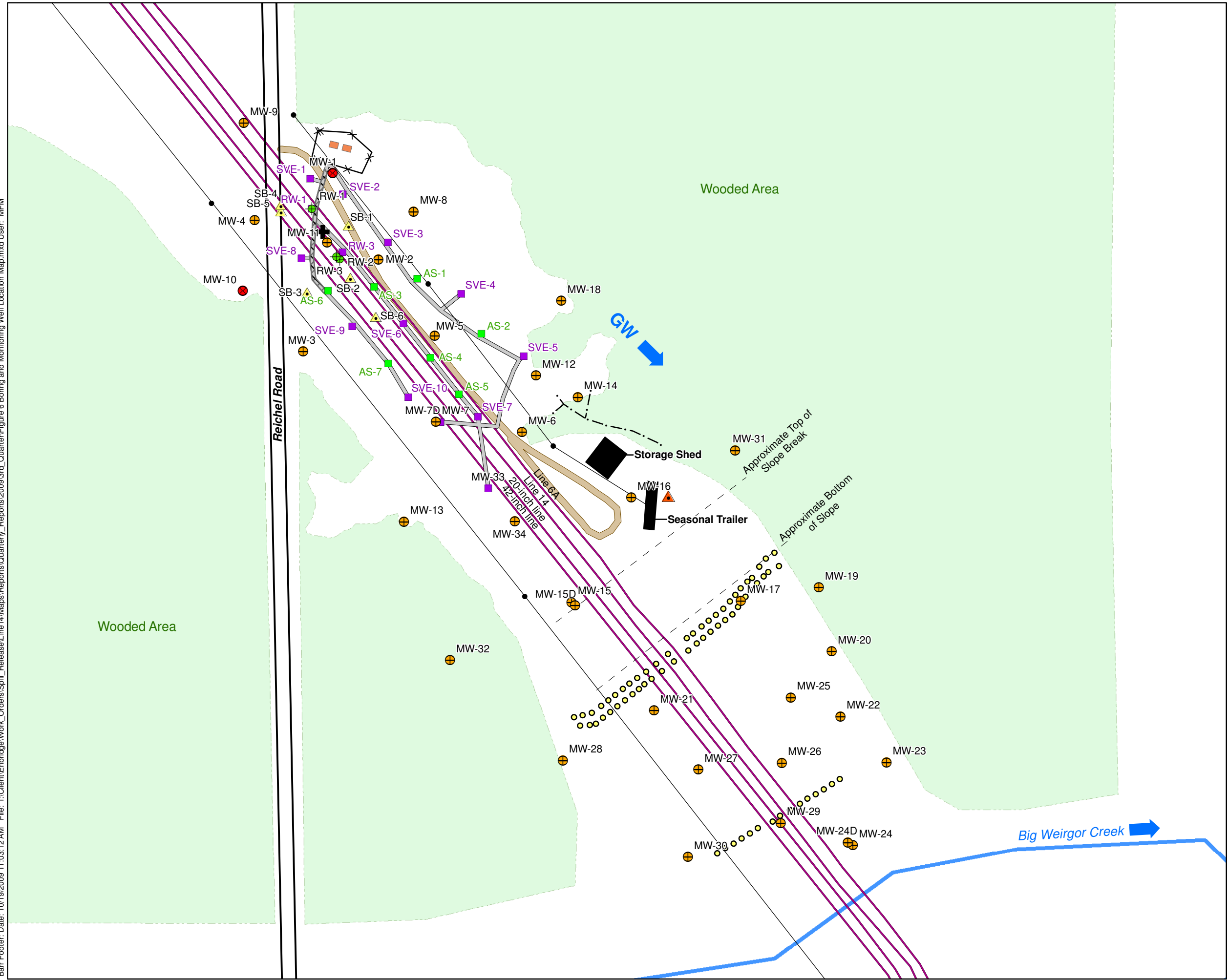
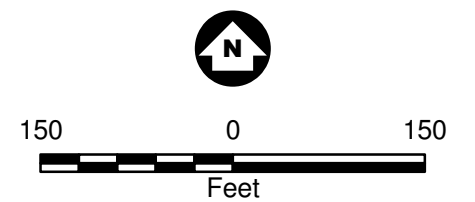


Figure 5  
SUPPLEMENTAL AS SYSTEM AND  
GROUNDWATER MONITORING POINTS  
Enbridge Energy, Limited Partnership  
Line 14, MP-85 Crude Oil Release Site  
Rusk County, Wisconsin



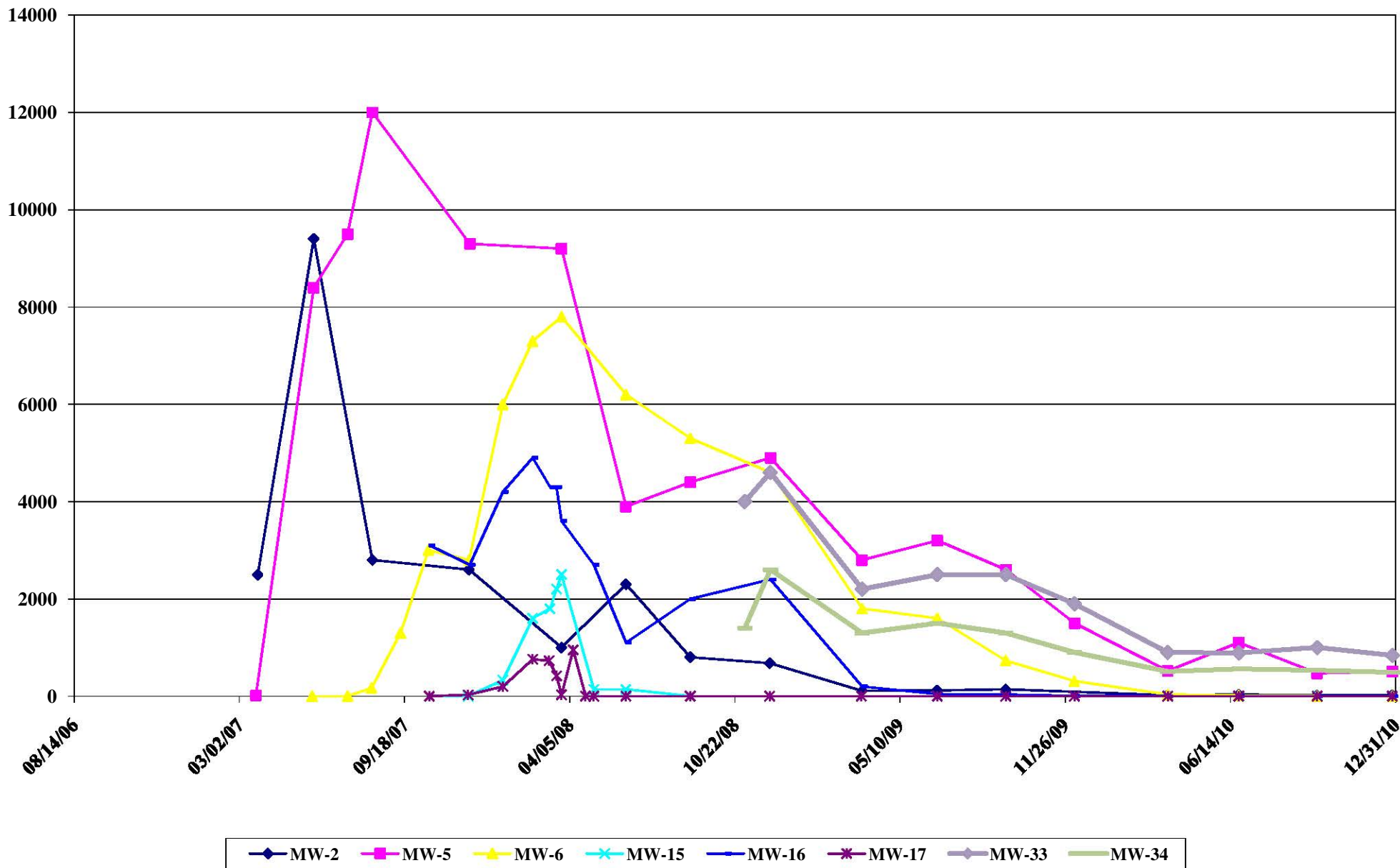
- ✚ Release Location
- ▲ Soil Boring
- ⊕ Monitoring Well
- Abandoned Monitoring Well
- ⊕ Recovery Well
- Supplemental Sparge Well
- ▲ Residential Well
- Source Area Sparge Well
- SVE Point
- ✕ Fence
- - - Ravine
- Approximate Pipeline Location
- Overhead Powerlines and Poles
- Remediation System Sheds
- SVE/AS Trench
- Insulated Portion of SVE/AS Trench
- Driveway
- Structures
- ➡ Approximate Groundwater and River Flow Direction



**Figure 6**  
**BORING AND MONITORING WELL LOCATION MAP**  
 Enbridge Energy, Limited Partnership  
 Line 14, MP-85 Crude Oil Release Site  
 Rusk County, Wisconsin

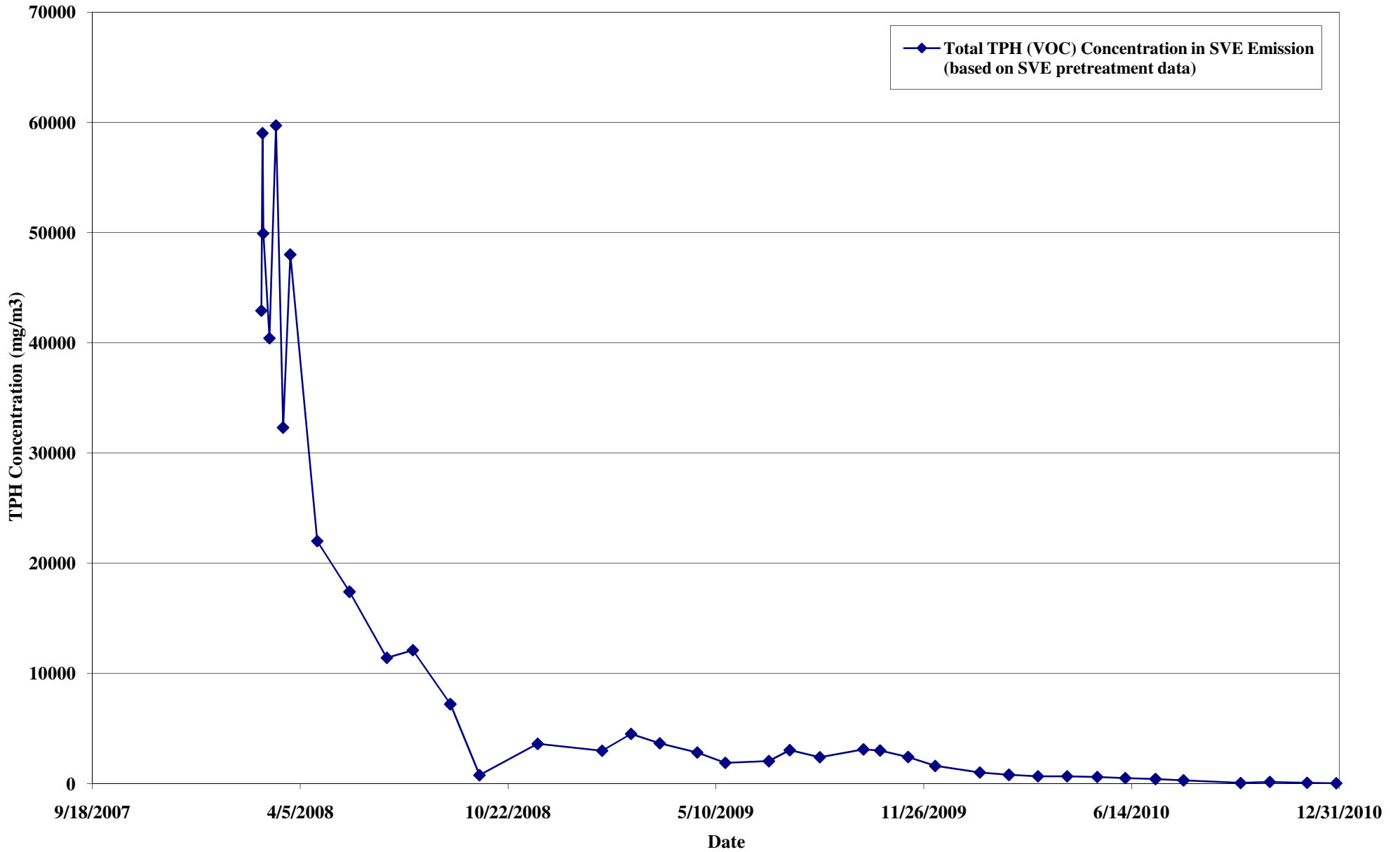
## **IV. Charts**

**Chart 1**  
**Benzene Concentration Vs. Time at Select Wells**  
**Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release**  
**Rusk County, Wisconsin**

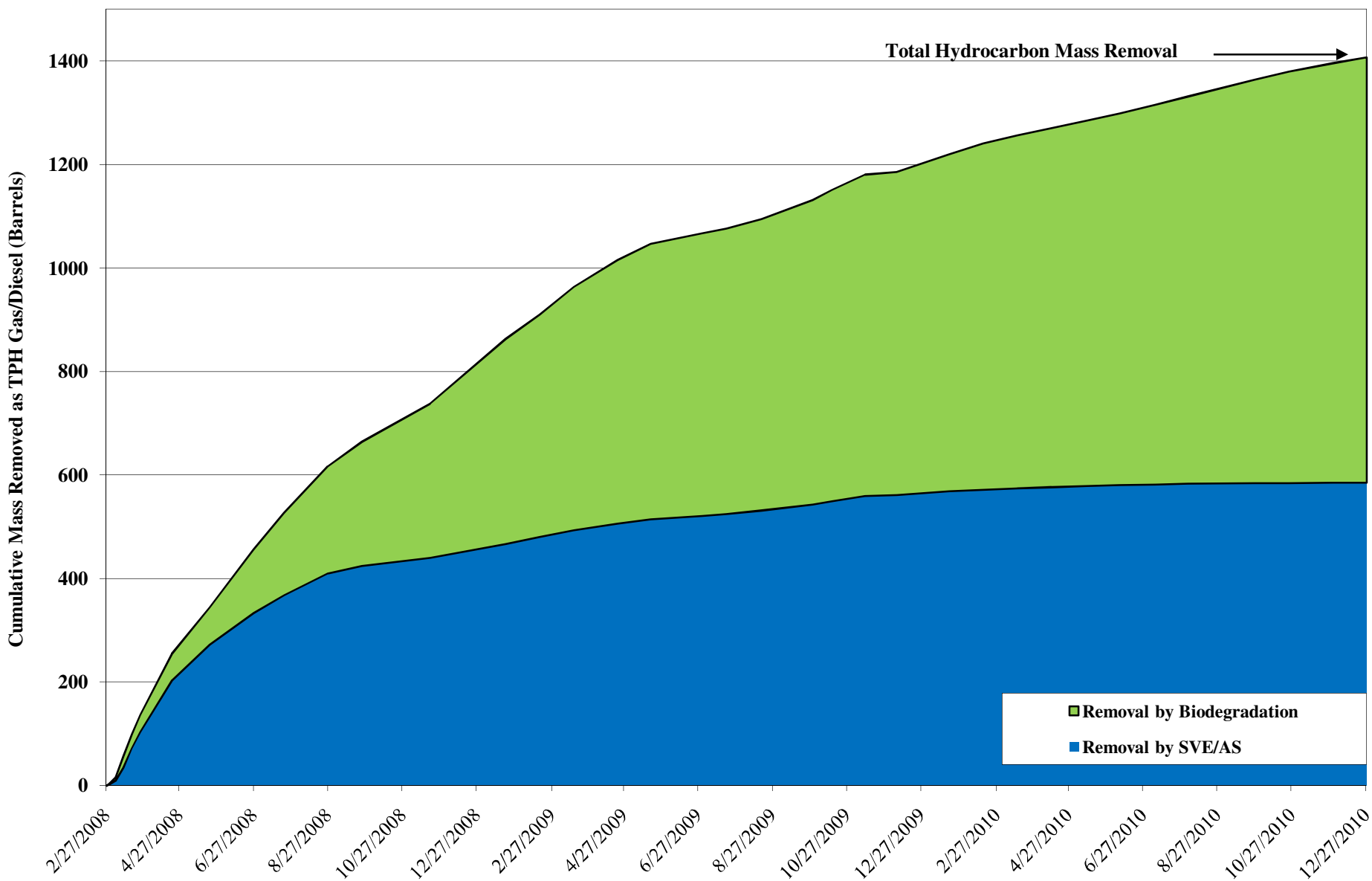




**Chart 2**  
**Total Petroleum Hydrocarbon Vapor Concentration vs. Time**  
**Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release**  
**Rusk County, Wisconsin**



**Chart 3**  
**Cumulative Hydrocarbon Mass Removal by SVE/AS and Biodegradation**  
**Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release**  
**Rusk County, Wisconsin**



## **V. Tables**

**Table 1**  
**Groundwater Analytical Data - TPH and PVOC**  
**Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release**  
**Rusk County, Wisconsin**  
**(concentrations in ug/L)**

Location	Date	Diesel Range Organics	DRO Extended Range C10-C32	Sum of trimethyl-benzenes	Benzene	Ethyl benzene	Naphthalene	Toluene	Xylenes total
WI Public Health Groundwater Preventive Action Limit	<b>Bold</b>	--	--	96 c	0.5	140	8	200	1000
WI Public Health Groundwater Enforcement Standards	<u>Underline</u>	--	--	480 c	5	700	40	1000	10000 (4)
MW-1	3/24/2007	--	<500	ND	<u>11</u>	<1.0	<5.0	10	2.1
MW-1	5/31/2007	--	<460	ND	<u>2.2</u>	<1.0	--	<1.0	<3.0
MW-1	8/9/2007	--	<460	ND	<1.0	<1.0	--	<1.0	<3.0
MW-1	12/5/2007	--	--	ND	<u>6.7</u>	<1.0	<5.0	<1.0	<3.0
MW-1	3/25/2008	--	--	ND	<u>2.2</u>	<1.0	--	<1.0	<3.0
MW-1	6/12/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-2	3/24/2007	--	2900	<b>108</b>	<b>2500</b>	130	<b>22</b>	<b>1800</b>	710
MW-2	5/31/2007	--	3800	<b>378</b>	<b>9400</b>	<b>370</b>	--	<b>7100</b>	<b>2200</b>
MW-2	8/10/2007	--	1100	<b>198</b>	<b>2800</b>	<b>230</b>	--	<b>980</b>	<b>1200</b>
MW-2	12/5/2007	--	--	77	<u>2600</u>	<b>240</b>	<u>71</u>	150	460
MW-2	3/26/2008	--	--	36	<u>1000</u>	56	--	130	130
MW-2	6/12/2008	--	--	<b>216</b>	<b>2300</b>	<b>140</b>	--	<b>800</b>	<b>580</b>
MW-2	8/29/2008	--	--	<b>99</b>	<b>800</b>	120	--	120	190
MW-2	12/3/2008	--	--	72	<u>680</u>	120	--	120	200
MW-2	3/25/2009	--	--	17.5	<u>110</u>	31	--	33	49
MW-2	6/24/2009	--	--	93	<u>120</u>	110	--	100	170
MW-2	9/16/2009	--	--	34	<u>140</u>	40	--	83	90
MW-2	3/30/2010	--	--	9.2	<u>19</u>	7.8	--	16	30
MW-2	6/24/2010	--	--	46	<u>32</u>	100	--	3.1	130
MW-2	9/27/2010	--	--	19.3	<u>16</u>	28	--	<1.0	9.3
MW-2	12/27/2010	--	--	25.1	<u>24</u>	25	--	<1.0	17
MW-3	3/22/2007	--	<500	ND	<u>7.3</u>	<1.0	<5.0	5.8	ND
MW-3	5/31/2007	--	<500	ND	<1.0	<1.0	--	<1.0	<3.0
MW-3	7/11/2007	--	<460	ND	<u>17</u>	1.3	--	7.4	<3.0
MW-3	8/9/2007	--	<460	ND	<u>23</u>	1.3	--	6.1	<3.0
MW-3	12/5/2007	--	--	ND	<u>1.7</u>	<1.0	<5.0	<1.0	<3.0
MW-3	3/25/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-3	6/10/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-3	8/28/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-3	3/29/2010	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-4	3/24/2007	--	<500	4.2	<u>110</u>	9.2	<5.0	110	41.8
MW-4	5/30/2007	--	<460	8.2	<u>180</u>	9.7	--	130	41
MW-4	8/10/2007	--	<460	ND	<u>7.9</u>	<1.0	--	2.6	<3.0
MW-4	12/5/2007	--	--	ND	<u>1.1</u>	<1.0	<5.0	<1.0	<3.0
MW-4	3/24/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-4	6/10/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-4	8/28/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-4	3/29/2010	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-5	3/22/2007	--	<500	ND	<u>17</u>	<1.0	<5.0	1.5	3.3
MW-5	5/31/2007	--	940 *	<b>215</b>	<b>8400</b>	<b>230</b>	--	<b>4500</b>	<b>1500</b>
MW-5	7/11/2007	--	1500 *	<b>210</b>	<b>9500</b>	<b>300</b>	--	<b>5900</b>	<b>1800</b>
MW-5	8/10/2007	--	1900	<b>459</b>	<b>12000</b>	<b>310</b>	--	<b>5600</b>	<b>1800</b>
MW-5	12/6/2007	--	--	<b>349</b>	<b>9300</b>	<b>390</b>	<250	<50	<b>1900</b>
MW-5	3/26/2008	--	--	<b>365</b>	<u>9200</u>	<b>450</b>	--	<50	930
MW-5	6/12/2008	--	--	79	<u>3900</u>	110	--	100	240
MW-5	8/29/2008	--	--	<b>140</b>	<b>4400</b>	97	--	<50	370
MW-5	12/4/2008	--	--	<b>296</b>	<b>4900</b>	79	--	<50	450
MW-5	3/25/2009	--	--	<b>124</b>	<b>2800</b>	89	--	<20	230
MW-5	6/25/2009	--	--	<b>240</b>	<b>3200</b>	<b>270</b>	--	<b>390</b>	<b>590</b>
MW-5	9/16/2009	--	--	<b>191</b>	<b>2600</b>	<b>240</b>	--	56	290
MW-5	12/8/2009	--	--	82	<u>1500</u>	130	--	<20	130
MW-5	3/30/2010	--	--	16.6	<u>520</u>	55	--	<1.0	12
MW-5	6/24/2010	--	--	133	<u>1100</u>	<b>250</b>	--	15	280
MW-5	9/27/2010	--	--	44	<u>470</u>	110	--	5.7	46
MW-5	12/27/2010	--	--	45.7	<u>510</u>	110	--	8	28
MW-6	5/29/2007	--	<500	ND	<1.0	<1.0	<5.0	<1.0	ND
MW-6	7/11/2007	--	<520	ND	<1.0	<1.0	--	<1.0	<3.0
MW-6	8/9/2007	--	<460	4.2	<u>170</u>	5.2	--	84	30
MW-6	9/13/2007	--	<460	32	<u>1300</u>	37	--	31	210
MW-6	10/17/2007	--	<460	76	<u>3000</u>	85	--	<10	480

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**Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release**  
**Rusk County, Wisconsin**  
**(concentrations in ug/L)**

Location	Date	Diesel Range Organics	DRO Extended Range C10-C32	Sum of trimethyl-benzenes	Benzene	Ethyl benzene	Napthalene	Toluene	Xylenes total
WI Public Health Groundwater Preventive Action Limit	<b>Bold</b>	--	--	96 c	0.5	140	8	200	1000
WI Public Health Groundwater Enforcement Standards	<u>Underline</u>	--	--	480 c	5	700	40	1000	10000 (4)
MW-6	12/5/2007	--	--	55	<u>2800</u>	94	<50	<10	370
MW-6	1/15/2008	--	--	56	<u>6000</u>	170	<50	<10	500
MW-6	2/20/2008	--	--	ND	<u>7300</u>	240	<u>66</u>	<50	480
MW-6	3/26/2008	--	--	ND	<u>7800</u>	200	--	<50	490
MW-6	6/12/2008	--	--	ND	<u>6200</u>	81	--	<50	200
MW-6	8/29/2008	--	--	ND	<u>5300</u>	<50	--	<50	<150
MW-6	12/4/2008	--	--	ND	<u>4600</u>	<50	--	<50	<150
MW-6	3/25/2009	--	--	ND	<u>1800</u>	<10	--	<10	<30
MW-6	6/25/2009	--	--	ND	<u>1600</u>	11	--	<10	<30
MW-6	9/16/2009	--	--	ND	<u>730</u>	7.5	--	<5.0	<15
MW-6	12/7/2009	--	--	ND	<u>310</u>	2.2	--	<2.0	<6
MW-6	3/30/2010	--	--	1.4	<u>34</u>	<1.0	--	<1.0	<3.0
MW-6	6/24/2010	--	--	1.1	<u>13</u>	<1.0	--	<1.0	<3.0
MW-6	9/27/2010	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-6	12/27/2010	--	--	ND	1.7	1.4	--	<1.0	<3.0
MW-7	5/31/2007	--	750	85	<u>4700</u>	130	<u>19</u>	<u>2900</u>	750
MW-7	7/11/2007	--	850	<u>141</u>	<u>4600</u>	<u>180</u>	--	<u>3100</u>	<u>1000</u>
MW-7	8/10/2007	--	1100	<u>123</u>	<u>3500</u>	<u>140</u>	--	<u>1800</u>	750
MW-7	12/5/2007	--	--	51	<u>3800</u>	<u>200</u>	<100	88	570
MW-7D	8/9/2007	--	<460	ND	<1.0	<1.0	<5.0	<1.0	ND
MW-7D	12/4/2007	--	--	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-7D	3/24/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-7D	6/11/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-7D	8/28/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-7D	3/29/2010	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-8	5/30/2007	--	<500	ND	<1.0	<1.0	<5.0	<1.0	ND
MW-8	8/9/2007	--	<500	ND	<1.0	<1.0	--	<1.0	<3.0
MW-8	12/4/2007	--	--	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-8	3/25/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-8	12/3/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-8	3/29/2010	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-9	5/30/2007	--	<460	ND	<1.0	<1.0	<5.0	<1.0	ND
MW-9	8/9/2007	--	<460	ND	<1.0	<1.0	--	<1.0	<3.0
MW-9	12/4/2007	--	--	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-9	3/24/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-9	6/10/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-9	8/28/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-9	12/3/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-9	3/29/2010	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-10	8/10/2007	--	<460	ND	<1.0	<1.0	--	<1.0	<3.0
MW-10	12/4/2007	--	--	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-10	3/24/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-10	6/10/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-11	8/10/2007	--	1700	269	<u>6400</u>	320	--	<u>4900</u>	1800
MW-11	6/24/2010	--	--	245	<u>2300</u>	260	--	450	1400
MW-11	9/27/2010	--	--	188	<u>2200</u>	180	--	62	1000
MW-11	12/27/2010	--	--	256	<u>780</u>	220	--	6.8	1000
MW-12	8/10/2007	--	530	120	<u>3600</u>	130	<u>22</u>	<u>1600</u>	1390
MW-12	9/13/2007	--	<460	161	<u>3700</u>	200	--	300	970
MW-12	10/17/2007	--	480	194	<u>4400</u>	230	--	500	1200
MW-12	12/6/2007	--	--	101	<u>2400</u>	150	<100	230	610
MW-12	3/26/2008	--	--	23	<u>1400</u>	68	--	170	170
MW-12	6/12/2008	--	--	13.7	<u>230</u>	14	--	87	48
MW-12	8/29/2008	--	--	195	<u>2200</u>	150	--	710	480
MW-12	12/4/2008	--	--	289	<u>2300</u>	220	--	850	730
MW-12	12/7/2009	--	--	165	<u>310</u>	83	--	250	450
MW-12	3/30/2010	--	--	19.1	<u>19</u>	7.3	--	3.3	38
MW-12	6/24/2010	--	--	9.9	<u>3.8</u>	2.0	--	<1.0	19

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WI Public Health Groundwater Preventive Action Limit	<b>Bold</b>	--	--	96 c	0.5	140	8	200	1000
WI Public Health Groundwater Enforcement Standards	<u>Underline</u>	--	--	480 c	5	700	40	1000	10000 (4)
MW-12	9/27/2010	--	--	74	<u>18</u>	12	--	2.8	120
MW-12	12/27/2010	--	--	81	<u>19</u>	13	--	<1.0	91
MW-13	8/9/2007	--	<460	ND	<1.0	<1.0	<5.0	<1.0	ND
MW-13	9/13/2007	--	<460	ND	<1.0	<1.0	--	<1.0	<3.0
MW-13	10/17/2007	--	<460	ND	<1.0	<1.0	--	<1.0	<3.0
MW-13	12/4/2007	--	--	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-13	1/15/2008	--	--	ND	<b>1.3</b>	<1.0	<5.0	<1.0	<3.0
MW-13	2/20/2008	--	--	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-13	3/25/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-13	12/3/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-13	3/29/2010	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-14	8/9/2007	--	<460	ND	<1.0	<1.0	<5.0	<1.0	ND
MW-14	9/13/2007	--	<460	ND	<1.0	<1.0	--	<1.0	<3.0
MW-14	10/17/2007	--	<460	ND	<1.0	<1.0	--	<1.0	<3.0
MW-14	12/4/2007	--	--	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-14	1/15/2008	--	--	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-14	2/20/2008	--	--	ND	<b>2</b>	<1.0	<5.0	<1.0	<3.0
MW-14	3/25/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-14	6/10/2008	--	--	ND	<b>95</b>	4.5	--	<1.0	18
MW-14	7/24/2008	--	--	ND	<b>150</b>	7.4	--	<1.0	41
MW-14	8/28/2008	--	--	1.3	<b>120</b>	4.6	--	<1.0	32
MW-14	12/3/2008	--	--	ND	<b>42</b>	<1.0	--	<1.0	<3.0
MW-14	3/25/2009	--	--	1.1	<b>4.8</b>	<1.0	--	<1.0	<3.0
MW-14	6/24/2009	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-14	9/16/2009	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-14	9/27/2010	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-14	12/27/2010	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-15	10/18/2007	--	<460	ND	<1.0	<1.0	<5.0	<1.0	ND
MW-15	12/4/2007	--	--	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-15	1/15/2008	--	--	ND	<b>330</b>	<1.0	<5.0	<1.0	7.5
MW-15	2/20/2008	--	--	ND	<b>1600</b>	<10	6.1	<10	<30
MW-15	3/12/2008	--	<460	ND	<b>1800</b>	<10	<50	<10	<30
MW-15	3/20/2008	--	<460	11	<b>2200</b>	<10	<50	<10	<30
MW-15	3/26/2008	--	--	ND	<b>2500</b>	12	--	<10	<30
MW-15	5/4/2008	--	--	ND	<b>140</b>	<1.0	--	<1.0	<3.0
MW-15	6/12/2008	--	--	ND	<b>140</b>	<1.0	--	<1.0	<3.0
MW-15	8/29/2008	--	--	3.0	<1.0	<1.0	--	<1.0	<3.0
MW-15	12/3/2008	--	--	1.5	<1.0	<1.0	--	<1.0	<3.0
MW-15	3/24/2009	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-15	5/19/2009	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-15	6/24/2009	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-15	9/16/2009	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-15	12/7/2009	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-15	3/29/2010	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-15	6/24/2010	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-15	9/27/2010	--	--	ND	<b>2.5</b>	<1.0	--	<1.0	<3.0
MW-15	12/27/2010	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-15D	3/25/2008	--	<460	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-15D	6/11/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-15D	8/28/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-15D	3/29/2010	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-16	10/18/2007	--	490	75	<b>3100</b>	76	<b>11</b>	19 *	580
MW-16	12/6/2007	--	--	44	<b>2700</b>	95	<100	<20	460
MW-16	1/15/2008	--	--	43	<b>4200</b>	<b>160</b>	<50	<10	350
MW-16	2/20/2008	--	--	16.1	<b>4900</b>	<b>180</b>	<b>34</b>	5.4	450
MW-16	3/12/2008	--	<500	35	<b>4300</b>	70	<100	<20	390
MW-16	3/20/2008	--	<460	ND	<b>4300</b>	53	<120	<25	390
MW-16	3/26/2008	--	--	ND	<b>3600</b>	30	--	<20	300
MW-16	5/4/2008	--	--	ND	<b>2700</b>	<5.0	--	<5.0	250
MW-16	6/12/2008	--	--	2.1	<b>1100</b>	2.3	--	3.4	61

**Table 1**  
**Groundwater Analytical Data - TPH and PVOC**  
**Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release**  
**Rusk County, Wisconsin**  
**(concentrations in ug/L)**

Location	Date	Diesel Range Organics	DRO Extended Range C10-C32	Sum of trimethyl-benzenes	Benzene	Ethyl benzene	Naphthalene	Toluene	Xylenes total
WI Public Health Groundwater Preventive Action Limit	<b>Bold</b>	--	--	96 c	0.5	140	8	200	1000
WI Public Health Groundwater Enforcement Standards	<u>Underline</u>	--	--	480 c	5	700	40	1000	10000 (4)
MW-16	8/29/2008	--	--	ND	<u>2000</u>	14	--	11	47
MW-16	12/4/2008	--	--	ND	<u>2400</u> *	<20	--	<20	<60
MW-16	3/25/2009	--	--	1.8	<u>200</u>	<1.0	--	<1.0	<3.0
MW-16	6/24/2009	--	--	2.4	<u>43</u>	<1.0	--	<1.0	<3.0
MW-16	9/16/2009	--	--	1.2	<u>32</u>	2.7	--	<1.0	<3.0
MW-16	12/7/2009	--	--	ND	<u>3.1</u>	<1.0	--	<1.0	<3.0
MW-16	3/30/2010	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-16	6/24/2010	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-16	9/27/2010	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-16	12/27/2010	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-17	10/18/2007	--	<460	ND	<1.0	<1.0	<5.0	<1.0	ND
MW-17	12/4/2007	--	--	ND	<u>27</u>	1.1	<5.0	<1.0	4.9
MW-17	1/15/2008	--	--	5	<u>200</u>	5.4	<5.0	<1.0	33
MW-17	2/20/2008	--	--	4.5	<u>760</u>	14	<5.0	<1.0	48
MW-17	3/11/2008	--	<460	1.7	<u>730</u>	21	<5.0	<1.0	50
MW-17	3/20/2008	--	<460	ND	<u>420</u>	13	<25	<5.0	30
MW-17	3/26/2008	--	--	ND	<u>29</u>	1.1	--	<1.0	<3.0
MW-17	4/9/2008	--	--	ND	<u>950</u>	2.1	--	<1.0	42
MW-17	4/24/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-17	5/4/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-17	6/12/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-17	8/29/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-17	12/3/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-17	3/24/2009	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-17	5/19/2009	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-17	6/24/2009	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-17	9/16/2009	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-17	12/7/2009	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-17	3/30/2010	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-17	6/24/2010	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-17	9/27/2010	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-17	12/27/2010	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-18	11/1/2007	--	<460	ND	<1.0 h	<1.0 h	--	<1.0 h	<3.0 h
MW-18	12/5/2007	--	--	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-18	3/24/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-18	12/3/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-18	3/24/2009	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-18	6/24/2009	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-18	9/16/2009	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-19	2/26/2008	--	--	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-19	3/11/2008	--	<460	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-19	3/20/2008	--	<460	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-19	3/24/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-19	4/9/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-19	4/24/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-19	5/3/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-19	6/11/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-19	8/28/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-20	2/29/2008	--	--	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-20	3/11/2008	--	<460	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-20	3/20/2008	--	<460	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-20	3/24/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-21	2/27/2008	--	--	ND	<u>1.7</u>	<1.0	<5.0	<1.0	<3.0
MW-21	3/12/2008	--	<460	ND	<u>10</u>	<1.0	<5.0	<1.0	<3.0
MW-21	3/20/2008	--	<460	ND	<u>8.2</u>	<1.0	<5.0	<1.0	<3.0
MW-21	3/26/2008	--	--	ND	<u>8</u>	<1.0	--	<1.0	<3.0
MW-21	6/12/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-21	8/29/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-21	12/3/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0

**Table 1**  
**Groundwater Analytical Data - TPH and PVOC**  
**Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release**  
**Rusk County, Wisconsin**  
**(concentrations in ug/L)**

Location	Date	Diesel Range Organics	DRO Extended Range C10-C32	Sum of trimethyl-benzenes	Benzene	Ethyl benzene	Napthalene	Toluene	Xylenes total
WI Public Health Groundwater Preventive Action Limit	<b>Bold</b>	--	--	96 c	0.5	140	8	200	1000
WI Public Health Groundwater Enforcement Standards	<u>Underline</u>	--	--	480 c	5	700	40	1000	10000 (4)
MW-22	2/28/2008	--	--	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-22	3/11/2008	--	<460	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-22	3/20/2008	--	<460	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-22	3/24/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-23	3/25/2008	--	<460	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-23	4/8/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-23	4/23/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-23	5/3/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-23	6/11/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-23	8/28/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-24	2/26/2008	--	--	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-24	3/11/2008	--	<460	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-24	3/19/2008	--	<460	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-24	3/24/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-24	4/8/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-24	4/23/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-24	5/3/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-24	6/11/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-24	8/28/2008	--	--	ND	<1.0	<1.0	--	1.1	<3.0
MW-24	12/3/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-24D	3/19/2008	--	<460	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-24D	3/24/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-24D	6/11/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-24D	8/28/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-25	2/26/2008	--	--	ND	<u>41</u>	1.2	<5.0	<1.0	5.2
MW-25	3/12/2008	--	<500	1.3	<u>140</u>	2.9	<5.0	<1.0	17
MW-25	3/20/2008	--	<460	1.5	<u>120</u>	3.1	<5.0	<1.0	19
MW-25	3/26/2008	--	--	ND	<u>93</u>	2.4	--	<1.0	14
MW-25	5/3/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-25	6/11/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-25	8/29/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-26	2/28/2008	<93	--	ND	<u>26</u>	<1.0	<5.0	<1.0	<3.0
MW-26	3/12/2008	--	<460	ND	<u>16</u>	<1.0	<5.0	<1.0	<3.0
MW-26	3/20/2008	--	<460	ND	<u>27</u>	<1.0	<5.0	<1.0	<3.0
MW-26	3/26/2008	--	--	ND	<u>67</u>	<1.0	--	<1.0	4.6
MW-26	5/4/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-26	6/12/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-26	8/29/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-26	12/3/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-26	3/24/2009	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-26	6/24/2009	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-26	9/16/2009	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-27	2/27/2008	--	--	3.6	<u>55</u>	<1.0	<5.0	<1.0	3.5
MW-27	3/12/2008	--	<460	ND	<u>77</u>	<1.0	<5.0	<1.0	4.4
MW-27	3/20/2008	--	<460	ND	<u>57</u>	<1.0	<5.0	<1.0	3.3
MW-27	3/26/2008	--	--	ND	<u>40</u>	<1.0	--	<1.0	<3.0
MW-27	6/12/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-27	8/29/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-28	3/25/2008	--	<460	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-28	4/8/2008	--	--	ND	<u>2.2</u>	<1.0	--	<1.0	<3.0
MW-28	4/23/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-28	5/3/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-28	6/11/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-28	8/28/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-29	2/27/2008	--	--	ND	<u>14</u>	<1.0	<5.0	<1.0	<3.0
MW-29	3/12/2008	--	<460	2.6	<u>150</u>	4.0	<5.0	<1.0	23
MW-29	3/19/2008	--	<460	ND	<u>2.7</u>	<1.0	--	<1.0	<3.0



**Table 1**  
**Groundwater Analytical Data - TPH and PVOC**  
**Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release**  
**Rusk County, Wisconsin**  
**(concentrations in ug/L)**

Location	Date	Diesel Range Organics	DRO Extended Range C10-C32	Sum of trimethyl-benzenes	Benzene	Ethyl benzene	Naphthalene	Toluene	Xylenes total
WI Public Health Groundwater Preventive Action Limit	<b>Bold</b>	--	--	96 c	0.5	140	8	200	1000
WI Public Health Groundwater Enforcement Standards	<u>Underline</u>	--	--	480 c	5	700	40	1000	10000 (4)
MW-29	3/26/2008	--	--	ND	1.4	<1.0	--	<1.0	<3.0
MW-29	4/9/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-29	4/24/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-29	5/3/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-29	6/11/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-29	8/29/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-30	3/25/2008	--	<460	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-30	4/8/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-30	4/23/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-30	5/3/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-30	6/11/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-30	8/28/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-31	3/25/2008	--	<460	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-31	6/10/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-31	8/28/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-32	3/25/2008	--	<460	ND	<1.0	<1.0	<5.0	<1.0	<3.0
MW-32	6/11/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-32	8/28/2008	--	--	ND	<1.0	<1.0	--	<1.0	<3.0
MW-33	11/3/2008	--	--	83	<u>3900</u>	69	--	<b>240</b>	310
MW-33	12/4/2008	--	--	20	<u>4600</u>	<20	--	<20	200
MW-33	3/25/2009	--	--	15	<u>2200</u>	13	--	22	51
MW-33	6/25/2009	--	--	28	<u>2500</u>	40	--	44	62
MW-33	9/16/2009	--	--	68	<u>2500</u>	73	--	53	91
MW-33	12/8/2009	--	--	31	<u>1900</u>	69	--	99	94
MW-33	3/30/2010	--	--	16.7	<u>900</u>	30	--	46	34
MW-33	6/24/2010	--	--	22	<u>890</u>	27	--	23	59
MW-33	9/27/2010	--	--	41	<u>1000</u>	61	--	7.7	40
MW-33	12/27/2010	--	--	67	<u>840</u>	70	--	21	59
MW-34	11/3/2008	--	--	12.5	<u>1400</u>	13	--	26	79
MW-34	12/4/2008	--	--	14	<u>2600</u>	13	--	18	110
MW-34	3/25/2009	--	--	ND	<u>1300</u>	5.4	--	<5.0	<15
MW-34	6/25/2009	--	--	10	<u>1500</u>	38	--	<10	30
MW-34	9/16/2009	--	--	29	<u>1300</u>	56	--	<5.0	45
MW-34	12/8/2009	--	--	14	<u>900</u>	54	--	39	38
MW-34	3/30/2010	--	--	9.4	<u>510</u>	21	--	6.6	13
MW-34	6/24/2010	--	--	11.4	<u>560</u>	26	--	8.0	<15
MW-34	9/27/2010	--	--	21	<u>530</u>	42	--	8.2	32
MW-34	12/27/2010	--	--	31	<u>490</u>	52	--	6.0	47

-- No criteria/not analyzed.  
\* Estimated value, QA/QC criteria not met.  
ND Not detected.  
(4) Xylene includes meta-, ortho-, and para-xylene combined. The preventive action limit has been set at a concentration that is intended to address taste and odor concerns associated with this substance.  
c The listed criteria is for 1,2,4- and 1,3,5- Trimethylbenzenes combined.  
h EPA recommended sample preservation, extraction or analysis holding time was exceeded.

















**Table 2  
Ground Water Elevations/Product Thickness  
Enbridge Energy MP85  
Reichel Road, Town of Murry, Rusk County, Wisconsin  
WDNR BRRTS# 02-55-548746**

<b>Location</b>	<b>Date</b>	<b>Ground Surface Elevation</b>	<b>Top of Risers Elevation</b>	<b>Top of Screen Elevation</b>	<b>Bottom of Screen Elevation</b>	<b>Depth to Water (TOR)</b>	<b>Depth to Product</b>	<b>Product Thickness</b>	<b>Ground Water Elevation</b>	<b>Product Elevation</b>
MW-11	10/25/2010	1224.81	1226.87	1190.87	1180.87	39.70			1187.17	
MW-11	11/9/2010	1224.81	1226.87	1190.87	1180.87	39.30			1187.57	
MW-11	11/30/2010	1224.81	1226.87	1190.87	1180.87	39.29			1187.58	
MW-11	12/16/2010	1224.81	1226.87	1190.87	1180.87	39.36			1187.51	
MW-11	12/28/2010	1224.81	1226.87	1190.87	1180.87	39.37			1187.50	
MW-12	7/25/2007	1223.28	1225.71	1189.71	1179.71	39.52			1186.19	
MW-12	8/2/2007	1223.28	1225.71	1189.71	1179.71	39.53			1186.18	
MW-12	8/9/2007	1223.28	1225.71	1189.71	1179.71	39.58			1186.13	
MW-12	10/17/2007	1223.28	1225.71	1189.71	1179.71	39.09			1186.62	
MW-12	11/9/2007	1223.28	1225.71	1189.71	1179.71	39.20			1186.51	
MW-12	12/3/2007	1223.28	1225.71	1189.71	1179.71	39.21			1186.50	
MW-12	1/14/2008	1223.28	1225.71	1189.71	1179.71	39.58			1186.13	
MW-12	2/19/2008	1223.28	1225.71	1189.71	1179.71	39.82			1185.89	
MW-12	03/24/2008	1223.28	1225.71	1189.71	1179.71	39.85			1185.86	
MW-12	04/01/2008	1223.28	1225.71	1189.71	1179.71	39.82			1185.89	
MW-12	06/10/2008	1223.28	1225.71	1189.71	1179.71	38.81			1186.90	
MW-12	08/28/2008	1223.28	1225.71	1189.71	1179.71	39.18			1186.53	
MW-12	12/03/2008	1223.28	1225.71	1189.71	1179.71	39.10			1186.61	
MW-12	03/25/2009	1223.28	1225.71	1189.71	1179.71	39.24			1186.47	
MW-12	03/31/2009	1223.28	1225.71	1189.71	1179.71	38.29			1187.42	
MW-12	04/08/2009	1223.28	1225.71	1189.71	1179.71	39.31			1186.40	
MW-12	04/13/2009	1223.28	1225.71	1189.71	1179.71	39.50			1186.21	
MW-12	05/12/2009	1223.28	1225.71	1189.71	1179.71	39.38			1186.33	
MW-12	05/19/2009	1223.28	1225.71	1189.71	1179.71	39.60			1186.11	
MW-12	6/3/2009	1223.28	1225.71	1189.71	1179.71	39.73			1185.98	
MW-12	6/10/2009	1223.28	1225.71	1189.71	1179.71	39.69			1186.02	
MW-12	6/16/2009	1223.28	1225.71	1189.71	1179.71	39.82			1185.89	
MW-12	6/24/2009	1223.28	1225.71	1189.71	1179.71	39.82			1185.89	
MW-12	6/30/2009	1223.28	1225.71	1189.71	1179.71	39.91			1185.80	
MW-12	7/8/2009	1223.28	1225.71	1189.71	1179.71	39.94			1185.77	
MW-12	7/20/2009	1223.28	1225.71	1189.71	1179.71	40.01			1185.70	
MW-12	8/4/2009	1223.28	1225.71	1189.71	1179.71	39.99			1185.72	
MW-12	8/18/2009	1223.28	1225.71	1189.71	1179.71	40.08			1185.63	
MW-12	9/1/2009	1223.28	1225.71	1189.71	1179.71	40.06			1185.65	
MW-12	9/15/2009	1223.28	1225.71	1189.71	1179.71	40.19			1185.52	
MW-12	9/29/2009	1223.28	1225.71	1189.71	1179.71	40.20			1185.51	
MW-12	10/28/2009	1223.28	1225.71	1189.71	1179.71	39.92			1185.79	
MW-12	11/11/2009	1223.28	1225.71	1189.71	1179.71	39.97			1185.74	
MW-12	12/1/2009	1223.28	1225.71	1189.71	1179.71	40.11			1185.60	
MW-12	12/7/2009	1223.28	1225.71	1189.71	1179.71	40.20			1185.51	
MW-12	12/22/2009	1223.28	1225.71	1189.71	1179.71	40.20			1185.51	
MW-12	1/5/2010	1223.28	1225.71	1189.71	1179.71	40.18			1185.53	
MW-12	1/19/2010	1223.28	1225.71	1189.71	1179.71	40.20			1185.51	
MW-12	2/3/2010	1223.28	1225.71	1189.71	1179.71	40.19			1185.52	
MW-12	2/16/2010	1223.28	1225.71	1189.71	1179.71	40.22			1185.49	
MW-12	3/3/2010	1223.28	1225.71	1189.71	1179.71	40.30			1185.41	
MW-12	3/16/2010	1223.28	1225.71	1189.71	1179.71	39.09			1186.62	
MW-12	3/30/2010	1223.28	1225.71	1189.71	1179.71	39.73			1185.98	
MW-12	4/13/2010	1223.28	1225.71	1189.71	1179.71	39.98			1185.73	
MW-12	4/27/2010	1223.28	1225.71	1189.71	1179.71	39.95			1185.76	
MW-12	5/12/2010	1223.28	1225.71	1189.71	1179.71	39.91			1185.80	
MW-12	5/26/2010	1223.28	1225.71	1189.71	1179.71	39.87			1185.84	
MW-12	6/8/2010	1223.28	1225.71	1189.71	1179.71	39.26			1186.45	
MW-12	6/24/2010	1223.28	1225.71	1189.71	1179.71	39.58			1186.13	
MW-12	7/7/2010	1223.28	1225.71	1189.71	1179.71	39.64			1186.07	
MW-12	7/20/2010	1223.28	1225.71	1189.71	1179.71	39.31			1186.40	
MW-12	8/3/2010	1223.28	1225.71	1189.71	1179.71	39.35			1186.36	
MW-12	8/16/2010	1223.28	1225.71	1189.71	1179.71	39.01			1186.70	
MW-12	8/31/2010	1223.28	1225.71	1189.71	1179.71	39.18			1186.53	
MW-12	9/14/2010	1223.28	1225.71	1189.71	1179.71	39.20			1186.51	
MW-12	9/27/2010	1223.28	1225.71	1189.71	1179.71	38.61			1187.10	
MW-12	10/12/2010	1223.28	1225.71	1189.71	1179.71	38.88			1186.83	
MW-12	10/25/2010	1223.28	1225.71	1189.71	1179.71	38.81			1186.90	
MW-12	11/19/2010	1223.28	1225.71	1189.71	1179.71	38.60			1187.11	
MW-12	11/30/2010	1223.28	1225.71	1189.71	1179.71	38.58			1187.13	
MW-12	12/16/2010	1223.28	1225.71	1189.71	1179.71	38.66			1187.03	
MW-12	12/28/2010	1223.28	1225.71	1189.71	1179.71	38.71			1187.00	
MW-13	7/25/2007	1222.71	1224.67	1189.17	1179.17	38.62			1186.05	
MW-13	8/2/2007	1222.71	1224.67	1189.17	1179.17	38.62			1186.05	
MW-13	8/9/2007	1222.71	1224.67	1189.17	1179.17	38.66			1186.01	
MW-13	10/17/2007	1222.71	1224.67	1189.17	1179.17	38.21			1186.46	
MW-13	11/9/2007	1222.71	1224.67	1189.17	1179.17	38.32			1186.35	
MW-13	12/3/2007	1222.71	1224.67	1189.17	1179.17	38.30			1186.37	
MW-13	1/14/2008	1222.71	1224.67	1189.17	1179.17	38.63			1186.04	
MW-13	2/19/2008	1222.71	1224.67	1189.17	1179.17	38.84			1185.83	
MW-13	03/11/2008	1222.71	1224.67	1189.17	1179.17	38.89			1185.78	
MW-13	03/19/2008	1222.71	1224.67	1189.17	1179.17	38.93			1185.74	
MW-13	03/24/2008	1222.71	1224.67	1189.17	1179.17	38.90			1185.77	
MW-13	04/01/2008	1222.71	1224.67	1189.17	1179.17	38.82			1185.85	
MW-13	06/10/2008	1222.71	1224.67	1189.17	1179.17	37.80			1186.87	
MW-13	08/28/2008	1222.71	1224.67	1189.17	1179.17	38.18			1186.49	
MW-13	12/03/2008	1222.71	1224.67	1189.17	1179.17	37.97			1186.70	
MW-13	03/25/2009	1222.71	1224.67	1189.17	1179.17	38.19			1186.48	
MW-13	06/24/2009	1222.71	1224.67	1189.17	1179.17	38.78			1185.89	
MW-13	9/15/2009	1222.71	1224.67	1189.17	1179.17	39.18			1185.49	
MW-13	12/7/2009	1222.71	1224.67	1189.17	1179.17	39.18			1185.49	

**Table 2**  
**Ground Water Elevations/Product Thickness**  
**Enbridge Energy MP85**  
**Reichel Road, Town of Murry, Rusk County, Wisconsin**  
**WDNR BRRTS# 02-55-548746**

Location	Date	Ground Surface Elevation	Top of Risser Elevation	Top of Screen Elevation	Bottom of Screen Elevation	Depth to Water (TOR)	Depth to Product	Product Thickness	Ground Water Elevation	Product Elevation
MW-13	3/29/2010	1222.71	1224.67	1189.17	1179.17	38.64			1186.03	
MW-13	6/24/2010	1222.71	1224.67	1189.17	1179.17	38.46			1186.21	
MW-13	9/27/2010	1222.71	1224.67	1189.17	1179.17	37.57			1187.10	
MW-13	12/28/2010	1222.71	1224.67	1189.17	1179.17	37.64			1187.03	
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MW-14	7/25/2007	1222.93	1225.20	1189.70	1179.70	39.21			1185.99	
MW-14	8/2/2007	1222.93	1225.20	1189.70	1179.70	39.22			1185.98	
MW-14	8/9/2007	1222.93	1225.20	1189.70	1179.70	39.28			1185.92	
MW-14	10/17/2007	1222.93	1225.20	1189.70	1179.70	38.79			1186.41	
MW-14	11/9/2007	1222.93	1225.20	1189.70	1179.70	38.87			1186.33	
MW-14	12/3/2007	1222.93	1225.20	1189.70	1179.70	38.90			1186.30	
MW-14	1/14/2008	1222.93	1225.20	1189.70	1179.70	39.26			1185.94	
MW-14	2/19/2008	1222.93	1225.20	1189.70	1179.70	39.40			1185.80	
MW-14	03/11/2008	1222.93	1225.20	1189.70	1179.70	39.45			1185.75	
MW-14	03/19/2008	1222.93	1225.20	1189.70	1179.70	39.49			1185.71	
MW-14	03/24/2008	1222.93	1225.20	1189.70	1179.70	39.46			1185.74	
MW-14	04/01/2008	1222.93	1225.20	1189.70	1179.70	39.37			1185.83	
MW-14	06/10/2008	1222.93	1225.20	1189.70	1179.70	38.37			1186.83	
MW-14	08/28/2008	1222.93	1225.20	1189.70	1179.70	38.75			1186.45	
MW-14	12/03/2008	1222.93	1225.20	1189.70	1179.70	38.53			1186.67	
MW-14	03/25/2009	1222.93	1225.20	1189.70	1179.70	38.86			1186.34	
MW-14	06/24/2009	1222.93	1225.20	1189.70	1179.70	39.36			1185.84	
MW-14	9/15/2009	1222.93	1225.20	1189.70	1179.70	39.75			1185.45	
MW-14	12/7/2009	1222.93	1225.20	1189.70	1179.70	39.72			1185.48	
MW-14	3/29/2010	1222.93	1225.20	1189.70	1179.70	39.18			1186.02	
MW-14	6/24/2010	1222.93	1225.20	1189.70	1179.70	39.10			1186.10	
MW-14	9/27/2010	1222.93	1225.20	1189.70	1179.70	38.18			1187.02	
MW-14	12/28/2010	1222.93	1225.20	1189.70	1179.70	38.17			1187.03	
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MW-15	10/17/2007	1220.34	1222.53	1188.03	1178.03	36.56			1185.97	
MW-15	11/9/2007	1220.34	1222.53	1188.03	1178.03	36.67			1185.86	
MW-15	12/3/2007	1220.34	1222.53	1188.03	1178.03	36.70			1185.83	
MW-15	1/14/2008	1220.34	1222.53	1188.03	1178.03	37.04			1185.49	
MW-15	2/19/2008	1220.34	1222.53	1188.03	1178.03	37.20			1185.33	
MW-15	03/11/2008	1220.34	1222.53	1188.03	1178.03	37.24			1185.29	
MW-15	03/19/2008	1220.34	1222.53	1188.03	1178.03	37.27			1185.26	
MW-15	03/24/2008	1220.34	1222.53	1188.03	1178.03	37.23			1185.30	
MW-15	04/01/2008	1220.34	1222.53	1188.03	1178.03	37.11			1185.42	
MW-15	05/03/2008	1220.34	1222.53	1188.03	1178.03	36.07			1186.46	
MW-15	06/10/2008	1220.34	1222.53	1188.03	1178.03	35.51			1187.02	
MW-15	08/28/2008	1220.34	1222.53	1188.03	1178.03	36.61			1185.92	
MW-15	12/03/2008	1220.34	1222.53	1188.03	1178.03	36.34			1186.19	
MW-15	03/25/2009	1220.34	1222.53	1188.03	1178.03	36.68			1185.85	
MW-15	03/31/2009	1220.34	1222.53	1188.03	1178.03	36.61			1185.92	
MW-15	04/08/2009	1220.34	1222.53	1188.03	1178.03	36.65			1185.88	
MW-15	04/13/2009	1220.34	1222.53	1188.03	1178.03	36.76			1185.77	
MW-15	05/12/2009	1220.34	1222.53	1188.03	1178.03	36.87			1185.66	
MW-15	05/19/2009	1220.34	1222.53	1188.03	1178.03	36.90			1185.63	
MW-15	6/3/2009	1220.34	1222.53	1188.03	1178.03	37.10			1185.43	
MW-15	6/10/2009	1220.34	1222.53	1188.03	1178.03	37.01			1185.52	
MW-15	6/16/2009	1220.34	1222.53	1188.03	1178.03	37.17			1185.36	
MW-15	6/24/2009	1220.34	1222.53	1188.03	1178.03	37.19			1185.34	
MW-15	6/30/2009	1220.34	1222.53	1188.03	1178.03	37.25			1185.28	
MW-15	7/8/2009	1220.34	1222.53	1188.03	1178.03	37.34			1185.19	
MW-15	7/20/2009	1220.34	1222.53	1188.03	1178.03	37.39			1185.14	
MW-15	8/4/2009	1220.34	1222.53	1188.03	1178.03	37.34			1185.19	
MW-15	8/18/2009	1220.34	1222.53	1188.03	1178.03	37.47			1185.06	
MW-15	9/1/2009	1220.34	1222.53	1188.03	1178.03	37.46			1185.07	
MW-15	9/15/2009	1220.34	1222.53	1188.03	1178.03	37.55			1184.98	
MW-15	9/29/2009	1220.34	1222.53	1188.03	1178.03	37.56			1184.97	
MW-15	10/28/2009	1220.34	1222.53	1188.03	1178.03	37.22			1185.31	
MW-15	11/11/2009	1220.34	1222.53	1188.03	1178.03	37.34			1185.19	
MW-15	12/1/2009	1220.34	1222.53	1188.03	1178.03	37.43			1185.10	
MW-15	12/7/2009	1220.34	1222.53	1188.03	1178.03	37.52			1185.01	
MW-15	12/22/2009	1220.34	1222.53	1188.03	1178.03	37.64			1184.89	
MW-15	1/5/2010	1220.34	1222.53	1188.03	1178.03	37.50			1185.03	
MW-15	1/19/2010	1220.34	1222.53	1188.03	1178.03	37.54			1184.99	
MW-15	2/3/2010	1220.34	1222.53	1188.03	1178.03	37.55			1184.98	
MW-15	2/16/2010	1220.34	1222.53	1188.03	1178.03	37.55			1184.98	
MW-15	3/3/2010	1220.34	1222.53	1188.03	1178.03	37.57			1184.96	
MW-15	3/16/2010	1220.34	1222.53	1188.03	1178.03	36.55			1185.98	
MW-15	3/29/2010	1220.34	1222.53	1188.03	1178.03	37.00			1185.53	
MW-15	4/13/2010	1220.34	1222.53	1188.03	1178.03	37.25			1185.28	
MW-15	4/27/2010	1220.34	1222.53	1188.03	1178.03	37.23			1185.30	
MW-15	5/12/2010	1220.34	1222.53	1188.03	1178.03	37.20			1185.33	
MW-15	5/26/2010	1220.34	1222.53	1188.03	1178.03	37.15			1185.38	
MW-15	6/8/2010	1220.34	1222.53	1188.03	1178.03	37.25			1185.28	
MW-15	6/24/2010	1220.34	1222.53	1188.03	1178.03	36.81			1185.72	
MW-15	7/7/2010	1220.34	1222.53	1188.03	1178.03	36.85			1185.68	
MW-15	7/20/2010	1220.34	1222.53	1188.03	1178.03	36.63			1185.90	
MW-15	8/3/2010	1220.34	1222.53	1188.03	1178.03	36.70			1185.83	
MW-15	8/16/2010	1220.34	1222.53	1188.03	1178.03	36.21			1186.32	
MW-15	8/31/2010	1220.34	1222.53	1188.03	1178.03	36.61			1185.92	
MW-15	9/14/2010	1220.34	1222.53	1188.03	1178.03	36.63			1185.90	
MW-15	9/27/2010	1220.34	1222.53	1188.03	1178.03	35.94			1186.59	
MW-15	10/12/2010	1220.34	1222.53	1188.03	1178.03	36.33			1186.20	
MW-15	10/25/2010	1220.34	1222.53	1188.03	1178.03	36.25			1186.28	
MW-15	11/19/2010	1220.34	1222.53	1188.03	1178.03	36.03			1186.50	

Table 2  
Ground Water Elevations/Product Thickness  
Enbridge Energy MP85  
Reichel Road, Town of Murry, Rusk County, Wisconsin  
WDNR BRRTS# 02-55-548746

Location	Date	Ground Surface Elevation	Top of Riser Elevation	Top of Screen Elevation	Bottom of Screen Elevation	Depth to Water (TOR)	Depth to Product	Product Thickness	Ground Water Elevation	Product Elevation
MW-15	11/30/2010	1220.34	1222.53	1188.03	1178.03	36.02			1186.51	
MW-15	12/16/2010	1220.34	1222.53	1188.03	1178.03	36.12			1186.41	
MW-15	12/28/2010	1220.34	1222.53	1188.03	1178.03	36.16			1186.37	
<b>MW-15D</b>										
MW-15D	03/24/2008	1221.20	1223.46	1155.96	1150.96	39.00			1184.46	
MW-15D	04/01/2008	1221.20	1223.46	1155.96	1150.96	38.81			1184.65	
MW-15D	06/10/2008	1221.20	1223.46	1155.96	1150.96	37.39			1186.07	
MW-15D	08/28/2008	1221.20	1223.46	1155.96	1150.96	38.40			1185.06	
MW-15D	12/03/2008	1221.20	1223.46	1155.96	1150.96	38.00			1185.46	
MW-15D	03/25/2009	1221.20	1223.46	1155.96	1150.96	38.22			1185.24	
MW-15D	06/24/2009	1221.20	1223.46	1155.96	1150.96	38.91			1184.55	
MW-15D	9/15/2009	1221.20	1223.46	1155.96	1150.96	39.27			1184.19	
MW-15D	12/7/2009	1221.20	1223.46	1155.96	1150.96	39.20			1184.26	
MW-15D	3/29/2010	1221.20	1223.46	1155.96	1150.96	38.66			1184.80	
MW-15D	6/24/2010	1221.20	1223.46	1155.96	1150.96	38.40			1185.06	
MW-15D	9/27/2010	1221.20	1223.46	1155.96	1150.96	37.78			1185.68	
MW-15D	12/28/2010	1221.20	1223.46	1155.96	1150.96	38.06			1185.40	
<b>MW-16</b>										
MW-16	10/17/2007	1221.69	1223.42	1188.92	1178.92	37.21			1186.21	
MW-16	11/9/2007	1221.69	1223.42	1188.92	1178.92	37.30			1186.12	
MW-16	12/3/2007	1221.69	1223.42	1188.92	1178.92	37.33			1186.09	
MW-16	1/14/2008	1221.69	1223.42	1188.92	1178.92	37.69			1185.73	
MW-16	2/19/2008	1221.69	1223.42	1188.92	1178.92	37.84			1185.58	
MW-16	03/11/2008	1221.69	1223.42	1188.92	1178.92	37.90			1185.52	
MW-16	03/19/2008	1221.69	1223.42	1188.92	1178.92	37.92			1185.50	
MW-16	03/24/2008	1221.69	1223.42	1188.92	1178.92	37.84			1185.58	
MW-16	04/01/2008	1221.69	1223.42	1188.92	1178.92	37.78			1185.64	
MW-16	05/03/2008	1221.69	1223.42	1188.92	1178.92	36.74			1186.68	
MW-16	06/10/2008	1221.69	1223.42	1188.92	1178.92	36.90			1186.52	
MW-16	08/28/2008	1221.69	1223.42	1188.92	1178.92	37.20			1186.22	
MW-16	12/03/2008	1221.69	1223.42	1188.92	1178.92	37.00			1186.42	
MW-16	03/25/2009	1221.69	1223.42	1188.92	1178.92	37.11			1186.31	
MW-16	06/24/2009	1221.69	1223.42	1188.92	1178.92	37.81			1185.61	
MW-16	9/15/2009	1221.69	1223.42	1188.92	1178.92	38.18			1185.24	
MW-16	12/7/2009	1221.69	1223.42	1188.92	1178.92	38.15			1185.27	
MW-16	3/30/2010	1221.69	1223.42	1188.92	1178.92	37.62			1185.80	
MW-16	6/24/2010	1221.69	1223.42	1188.92	1178.92	37.47			1185.95	
MW-16	9/27/2010	1221.69	1223.42	1188.92	1178.92	36.59			1186.83	
MW-16	12/28/2010	1221.69	1223.42	1188.92	1178.92	36.69			1186.73	
<b>MW-17</b>										
MW-17	10/17/2007	1188.77	1190.88	1182.38	1172.38	5.66			1185.22	
MW-17	11/9/2007	1188.77	1190.88	1182.38	1172.38	5.99			1184.89	
MW-17	12/3/2007	1188.77	1190.88	1182.38	1172.38	6.20			1184.68	
MW-17	1/14/2008	1188.77	1190.88	1182.38	1172.38	6.48			1184.40	
MW-17	2/19/2008	1188.77	1190.88	1182.38	1172.38	6.45			1184.43	
MW-17	03/11/2008	1188.77	1190.88	1182.38	1172.38	6.46			1184.42	
MW-17	03/19/2008	1188.77	1190.88	1182.38	1172.38	6.38			1184.50	
MW-17	03/24/2008	1188.77	1190.88	1182.38	1172.38	6.33			1184.55	
MW-17	04/01/2008	1188.77	1190.88	1182.38	1172.38	5.56			1185.32	
MW-17	04/08/2008	1188.77	1190.88	1182.38	1172.38	1.40			1189.48	
MW-17	11/19/2008	1188.77	1190.88	1182.38	1172.38	6.45			1184.43	
MW-17	12/03/2008	1188.77	1190.88	1182.38	1172.38	6.26			1184.62	
MW-17	03/25/2009	1188.77	1190.88	1182.38	1172.38	5.23			1185.65	
MW-17	06/24/2009	1188.77	1190.88	1182.38	1172.38	6.41			1184.47	
MW-17	9/15/2009	1188.77	1190.88	1182.38	1172.38	6.65			1184.23	
MW-17	12/7/2009	1188.77	1190.88	1182.38	1172.38	6.58			1184.30	
MW-17	3/30/2010	1188.77	1190.88	1182.38	1172.38	6.11			1184.77	
MW-17	6/24/2010	1188.77	1190.88	1182.38	1172.38	5.57			1185.31	
MW-17	9/27/2010	1188.77	1190.88	1182.38	1172.38	4.98			1185.90	
MW-17	12/28/2010	1188.77	1190.88	1182.38	1172.38	5.69			1185.19	
<b>MW-18</b>										
MW-18	11/1/2007	1225.12	1227.18	1192.18	1182.18	40.66			1186.52	
MW-18	11/9/2007	1225.12	1227.18	1192.18	1182.18	40.71			1186.47	
MW-18	12/3/2007	1225.12	1227.18	1192.18	1182.18	40.74			1186.44	
MW-18	1/14/2008	1225.12	1227.18	1192.18	1182.18	41.08			1186.10	
MW-18	2/19/2008	1225.12	1227.18	1192.18	1182.18	41.25			1185.93	
MW-18	03/19/2008	1225.12	1227.18	1192.18	1182.18	41.33			1185.85	
MW-18	03/24/2008	1225.12	1227.18	1192.18	1182.18	41.29			1185.89	
MW-18	04/01/2008	1225.12	1227.18	1192.18	1182.18	41.20			1185.98	
MW-18	06/10/2008	1225.12	1227.18	1192.18	1182.18	40.19			1186.99	
MW-18	08/28/2008	1225.12	1227.18	1192.18	1182.18	40.55			1186.63	
MW-18	12/03/2008	1225.12	1227.18	1192.18	1182.18	40.45			1186.73	
MW-18	03/25/2009	1225.12	1227.18	1192.18	1182.18	40.62			1186.56	
MW-18	06/24/2009	1225.12	1227.18	1192.18	1182.18	41.17			1186.01	
MW-18	9/15/2009	1225.12	1227.18	1192.18	1182.18	41.55			1185.63	
MW-18	12/7/2009	1225.12	1227.18	1192.18	1182.18	41.58			1185.60	
MW-18	3/29/2010	1225.12	1227.18	1192.18	1182.18	41.00			1186.18	
MW-18	6/24/2010	1225.12	1227.18	1192.18	1182.18	40.84			1186.34	
MW-18	9/27/2010	1225.12	1227.18	1192.18	1182.18	39.90			1187.28	
MW-18	12/28/2010	1225.12	1227.18	1192.18	1182.18	40.00			1187.18	
<b>RW-1</b>										
RW-1	6/12/2007	1224.98	1227.25	1190.25	1180.25	40.32			1186.93	
RW-1	6/21/2007	1224.98	1227.25	1190.25	1180.25	40.41			1186.84	
RW-1	7/2/2007	1224.98	1227.25	1190.25	1180.25	40.55			1186.70	
RW-1	7/11/2007	1224.98	1227.25	1190.25	1180.25	40.54			1186.71	

**Table 2**  
**Ground Water Elevations/Product Thickness**  
**Enbridge Energy MP85**  
**Reichel Road, Town of Murry, Rusk County, Wisconsin**  
**WDNR BRRTS# 02-55-548746**

Location	Date	Ground Surface Elevation	Top of Riser Elevation	Top of Screen Elevation	Bottom of Screen Elevation	Depth to Water (TOR)	Depth to Product	Product Thickness	Ground Water Elevation	Product Elevation
RW-1	7/24/2007	1224.98	1227.25	1190.25	1180.25	40.62			1186.63	
RW-1	8/2/2007	1224.98	1227.25	1190.25	1180.25	40.64			1186.61	
RW-1	8/9/2007	1224.98	1227.25	1190.25	1180.25	40.65	40.64	0.01	1186.60	1186.61
RW-1	10/17/2007	1224.98	1227.25	1190.25	1180.25	40.16			1187.09	
RW-1	11/9/2007	1224.98	1227.25	1190.25	1180.25	40.27			1186.98	
RW-1	12/3/2007	1224.98	1227.25	1190.25	1180.25	40.30			1186.95	
RW-1	02/19/2008	1224.98	1227.25	1190.25	1180.25	41.03			1186.22	
RW-1	03/25/2009	1224.98	1227.25	1190.25	1180.25	40.05			1187.20	
RW-1	12/07/2009	1224.98	1227.25	1190.25	1180.25	41.32	41.30	0.02	1185.93	1185.95
RW-1	03/29/2010	1224.98	1227.25	1190.25	1180.25	41.50	40.85	0.65	1185.75	1186.40
RW-1	06/24/2010	1224.98	1227.25	1190.25	1180.25	40.95	40.65		1186.30	1186.60
RW-1	09/27/2010	1224.98	1227.25	1190.25	1180.25	39.82			1187.43	
RW-1	12/28/2010	1224.98	1227.25	1190.25	1180.25	39.70	39.65	0.30	1187.55	1187.60
RW-2	6/12/2007	1224.63	1226.66	1189.66	1179.66	40.09			1186.57	
RW-2	6/21/2007	1224.63	1226.66	1189.66	1179.66	40.17		0.00	1186.49	
RW-2	6/21/2007	1224.63	1226.66	1189.66	1179.66	40.15	40.14	0.01	1186.51	1186.52
RW-2	7/2/2007	1224.63	1226.66	1189.66	1179.66	40.35	40.28	0.07	1186.31	1186.38
RW-2	7/11/2007	1224.63	1226.66	1189.66	1179.66	40.34	40.29	0.05	1186.32	1186.37
RW-2	7/24/2007	1224.63	1226.66	1189.66	1179.66	40.35	40.33	0.02	1186.31	1186.33
RW-2	8/2/2007	1224.63	1226.66	1189.66	1179.66	40.37	40.36	0.01	1186.29	1186.30
RW-2	8/2/2007	1224.63	1226.66	1189.66	1179.66	40.39	40.35	0.04	1186.27	1186.31
RW-2	8/9/2007	1224.63	1226.66	1189.66	1179.66	40.45	40.38	0.07	1186.21	1186.28
RW-2	10/17/2007	1224.63	1226.66	1189.66	1179.66	39.91	39.89	0.02	1186.75	1186.77
RW-2	11/9/2007	1224.63	1226.66	1189.66	1179.66	40.01			1186.65	
RW-2	12/3/2007	1224.63	1226.66	1189.66	1179.66	40.06	40.03	0.03	1186.60	1186.63
RW-2	1/14/2008	1224.63	1226.66	1189.66	1179.66	40.42	40.36	0.06	1186.24	1186.30
RW-2	2/19/2008	1224.63	1226.66	1189.66	1179.66	40.57	40.51	0.06	1186.09	1186.15
RW-2	03/19/2008	1224.63	1226.66	1189.66	1179.66	40.68	40.65	0.03	1185.98	1186.01
RW-2	04/01/2008	1224.63	1226.66	1189.66	1179.66	40.55	40.49	0.06	1186.11	1186.17
RW-2	04/08/2008	1224.63	1226.66	1189.66	1179.66	40.03	40.03	0.00	1186.63	1186.63
RW-2	04/23/2008	1224.63	1226.66	1189.66	1179.66	39.60	39.58	0.02	1187.06	1187.08
RW-2	05/03/2008	1224.63	1226.66	1189.66	1179.66	39.47	39.47	0.00	1187.19	1187.19
RW-2	06/10/2008	1224.63	1226.66	1189.66	1179.66	39.49			1187.17	
RW-2	07/22/2008	1224.63	1226.66	1189.66	1179.66	39.66	39.66	0.00	1187.00	1187.00
RW-2	07/30/2008	1224.63	1226.66	1189.66	1179.66	39.59	39.59	0.00	1187.07	1187.07
RW-2	08/05/2008	1224.63	1226.66	1189.66	1179.66	39.69	39.69	0.00	1186.97	1186.97
RW-2	08/12/2008	1224.63	1226.66	1189.66	1179.66	39.65	39.65	0.00	1187.01	1187.01
RW-2	08/19/2008	1224.63	1226.66	1189.66	1179.66	39.71	39.71	0.00	1186.95	1186.95
RW-2	08/27/2008	1224.63	1226.66	1189.66	1179.66	39.71	39.71	0.00	1186.95	1186.95
RW-2	08/28/2008	1224.63	1226.66	1189.66	1179.66	39.93	39.92	0.01	1186.73	1186.74
RW-2	09/09/2008	1224.63	1226.66	1189.66	1179.66	39.83	39.82	0.01	1186.83	1186.84
RW-2	09/16/2008	1224.63	1226.66	1189.66	1179.66	39.80	39.80	0.00	1186.86	1186.86
RW-2	09/24/2008	1224.63	1226.66	1189.66	1179.66	39.85	39.85	0.00	1186.81	1186.81
RW-2	09/30/2008	1224.63	1226.66	1189.66	1179.66	39.76	39.76	0.00	1186.90	1186.90
RW-2	10/06/2008	1224.63	1226.66	1189.66	1179.66	39.70	39.70	0.00	1186.96	1186.96
RW-2	10/14/2008	1224.63	1226.66	1189.66	1179.66	39.68	39.68	0.00	1186.98	1186.98
RW-2	10/21/2008	1224.63	1226.66	1189.66	1179.66	39.61	39.61	0.00	1187.05	1187.05
RW-2	11/04/2008	1224.63	1226.66	1189.66	1179.66	39.49	39.49	0.00	1187.17	1187.17
RW-2	11/11/2008	1224.63	1226.66	1189.66	1179.66	39.47	39.47	0.00	1187.19	1187.19
RW-2	11/19/2008	1224.63	1226.66	1189.66	1179.66	39.52	39.52	0.00	1187.14	1187.14
RW-2	12/03/2008	1224.63	1226.66	1189.66	1179.66	39.55	39.55	0.00	1187.11	1187.11
RW-2	01/02/2009	1224.63	1226.66	1189.66	1179.66	39.88	39.88	0.00	1186.78	1186.78
RW-2	02/04/2009	1224.63	1226.66	1189.66	1179.66	39.92			1186.74	
RW-2	02/10/2009	1224.63	1226.66	1189.66	1179.66	39.98			1186.68	
RW-2	02/17/2009	1224.63	1226.66	1189.66	1179.66	39.96	39.95	0.01	1186.70	1186.71
RW-2	02/27/2009	1224.63	1226.66	1189.66	1179.66	39.95	39.93	0.02	1186.71	1186.73
RW-2	03/04/2009	1224.63	1226.66	1189.66	1179.66	40.04	40.03	0.01	1186.62	1186.63
RW-2	03/11/2009	1224.63	1226.66	1189.66	1179.66	40.07			1186.59	
RW-2	03/17/2009	1224.63	1226.66	1189.66	1179.66	39.94			1186.72	
RW-2	03/25/2009	1224.63	1226.66	1189.66	1179.66	39.81			1186.85	
RW-2	03/31/2009	1224.63	1226.66	1189.66	1179.66	39.91			1186.75	
RW-2	04/08/2009	1224.63	1226.66	1189.66	1179.66	39.96			1186.70	
RW-2	04/13/2009	1224.63	1226.66	1189.66	1179.66	40.04			1186.62	
RW-2	05/12/2009	1224.63	1226.66	1189.66	1179.66	39.98			1186.68	
RW-2	05/19/2009	1224.63	1226.66	1189.66	1179.66	40.12			1186.54	
RW-2	6/3/2009	1224.63	1226.66	1189.66	1179.66	40.37	40.37	0.00	1186.29	1186.29
RW-2	6/10/2009	1224.63	1226.66	1189.66	1179.66	40.39	40.38	0.01	1186.27	1186.28
RW-2	6/16/2009	1224.63	1226.66	1189.66	1179.66	40.45	40.45	0.00	1186.21	1186.21
RW-2	6/24/2009	1224.63	1226.66	1189.66	1179.66	40.47			1186.19	
RW-2	6/30/2009	1224.63	1226.66	1189.66	1179.66	40.50			1186.16	
RW-2	7/8/2009	1224.63	1226.66	1189.66	1179.66	40.54	40.52	0.02	1186.12	1186.14
RW-2	7/20/2009	1224.63	1226.66	1189.66	1179.66	40.70	40.68	0.02	1185.96	1185.98
RW-2	8/4/2009	1224.63	1226.66	1189.66	1179.66	40.65	40.63	0.02	1186.01	1186.03
RW-2	8/18/2009	1224.63	1226.66	1189.66	1179.66	40.72	40.71	0.01	1185.94	1185.95
RW-2	9/15/2009	1224.63	1226.66	1189.66	1179.66	41.13	41.09	0.04	1185.53	1185.57
RW-2	9/29/2009	1224.63	1226.66	1189.66	1179.66	41.11	41.03	0.08	1185.55	1185.63
RW-2	10/15/2009	1224.63	1226.66	1189.66	1179.66	40.92	40.88	0.04	1185.74	1185.78
RW-2	10/28/2009	1224.63	1226.66	1189.66	1179.66	40.62			1186.04	
RW-2	11/11/2009	1224.63	1226.66	1189.66	1179.66	40.59			1186.07	
RW-2	12/1/2009	1224.63	1226.66	1189.66	1179.66	40.85	40.78	0.07	1185.81	1185.88
RW-2	12/7/2009	1224.63	1226.66	1189.66	1179.66	40.85	40.84	0.01	1185.81	1185.82
RW-2	12/22/2009	1224.63	1226.66	1189.66	1179.66	40.85			1185.81	
RW-2	1/5/2010	1224.63	1226.66	1189.66	1179.66	40.80			1185.86	
RW-2	1/19/2010	1224.63	1226.66	1189.66	1179.66	40.80			1185.86	
RW-2	2/3/2010	1224.63	1226.66	1189.66	1179.66	40.81	40.8	0.01	1185.85	1185.86
RW-2	2/16/2010	1224.63	1226.66	1189.66	1179.66	40.82			1185.84	
RW-2	3/3/2010	1224.63	1226.66	1189.66	1179.66	40.83	40.8	0.03	1185.83	1185.86
RW-2	3/16/2010	1224.63	1226.66	1189.66	1179.66	40.10			1186.56	

Table 2  
 Ground Water Elevations/Product Thickness  
 Enbridge Energy MP85  
 Reichel Road, Town of Murry, Rusk County, Wisconsin  
 WDNR BRRTS# 02-55-548746

Location	Date	Ground Surface Elevation	Top of Riser Elevation	Top of Screen Elevation	Bottom of Screen Elevation	Depth to Water (TOR)	Depth to Product	Product Thickness	Ground Water Elevation	Product Elevation
RW-2	3/29/2010	1224.63	1226.66	1189.66	1179.66	40.30	40.295	0.00	1186.36	1186.37
RW-2	4/13/2010	1224.63	1226.66	1189.66	1179.66	40.55	40.55	0.00	1186.11	1186.11
RW-2	4/27/2010	1224.63	1226.66	1189.66	1179.66	40.25			1186.41	
RW-2	5/12/2010	1224.63	1226.66	1189.66	1179.66	40.45			1186.21	
RW-2	5/26/2010	1224.63	1226.66	1189.66	1179.66	40.41			1186.25	
RW-2	6/8/2010	1224.63	1226.66	1189.66	1179.66	40.50			1186.16	
RW-2	6/24/2010	1224.63	1226.66	1189.66	1179.66	40.11			1186.55	
RW-2	7/7/2010	1224.63	1226.66	1189.66	1179.66	40.16			1186.50	
RW-2	7/20/2010	1224.63	1226.66	1189.66	1179.66	39.84			1186.82	
RW-2	8/3/2010	1224.63	1226.66	1189.66	1179.66	39.89			1186.77	
RW-2	8/16/2010	1224.63	1226.66	1189.66	1179.66	39.58			1187.08	
RW-2	8/31/2010	1224.63	1226.66	1189.66	1179.66	39.80			1186.86	
RW-2	9/14/2010	1224.63	1226.66	1189.66	1179.66	39.83			1186.83	
RW-2	9/27/2010	1224.63	1226.66	1189.66	1179.66	39.25			1187.41	
RW-2	10/12/2010	1224.63	1226.66	1189.66	1179.66	39.48			1187.18	
RW-2	10/25/2010	1224.63	1226.66	1189.66	1179.66	39.42			1187.24	
RW-2	11/9/2010	1224.63	1226.66	1189.66	1179.66	39.12			1187.54	
RW-2	11/30/2010	1224.63	1226.66	1189.66	1179.66	39.10			1187.56	
RW-2	12/16/2010	1224.63	1226.66	1189.66	1179.66	39.62			1187.04	
RW-2	12/28/2010	1224.63	1226.66	1189.66	1179.66	39.23			1187.43	
RW-3	8/2/2007	1223.83	1226.55	1195.05	1185.05	39.99			1186.56	
RW-3	8/2/2007	1223.83	1226.55	1195.05	1185.05	40.00		film	1186.55	
RW-3	8/9/2007	1223.83	1226.55	1195.05	1185.05	40.08	39.98	0.10	1186.47	1186.57
RW-3	10/17/2007	1223.83	1226.55	1195.05	1185.05	39.77	39.43	0.34	1186.78	1187.12
RW-3	11/9/2007	1223.83	1226.55	1195.05	1185.05	40.39	39.55	0.84	1186.16	1187.00
RW-3	12/3/2007	1223.83	1226.55	1195.05	1185.05	40.05	39.58	0.47	1186.50	1186.97
RW-3	03/19/2008	1223.83	1226.55	1195.05	1185.05	39.40	39.17	0.23	1187.15	1187.38
RW-3	03/25/2009	1223.83	1226.55	1195.05	1185.05	38.25			1188.30	
RW-3	06/24/2009	1223.83	1226.55	1195.05	1185.05	38.59	38.55	0.04	1187.96	1188.00
RW-3	9/15/2009	1223.83	1226.55	1195.05	1185.05	38.98			1187.57	
RW-3	12/7/2009	1223.83	1226.55	1195.05	1185.05	39.30			1187.25	
RW-3	3/29/2010	1223.83	1226.55	1195.05	1185.05	38.55			1188.00	
RW-3	6/24/2010	1223.83	1226.55	1195.05	1185.05	38.49			1188.06	
RW-3	9/27/2010	1223.83	1226.55	1195.05	1185.05	38.62			1187.93	
RW-3	12/28/2010	1223.83	1226.55	1195.05	1185.05	38.74			1187.81	
MW-19	02/26/2008	1187.43	1189.75	1183.75	1173.75	5.63			1184.12	
MW-19	03/11/2008	1187.43	1189.75	1183.75	1173.75	8.61			1181.14	
MW-19	03/19/2008	1187.43	1189.75	1183.75	1173.75	5.60			1184.15	
MW-19	03/24/2008	1187.43	1189.75	1183.75	1173.75	5.60			1184.15	
MW-19	04/01/2008	1187.43	1189.75	1183.75	1173.75	5.33			1184.42	
MW-19	04/08/2008	1187.43	1189.75	1183.75	1173.75	4.47			1185.28	
MW-19	04/09/2008	1187.43	1189.75	1183.75	1173.75	3.50			1186.25	
MW-19	04/23/2008	1187.43	1189.75	1183.75	1173.75	4.40			1185.35	
MW-19	05/03/2008	1187.43	1189.75	1183.75	1173.75	4.27			1185.48	
MW-19	06/10/2008	1187.43	1189.75	1183.75	1173.75	4.58			1185.17	
MW-19	08/28/2008	1187.43	1189.75	1183.75	1173.75	5.02			1184.73	
MW-19	12/03/2008	1187.43	1189.75	1183.75	1173.75	5.14			1184.61	
MW-19	03/25/2009	1187.43	1189.75	1183.75	1173.75	4.82			1184.93	
MW-19	06/24/2009	1187.43	1189.75	1183.75	1173.75	5.48			1184.27	
MW-19	9/15/2009	1187.43	1189.75	1183.75	1173.75	5.77			1183.98	
MW-19	12/7/2009	1187.43	1189.75	1183.75	1173.75	5.71			1184.04	
MW-19	3/29/2010	1187.43	1189.75	1183.75	1173.75	5.27			1184.48	
MW-19	6/24/2010	1187.43	1189.75	1183.75	1173.75	4.92			1184.83	
MW-19	9/27/2010	1187.43	1189.75	1183.75	1173.75	4.52			1185.23	
MW-19	12/28/2010	1187.43	1189.75	1183.75	1173.75	4.67			1185.08	
MW-20	2/26/2008	1188.54	1190.76	1184.76	1174.76	7.11			1183.65	
MW-20	03/11/2008	1188.54	1190.76	1184.76	1174.76	7.12			1183.64	
MW-20	03/19/2008	1188.54	1190.76	1184.76	1174.76	7.17			1183.59	
MW-20	03/24/2008	1188.54	1190.76	1184.76	1174.76	7.07			1183.69	
MW-20	04/01/2008	1188.54	1190.76	1184.76	1174.76	6.77			1183.99	
MW-20	04/08/2008	1188.54	1190.76	1184.76	1174.76	5.76			1185.00	
MW-20	04/23/2008	1188.54	1190.76	1184.76	1174.76	5.80			1184.96	
MW-20	06/10/2008	1188.54	1190.76	1184.76	1174.76	6.20			1184.56	
MW-20	08/28/2008	1188.54	1190.76	1184.76	1174.76	6.62			1184.14	
MW-20	12/03/2008	1188.54	1190.76	1184.76	1174.76	9.12			1181.64	
MW-20	03/25/2009	1188.54	1190.76	1184.76	1174.76	6.16			1184.60	
MW-20	06/24/2009	1188.54	1190.76	1184.76	1174.76	7.00			1183.76	
MW-20	9/15/2009	1188.54	1190.76	1184.76	1174.76	7.31			1183.45	
MW-20	12/7/2009	1188.54	1190.76	1184.76	1174.76	7.23			1183.53	
MW-20	3/29/2010	1188.54	1190.76	1184.76	1174.76	6.78			1183.98	
MW-20	6/24/2010	1188.54	1190.76	1184.76	1174.76	6.50			1184.26	
MW-20	9/27/2010	1188.54	1190.76	1184.76	1174.76	6.02			1184.74	
MW-20	12/28/2010	1188.54	1190.76	1184.76	1174.76	6.28			1184.48	
MW-21	02/27/2008	1189.48	1191.76	1186.26	1176.26	7.17			1184.59	
MW-21	03/11/2008	1189.48	1191.76	1186.26	1176.26	7.14			1184.62	
MW-21	03/19/2008	1189.48	1191.76	1186.26	1176.26	7.14			1184.62	
MW-21	03/24/2008	1189.48	1191.76	1186.26	1176.26	7.07			1184.69	
MW-21	04/01/2008	1189.48	1191.76	1186.26	1176.26	6.88			1184.88	
MW-21	04/08/2008	1189.48	1191.76	1186.26	1176.26	3.17			1188.59	
MW-21	11/19/2008	1189.48	1191.76	1186.26	1176.26	8.42			1183.34	
MW-21	12/03/2008	1189.48	1191.76	1186.26	1176.26	6.58			1185.18	
MW-21	06/24/2009	1189.48	1191.76	1186.26	1176.26	7.34			1184.42	

**Table 2**  
**Ground Water Elevations/Product Thickness**  
**Enbridge Energy MP85**  
**Reichel Road, Town of Murry, Rusk County, Wisconsin**  
**WDNR BRRTS# 02-55-548746**

Location	Date	Ground Surface Elevation	Top of Riser Elevation	Top of Screen Elevation	Bottom of Screen Elevation	Depth to Water (TOR)	Depth to Product	Product Thickness	Ground Water Elevation	Product Elevation
MW-21	9/15/2009	1189.48	1191.76	1186.26	1176.26	7.61			1184.15	
MW-21	12/7/2009	1189.48	1191.76	1186.26	1176.26	7.58			1184.18	
MW-21	3/29/2010	1189.48	1191.76	1186.26	1176.26	6.97			1184.79	
MW-21	6/24/2010	1189.48	1191.76	1186.26	1176.26	6.73			1185.03	
MW-21	9/27/2010	1189.48	1191.76	1186.26	1176.26	5.75			1186.01	
MW-21	12/28/2010	1189.48	1191.76	1186.26	1176.26	6.60			1185.16	
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MW-22	02/28/2008	1188.14	1190.56	1185.56	1175.06	7.05			1183.51	
MW-22	03/11/2008	1188.14	1190.56	1185.56	1175.06	7.19			1183.37	
MW-22	03/19/2008	1188.14	1190.56	1185.56	1175.06	7.03			1183.53	
MW-22	03/24/2008	1188.14	1190.56	1185.56	1175.06	7.06			1183.50	
MW-22	04/01/2008	1188.14	1190.56	1185.56	1175.06	6.76			1183.80	
MW-22	04/23/2008	1188.14	1190.56	1185.56	1175.06	5.85			1184.71	
MW-22	06/10/2008	1188.14	1190.56	1185.56	1175.06	6.17			1184.39	
MW-22	08/28/2008	1188.14	1190.56	1185.56	1175.06	6.78			1183.78	
MW-22	12/03/2008	1188.14	1190.56	1185.56	1175.06	6.19			1184.37	
MW-22	03/25/2009	1188.14	1190.56	1185.56	1175.06	6.02			1184.54	
MW-22	06/24/2009	1188.14	1190.56	1185.56	1175.06	7.14			1183.42	
MW-22	9/15/2009	1188.14	1190.56	1185.56	1175.06	7.47			1183.09	
MW-22	12/7/2009	1188.14	1190.56	1185.56	1175.06	7.35			1183.21	
MW-22	3/29/2010	1188.14	1190.56	1185.56	1175.06	6.94			1183.62	
MW-22	6/24/2010	1188.14	1190.56	1185.56	1175.06	6.60			1183.96	
MW-22	9/27/2010	1188.14	1190.56	1185.56	1175.06	5.45			1185.11	
MW-22	12/28/2010	1188.14	1190.56	1185.56	1175.06	6.51			1184.05	
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MW-23	03/24/2008	1187.00	1189.43	1183.93	1173.93	6.30			1183.13	
MW-23	04/01/2008	1187.00	1189.43	1183.93	1173.93	6.11			1183.32	
MW-23	04/08/2008	1187.00	1189.43	1183.93	1173.93	5.00			1184.43	
MW-23	04/09/2008	1187.00	1189.43	1183.93	1173.93	3.09			1186.34	
MW-23	04/23/2008	1187.00	1189.43	1183.93	1173.93	5.14			1184.29	
MW-23	05/03/2008	1187.00	1189.43	1183.93	1173.93	4.95			1184.48	
MW-23	06/10/2008	1187.00	1189.43	1183.93	1173.93	5.42			1184.01	
MW-23	08/28/2008	1187.00	1189.43	1183.93	1173.93	6.04			1183.39	
MW-23	12/03/2008	1187.00	1189.43	1183.93	1173.93	5.49			1183.94	
MW-23	03/25/2009	1187.00	1189.43	1183.93	1173.93	5.32			1184.11	
MW-23	06/24/2009	1187.00	1189.43	1183.93	1173.93	6.50			1182.93	
MW-23	9/15/2009	1187.00	1189.43	1183.93	1173.93	6.81			1182.62	
MW-23	12/7/2009	1187.00	1189.43	1183.93	1173.93	6.70			1182.73	
MW-23	3/29/2010	1187.00	1189.43	1183.93	1173.93	6.25			1183.18	
MW-23	6/24/2010	1187.00	1189.43	1183.93	1173.93	6.60			1182.83	
MW-23	9/27/2010	1187.00	1189.43	1183.93	1173.93	5.44			1183.99	
MW-23	12/28/2010	1187.00	1189.43	1183.93	1173.93	5.89			1183.54	
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MW-24	02/26/2008	1185.60	1187.73	1183.73	1173.73	5.11			1182.62	
MW-24	03/11/2008	1185.60	1187.73	1183.73	1173.73	5.22			1182.51	
MW-24	03/19/2008	1185.60	1187.73	1183.73	1173.73	5.17			1182.56	
MW-24	03/24/2008	1185.60	1187.73	1183.73	1173.73	5.17			1182.56	
MW-24	04/01/2008	1185.60	1187.73	1183.73	1173.73	4.98			1182.75	
MW-24	04/08/2008	1185.60	1187.73	1183.73	1173.73	3.67			1184.06	
MW-24	04/09/2008	1185.60	1187.73	1183.73	1173.73	4.14			1183.59	
MW-24	04/23/2008	1185.60	1187.73	1183.73	1173.73	4.26			1183.47	
MW-24	05/03/2008	1185.60	1187.73	1183.73	1173.73	3.98			1183.75	
MW-24	06/10/2008	1185.60	1187.73	1183.73	1173.73	4.74			1182.99	
MW-24	08/28/2008	1185.60	1187.73	1183.73	1173.73	5.22			1182.51	
MW-24	12/03/2008	1185.60	1187.73	1183.73	1173.73	4.43			1183.30	
MW-24	03/25/2009	1185.60	1187.73	1183.73	1173.73	4.16			1183.57	
MW-24	06/24/2009	1185.60	1187.73	1183.73	1173.73	5.61			1182.12	
MW-24	9/15/2009	1185.60	1187.73	1183.73	1173.73	5.83			1181.90	
MW-24	12/7/2009	1185.60	1187.73	1183.73	1173.73	5.72			1182.01	
MW-24	3/29/2010	1185.60	1187.73	1183.73	1173.73	3.45			1184.28	
MW-24	6/24/2010	1185.60	1187.73	1183.73	1173.73	4.32			1183.41	
MW-24	9/27/2010	1185.60	1187.73	1183.73	1173.73	4.60			1183.13	
MW-24	12/28/2010	1185.60	1187.73	1183.73	1173.73	5.27			1182.46	
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MW-24D	03/19/2008	1185.50	1187.76	1125.76	1120.76	3.72			1184.04	
MW-24D	03/24/2008	1185.50	1187.76	1125.76	1120.76	3.72			1184.04	
MW-24D	04/01/2008	1185.50	1187.76	1125.76	1120.76	3.55			1184.21	
MW-24D	04/08/2008	1185.50	1187.76	1125.76	1120.76	2.78			1184.98	
MW-24D	04/09/2008	1185.50	1187.76	1125.76	1120.76	2.74			1185.02	
MW-24D	04/23/2008	1185.50	1187.76	1125.76	1120.76	2.60			1185.16	
MW-24D	05/03/2008	1185.50	1187.76	1125.76	1120.76	2.44			1185.32	
MW-24D	06/10/2008	1185.50	1187.76	1125.76	1120.76	2.64			1185.12	
MW-24D	08/28/2008	1185.50	1187.76	1125.76	1120.76	3.17			1184.59	
MW-24D	12/03/2008	1185.50	1187.76	1125.76	1120.76	2.60			1185.16	
MW-24D	03/25/2009	1185.50	1187.76	1125.76	1120.76	3.25			1184.51	
MW-24D	06/24/2009	1185.50	1187.76	1125.76	1120.76	3.74			1184.02	
MW-24D	9/15/2009	1185.50	1187.76	1125.76	1120.76	4.06			1183.70	
MW-24D	12/7/2009	1185.50	1187.76	1125.76	1120.76	3.80			1183.96	
MW-24D	3/29/2010	1185.50	1187.76	1125.76	1120.76	3.48			1184.28	
MW-24D	6/24/2010	1185.50	1187.76	1125.76	1120.76	3.12			1184.64	
MW-24D	9/27/2010	1185.50	1187.76	1125.76	1120.76	2.64			1185.12	
MW-24D	12/28/2010	1185.50	1187.76	1125.76	1120.76	2.57			1185.19	
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MW-25	02/26/2008	1188.38	1190.44	1184.94	1174.94	6.79			1183.65	
MW-25	03/11/2008	1188.38	1190.44	1184.94	1174.94	6.85			1183.59	

Table 2  
Ground Water Elevations/Product Thickness  
Enbridge Energy MP85  
Reichel Road, Town of Murry, Rusk County, Wisconsin  
WDNR BRRTS# 02-55-548746

Location	Date	Ground Surface Elevation	Top of Riser Elevation	Top of Screen Elevation	Bottom of Screen Elevation	Depth to Water (TOR)	Depth to Product	Product Thickness	Ground Water Elevation	Product Elevation
MW-25	03/19/2008	1188.38	1190.44	1184.94	1174.94	6.70			1183.74	
MW-25	03/24/2008	1188.38	1190.44	1184.94	1174.94	6.71			1183.73	
MW-25	04/01/2008	1188.38	1190.44	1184.94	1174.94	6.52			1183.92	
MW-25	04/08/2008	1188.38	1190.44	1184.94	1174.94	5.14			1185.30	
MW-25	04/09/2008	1188.38	1190.44	1184.94	1174.94	4.85			1185.59	
MW-25	04/23/2008	1188.38	1190.44	1184.94	1174.94	5.21			1185.23	
MW-25	05/03/2008	1188.38	1190.44	1184.94	1174.94	4.99			1185.45	
MW-25	06/10/2008	1188.38	1190.44	1184.94	1174.94	5.30			1185.14	
MW-25	08/28/2008	1188.38	1190.44	1184.94	1174.94	6.19			1184.25	
MW-25	12/03/2008	1188.38	1190.44	1184.94	1174.94	5.92			1184.52	
MW-25	03/25/2009	1188.38	1190.44	1184.94	1174.94	5.69			1184.75	
MW-25	06/24/2009	1188.38	1190.44	1184.94	1174.94	6.82			1183.62	
MW-25	9/15/2009	1188.38	1190.44	1184.94	1174.94	7.13			1183.31	
MW-25	12/7/2009	1188.38	1190.44	1184.94	1174.94	7.00			1183.44	
MW-25	3/29/2010	1188.38	1190.44	1184.94	1174.94	6.48			1183.96	
MW-25	6/24/2010	1188.38	1190.44	1184.94	1174.94	6.15			1184.29	
MW-25	9/27/2010	1188.38	1190.44	1184.94	1174.94	6.24			1184.20	
MW-25	12/28/2010	1188.38	1190.44	1184.94	1174.94	6.11			1184.33	

MW-26	02/28/2008	1189.22	1191.31	1186.81	1176.81	7.94			1183.37	
MW-26	03/11/2008	1189.22	1191.31	1186.81	1176.81	8.04			1183.27	
MW-26	03/19/2008	1189.22	1191.31	1186.81	1176.81	7.91			1183.40	
MW-26	03/24/2008	1189.22	1191.31	1186.81	1176.81	7.91			1183.40	
MW-26	04/01/2008	1189.22	1191.31	1186.81	1176.81	7.78			1183.53	
MW-26	04/08/2008	1189.22	1191.31	1186.81	1176.81	5.57			1185.74	
MW-26	04/09/2008	1189.22	1191.31	1186.81	1176.81	6.14			1185.17	
MW-26	04/23/2008	1189.22	1191.31	1186.81	1176.81	6.52			1184.79	
MW-26	05/03/2008	1189.22	1191.31	1186.81	1176.81	6.41			1184.90	
MW-26	06/10/2008	1189.22	1191.31	1186.81	1176.81	6.95			1184.36	
MW-26	08/28/2008	1189.22	1191.31	1186.81	1176.81	7.80			1183.51	
MW-26	12/03/2008	1189.22	1191.31	1186.81	1176.81	7.26			1184.05	
MW-26	03/25/2009	1189.22	1191.31	1186.81	1176.81	6.89			1184.42	
MW-26	06/24/2009	1189.22	1191.31	1186.81	1176.81	8.21			1183.10	
MW-26	9/15/2009	1189.22	1191.31	1186.81	1176.81	8.49			1182.82	
MW-26	12/7/2009	1189.22	1191.31	1186.81	1176.81	8.33			1182.98	
MW-26	12/22/2009	1189.22	1191.31	1186.81	1176.81	8.30			1183.01	
MW-26	2/3/2010	1189.22	1191.31	1186.81	1176.81	8.35			1182.96	
MW-26	3/29/2010	1189.22	1191.31	1186.81	1176.81	7.86			1183.45	
MW-26	6/24/2010	1189.22	1191.31	1186.81	1176.81	7.38			1183.93	
MW-26	7/20/2010	1189.22	1191.31	1186.81	1176.81	7.33			1183.98	
MW-26	9/27/2010	1189.22	1191.31	1186.81	1176.81	6.91			1184.40	
MW-26	12/28/2010	1189.22	1191.31	1186.81	1176.81	7.62			1183.69	

MW-27	02/27/2008	1189.48	1191.76	1185.76	1175.76	8.07			1183.69	
MW-27	03/11/2008	1189.48	1191.76	1185.76	1175.76	7.90			1183.86	
MW-27	03/19/2008	1189.48	1191.76	1185.76	1175.76	8.00			1183.76	
MW-27	03/24/2008	1189.48	1191.76	1185.76	1175.76	7.99			1183.77	
MW-27	04/01/2008	1189.48	1191.76	1185.76	1175.76	7.96			1183.80	
MW-27	04/08/2008	1189.48	1191.76	1185.76	1175.76	4.91			1186.85	
MW-27	04/09/2008	1189.48	1191.76	1185.76	1175.76	6.36			1185.40	
MW-27	04/23/2008	1189.48	1191.76	1185.76	1175.76	6.56			1185.20	
MW-27	05/03/2008	1189.48	1191.76	1185.76	1175.76	6.42			1185.34	
MW-27	06/10/2008	1189.48	1191.76	1185.76	1175.76	7.10			1184.66	
MW-27	08/28/2008	1189.48	1191.76	1185.76	1175.76	7.81			1183.95	
MW-27	12/03/2008	1189.48	1191.76	1185.76	1175.76	7.36			1184.40	
MW-27	03/25/2009	1189.48	1191.76	1185.76	1175.76	7.12			1184.64	
MW-27	06/24/2009	1189.48	1191.76	1185.76	1175.76	8.24			1183.52	
MW-27	9/15/2009	1189.48	1191.76	1185.76	1175.76	8.51			1183.25	
MW-27	12/7/2009	1189.48	1191.76	1185.76	1175.76	8.43			1183.33	
MW-27	12/22/2009	1189.48	1191.76	1185.76	1175.76	8.40			1183.36	
MW-27	1/5/2010	1189.48	1191.76	1185.76	1175.76	8.38			1183.38	
MW-27	2/3/2010	1189.48	1191.76	1185.76	1175.76	8.42			1183.34	
MW-27	3/29/2010	1189.48	1191.76	1185.76	1175.76	7.98			1183.78	
MW-27	6/24/2010	1189.48	1191.76	1185.76	1175.76	7.51			1184.25	
MW-27	7/20/2010	1189.48	1191.76	1185.76	1175.76	7.45			1184.31	
MW-27	9/27/2010	1189.48	1191.76	1185.76	1175.76	6.87			1184.89	
MW-27	12/28/2010	1189.48	1191.76	1185.76	1175.76	7.67			1184.09	

MW-28	03/24/2008	1193.70	1195.89	1189.39	1179.39	11.17			1184.72	
MW-28	04/01/2008	1193.70	1195.89	1189.39	1179.39	10.87			1185.02	
MW-28	04/08/2008	1193.70	1195.89	1189.39	1179.39	8.00			1187.89	
MW-28	04/09/2008	1193.70	1195.89	1189.39	1179.39	8.57			1187.32	
MW-28	04/23/2008	1193.70	1195.89	1189.39	1179.39	9.71			1186.18	
MW-28	05/03/2008	1193.70	1195.89	1189.39	1179.39	9.49			1186.40	
MW-28	06/10/2008	1193.70	1195.89	1189.39	1179.39	11.32			1184.57	
MW-28	08/28/2008	1193.70	1195.89	1189.39	1179.39	10.53			1185.36	
MW-28	12/03/2008	1193.70	1195.89	1189.39	1179.39	10.35			1185.54	
MW-28	03/25/2009	1193.70	1195.89	1189.39	1179.39	10.18			1185.71	
MW-28	06/24/2009	1193.70	1195.89	1189.39	1179.39	11.16			1184.73	
MW-28	9/15/2009	1193.70	1195.89	1189.39	1179.39	11.50			1184.39	
MW-28	12/7/2009	1193.70	1195.89	1189.39	1179.39	11.42			1184.47	
MW-28	3/29/2010	1193.70	1195.89	1189.39	1179.39	10.82			1185.07	
MW-28	6/24/2010	1193.70	1195.89	1189.39	1179.39	10.59			1185.30	
MW-28	9/27/2010	1193.70	1195.89	1189.39	1179.39	9.46			1186.43	
MW-28	12/28/2010	1193.70	1195.89	1189.39	1179.39	10.29			1185.60	

**Table 2**  
**Ground Water Elevations/Product Thickness**  
**Enbridge Energy MP85**  
**Reichel Road, Town of Murry, Rusk County, Wisconsin**  
**WDNR BRRTS# 02-55-548746**

Location	Date	Ground Surface Elevation	Top of Riser Elevation	Top of Screen Elevation	Bottom of Screen Elevation	Depth to Water (TOR)	Depth to Product	Product Thickness	Ground Water Elevation	Product Elevation
MW-29	02/27/2008	1188.17	1189.86	1184.86	1174.86	7.00			1182.86	
MW-29	03/11/2008	1188.17	1189.86	1184.86	1174.86	7.02			1182.84	
MW-29	03/19/2008	1188.17	1189.86	1184.86	1174.86	6.68			1183.18	
MW-29	03/24/2008	1188.17	1189.86	1184.86	1174.86	6.98			1182.88	
MW-29	04/01/2008	1188.17	1189.86	1184.86	1174.86	7.74			1182.12	
MW-29	04/08/2008	1188.17	1189.86	1184.86	1174.86	2.29			1187.57	
MW-29	04/09/2008	1188.17	1189.86	1184.86	1174.86	5.85			1184.01	
MW-29	04/23/2008	1188.17	1189.86	1184.86	1174.86	5.99			1183.87	
MW-29	05/03/2008	1188.17	1189.86	1184.86	1174.86	5.63			1184.23	
MW-29	06/10/2008	1188.17	1189.86	1184.86	1174.86	6.51			1183.35	
MW-29	08/28/2008	1188.17	1189.86	1184.86	1174.86	6.94			1182.92	
MW-29	12/03/2008	1188.17	1189.86	1184.86	1174.86	6.33			1183.53	
MW-29	03/25/2009	1188.17	1189.86	1184.86	1174.86	5.99			1183.87	
MW-29	06/24/2009	1188.17	1189.86	1184.86	1174.86	7.33			1182.53	
MW-29	9/15/2009	1188.17	1189.86	1184.86	1174.86	7.57			1182.29	
MW-29	12/7/2009	1188.17	1189.86	1184.86	1174.86	7.45			1182.41	
MW-29	3/29/2010	1188.17	1189.86	1184.86	1174.86	7.11			1182.75	
MW-29	6/24/2010	1188.17	1189.86	1184.86	1174.86	6.22			1183.64	
MW-29	9/27/2010	1188.17	1189.86	1184.86	1174.86	6.25			1183.61	
MW-29	12/28/2010	1188.17	1189.86	1184.86	1174.86	6.90			1182.96	
MW-30	03/24/2008	1187.70	1190.84	1185.84	1175.84	7.82			1183.02	
MW-30	04/01/2008	1187.70	1190.84	1185.84	1175.84	7.62			1183.22	
MW-30	04/08/2008	1187.70	1190.84	1185.84	1175.84	6.18			1184.66	
MW-30	04/09/2008	1187.70	1190.84	1185.84	1175.84	6.45			1184.39	
MW-30	04/23/2008	1187.70	1190.84	1185.84	1175.84	6.66			1184.18	
MW-30	05/03/2008	1187.70	1190.84	1185.84	1175.84	6.40			1184.44	
MW-30	06/10/2008	1187.70	1190.84	1185.84	1175.84	7.25			1183.59	
MW-30	08/28/2008	1187.70	1190.84	1185.84	1175.84	7.87			1182.97	
MW-30	12/03/2008	1187.70	1190.84	1185.84	1175.84	7.22			1183.62	
MW-30	03/25/2009	1187.70	1190.84	1185.84	1175.84	10.81			1180.03	
MW-30	06/24/2009	1187.70	1190.84	1185.84	1175.84	8.22			1182.62	
MW-30	9/15/2009	1187.70	1190.84	1185.84	1175.84	8.45			1182.39	
MW-30	12/7/2009	1187.70	1190.84	1185.84	1175.84	8.32			1182.52	
MW-30	3/29/2010	1187.70	1190.84	1185.84	1175.84	8.00			1182.84	
MW-30	6/24/2010	1187.70	1190.84	1185.84	1175.84	7.11			1183.73	
MW-30	9/27/2010	1187.70	1190.84	1185.84	1175.84	6.98			1183.86	
MW-30	12/28/2010	1187.70	1190.84	1185.84	1175.84	6.81			1184.03	
MW-31	03/24/2008	1222.30	1223.99	1188.49	1178.49	38.67			1185.32	
MW-31	04/01/2008	1222.30	1223.99	1188.49	1178.49	38.50			1185.49	
MW-31	06/10/2008	1222.30	1223.99	1188.49	1178.49	37.51			1186.48	
MW-31	08/28/2008	1222.30	1223.99	1188.49	1178.49	37.94			1186.05	
MW-31	12/03/2008	1222.30	1223.99	1188.49	1178.49	37.70			1186.29	
MW-31	03/25/2009	1222.30	1223.99	1188.49	1178.49	37.88			1186.11	
MW-31	06/24/2009	1222.30	1223.99	1188.49	1178.49	38.51			1185.48	
MW-31	9/15/2009	1222.30	1223.99	1188.49	1178.49	38.90			1185.09	
MW-31	12/7/2009	1222.30	1223.99	1188.49	1178.49	38.88			1185.11	
MW-31	3/29/2010	1222.30	1223.99	1188.49	1178.49	38.37			1185.62	
MW-31	6/24/2010	1222.30	1223.99	1188.49	1178.49	38.19			1185.80	
MW-31	9/27/2010	1222.30	1223.99	1188.49	1178.49	37.34			1186.65	
MW-31	12/28/2010	1222.30	1223.99	1188.49	1178.49	37.44			1186.55	
MW-32	03/24/2008	1220.50	1222.67	1188.17	1178.17	37.28			1185.39	
MW-32	04/01/2008	1220.50	1222.67	1188.17	1178.17	37.23			1185.44	
MW-32	06/10/2008	1220.50	1222.67	1188.17	1178.17	36.19			1186.48	
MW-32	08/28/2008	1220.50	1222.67	1188.17	1178.17	36.66			1186.01	
MW-32	12/03/2008	1220.50	1222.67	1188.17	1178.17	36.45			1186.22	
MW-32	03/25/2009	1220.50	1222.67	1188.17	1178.17	36.68			1185.99	
MW-32	06/24/2009	1220.50	1222.67	1188.17	1178.17	37.27			1185.40	
MW-32	9/15/2009	1220.50	1222.67	1188.17	1178.17	37.65			1185.02	
MW-32	12/7/2009	1220.50	1222.67	1188.17	1178.17	37.62			1185.05	
MW-32	3/29/2010	1220.50	1222.67	1188.17	1178.17	37.14			1185.53	
MW-32	6/24/2010	1220.50	1222.67	1188.17	1178.17	36.93			1185.74	
MW-32	9/27/2010	1220.50	1222.67	1188.17	1178.17	35.98			1186.69	
MW-32	12/24/2010	1220.50	1222.67	1188.17	1178.17	36.21			1186.46	
MW-33	11/19/2008	1222.94	1224.97	1194.72	1174.72	38.59			1186.38	
MW-33	01/02/2009	1222.94	1224.97	1194.72	1174.72	38.57			1186.40	
MW-33	02/04/2009	1222.94	1224.97	1194.72	1174.72	38.69			1186.28	
MW-33	02/10/2009	1222.94	1224.97	1194.72	1174.72	38.71			1186.26	
MW-33	02/17/2009	1222.94	1224.97	1194.72	1174.72	38.69			1186.28	
MW-33	03/04/2009	1222.94	1224.97	1194.72	1174.72	38.80			1186.17	
MW-33	03/11/2009	1222.94	1224.97	1194.72	1174.72	38.82			1186.15	
MW-33	03/17/2009	1222.94	1224.97	1194.72	1174.72	38.66			1186.31	
MW-33	03/25/2009	1222.94	1224.97	1194.72	1174.72	38.57			1186.40	
MW-33	03/31/2009	1222.94	1224.97	1194.72	1174.72	41.00			1183.97	
MW-33	04/08/2009	1222.94	1224.97	1194.72	1174.72	38.68			1186.29	
MW-33	04/13/2009	1222.94	1224.97	1194.72	1174.72	38.74			1186.23	
MW-33	04/22/2009	1222.94	1224.97	1194.72	1174.72	38.85			1186.12	
MW-33	04/29/2009	1222.94	1224.97	1194.72	1174.72	38.77			1186.20	
MW-33	05/12/2009	1222.94	1224.97	1194.72	1174.72	38.72			1186.25	
MW-33	05/19/2009	1222.94	1224.97	1194.72	1174.72	38.89			1186.08	
MW-33	6/3/2009	1222.94	1224.97	1194.72	1174.72	39.10			1185.87	
MW-33	6/10/2009	1222.94	1224.97	1194.72	1174.72	39.04			1185.93	
MW-33	6/16/2009	1222.94	1224.97	1194.72	1174.72	39.16			1185.81	



**Table 2**  
**Ground Water Elevations/Product Thickness**  
**Enbridge Energy MP85**  
**Reichel Road, Town of Murry, Rusk County, Wisconsin**  
**WDNR BRRTS# 02-55-548746**

Location	Date	Ground Surface Elevation	Top of Riser Elevation	Top of Screen Elevation	Bottom of Screen Elevation	Depth to Water (TOR)	Depth to Product	Product Thickness	Ground Water Elevation	Product Elevation
MW-33	6/24/2009	1222.94	1224.97	1194.72	1174.72	39.21			1185.76	
MW-33	6/30/2009	1222.94	1224.97	1194.72	1174.72	39.30			1185.67	
MW-33	7/8/2009	1222.94	1224.97	1194.72	1174.72	39.55			1185.42	
MW-33	07/20/2009	1222.94	1224.97	1194.72	1174.72	39.44			1185.53	
MW-33	08/04/2009	1222.94	1224.97	1194.72	1174.72	39.38			1185.59	
MW-33	8/18/2009	1222.94	1224.97	1194.72	1174.72	39.50			1185.47	
MW-33	9/1/2009	1222.94	1224.97	1194.72	1174.72	39.51			1185.46	
MW-33	9/15/2009	1222.94	1224.97	1194.72	1174.72	39.59			1185.38	
MW-33	9/29/2009	1222.94	1224.97	1194.72	1174.72	39.58			1185.39	
MW-33	10/15/2009	1222.94	1224.97	1194.72	1174.72	39.45			1185.52	
MW-33	10/28/2009	1222.94	1224.97	1194.72	1174.72	39.30			1185.67	
MW-33	11/11/2009	1222.94	1224.97	1194.72	1174.72	39.35			1185.62	
MW-33	12/1/2009	1222.94	1224.97	1194.72	1174.72	38.47			1186.50	
MW-33	12/7/2009	1222.94	1224.97	1194.72	1174.72	39.55			1185.42	
MW-33	12/22/2009	1222.94	1224.97	1194.72	1174.72	39.54			1185.43	
MW-33	1/5/2010	1222.94	1224.97	1194.72	1174.72	39.48			1185.49	
MW-33	1/19/2010	1222.94	1224.97	1194.72	1174.72	39.52			1185.45	
MW-33	2/3/2010	1222.94	1224.97	1194.72	1174.72	39.49			1185.48	
MW-33	2/16/2010	1222.94	1224.97	1194.72	1174.72	39.50			1185.47	
MW-33	3/3/2010	1222.94	1224.97	1194.72	1174.72	39.50			1185.47	
MW-33	3/16/2010	1222.94	1224.97	1194.72	1174.72	38.70			1186.27	
MW-33	3/30/2010	1222.94	1224.97	1194.72	1174.72	38.98			1185.99	
MW-33	4/13/2010	1222.94	1224.97	1194.72	1174.72	39.21			1185.76	
MW-33	4/27/2010	1222.94	1224.97	1194.72	1174.72	39.18			1185.79	
MW-33	5/12/2010	1222.94	1224.97	1194.72	1174.72	39.23			1185.74	
MW-33	5/26/2010	1222.94	1224.97	1194.72	1174.72	39.19			1185.78	
MW-33	6/8/2010	1222.94	1224.97	1194.72	1174.72	39.14			1185.83	
MW-33	6/24/2010	1222.94	1224.97	1194.72	1174.72	38.73			1186.24	
MW-33	7/7/2010	1222.94	1224.97	1194.72	1174.72	38.78			1186.19	
MW-33	7/20/2010	1222.94	1224.97	1194.72	1174.72	38.67			1186.30	
MW-33	8/3/2010	1222.94	1224.97	1194.72	1174.72	38.73			1186.24	
MW-33	8/16/2010	1222.94	1224.97	1194.72	1174.72	38.32			1186.65	
MW-33	8/31/2010	1222.94	1224.97	1194.72	1174.72	38.50			1186.47	
MW-33	9/14/2010	1222.94	1224.97	1194.72	1174.72	38.50			1186.47	
MW-33	9/27/2010	1222.94	1224.97	1194.72	1174.72	37.99			1186.98	
MW-33	10/12/2010	1222.94	1224.97	1194.72	1174.72	38.20			1186.77	
MW-33	10/25/2010	1222.94	1224.97	1194.72	1174.72	38.10			1186.87	
MW-33	11/9/2010	1222.94	1224.97	1194.72	1174.72	37.92			1187.05	
MW-33	11/30/2010	1222.94	1224.97	1194.72	1174.72	37.92			1187.05	
MW-33	12/16/103	1222.94	1224.97	1194.72	1174.72	37.90			1187.07	
MW-33	12/28/2010	1222.94	1224.97	1194.72	1174.72	37.97			1187.00	
MW-34	11/19/2008	1223.10	1225.14	1197.29	1177.29	38.31			1186.83	
MW-34	12/03/2008	1223.10	1225.14	1197.29	1177.29	38.59			1186.55	
MW-34	01/02/2009	1223.10	1225.14	1197.29	1177.29	38.83			1186.31	
MW-34	02/04/2009	1223.10	1225.14	1197.29	1177.29	38.91			1186.23	
MW-34	02/10/2009	1223.10	1225.14	1197.29	1177.29	38.94			1186.20	
MW-34	02/17/2009	1223.10	1225.14	1197.29	1177.29	38.93			1186.21	
MW-34	03/04/2009	1223.10	1225.14	1197.29	1177.29	39.01			1186.13	
MW-34	03/11/2009	1223.10	1225.14	1197.29	1177.29	39.04			1186.10	
MW-34	03/17/2009	1223.10	1225.14	1197.29	1177.29	38.91			1186.23	
MW-34	03/25/2009	1223.10	1225.14	1197.29	1177.29	38.82			1186.32	
MW-34	03/31/2009	1223.10	1225.14	1197.29	1177.29	38.80			1186.34	
MW-34	04/08/2009	1223.10	1225.14	1197.29	1177.29	38.95			1186.19	
MW-34	04/13/2009	1223.10	1225.14	1197.29	1177.29	39.05			1186.09	
MW-34	04/22/2009	1223.10	1225.14	1197.29	1177.29	36.11			1189.03	
MW-34	04/29/2009	1223.10	1225.14	1197.29	1177.29	39.03			1186.11	
MW-34	05/12/2009	1223.10	1225.14	1197.29	1177.29	38.98			1186.16	
MW-34	05/19/2009	1223.10	1225.14	1197.29	1177.29	39.19			1185.95	
MW-34	6/3/2009	1223.10	1225.14	1197.29	1177.29	39.35			1185.79	
MW-34	6/10/2009	1223.10	1225.14	1197.29	1177.29	39.34			1185.80	
MW-34	6/16/2009	1223.10	1225.14	1197.29	1177.29	39.47			1185.67	
MW-34	6/24/2009	1223.10	1225.14	1197.29	1177.29	39.45			1185.69	
MW-34	6/30/2009	1223.10	1225.14	1197.29	1177.29	39.25			1185.89	
MW-34	7/8/2009	1223.10	1225.14	1197.29	1177.29	39.62			1185.52	
MW-34	7/20/2009	1223.10	1225.14	1197.29	1177.29	39.70			1185.44	

Table 3  
Air Sparging Air Pressure and Injection Flow Rates  
Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release  
Rusk County, Wisconsin

Date	AS-1		AS-2		AS-3		AS-4		AS-5		AS-6		AS-7		Sparge Blower #1		Sparge Blower #2	
	Flow Rate (scfm)	Pressure (psi)	Flow Rate (scfm)	Pressure (psi)	Flow Rate (scfm)	Pressure (psi)	Flow Rate (scfm)	Pressure (psi)	Flow Rate (scfm)	Pressure (psi)	Flow Rate (scfm)	Pressure (psi)	Flow Rate (scfm)	Pressure (psi)	Flow Rate (scfm)	Pressure (psi)	Flow Rate (scfm)	Pressure (psi)
04/08/08	8.5	2.5																
04/15/08	9																	
04/21/08	8.5		8.5		9		8.5		8.5		8.5		8.5					
04/28/08	8	3	8	3	8	3	8	3	8	3	8	3	8	3				
05/06/08	6.5		6.5		6.5		6.5		6.5		6.5		6.5					
05/22/08	7.5	3	7.5	3	7.5	3	7.5	3	7.5	3	7.5	3	7.5	3				
06/04/08	7	3	7	3	7	3	7	3	7	3	7	3	7	3				
06/27/08	3	2.8	3	2.8	3	2.8	3	2.8	3	2.8	3	2.8	3	2.8				
07/22/08	0	0	0	0	3	5	6	5	8	4	7	2	6	2	--	20	--	23
07/23/08	0	0	0	0	3	--	4	--	5	--	10	--	8	--	123	12	123	14
07/30/08	0	0	0	0	3	4	4	4	6	4	9	1	8	1	120	12.5	120	15
08/05/08	0	0	0	0	3	5	5	5	5	4	9	2	8	3	147	18	136	18
08/12/08	0	0	0	0	3	4.5	4	4	6	4	10	0.5	8	0.5	145	18	136	18
08/19/08	0	0	0	0	2	4.5	4	4	6	4	8	1	10	1	150	19	150	18
08/27/08	0	0	0	0	2	4.5	4	4.5	6	4	10	1	8	2	145	19	128	18
09/09/08	0	0	0	0	1	4	5	4.2	7	4	10	1	8.5	1.2	154	18	132	17
09/16/08	0	0	0	0	1	5	3	5	6.5	4	1	1	8.5	1	154	18	132	17
09/24/08	0	0	0	0	1	4.5	4.5	4.2	7	4	10	1	8.5	2	154	18	141	17
09/30/08	0	0	0	0	1	4.5	4	4.5	7	4	10	1.5	8.5	1.4	132	19	0	0
10/06/08	8.5	7	0	0	4	6	0	0	0	0	11	3	0	0	0	0	154	19
10/14/08	7	3.5	1	3.5	1	5	1	5	6	4	10	1	8	1.5	0	0	158	19
10/21/08	7	3.5	1	3.5	1	4.75	1	5	6	4	9.5	1.5	8	2	0	0	154	19
11/04/08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	132	18
11/11/08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	145	20
11/19/08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	145
12/04/08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	150	22
12/10/08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NR	21
12/26/08	13.5	5	1	5.5	2	4.5	2	7	1	5	5.5	0	1	5.5	NR	20	0	0
01/02/09	14	4	1	6	2	4	1	7	1	5	5	0	1.5	5.5	0	0	92	21
01/09/09	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
01/20/09	1	2.5	1	2.5	1	2	1	3	5.5	3.5	11.5	0	7	0	0	0	132	20
01/27/09	0-1	1	0-1	1	0-1	1	0-1	2	4	2.5	12	0.5	10	1	NR	22	0	5
02/04/09	1	1	1	1	1	1	1	1	7.5	2.5	15	1	11	1	0	0	110	28
02/11/09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	FROZEN	19.5	0	0
02/17/09	1	1	2	1	2	1	2	2.5	4.5	1	11.5	2.5	10	1	0	0	132	20
02/27/09	1.5	0	1	0	1	0	0.5	1	4.5	0	11.5	2	10.5	0	123	21	0	0
03/04/09	3.5	2.5	1	2.5	1	2	1	3	5	0	12.5	3.5	16	2	0	0	136	20
03/11/09	0	0	0	0	2	3	1	4	5.5	0	13	3.5	16	2.5	123	20	0	0
03/17/09	5	3	1	3	2	3	1	4	OFF	OFF	13.5	3.5	16	2.25	0	0	136	20.5
03/24/09	5.5	2.5	1.5	2.75	1.5	2.5	1	3.5	1.5	2	13.5	3.5	15.5	2.5	0	0	123	20
03/31/09	1.2	3	1	3	1	3	1	4	5.5	2.75	12.5	3.5	14.5	3.75	0	0	0	0
04/08/09	2	3	1	3	1	2.75	1	4.75	5.5	2.5	11.5	3.5	15	2.5	0	0	0	0
04/13/09	2	3	2	2.25	2	2	2	3	5.5	2	10.5	3.5	16	2.25	0	0	0	0
04/22/09	1.5	2	1.5	2	1.5	1	1.5	2.5	5	1.5	11	3	18	1.5	0	0	0	0
04/29/09	1	2.75	2	2.5	2	2.5	1	3.25	5	2.25	11	3.25	17.25	2	0	0	0	0
05/12/09	1	2.25	1	2	1.5	1.75	1	3	5	1.75	11	3.25	17	1.75	0	0	0	0
05/19/09	1	2.5	1	2	1	2.25	1	3	4.5	2	11	3.25	17.5	2	0	0	0	0
06/03/09	1	3	1	3	1	2.75	1	3.5	5	2.5	11	3	19	2	0	0	0	0
06/10/09	2.5	3	2	2.25	1.5	2	1.5	3	6	2	12.5	3.25	11.5	1.75	0	0	0	0
06/16/09	3	2	1.5	2	1	1.75	1	2.5	5.5	1.75	13	3.5	12.5	1	0	0	0	0
06/24/09	3	2	1.5	2	1	1.75	1	2.5	5.5	1.75	13	3.5	12.5	1	0	0	0	0
06/30/09	2	2.5	2	2	1.5	2	1	3	5.5	2	13	3	12.5	2	0	0	0	0
07/08/09	1	3	2	2.5	1	2	2	3	5.5	2	12.5	3	13	2	0	0	0	0
07/20/09	2	1	2	1	1	1	1	2.25	5.5	1.5	13	3	13.5	1	0	0	0	0
08/04/09	2	1.5	2	1	1	1	1	2	5.5	1	13	2.5	13.5	1	0	0	0	0
08/18/09	2	1.5	1.5	1	2	1	1	2	5	2	13	2	14	1	0	0	0	0
09/11/09	11	3	7	3	5	3	1	3	6	2.5	0	0	0	0	0	0	0	0
09/15/09	12	2	6	2.5	4	2	1.5	2	6.5	2.5	Closed	0	0	0	0	0	0	0
09/29/09	System down for repair																	
09/30/09	0	0	3	3.1	9	3.5	8.5	4.5	10	4	3	0.5	3	0.5				
10/15/09	6	4	6	4	5	4	5.5	5	6	4	4.5	0.5	6	0.5				
10/28/09	0	0	0	3	9	5	9	5	9	5	3	1	0	0				
11/11/09	0	0	0	4	9	4	9	5	10	4.5	3	1	0	0				
12/01/09	1	3.5	5	4	5	4	5	4.5	5	3.5	5	1	5	0.5				
12/07/09	1	3	5	3.5	5.5	3.5	5	4.5	5	2	5	1	5.5	0.5				
12/22/09	0	1	3	4.5	9	5	9	6	9	4.5	0	0	3	0				
01/05/10	0	0	3	3.5	9	3.5	9	4.5	9	4	0	0	2	0				
01/19/10	0	0	2	4	9	4.5	9	5	9	4.5	0	0	3	0				
02/03/10	0	0	0	0	9	4.5	8.5	5	9	4.5	0	0	0	0				
02/16/10	0	0	0	3	9	5	9	5	9	5	0	0	0	0				
03/03/10	0	0	0	3	9	4	9	4.8	9	4	0	0	0	0				
03/16/10	0	0	5	4.5	5	4.5	4.5	5	5	3	5	1	0	0				
03/29/10	0	0	5	4	5	5	3	5	5	3	0	0	5	1				
04/13/10	0	0	5	4	5	4.5	3	5	5	2.5	0	0	5	0.5				
04/27/10	0	0	5	4	5	4	3	4.5	5	2	0	0	5	0.5				
05/12/10	blower down for repair																	
05/26/10	blower down for repair																	
06/08/10	0	0	7	4	7	4.5	7	5	7	4.5	0	0	7.5	1				
06/24/10	0	0	7	4	7	4	7	4.5	7	4.5	0	0	7	2				
07/07/10	1	0	7	3	7	3	7	3	7	3	0	0	7	0				
07/20/10	1	0	7	4	7	3.5	7	4.5	7	4	0	0	7	0.5				
08/03/10	0	0	7	4	7	3.5	7	4	7	4	0	0	7	0				
08/16/10	0	0	7	5	7	5	7	6	7	5.5	0	0	7	2				
08/31/10	0	0	7	4	7	4	7	4.5	7	4	0	0	7	0				
09/14/10	0	0	6.5	5	6	5	6	5	6.5	5	0	0	6.5	1				
09/27/10	0	0	6	5	6	5	6	5	6	5	0	0	6	1				
10/12/10	5.5	4	5.5	4	5.5	4	5	4.5	5.5	4.5	0	0	0	0				
10/25/10	6	4.5	6	5	6	5	3	5.5	6	5	0	0	0	0				
11/09/10	6	4	6	5	6	5	4	6	6	5	0	0	0	0				
11/30/10	5	5	5	5	5	5.25	5	5.5	5	5	0	0	0	0				
12/16/10	5	5	5	5	5	5.28	5	6	5	5	0	0	0	0				

**Table 4**  
**SVE Extraction Point Field Data**  
**Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release**  
**Rusk County, Wisconsin**

Sample Location	Date	LEL (%)	Oxygen (%)	Carbon Dioxide (%)	PID (ppm)	Methane (%)	Vacuum (inches of water)	FID	Comment
SVE #1	2/6/2008	100	0	14	150				
	3/12/2008	38	16.6	3.7	274		11	1.27%	
	3/19/2008	3	19.6	2	22		10	356	
	4/21/2008	0	20.1	0.5	67.1			197	
	5/6/2008	0	20.2	0.6	42.5		0	212	
	5/22/2008	0	19.6	0.8	76		27	310	
	6/27/2008	0	14.8	0.7	43.1			88	
	7/22/2008	0	18.8	1.1	70.4		26	NM	
	7/23/2008						26		
	7/30/2008	0	18	2	14.3		26	45	
	8/5/2008	0	17.9	2.2	17.5		28	95	
	8/12/2008	0	18.2	2.3	29		28	126	
	8/19/2008	0	18.2	2.3	25		28	170	
	8/27/2008	0	18.1	2.4	12		28	58	
	9/9/2008	0	18.1	2	1		36.5		
	9/16/2008	0	18.2	2	143		9.5		
	9/24/2008	0	19.2	0	14		10		
	9/30/2008	0	19.3	0	181		10		
	10/6/2008	0	19.8	1.16	52		15		
	10/14/2008	0	18.9	2.05	57.8		10		
	10/21/2008	0	18.6	2.2	193		10		
	11/4/2008	0	18.8	1.76	105		13		
	11/11/2008	0	18.5	2.2	13		12.5		
	11/19/2008	0	18.7	1.9	0		13		
	12/4/2008	0	17.4	2.3	10		12		
	12/10/2008	0	17.1	2.3	0		10		
	1/2/2009	0.07	13.8	4.6	5		23		
	1/20/2009						24		
	1/27/2009	0	18.5	2	0		26		
	2/4/2009								CLOSED
	2/11/2009								No Readings Taken
	2/17/2009								CLOSED
	2/27/2009								CLOSED
	3/4/2009								CLOSED
	3/11/2009								CLOSED
	3/17/2009								CLOSED
	3/24/2009								CLOSED
	3/31/2009	0	19.9	0.9	1		15		
	4/8/2009								CLOSED
	4/13/2009								CLOSED
	4/22/2009								CLOSED
	4/29/2009								CLOSED
	5/12/2009	0	19.6	0.95	0		15		
	5/19/2009	0	19.4	1.22	0.7		14		
	6/2/2009	0	16.6	2.25	16.7		13		
	6/10/2009	0	18.6	1.7	11		13		
	6/16/2009	0	18.3	20.5	22		12		
	6/24/2009	0	18.1	2.25	15		13		
	6/30/2009	0	18.2	2.2	7		8		
	7/8/2009	0	17.5	2.65	27		8		
	7/20/2009	0	17.9	2.7	23		8		
8/4/2009	0	18.4	2.65	26		8			
8/18/2009	0	18	2.8	46		7			
9/11/2009	0	17	3.25	84		10			
9/15/2009	0	17.7	3.05	80		9			
9/29/2009	0	18.1	2.85	17		10			
10/15/2009	0	18.5	2.5	11		11			
10/28/2009	0	18	2.4	9.9		12			
11/11/2009	0	18.4	2.2	3.6		12			
12/1/2009	0	18	1.81	270		9			
12/7/2009	0	19.2	1.54	4		17			
12/22/2009	0	18.3	2.35	8		18			
1/5/2010	0	18.2	2.25	8		22			
1/19/2010	0	18.3	2.2	6		22			
2/3/2010	0	18.1	2.3	6		23			
2/16/2010	0	18.3	2.2	16		20			
3/2/2010	0	18.1	2.28	10		23			
3/16/2010	0	19.1	1.26	3		23			
3/29/2010	0	19	1.26	1.6		20			
4/13/2010	0	19	1.24	3.9		18			
4/27/2010	0	18.9	1.24	2		0		closed	
5/12/2010	0	20	0.64	0		0-12		Opened for readings only	
5/26/2010	0	19.5	1.12	21		0-13		Opened for readings only	
6/8/2010	0	19.5	1.1	31		0-13		Opened for readings only	
6/24/2010	0	19.2	1.28	18		0-15		Opened for readings only	
7/7/2010	0	19.2	1.32	21		14-0		Opened for readings only	
7/20/2010	0	19.2	1.26	13		13-0		Opened for readings only	
8/3/2010	0	19.1	1.36	24		0-12-17		Opened for readings only	
8/16/2010	0	18.8	1.92	10		15			
8/31/2010	0	18.9	1.46	0		16			
9/14/2010	0	19	1.48	0		17			
9/27/2010	0	18.5	1.14	0		17			
10/12/2010	0	18.6	1.48	0		18			
10/25/2010	0	18.8	1.48	0		19			
11/9/2010	0	19	1.32	0		20			
11/20/2010	0	19	1.22	0		24			
12/16/2010	0	18.9	1.18	0		26			
12/28/2010	0	19.2	1.14	0		25			
	2/6/2008	100	4.1	12.1	128.6				
	3/12/2008	80	14.9	4.6	168		12	4.50%	
	3/19/2008	64	19	1.9	247		11	17500	
	4/21/2008	0	18.8	1.2	61.2			188	
	5/6/2008	0	18.7	1.6	83.7		0	431	
	5/22/2008	0	18.9	1.7	70		27	310	
	6/27/2008	0	17.2	1.1	53.9			119	
	7/22/2008	0	19.3	1.3	56		10	NM	
	7/23/2008						10		
	7/30/2008	0	18.6	1.2	160		9	445	
	8/5/2008	0	18.5	2	174		10	614	
	8/12/2008	0	18.5	2	118		10	552	
	8/19/2008	0	18.4	2	165		10	516	
	8/27/2008	0	18.5	1.9	102		10	440	
	9/9/2008	0	20.2	1	2		10		
	9/16/2008	0	18.1	2	120		9.5		
	9/24/2008	0	19.2	0	13.5		10		
	9/30/2008	0	19.1	0	131		10		
	10/6/2008	0	19.2	1.68	43.6		15		
	10/14/2008	0	19	1.88	44		10		
	10/21/2008	0	18.9	1.9	77		10		
	11/4/2008	0	18.3	2.1	166		11		
	11/11/2008	0	18.3	2.35	14		11.5		
	11/19/2008	0	18.2	2.2	0.9		11		

Table 4  
 SVE Extraction Point Field Data  
 Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release  
 Rusk County, Wisconsin

Sample Location	Date	LEL (%)	Oxygen (%)	Carbon Dioxide (%)	PID (ppm)	Methane (%)	Vacuum (inches of water)	FID	Comment	
SVE #2	12/4/2008	0	17.4	2.2	0		11			
	12/10/2008	0	17.8	1.82	0		10			
	1/2/2009	0	14.8	4	14		20			
	1/20/2009						24			
	1/27/2009	0	17.5	2.6	1		25			
	2/4/2009								CLOSED	
	2/11/2009								No Readings Taken	
	2/17/2009								CLOSED	
	2/27/2009								CLOSED	
	3/4/2009								CLOSED	
	3/11/2009								CLOSED	
	3/17/2009								CLOSED	
	3/24/2009								CLOSED	
	3/31/2009	0	20	1.04	1.9			11		
	4/8/2009									CLOSED
	4/13/2009									CLOSED
	4/22/2009									CLOSED
	4/29/2009									CLOSED
	5/12/2009	0	19.8	1	8.3			10.5		
	5/19/2009	0	18	1.88	1.7			12		
	6/9/2009	0	16.2	2.25	27.7			10		
	6/10/2009	0	17.2	2.55	21			10		
	6/16/2009	0	17.2	2.55	33			10		
	6/24/2009	0	16.9	2.9	32			10		
	6/30/2009	0	17.5	2.65	23			7.5		
	7/8/2009	0.06	17.8	2.32	41			7		
	7/20/2009	0.06	16.8	3.15	57			7.5		
	8/4/2009	0.07	15.8	3.75	63			8		
	8/18/2009	0.07	16.5	3.45	82			8		
	9/11/2009	0	16.7	3.05	84			10		
	9/15/2009	0.07	16.8	3.4	120			10		
	9/29/2009	0	17.6	2.7	58			10		
	10/15/2009	0	17.4	2.8	30			10		
	10/28/2009	0.06	17.4	2.75	23.1			11		
	11/11/2009	0	17.6	2.5	23.9			11		
	12/1/2009	0	17.9	2.15	24			9		
	12/7/2009	0	18	2.5	29			16		
	12/22/2009	0	18.6	1.96	18			19		
	1/5/2010	0	18.9	1.68	18			23		
	1/19/2010	0	18.9	1.7	10			23		
	2/9/2010	0	18.5	1.88	15			23		
	2/16/2010	0	18.6	1.81	25			20		
	3/9/2010	0	18.4	1.84	19			22		
	3/16/2010	0	19.4	1.04	9.9			23		
	3/29/2010	0	19.4	1.04	7.2			19		
	4/13/2010	0	19.4	1.04	8.6			18		
	4/27/2010	0	18.8	1.34	3			0		closed
	5/12/2010	0	19.9	0.55	0			0-11		Opened for readings only
	5/26/2010	0	19	1.26	16			0-11		Opened for readings only
	6/8/2010	0	18.8	1.28	20			0-11		Opened for readings only
6/24/2010	0	19	1.28	15			0-12		Opened for readings only	
7/7/2010	0	19	1.3	18			10-0		Opened for readings only	
7/20/2010	0	19.3	1.14	11			11-0		Opened for readings only	
8/3/2010	0	19.1	1.2	17			0-12		Opened for readings only	
8/16/2010	0	19.2	1.08	24			10-0		Opened for readings only	
8/31/2010	0	19.6	0.93	23			10-0		Opened for readings only	
9/14/2010	0	19.6	0.89	20			10-0		Opened for readings only	
9/27/2010	0	19.3	0.87	13			10-0		Opened for readings only	
10/12/2010	0	19.7	0.8	9			0-10-0		Opened for measurement	
10/25/2010	0	19.6	0.85	6			0-10-0		Opened for measurement	
11/9/2010	0	19.9	0.81	6			11-0		Opened for measurement	
11/20/2010	0	19.6	0.76	3.9			14-0		Opened for measurement	
12/16/2010	0	19.8	0.66	4			14-0		Opened for measurement	
12/28/2010	0	19.9	0.6	2.3			15-0		Opened for measurement	
SVE #3	2/6/2008	100	2.4	11.9	133					
	3/12/2008	100	13.6	5.9	67		11	6%		
	3/19/2008	100	19	1.8	134		11	3000		
	3/26/2008	33	19	1.7	160		27	12600		
	4/1/2008	23	19	1.4			29	9030		
	4/8/2008	21	19.6	1.2	642		30	11300		
	4/21/2008	9	19.5	1.1	546			5789		
	5/6/2008	0	19.5	1.2	137		0	1101		
	5/22/2008	0	19.6	1.4	64		10	197		
	6/27/2008	0	17.6	0.9	87.7			300		
	7/22/2008	0	20.2	1	43		10	NM		
	7/29/2008	0					10			
	7/30/2008	2	19.8	1.1	210		9	1038		
	8/5/2008	5	19.7	1.4	230		10	1392		
	8/12/2008	2	19.8	1.4	124		10	907		
	8/19/2008	0	19.8	1.2	170		10	880		
	8/27/2008	0	19.7	1.3	224		10	1472		
	9/9/2008	0	20.2	1	2		10			
	9/16/2008	0	18.3	1	109		10			
	9/24/2008	0	18.9	1	43		10			
	9/30/2008	0	20.1	0	138		10			
	10/6/2008	0	20	1.1	43.6		15			
	10/14/2008	0	20.2	0.94	47		10			
	10/21/2008	0	20.1	0.93	79		10			
	11/4/2008	0	19.8	0.98	118		11			
	11/11/2008	0	19.9	1.2	18		12			
	11/19/2008	0	19.9	1.12	3.2		11			
	12/4/2008	0	19.5	1.02	6		10			
	12/10/2008	0	19.1	0.91	0		10			
	1/2/2009	0.14	18.7	1.42	50		20			
	1/20/2009						24			
	1/27/2009	0	20.2	0.84	7		25			
	2/4/2009								CLOSED	
	2/11/2009								No Readings Taken	
	2/17/2009								CLOSED	
	2/27/2009								CLOSED	
	3/4/2009								CLOSED	
	3/11/2009								CLOSED	
	3/17/2009								CLOSED	
	3/24/2009								CLOSED	
	3/31/2009	0	20.5	0.38	10		11			
	4/8/2009								CLOSED	
	4/13/2009								CLOSED	
	4/22/2009								CLOSED	
	4/29/2009								CLOSED	
	5/12/2009	0	20.4	0.42	8.3		12			
	5/19/2009	0	20.2	0.66	4.4		13			
	6/9/2009	0.05	19.6	0.65	68.3		11			
6/10/2009	0	19.3	1.38	55		11				
6/16/2009	0	19.2	1.42	78		11				

**Table 4**  
**SVE Extraction Point Field Data**  
**Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release**  
**Rusk County, Wisconsin**

Sample Location	Date	LEL (%)	Oxygen (%)	Carbon Dioxide (%)	PID (ppm)	Methane (%)	Vacuum (inches of water)	FID	Comment
	6/24/2009	0	18.4	2.19	9		10		
	6/30/2009	0	19	1.54	58		8		
	7/8/2009	0.19	18.3	1.72	61		8		
	7/20/2009	0.12	18.7	1.82	122		8		
	8/4/2009	0.12	18.4	1.92	121		7.5		
	8/18/2009	0.17	18.1	2.5	180		8		
	9/1/2009	0.2	17.6	2.45	293		10		
	9/15/2009	0.15	19.1	1.92	262		10		
	9/29/2009	0.08	18.9	1.72	118		10		
	10/15/2009	0.06	19.5	1.38	64		10		
	10/28/2009	0.06	19.1	1.34	53.7		11		
	11/1/2009	0.06	19.4	1.14	59.1		12		
	12/1/2009	0.07	18.2	1.68	94		10		
	12/7/2009	0	19.2	1.68	72		16		
	12/22/2009	0	19.8	0.94	47		20		
	1/9/2010	0	20.2	0.5	41		22		
	1/19/2010	0	20.3	0.55	26		20		
	2/9/2010	0	20.1	0.57	24		23		
	2/16/2010	0	20.3	0.62	70		21		
	3/2/2010	0	20.1	0.6	59		23		
	3/16/2010	0	20.4	0.5	37		23		
	3/29/2010	0	20.5	0.43	24.6		20		
	4/13/2010	0	20.1	0.6	9.3		17		
	4/27/2010	0	20.4	0.65	33		0		closed
	5/12/2010	0	20.5	0.19	1		0-12		Opened for readings only
	5/26/2010	0	19.9	0.68	24		0-11		Opened for readings only
	6/8/2010	0	19.8	0.64	21		0-13		Opened for readings only
	6/24/2010	0	19.9	0.68	16		0-12		Opened for readings only
	7/7/2010	0	19.8	0.73	14		12.0		Opened for readings only
	7/20/2010	0	20.1	0.58	11		12.0		Opened for readings only
	8/3/2010	0	20	0.62	16		0-12		Opened for readings only
	8/16/2010	0	19.8	0.71	21		10.0		Opened for readings only
	8/31/2010	0	20.3	0.44	14		12.0		Opened for readings only
	9/14/2010	0	20.4	0.22	15		12.0		Opened for readings only
	9/27/2010	0	19.9	0.39	9		12.0		Opened for readings only
	10/12/2010	0	20.6	0.14	7		0-12.0		Opened for measurement
	10/25/2010	0	20.2	0.44	5		0-12.0		opened for measurement
	11/9/2010	0	20.5	0.19	8		12.0		opened for measurement
	11/30/2010	0	20.2	0.26	5.5		15.0		opened for measurement
	12/16/2010	0	20.1	0.29	3.9		15.0		Opened for measurement
	12/28/2011	0	20.4	0.09	24		16.0		
	2/8/2008	100	13	2.1	182				
	2/27/2008	100	15.5	1.7	56		30		
	2/28/2008	100	15	2.2	53		30		
	2/29/2008	100	15.9	1.9	54		30		
	3/6/2008	100	16.2	3	5		34	43100	
	3/12/2008	63	17.6	1.7	79		12	3,74%	
	3/19/2008	95	19.6	1.4	144		11	2,900	
	3/26/2008	25	19.3	1.5	163		29	7700	
	4/1/2008	22	19.2	1.3	39		30	8613	
	4/8/2008	23	19.7	1.3	557		32	11100	
	4/15/2008						39		
	4/21/2008	3	19.9	0.8	391		40	2319	
	5/6/2008	0	20.5	0.5	47.2		0	232	
	5/22/2008	0	20.5	0.5	61		11	168	
	6/27/2008	0	18	0.3	79.3			208	
	7/2/2008	0	20.6	0.6	48		10	NM	
	7/23/2008						9		
	7/30/2008	0	20.2	0.8	15.8		9	36	
	8/5/2008	0	20.1	0.9	26		10	76	
	8/12/2008	0	20	1	29		10	53	
	8/19/2008	0	20.2	1	28		10	81	
	8/27/2008	0	20	1	54		10	172	
	9/8/2008	0	20.7	1	2		10		
	9/16/2008	0	18.5	2	101		10		
	9/24/2008	0	20.3	1	57		10		
	9/30/2008	0	20.3	0	136		10		
	10/6/2008								No Readings Taken
	10/14/2008	0	20.3	0.76	49.3				
	10/21/2008	0	20.2	0.86	77		10		
	11/4/2008	0	20.3	0.65	133		12		
	11/11/2008	0	20.5	0.78	21		11.5		
	11/19/2008	0	20.4	0.7	8.2		12		
	12/4/2008	0	20	0.76	29		11		
	12/10/2008	0	20.3	0.71	11		10		
	1/2/2009	0.08	20.3	0.78	56		20		
	1/20/2009						24		
	1/27/2009	0	20.3	0.72	15		26		
	2/4/2009	0.05	20.2	0.74	90		32		
	2/11/2009								No Readings Taken
	2/17/2009	0	20.4	0.71	9		24		
	2/27/2009	0.03	20.2	0.73	8		28		
	3/4/2009	0	20.5	0.58	6.4		28		
	3/11/2009	0	20.7	0.27	2.6		26		
	3/17/2009								CLOSED
	3/24/2009								CLOSED
	3/31/2009	0	20.4	0.49	11.6		15		
	4/8/2009								CLOSED
	4/13/2009								CLOSED
	4/22/2009								CLOSED
	4/29/2009								CLOSED
	5/12/2009	0	20.4	0.6	20.5		15		
	5/19/2009	0	20.3	0.64	7.4		15		
	6/3/2009	0.09	20.2	0.62	90.2		10		
	6/10/2009	0.09	20.3	0.6	84		10		
	6/16/2009	0.1	20.4	0.62	106		10		
	6/24/2009	0.09	20.3	0.61	100		10		
	6/30/2009	0	20.1	0.61	102		7.5		
	7/6/2009	0.76	19.9	0.62	300		7		
	7/20/2009	0.32	20.3	0.59	237		7		
	8/4/2009	0.26	20.3	0.72	231		8		
	8/18/2009	0.25	20.3	0.75	272		8		
	9/1/2009	0.43	19.6	0.98	518		10		
	9/15/2009	0.34	20	0.87	502		10		
	9/29/2009	0.13	20.1	0.93	249		10		
	10/15/2009	0.1	20.4	0.8	130		10		
	10/28/2009	0.07	19.8	0.6	211		11		
	11/1/2009	0.09	20	0.78	106		11		
	12/1/2009	0.23	19.6	0.98	280		10		
	12/7/2009	0.08	20.3	0.8	141		15		
	12/22/2009	0.07	20.3	0.67	146		19		
	1/5/2010	0.06	20.3	0.72	119		21		
	1/19/2010	0	20.5	0.67	77		21		
	2/2/2010	0	20.4	0.6	97		22		
	2/16/2010	0	20.6	0.55	110		20		
	3/2/2010	0	20.3	0.58	95		22		

**Table 4**  
**SVE Extraction Point Field Data**  
**Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release**  
**Rusk County, Wisconsin**

Sample Location	Date	LEL (%)	Oxygen (%)	Carbon Dioxide (%)	PID (ppm)	Methane (%)	Vacuum (inches of water)	FID	Comment
	3/16/2010	0	20.6	0.48	74		21		
	3/29/2010	0	20.6	0.38	90		19		
	4/13/2010	0	20.6	0.34	68		17		
	4/27/2010	0	20.5	0.31	73		28		
	5/12/2010	0.05	20.4	0.41	79		25		
	5/26/2010	0	20.5	0.44	78		21		
	6/8/2010	0	20.2	0.52	44		22		
	6/19/2010	0	20.2	0.52	16		23		
	7/7/2010	0	20.3	0.53	15		22		
	7/20/2010	0	20.2	0.47	16		21		
	8/9/2010	0	20.2	0.5	18		16		
	8/16/2010	0	19.9	0.5	24		15		
	8/31/2010	0	20.1	0.57	17		15		
	9/14/2010	0	20	0.6	27		16		
	9/27/2010	0	19.7	0.65	7		17		
	10/12/2010	0	19.9	0.77	1		18		
	10/25/2010	0	20.1	0.72	19		19		
	11/9/2010	0	20.2	0.65	14		20		
	11/30/2010	0	20.2	0.6	0.3		24		
	12/16/2010	0	20.2	0.54	0.8		26		
	12/28/2011	0	20.2	0.6	0.1		26		
	1/17/2008	75	17.8	1.4	460		31		
	1/17/2008	63	17.1	1.4	139		mm		
	1/18/2008	69	18	1.4	325		29		
	1/19/2008	68	17.2	1.6	430	82.2	29		
	1/19/2008	69	17.6	1.6	344	80.8	29		
	1/20/2008	61	18	1.6	365	80.4	31		
	1/20/2008	66	17.9	1.6	337	80.4	30		
	1/23/2008	72	17.7	1.7	252	80.6	35		
	1/24/2008	78	17.5	1.7	305		46		
	1/31/2008	86	16.3	1.8	1656		45		
	2/6/2008	100	16.9	2	108		34		
	2/27/2008	92	16.8	2.1	54		30		
	2/28/2008	100	17.5	2	124		30		
	2/29/2008	100	17.2	1.9	96		30		
	3/6/2008	24	18.3	1.7	49		32	11200	
	3/12/2008	16	18.1	1.9	121		12	6661	
	3/19/2008	12	19.7	1.1	260		11	2360	
	4/21/2008	0	20.4	0.7	184			1085	
	5/6/2008	0	20.6	0.5	74.5		0	695	
	5/22/2008	0	20.7	0.5	167		10	950	
	6/27/2008	0	18.2	0.3	81			282	
	7/22/2008	0	20.7	0.3	95		10	NM	
	7/23/2008						9		
	7/30/2008	0	20.4	0.5	224		9	1040	
	8/5/2008	3	20.4	0.5	206		10	1128	
	8/12/2008	0	20.3	0.6	105		10	664	
	8/19/2008	0	20.5	0.5	126		10	615	
	8/27/2008	0	20.4	0.5	189		9.5	1106	
	9/9/2008	0	20.2	0	1.3		10		
	9/16/2008	0	18.5	1	97		9.5		
	9/24/2008	0	20.4	0	31		10		
	9/30/2008	0	20.4	0	125		10		
	10/6/2008								No Readings Taken
	10/14/2008	0	20.4	0.61	41		10		
	10/21/2008	0	20.3	0.78	72		10		
	11/4/2008	0	20.4	0.61	138		11		
	11/11/2008	0	20.4	0.78	18		11		
	11/19/2008	0	20.4	0.71	4		12		
	12/4/2008	0.05	19.9	0.76	11		10		
	12/10/2008	0	20.2	0.72	9		10		
	1/2/2009	0.08	20.3	0.78	54		20		
	1/20/2009						24		
	1/27/2009	0	20.3	0.84	15		25		
	2/4/2009	0.05	20.2	0.85	75		32		
	2/11/2009								No Readings Taken
	2/17/2009	0	20.4	0.75	15		22		
	2/27/2009	0.05	20.2	0.75	14		26		
	3/4/2009	0	20.5	0.54	10.1		26		
	3/11/2009	0	20.7	0.18	8		24		
	3/17/2009								CLOSED
	3/24/2009								CLOSED
	3/31/2009	0	20.5	0.33	5.8		12		
	4/8/2009								CLOSED
	4/15/2009								CLOSED
	4/22/2009								CLOSED
	4/29/2009								CLOSED
	5/12/2009	0	20.5	0.31	15.3		12		
	5/19/2009	0	20.6	0.38	7.2		13		
	6/2/2009	0.06	20.5	0.27	65		11		
	6/10/2009	0.07	20.4	0.46	66		11		
	6/16/2009	0.06	20.4	0.51	86		11		
	6/24/2009	0	20.3	0.57	69		11		
	6/30/2009	0.13	20.4	0.47	102		7.5		
	7/8/2009	0.76	19.9	0.62	300		7		
	7/20/2009	0.32	20.3	0.59	237		7		
	8/4/2009	0.17	20.3	0.59	168		8		
	8/18/2009	0.18	20.7	0.71	232		8		
	9/1/2009	0.34	19.9	0.84	447		10		
	9/15/2009	0.27	20.1	0.84	467		10		
	9/29/2009	0.11	20.2	0.78	249		10		
	10/15/2009	0.1	20.5	0.67	144		11		
	10/28/2009	0.13	20.1	0.69	182		12		
	11/11/2009	0.09	20.1	0.85	117		10		
	12/1/2009	0.2	19.9	0.72	249		10		
	12/7/2009	0.09	20.4	0.74	177		15		
	12/22/2009	0.07	20.5	0.62	153		18		
	1/5/2010	0.06	20.6	0.56	93		20		
	1/19/2010	0	20.7	0.46	92		22		
	2/9/2010	0	20.7	0.3	76		23		
	2/16/2010	0	20.8	0.2	90		19		
	3/9/2010	0	20.4	0.26	75		21		
	3/16/2010	0	20.7	0.34	70.1		22		
	3/29/2010	0	20.6	0.29	78.6		29		
	4/13/2010	0	20.6	0.28	66		18		
	4/27/2010	0	20.6	0.26	54		29		
	5/12/2010	0	20.4	0.28	60		23		
	5/26/2010	0	20.7	0.26	47		21		
	6/9/2010	0	20.4	0.31	54		22		
	6/24/2010	0	20.4	0.32	32		23		
	7/7/2010	0	20.3	0.46	17		23		
	7/20/2010	0	19.9	0.58	12		21		

**Table 4**  
**SVE Extraction Point Field Data**  
**Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release**  
**Rusk County, Wisconsin**

Sample Location	Date	LEL (%)	Oxygen (%)	Carbon Dioxide (%)	PID (ppm)	Methane (%)	Vacuum (inches of water)	FID	Comment
	8/3/2010	0	19.6	0.62	26		16		
	8/16/2010	0	19.5	0.84	28		15		
	8/31/2010	0	19.9	0.79	20		15		
	9/14/2010	0	19.9	0.83	25		16		
	9/27/2010	0	19.7	0.81	7		18		
	10/12/2010	0	20.1	0.83	2.5		18		
	10/25/2010	0	20.4	0.71	12		19		
	11/9/2010	0	20.4	0.66	11		20		
	11/30/2010	0	20.3	0.57	0.8		24		
	12/16/2010	0	20.3	0.51	0.5		26		
	12/28/2010	0	20.3	0.49			27		
	2/6/2008	100	9.7	4.9	118.5				
	2/27/2008	100	10.7	6.8	53		30		
	2/28/2008	100	9.8	7.6	89		30		
	2/29/2008	100	9.1	8.1	57		30		
	3/6/2008	100	11.9	6.7	35		32	12200	
	3/12/2008	100	16.2	3.4	134		12	11%	
	3/19/2008	26	20.3	0.5	111		11	4275	
	4/21/2008	20	20.3	0.6	484			10200	
	4/28/2008	9	20.4	0.8	535		37	5069	
	5/6/2008	13	20.1	0.6	754		34	8483	
	5/22/2008	10	20.4	0.6	354		32	4725	
	6/4/2008	11	20.2					4136	
	6/27/2008	8	18	0.6	357			1744	
	7/22/2008	13	20.1	0.8	477		10	NM	
	7/23/2008								
	7/29/2008	10	20	0.9	504		10	3830	
	8/5/2008	17	20	0.9	466		10	4039	
	8/12/2008	8	19.9	1	197		10	2930	
	8/19/2008	8	20	0.9	358		10	2385	
	8/27/2008	10	19.7	0.9	403		10	4075	
	9/9/2008	0	20.6	1	1.3		10		
	9/16/2008	0	18.4	3	96		10		
	9/24/2008	0	20.2	1	53		10		
	9/30/2008	0	20.1	0	208		10		
	10/6/2008								No Readings Taken
	10/14/2008	0	19.9	1.22	80		10		
	10/21/2008	0	20	1.16	76		10		
	11/4/2008	0	20.1	0.89	168		12.5		
	11/11/2008	0	20.2	0.98	32		12		
	11/19/2008	0	20.2	0.85	16		12		
	12/4/2008	0.1	19.7	0.94	20		11.5		
	12/10/2008	0.14	19.9	0.94	25		10		
	1/2/2009	0.11	18.6	1.52	64		20		
	1/20/2009						25		
	1/27/2009	0.08	20.2	0.9	28		26		
	2/4/2009	0.09	20.1	0.8	100		32		
	2/11/2009								No Readings Taken
	2/17/2009	0.12	19.9	0.91	45		23		
	2/27/2009	0.08	20.1	0.92	17		26		
	3/4/2009	0.09	20.1	0.88	88.5		27		
	3/11/2009	0.06	20.2	0.89	78		30		
	3/17/2009	0.22	19.9	0.92	338		29		
	3/24/2009	0.14	20.1	0.66	258		31		
	3/31/2009	0	20.5	0.33	85		13		
	4/9/2009	0.08	20.3	0.35	154		28		
	4/13/2009	0	20.7	0.3	53		27		
	4/22/2009	0.06	20.4	0.36	86		23		
	4/29/2009	0	20.4	0.28	84		26		
	5/12/2009	0	20.5	0.35	46.7		12		
	5/19/2009	0	20.7	0.29	9.9		14		
	6/3/2009	0	20.4	0.29	60		12		
	6/10/2009	0.06	20.1	0.61	85		12		
	6/16/2009	0.06	20.2	0.65	107		12		
	6/24/2009	0.07	20.1	0.71	106		12		
	6/30/2009	0.06	20.2	0.68	99		8		
	7/8/2009	0.2	20.1	0.64	198		8		
	7/20/2009	0.22	20.2	0.79	175		8		
	8/4/2009	0.22	19.9	0.89	217		8		
	8/18/2009	0.24	19.6	1.2	246		7		
	9/1/2009	0.38	19.1	1.46	427		10		
	9/15/2009	0.35	19.7	11.42	446		9		
	9/29/2009	0.19	20.1	0.88	293		11		
	10/15/2009	0.13	20.6	0.52	170		10		
	10/28/2009	0.19	20.1	0.52	194		10		
	11/11/2009	0.11	20.4	0.35	151		11		
	12/1/2009	0.26	19.1	0.82	306		9		
	12/7/2009	0.13	20.3	0.71	219		14		
	12/22/2009	0.12	20.5	0.4	209		18		
	1/5/2010	0.08	20.6	0.2	154		20		
	1/19/2010	0.05	20.7	0.2	128		21		
	2/9/2010	0.08	20.5	0.24	114		23		
	2/16/2010	0.07	20.6	0.26	177		20		
	3/2/2010	0.08	20.5	0.24	158		22		
	3/16/2010	0	20.6	0.29	107		22		
	3/29/2010	0	20.4	0.29	133		20		
	4/13/2010	0.05	20.5	0.29	94		16		
	4/27/2010	0	20.5	0.3	98		27		
	5/12/2010	0.08	20	0.54	140		22		
	5/29/2010	0.06	20.2	0.58	102		20		
	6/8/2010	0.06	19.8	0.66	75		21		
	6/24/2010	0.05	20	0.65	58		21		
	7/7/2010	0	20	0.71	51		21		
	7/20/2010	0	20	0.67	26		70		
	8/2/2010	0.02	20	0.66	55		15		
	8/16/2010	0	19.8	0.74	84		14		
	8/31/2010	0	20.1	0.74	58		15		
	9/14/2010	0	20.1	0.69	60		15		
	9/27/2010	0	19.9	0.6	36		17		
	10/12/2010	0	20.2	0.63	18		17		
	10/25/2010	0	20.5	0.54	29		18		
	11/9/2010	0	20.6	0.37	10		20		
	11/30/2010	0	20.4	0.27	2.9		24		
	12/16/2010	0	20.3	0.25	2.2		25		
	12/28/2010	0	20.3	0.27	2.4		27		
	1/24/2008	100	15.9	2.3	332		15		
	1/31/2008	100	15.5	2.5	1473		5		
	2/6/2008	100	15.5	2.5	149.8				
	2/27/2008	100	15.9	2.9			30		
	2/28/2008	100	16.7	3.1	130		29		
	2/29/2008	100	16.3	3.1	94		30		
	3/6/2008	16	17.6	2.8	102		32	5630	
	3/12/2008	2	16.9	2.9	123		11	2298	
	3/19/2008	3	18.1	2.4	26		10	299	

**Table 4**  
**SVE Extraction Point Field Data**  
**Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release**  
**Rusk County, Wisconsin**

Sample Location	Date	LEL (%)	Oxygen (%)	Carbon Dioxide (%)	PID (ppm)	Methane (%)	Vacuum (inches of water)	FID	Comment	
SVE #7	4/21/2008	0	20.2	1.5	94.1			415		
	5/6/2008	0	20.7	0.3	53.7		0	287		
	5/22/2008	0	20.9	0.2	63		10	199		
	6/27/2008	0	18.1	0.2	50			114		
	7/23/2008	0	20.7	0.2	38.6		9	NM		
	7/23/2008						9			
	7/30/2008	2	19.4	0.6	95		9	704		
	8/5/2008	2	19	0.9	96		9	775		
	8/12/2008	0	19.7	1.4	62		10	522		
	8/19/2008	0	20.1	1.5	83		10	560		
	8/27/2008	0	19.8	1.4	32		9	300		
	9/2/2008	0	20.2	1	1.7		9.5			
	9/16/2008	0	18.1	2	96		9			
	9/24/2008	0	20.1	1	177		9.5			
	9/30/2008	0	20.1	0	238		9.5			
	10/6/2008									No Readings Taken
	10/14/2008	0.07	19.9	1	110		10			
	10/21/2008	0.07	19.7	1.04	90		10			
	11/4/2008	0	19.9	0.92	187		11			
	11/11/2008	0.06	20	1.18	72		11.5			
	11/19/2008	0	20.2	1.06	24		12			
	12/4/2008	0.09	20.4	0.08	45		11			
	12/10/2008	0.08	20.7	0.08	54		10			
	1/2/2009	0.1	18	2.1	61		20			
	1/20/2009						22			
	1/27/2009	0.02	20.8	0.1	41		25			
	2/4/2009	0.06	20.6	0.1	100		30			
	2/11/2009									No Readings Taken
	2/17/2009	0.05	20.9	0.08	66		20			
	2/27/2009	0.06	20.8	0.08	20		23			
	3/4/2009	0	20.8	0.06	65.4		24			
	3/11/2009	0.05	20.9	0.06	60		26			
	3/17/2009	0.06	20.7	0.05	95.5		25			
	3/24/2009	0.11	20.3	0.44	255		29			
	3/31/2009	0.06	20.5	0.33	117		12			
	4/8/2009	0.08	20.3	0.35	175		26			
	4/13/2009	0.07	20.6	0.38	37		24			
	4/22/2009	0	20.4	0.35	75		23			
	4/29/2009	0	20.1	0.39	53		25			
	5/12/2009	0	20.2	0.35	46.7		12			
	5/19/2009	0	20.3	0.42	12.7		12			
	6/3/2009	0	19.9	0.58	44		11			
	6/10/2009	0.05	19.6	0.83	70		11			
	6/16/2009	0	19.5	0.98	99		11			
	6/24/2009	0	19.3	1.16	80		11			
	6/30/2009	0.05	19.3	1.2	84		7			
	7/8/2009	0.1	19.2	1.24	307		7.5			
	7/20/2009	0.15	19.2	1.59	130		8			
	8/4/2009	0.1	18.4	2	150		8			
	8/18/2009	0.12	17.8	2.55	185		8			
	9/1/2009	0.15	18	2.65	268		10			
	9/15/2009	0.12	18.4	2.65	257		10			
	9/29/2009	0.1	19	2.2	177		10			
	10/15/2009	0.07	20.4	0.68	110		10			
	10/28/2009	0.12	19.5	1.64	157		11			
	11/1/2009	0.09	20	1.12	82.1		12			
	12/1/2009	0.19	19.9	1.08	248		10			
	12/7/2009	0.09	20.2	1.1	152		16			
	12/22/2009	0.07	20.4	0.68	139		18			
	1/5/2010	0.06	20.6	0.2	107		20			
	1/19/2010	0.05	20.7	0.42	103		21			
	2/2/2010	0.06	20.6	0.34	100		22			
	2/16/2010	0.05	20.7	0.27	109		19			
	3/2/2010	0.06	20.6	0.31	98		23			
	3/16/2010	0	20.6	0.27	100		22			
	3/29/2010	0.05	20.5	0.27	110		19			
	4/13/2010	0	20.6	0.28	66		18			
	4/27/2010	0.06	20.4	0.31	96		27			
	5/12/2010	0	20.7	0.03	71		22			
	5/26/2010	0.05	20.5	0.42	67		20			
	6/9/2010	0.06	20	0.53	71		20			
	6/24/2010	0	19.9	0.69	51		23			
7/7/2010	0	20.8	0.1	25		22				
7/20/2010	0	20	0.1	18		22				
8/3/2010	0	20.3	0.16	36		16				
8/16/2010	0	20.7	0.03	27		15				
8/31/2010	0	19.4	1.28	46		15				
9/14/2010	0	19.6	1.24	43		15				
9/27/2010	0	19.6	1.02	25		17				
10/12/2010	0	20.2	0.03	12.2		18				
10/25/2010	0	20.4	0.67	21		19				
11/9/2010	0	20.5	0.49	11		20				
11/30/2010	0	18.9	1.38	2.7		23				
12/16/2010	0	20.3	0.27	4.3		25				
12/28/2011	0	20.4	0.22	3.5		25				
	2/6/2008	100	0	15.1	155					
	3/6/2008	100	10.5	7.4	96		31	82000		
	3/17/2008	100	16.1	2.8	155		12	11		
	3/19/2008	30	18.7	1.9	174		10	5340		
	4/21/2008	0	18.4	1.2	135			626		
	5/6/2008	0	18.4	1.1	81.7		0	552		
	5/22/2008	0	17.7	1.7	104		10	323		
	6/27/2008	0	16.3	1.1	107			331		
	7/22/2008	0	17.8	1.4	43		9	NM		
	7/23/2008						9			
	7/30/2008	3	18.9	1.4	273		9	1198		
	8/5/2008	5	18.9	1.6	289		9	1480		
	8/12/2008	3	19.1	1.5	162		9.5	1390		
	8/19/2008	0	19.4	1.3	265		10	1150		
	8/27/2008	0	18.4	1.6	297		9	1308		
	9/9/2008	0	20.1	1	1.5		9.5			
	9/16/2008	0	17.6	2	97		10			
	9/24/2008	0	19.7	1	163		10			
	9/30/2008	0	19.4	2	218		10			
	10/6/2008	0	19.4	1.38	59		15			
	10/14/2008	0	19.3	1.36	96		10			
	10/21/2008	0	19.4	1.3	93		10			
	11/4/2008	0	19.4	1.2	137		11			
	11/11/2008	0	19.1	1.48	54		10.5			
	11/19/2008	0	19	1.46	26		12			
	12/4/2008	0.07	14.5	2.8	37		11			
	12/19/2008	0.06	16.3	2.75	36		11			



**Table 4**  
**SVE Extraction Point Field Data**  
**Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release**  
**Rusk County, Wisconsin**

Sample Location	Date	LEL (%)	Oxygen (%)	Carbon Dioxide (%)	PID (ppm)	Methane (%)	Vacuum (inches of water)	FID	Comment
SVE #8	1/2/2009	0.1	17.7	2.25	64		20		
	1/20/2009						24		
	1/27/2009	0	19.3	1.46	27		25		
	2/4/2009	0.05	18.7	1.58	88		30		
	2/11/2009								No Readings Taken
	2/17/2009	0	16.2	2.65	49		20		
	2/27/2009	0	18.3	2.55	44		25		
	3/4/2009	0	18.8	1.58	39.2		26		
	3/11/2009	0	18.3	2.1	52		26		
	3/17/2009	0	17.4	2.15	104		26		
	3/24/2009	0.08	18.6	1.6	109		28		
	3/31/2009	0	20.5	0.06	36		13		
	4/8/2009	0.05	18.7	1.4	71		26		
	4/13/2009	0	18.7	1.56	82		24		
	4/22/2009	0	17.5	1.92	65		22		
	4/29/2009	0	18.6	1.56	65		23		
	5/12/2009	0	18.7	1.58	31		12		
	5/19/2009	0	20.3	0.42	12.7		12		
	6/9/2009	0	13.4	3.05	34		10		
	6/10/2009	0	19	1.5	62		10		
	6/16/2009	0	18.9	1.66	90		10		
	6/24/2009	0	18.7	1.78	81		10		
	6/30/2009	0	18.8	1.72	73		8		
	7/8/2009	0.07	16.3	2.75	118		7		
	7/20/2009	0.1	18.5	2.05	115		7.5		
	8/4/2009	0.1	18.3	2.25	146		8		
	8/18/2009	0.11	18	2.4	170		8		
	9/1/2009	0.09	19.3	1.78	178		10		
	9/15/2009	0.14	17.8	2.55	264		10		
	9/29/2009	0.09	18.2	2.3	144		10		
	10/15/2009	0.06	18.2	2.25	8		10		
	10/28/2009	0.09	18.6	1.72	120		11		
	11/11/2009	0.05	18.8	1.58	75.8		12		
	12/1/2009	0.15	14.3	4.18	155		10		
	12/7/2009	0	18.2	2.1	100		17		
	12/22/2009	0	18.4	1.86	86		21		
	1/5/2010	0	18.8	1.7	62		21		
	1/19/2010	0	18.9	1.68	54		22		
	2/2/2010	0	19.1	1.5	57		23		
	2/16/2010	0	19	1.56	73		20		
	3/3/2010	0	19.1	1.53	61		23		
	3/16/2010	0	19.6	0.93	48		23		
	3/29/2010	0	19.6	0.85	51		19		
	4/13/2010	0	19.3	1.02	47		17		
	4/27/2010	0	19.6	0.87	59		27		
	5/12/2010	0	17.3	1.82	52		22		
	5/26/2010	0	17.8	1.62	47		20		
	6/9/2010	0	16.9	2.15	37		20		
	6/24/2010	0	16.8	2.2	34		23		
	7/7/2010	0	17.1	2.15	20		21		
	7/20/2010	0	18.2	1.54	18		20		
	8/3/2010	0	18.8	1.48	22		15		
	8/16/2010	0	17.2	1.66	18		14		
	8/31/2010	0	18.6	1.44	23		15		
	9/14/2010	0	18.7	1.46	25		15		
	9/27/2010	18	18	1.66	14		17		
10/12/2010	0	18.2	1.64	8		18			
10/25/2010	0	18	1.74	14		19			
11/9/2010	0	18.8	1.4	7		21			
11/30/2010	0	18.9	1.38	1.6		26			
12/16/2010	0	19	1.08	2.6		28			
12/28/2011	0	19.1	1.16	1.7		27			
SVE #9	2/8/2008	100	8.2	6.3	101.3				
	2/28/2008	100	6.2	9.4	70		16		
	2/29/2008	100	5.8	9.7	48		18		
	3/6/2008	100	12.5	6.4	104		31	74900	
	3/12/2008	100	16.4	2.5	126		12	11%	
	3/19/2008	74	19.5	1.6	125		11	16800	
	3/26/2008	40	19.1	1.5	163		29	15800	
	4/1/2008	34	19.2	1			30	14700	
	4/8/2008	36	19.6	1.1	623		31	20100	
	4/15/2008						38		
	4/21/2008	17	19.7	0.8	706		39	8922	
	4/28/2008	9	19.8	1.2	571		37	4667	
	5/6/2008	9	19.5	0.9	480		35	6264	
	5/22/2008	8	19.6	1	375		32	3850	
	6/4/2008	8	19.3					3245	
	6/27/2008	5	17.4	0.9	377			1676	
	7/2/2008	14	19.4	1.3	491		10	NM	
	7/23/2008						10		
	7/30/2008	12	19.8	1.2	608		9	4538	
	8/5/2008	23	19.8	1.3	605		10	5310	
	8/12/2008	7	19.8	1.3	215		10	2598	
	8/19/2008	7	20	1.2	375		10	2125	
	8/27/2008	14	19.6	1.3	516		10	5610	
	9/9/2008	0	20.7	1	1.3		10		
	9/16/2008	0	18.1	2	93		10		
	9/24/2008	0	20.1	1	168		10		
	9/30/2008	0	20.1	0	237		10		
	10/6/2008	0	19.9	1.28	118		15		
	10/14/2008	0	20	1.3	109		10		
	10/21/2008	0	20	1.22	94		10		
	11/4/2008	0	20.4	0.91	173		12		
	11/11/2008	0	20.1	1.06	56		11.5		
	11/19/2008	0	20.1	0.97	27		12		
	12/4/2008	0.08	19.6	1.08	33		11		
	12/10/2008	0.1	20.2	0.71	35		10		
	1/2/2009	0.09	17.9	2.1	65		20		
	1/20/2009						23		
	1/27/2009	0	20.2	0.91	28		26		
	2/4/2009	0.06	19.9	0.97	96		30		
	2/11/2009								No Readings Taken
	2/17/2009	0.1	19.6	1.14	62		22		
	2/27/2009	0.06	19.7	1.21	31		27		
	3/4/2009	0.07	20	1	63.1		27		
	3/11/2009	0.06	20.2	0.94	79		28		
	3/17/2009	0.14	19.8	0.9	248		29		
	3/24/2009	0.1	19.9	0.88	197		31		
	3/31/2009	0	20.5	0.22	38		13		
	4/8/2009	0.07	19.9	0.72	143		28		
	4/13/2009	0.07	20.2	0.76	140		26		
	4/22/2009	0.12	19.9	0.8	150		24		
	4/29/2009	0.06	19.9	0.75	148		25		
	5/12/2009	0	20.2	0.73	80.1		12.5		

**Table 4**  
**SVE Extraction Point Field Data**  
**Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release**  
**Rusk County, Wisconsin**

Sample Location	Date	LEL (%)	Oxygen (%)	Carbon Dioxide (%)	PID (ppm)	Methane (%)	Vacuum (inches of water)	FID	Comment
	5/19/2009	0	19.6	0.83	38		13		
	6/3/2009	0.12	18.4	1.42	177		11		
	6/10/2009	0.08	20	0.88	110		11		
	6/16/2009	0	20.7	0.11	28		11.5		
	6/24/2009	0.06	20	0.99	137		11		
	6/30/2009	0	18.8	1.72	73		8		
	7/8/2009	0.25	19.4	1.22	110		8		
	7/20/2009	0.15	20.1	0.97	175		8		
	8/4/2009	0.22	20	1.12	236		8		
	8/18/2009	0.22	20	1.24	244		8		
	9/1/2009	0.1	18.9	1.3	313		10		
	9/15/2009	0.25	19.7	1.46	392		10		
	9/29/2009	0.16	19.9	1.16	286		10		
	10/15/2009	0.14	19.9	1.1	176		11		
	10/28/2009	0.14	19.8	1.04	171		12		
	11/1/2009	0.09	20	0.86	141		12		
	12/1/2009	0.24	18.6	1.46	282		11		
	12/7/2009	0.08	20.1	0.97	164		16		
	12/22/2009	0.09	20.1	0.84	146		20		
	1/5/2010	0.07	20.2	0.78	132		23		
	1/19/2010	0.06	20.3	0.76	110		23		
	2/9/2010	0.07	20.2	0.75	160		24		
	2/16/2010	0.07	20.3	0.7	179		22		
	3/2/2010	0.08	20.2	0.72	172		24		
	3/16/2010	0	20.4	0.6	133		24		
	3/29/2010	0	20.3	0.53	100		20		
	4/13/2010	0.06	20.4	0.48	111		18		
	4/27/2010	0.08	20.5	0.51	102		29		
	5/12/2010	0.06	20	0.59	100		23		
	5/26/2010	0.06	20.3	0.59	132		21		
	6/9/2010	0	20	0.68	66		22		
	6/23/2010	0	19.8	0.78	74		24		
	7/7/2010	0	19.9	0.82	40		22		
	7/20/2010	0	19.8	0.78	52		22		
	8/3/2010	0	19.8	0.77	18		17		
	8/16/2010	0	19.6	0.8	100		15		
	8/31/2010	0	19.8	0.82	55		16		
	9/14/2010	0	19.7	0.82	51		16		
	9/27/2010	0	19.5	0.84	29		18		
	10/12/2010	0	19.7	0.9	16		19		
	10/25/2010	0	19.8	0.85	18		19		
	11/9/2010	0	20.1	0.82	7		21		
	11/30/2010	0	19.8	0.8	2		25		
	12/16/2010	0	19.9	0.74	2.2		28		
	12/28/2011	0	20.1	0.71	2.3		27		
	2/6/2008	100	14.4	2.2	109.4				
	2/27/2008	100	15	2.6	60		30		
	2/28/2008	100	16	2.6	97		29		
	2/29/2008	100	16.5	2	47		30		
	3/6/2008	96	17.2	2.2	130		31	36500	
	3/12/2008	80	17.3	2	186		12	5.8%	
	3/19/2008	70	19.7	1.7	132		14	14700	
	3/26/2008	21	20.2	1	186		28	600	
	4/1/2008	26	19.7	1	29		29	10860	
	4/8/2008	30	20.1	1.2	588		30	15400	
	4/15/2008						38		
	4/21/2008	15	20	1.3	659		39	5783	
	4/28/2008	7	20.6	1.3	454		36	3707	
	5/6/2008	7	20.6	0.5	442		35	6238	
	5/22/2008	12	20.9	0.4	413		31	5025	
	6/4/2008	9	20.3					3240	
	6/27/2008	6	18	0.4	357			1989	
	7/2/2008	14	20.2	0.6	446		10	NM	
	7/23/2008						10		
	7/30/2008	11	19.8	0.7	561		9	4140	
	8/5/2008	19	19.7	0.8	536		10	4625	
	8/12/2008	10	19.8	0.9	240		10	3822	
	8/19/2008	10	20.2	0.9	445		10	2930	
	8/27/2008	11	19.9	0.9	489		10	4640	
	9/9/2008	0	20.9	0	2.5		10		
	9/16/2008	0	18.2	0	98		9		
	9/24/2008	0	20.3	1	187		10		
	9/30/2008	0	20.3	0	245		10		
	10/6/2008	0	20.1	0.94	154		15		
	10/14/2008	0.06	20.1	1	128		10		
	10/21/2008	0.06	20.1	0.99	101		10		
	11/4/2008	0	20.3	0.74	189		12		
	11/11/2008	0.06	20.2	0.9	64		11.5		
	11/19/2008	0	20.1	0.78	24		12		
	12/4/2008	0.1	19.8	0.85	45		11		
	12/10/2008	0.12	20.2	0.71	55		11		
	1/2/2009	0.09	17.8	2.1	65		20		
	1/20/2009						24		
	1/27/2008	0.08	20.4	0.83	38		26		
	2/4/2009	0.07	20.3	0.78	63		31		
	2/11/2009								No Readings Taken
	2/17/2009	0.09	20.5	0.49	81		21		
	2/27/2009	0.06	20.3	0.62	40		25		
	3/4/2009	0.07	20.6	0.35	83.8		25		
	3/11/2009	0.06	20.7	0.36	84		28		
	3/17/2009	0.1	20.5	0.39	175		24		
	3/24/2009	0.07	20.4	0.34	178		29		
	3/31/2009	0	20.4	0.16	51		12		
	4/8/2009	0.07	20.3	0.33	133		26		
	4/13/2009	0.06	20.5	0.34	131		24		
	4/22/2009	0.06	20.4	0.34	108		22		
	4/29/2009	0.07	20.2	0.32	157		23		
	5/12/2009	0	20.4	0.32	104.2		11.5		
	5/19/2009	0	20.6	0.34	64		12		
	6/3/2009	0.08	20.6	0.21	155		11		
	6/10/2009	0.09	29.3	0.41	125		11		
	6/16/2009	0	29.4	0.42	109		11		
	6/24/2009	0.07	20.4	0.5	158		11		
	6/30/2009	0	20.4	0.38	116		8		
	7/8/2009	0.15	20.6	0.34	213		7.5		
	7/20/2009	0.11	20.8	0.36	158		8		
	8/4/2009	0.19	20.5	0.51	230		8		
	8/18/2009	0.18	20.3	0.64	2.4		8		
	9/1/2009	0.3	19.5	0.73	314		10		
	9/15/2009	0.21	20	0.95	355		10		
	9/29/2009	0.14	20.4	0.6	272		10		
	10/15/2009	0.15	20.4	0.56	171		11		
	10/28/2009	0.15	20.2	0.57	157		12		
	11/1/2009	0.12	20.5	0.5	177		12		
	12/1/2009	0.27	20.1	0.55	267		10		
	12/7/2009	0.12	20.5	0.56	181		17		

SVE #10

**Table 4  
SVE Extraction Point Field Data  
Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release  
Rusk County, Wisconsin**

Sample Location	Date	LEL (%)	Oxygen (%)	Carbon Dioxide (%)	PID (ppm)	Methane (%)	Vacuum (inches of water)	FID	Comment
	12/22/2009	0.11	20.5	0.44	164		20		
	1/5/2010	0.1	20.6	0.37	155		21		
	1/19/2010	0.07	20.7	0.34	154		22		
	2/3/2010	0.09	20.6	0.3	161		22		
	2/16/2010	0.08	20.7	0.29	222		20		
	3/2/2010	0.07	20.7	0.31	196		23		
	3/16/2010	0.06	20.7	0.23	139		23		
	3/29/2010	0.06	20.6	0.2	132		20		
	4/13/2010	0.09	20.5	0.29	119		17		
	4/27/2010	0.07	20.6	0.18	132		28		
	5/1/2010	0.09	20.5	0.22	164		23		
	5/26/2010	0.07	20.7	0.23	149		20		
	6/8/2010	0.06	20.4	0.32	80		21		
	6/24/2010	0	20.4	0.35	105		23		
	7/7/2010	0	20.3	0.48	78		22		
	7/20/2010	0	20.2	0.52	72		21		
	8/3/2010	0	20.2	0.58	98		16		
	8/16/2010	0	19.9	0.67	128		15		
	8/31/2010	0	20.1	0.7	92		15		
	9/14/2010	0	20.1	0.69	103		16		
	9/27/2010	0.05	20	0.62	66		18		
	10/12/2010	0	20.4	0.97	41		18		
	10/25/2010	0	20.5	0.55	29		19		
	11/9/2010	0	20.5	0.43	10		20		
	11/30/2010	0	20.3	0.33	3.7		23		
	12/16/2010	0	20.3	0.27	6.7		26		
	12/28/2011	0	20.3	0.24	5.3		25		
	2/6/2008	100	0	15.6	135.4				
	3/1/2008	100	15.8	5.1	161		11	>15%	
	3/19/2008	100	18.2	2.2	121		10	>70000	
	3/26/2008	68	19	1.8	148		27	57600	
	4/1/2008	56	19	1.4			29	42300	
	4/8/2008	47	19.4	1.4	1607		30	40100	
	4/15/2008						39		
	4/21/2008	20	19.5	1.1	1045		39	11800	
	4/28/2008	15	19.1	1.4	1325		36	10200	
	5/6/2008	10	18.8	1	709		34	7224	
	5/22/2008	5	18.6	1.8	634		31	4250	
	6/4/2008	10	18.6					3901	
	6/27/2008	11	16.5	1.2	856			3990	
	7/2/2008	10	15.6	3.2	592		9	NM	
	7/23/2008						9		
	7/30/2008	17	12.9	4.7	1454		9	6320	
	8/5/2008	31	11.8	5.5	1405		9	6500+ flame out, low O2	
	8/12/2008	19	15	3.9	496		9.5	9015	
	8/19/2008	25	15.1	4	145		10	7050	
	8/27/2008	10	9.2	7.3	728			NA	
	9/9/2008	0	20.7	1	1.2			9.5	
	9/16/2008	0	17.1	2	95			9.5	
	9/24/2008	0	17.6	1	175			9.5	
	9/30/2008	0	19.4	0	245			9.5	
	10/6/2008	0.8	14.3	4.25	83.5			15	
	10/14/2008	0	14.6	4.2	118			10	
	10/21/2008	0	14.7	4.1	111			10	
	11/4/2008	0	16.3	2.75	177			11.5	
	11/11/2008	0	15	3.95	70			11.5	
	11/19/2008	0	14.7	4.02	39			12.5	
	12/4/2008	0.21	4.1	7.7	51			11	
	12/10/2008	0.22	5.1	7.6	48			10	
	1/2/2009	0.18	6.2	9.4	55			20	
	1/20/2009							24	
	1/27/2009	0.06	17	2.95	50			26	
	2/4/2009	0.05	13.1	5	95			30	
	2/11/2009								No Readings Taken
	2/17/2009	0.08	11.7	5.4	80			19	
	2/27/2009	0.05	14.1	4.98	55			23	
	3/4/2009	0.06	16.6	3.05	71			23	
	3/11/2009	0.05	17.1	2.9	76			25	
	3/17/2009	0.07	15.9	3.3	134			24	
	3/24/2009	0.06	17.6	2.4	140			27	
	3/31/2009	0.01	19.6	0.86	35			11	
	4/8/2009	0.05	17.2	2.4	88			24	
	4/13/2009	0.00	17.8	2.3	88			21	
	4/22/2009	0.06	14.7	3.35	185			21	
	4/29/2009	0.00	17.7	2.2	94			23	
	5/1/2009	0.00	17	2.65	65			11	
	5/19/2009	0.00	11.1	5.9	58			13	
	6/9/2009	0.53	1.6	9.6	80			12	
	6/10/2009	0.10	14.8	3.8	142			11	
	6/16/2009	0.06	14.9	3.8	149			11.5	
	6/24/2009	0.06	14.2	4.5	173			11	
	6/30/2009	0.07	15.2	3.15	120			8	
	7/8/2009	0.25	2.8	9.99	226			8	
	7/20/2009	0.22	5.6	12.7	198			8	
	8/4/2009	0.25	14	5.1	305			8	
	8/18/2009	0.24	12.3	6.2	3.15			7	
	9/1/2009	0.47	1.7	9.99	346			10	
	9/15/2009	0.34	10.4	7.4	494			10	
	9/29/2009	0.17	11.4	6.5	346			10	
	10/15/2009	0.10	108	7.3	159			11	
	10/28/2009	0.14	10.1	7	174			12	
	11/1/2009	0.09	11.6	6.0	133			12	
	12/1/2009	0.29	6.5	9.18	190			11	
	12/7/2009	0.07	11.1	6.7	151			17	
	12/22/2009	0.12	8.3	8.5	212			20	
	1/5/2010	0.10	8.7	8.3	178			21	
	1/19/2010	0.06	8	9	137			22	
	2/3/2010	0.07	7.2	9.5	135			24	
	2/16/2010	0.07	8.5	8.5	165			20	
	3/3/2010	0.08	7.6	9.2	158			23	
	3/16/2010	0.00	11.1	4.1	104			23	
	3/29/2010	0.05	13.1	3.45	102			21	
	4/13/2010	0.07	13.8	3.25	70			18	
	4/27/2010	0.00	12.1	3.9	68			24	
	5/1/2010	0.06	16.8	2.1	100			22	
	5/26/2010	0.00	6.6	5.6	53			19	
	6/8/2010	0.00	18	1.68	60			23	
	6/24/2010	0.00	16.6	2.3	41			24	
	7/7/2010	0	17.2	2.15	38			23	
	7/20/2010	0	17.4	2	35			19	
	8/3/2010	0	17.7	1.96	33			15	
	8/16/2010	0	11.7	4	58			14	
	8/31/2010	0	16.4	2.2	49			14	

**Table 4**  
**SVE Extraction Point Field Data**  
**Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release**  
**Rusk County, Wisconsin**

Sample Location	Date	LEL (%)	Oxygen (%)	Carbon Dioxide (%)	PID (ppm)	Methane (%)	Vacuum (inches of water)	FID	Comment	
	9/14/2010	0	17	2.15	44		15			
	9/27/2010	0	15.6	2.4	31		18			
	10/12/2010	0	15.9	2.58	19.9		19			
	10/25/2010	0	14.5	3.05	19		20			
	11/9/2010	0	16.2	2.4	8		22			
	11/30/2010	0	13.5	3.3	4		23			
	12/16/2010	0	14.7	2.95	5.2		27			
	12/28/2011	0	16.2	2.55	2.2		26			
	SVE RW3	2/9/2008	100	0	18.9	149				
		3/12/2008	100	14.8	4.6	200		12	>15%	
3/19/2008		100	18.8	2.2	98		11	>70000		
3/26/2008		100	18.6	1.8			28	100400		
4/1/2008		68	19.1	1.1			30	69600		
4/8/2008		72	19.6	0.9	1383		31	92700		
4/15/2008							39			
4/21/2008		39	19.2	1	1453		40	27800		
4/28/2008		29	19.2	1.2	1714		37	21800		
5/6/2008		20	18.5	1	927		35	16800		
5/22/2008		16	18.2	1.9	964		32	9600		
6/4/2008		20	18.6					9970		
6/27/2008		19	16.9	1.1	1350			6800		
7/22/2008		21	15.6	2.9	982		10	NM		
7/23/2008							10			
7/30/2008		19	16.9	2.4	1485		10	8560		
8/5/2008		29	16.1	2.9	1375		10	10100		
8/12/2008		17	18.2	2	490		10	7965		
8/19/2008		22	18.3	2.1	95		10	6860		
8/27/2008		10	9.2	7.3	728		9.5	4860		
9/9/2008		0	20.9	0	1		10			
9/16/2008		0	12.6	4	89		9.5			
9/24/2008		0	18.3	3	263		10			
9/30/2008		0	17.9	2	400		10			
10/6/2008		0	19.5	1.42	173.8		15			
10/14/2008		0	17.2	2.7	178		10			
10/21/2008		0	17.3	2.6	98		10			
11/4/2008		0	16.8	2.75	187		12			
11/11/2008		0	15.9	2.3	78		12			
11/19/2008		0	14.7	4.02	39		12			
12/4/2008		0.2	4.2	8.6	41		11.5			
12/10/2008		0.16	6.7	7.8	51		10			
1/2/2009		0.11	17.4	2.35	72		20			
1/20/2009							24			
1/27/2009		0.05	16.1	3.1	46		26			
2/4/2009		0.05	16.4	3	80		30			
2/11/2009									No Readings Taken	
2/17/2009		0.11	8.2	6.6	74		23			
2/27/2009		0.05	15.9	5.69	46		27			
3/4/2009		0.07	16.1	3.2	72.2		27			
3/11/2009		0.06	17.3	1.68	88		30			
3/17/2009		0.14	10.6	5.5	275		29			
3/24/2009		0.06	17.5	2.45	139		31			
3/31/2009		0	20.6	0.06	25		14			
4/8/2009		0.08	15.6	3.1	180		29			
4/13/2009		0.00	16.6	2.75	135		27			
4/22/2009		0.08	12.2	4.85	205		25			
4/29/2009		0.07	15	3.45	158		27			
5/12/2009		0.00	14.4	4.08	120		13			
5/19/2009		0.00	15.5	3.55	59		13			
6/3/2009		0.32	2	9.99	10.5		9			
6/10/2009		0.07	14.5	4.15	144		9			
6/16/2009		0.05	14.5	4.4	150		8.5			
6/24/2009		0.05	14.3	4.65	157		9			
6/30/2009		0.00	14.4	4.3	100		5.5			
7/8/2009		0.35	1.2	9.99	181		5			
7/20/2009		0.22	16.3	3.1	188		5			
8/4/2009		0.15	12.8	6	194		6			
8/18/2009		0.22	12.1	6.6	253		6			
9/1/2009		0.37	1.8	9.99	300		10			
9/15/2009		0.19	12.9	6.5	352		8			
9/29/2009		0.10	13.8	5.2	214		8			
10/15/2009	0.11	15.4	4.3	154		8				
10/28/2009	0.09	14.3	4.65	153		10				
11/11/2009	0.07	15.9	3.5	120		9				
12/1/2009	0.90	5.2	7	153		8				
12/7/2009	0.08	14	5.1	160		14				
12/22/2009	0.08	14.7	4.45	156		17				
1/5/2010	0.08	14.8	4.3	149		20				
1/19/2010	0.05	15.3	3.95	147		21				
2/9/2010	0.06	15.6	3.85	131		20				
2/16/2010	0.00	15.1	4.15	155		18				
3/3/2010	0.05	14.9	4.21	146		20				
3/16/2010	0.00	16.7	2.2	124		21				
3/29/2010	0.00	16.2	2.35	71		17				
4/13/2010	0.00	14.9	2.85	57		15				
4/27/2010	0.00	16.7	2.15	65		23				
5/12/2010	0.00	12.5	3.7	64		21				
5/26/2010	0.00	6.6	5.6	53		19				
6/8/2010	0.00	13.7	3.4	36		20				
6/24/2010	0.00	13.5	3.6	34		17				
7/7/2010	0	14.2	3.4	23		20				
7/20/2010	0	16	2.65	21		20				
8/9/2010	0	16.6	2.44	20		14				
8/16/2010	0	5.3	5.8	34		13				
8/31/2010	0	17.1	2.05	22		13				
9/14/2010	0	17.3	1.96	29		14				
9/27/2010	0	15.7	2.5	20		17				
10/12/2010	0	16.2	2.45	12		17				
10/25/2010	0	15.3	2.65	13		18				
11/9/2010	0	16.1	2.65	5.2		19				
11/30/2010	0	15	2.65	2.7		23				
12/16/2010	0	17.1	1.82	2.7		25				
12/28/2011	0	17.1	1.84	4.3		25				

nm = Not measured

**Table 5**  
**SVE Total Emissions Field Readings**  
**Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release**  
**Rusk County, Wisconsin**

Source	Date	Time	Operational Timer	LEL	Oxygen	Carbon	PID	Methane	FID	Vac	Pressure	Airflow
				%	%	Dioxide %	(ppm)	%	(PSI/inches H <sub>2</sub> O)	(inches)	(SCFM)	
SVE Pretreatment	01/17/08	na		10	18.9	0.30	26.3				20	na
SVE Pretreatment	01/17/08	1550	8.4	15	19.2	0.30	615				19	
SVE Pretreatment	01/18/08	1600	30.6	8	19	0.30	220			40	18	175
SVE Pretreatment	01/19/08	1035	49.6	12	19.5	0.30	348	7.0		40	18	175
SVE Pretreatment	01/19/08	1335	52.3	6	19.5	0.30	175	3.2		40	18	175
SVE Pretreatment	01/20/08	955	72.6	5	20.3	0.30	139	2.6		40	18	175
SVE Pretreatment	01/20/08	1230	75.1	7	19.7	0.30	140	3.2		40	18	175
SVE Pretreatment	01/23/08	1230	147.5	9	20.5	0.30	164	2.0		40	18	175
SVE Pretreatment	01/24/08	800	167.2	22	19.5	0.40	380	14.5		35	22.5	102
SVE Pretreatment	01/30/08	1230	206.5									
SVE Pretreatment	01/31/08	700	223.1	10	19.6	0.30	1150			35	22	191
SVE Pretreatment	02/06/08	1015	370.3	12	20.7	0.20	52			40	40	65
SVE Pretreatment (re-start)	02/27/08	1100										
SVE Pretreatment	02/27/08	1500	480.3	100	17	2.10	90			30	25	
SVE Pretreatment	02/28/08	1630	494.4	100	14.6	3.50	80			32	30	50
SVE Pretreatment	02/29/08	1000	511.9	100	15.2	3.50	87			30	27	50
SVE Pretreatment	03/06/08	830	654.4	100	14.7	4.40	55		75000	34		144
SVE Pretreatment	03/12/08	1430	540.1	100	16	3.40	132		11%			380
SVE Pretreatment	03/19/08	1100	695.1	92	19.2	1.70	172		22600			380
SVE Pretreatment	03/26/08	930	861.9	74	19.1	1.40	171		37200		13	358
SVE Pretreatment	04/01/08	1100	1006.8	48	19.2	1.10			25500			384
SVE Pretreatment	04/08/08	1100	1126	45	19.5	1.30	1254		32700			384
SVE Pretreatment	04/15/08	900	1290	31	19.5	1.30	1239		20400			384
SVE Pretreatment	04/21/08	1100	1437.8	24	19.5	0.10	1174		13400			350
SVE Pretreatment	04/28/08	1200	1603.5	19	19.7	1.10	1161		11100	11	11	360
SVE Pretreatment	05/06/08	1050	1749.3	17	19.5	0.80	979		12600			384
SVE Pretreatment	05/14/08	1100	1984.7									349
SVE Pretreatment	05/22/08	1000	2054.3	17	19.4	1.10	962		7700	32		384
SVE Pretreatment	06/04/08	1000	2281.1	15	19.3				6875			384
SVE Pretreatment	06/27/08	1000	2659.4	11	17.3	0.90	960		4801			384
SVE Pretreatment	07/22/08	930	3055.5	14	17.9	1.90	715		NM			371
SVE Pretreatment	07/30/08	1000	3216.7	7	18.3	1.60	635		2355			415
SVE Pretreatment	08/05/08	1000	3315.7	12	18	0.20	630		3075			415
SVE Pretreatment	08/12/08	930	3483.1	8	18.8	1.70	279		2604			415
SVE Pretreatment	08/19/08	1000	3650.5	7	18.8	1.80	525		2089			415
SVE Pretreatment	08/27/08	945	3672.8	7	17.4	2.30	571		2830			415
SVE Pretreatment	09/09/08	1130	3934.9	0	18.6	0.00	104					415
SVE Pretreatment	09/16/08	1130	3987.9	0	18.3	1.00	752					458
SVE Pretreatment	09/24/08	1130	4178.2	0	19.3	2.00	495					415
SVE Pretreatment	09/30/08	1230	4323.1	0	19.3	1.00	462					445
SVE Pretreatment	10/06/08	1230	4466.51	0	18.8	1.72	89			9		415
SVE Pretreatment	10/14/08	1145	4655.7	0	18.9	1.80	240			9		454
SVE Pretreatment	10/21/08	1145	4800.8	0.07	19	1.72	72					471
SVE Pretreatment	11/04/08	830	5061.2	0	19.2	1.48	105					489
SVE Pretreatment	11/11/08	1200	5232.9	0.05	19	1.62	106					415
SVE Pretreatment	11/19/08	1115	5424.2	0.05	19.3	0.94	30			11		415
SVE Pretreatment	12/04/08	1100	5426.3	0.18	17.6	2.00	254			17		415
SVE Pretreatment	12/10/08	1130	5441.8	0.13	17.6	2.00	206			10		415
SVE Pretreatment	12/26/08	1030	5468							25		349
SVE Pretreatment	01/02/09	1015	5471.8	15	16	1.42	211					349
SVE Pretreatment	01/09/09	1015										
SVE Pretreatment	01/20/09	1225	5652.6	0.11	19.1	1.66	165			27		445
SVE Pretreatment	01/27/09	1120	5819.5	0.08	19.2	1.50	143			26		401
SVE Pretreatment	02/04/09	1030	6010.7	0.07	18.3	1.94	230					371
SVE Pretreatment	02/17/09	1030	6155.9	0.12	17.1	2.45	222			25		384
SVE Pretreatment	02/27/09	1130	6396	0.1	17.1	2.46	160			28		384
SVE Pretreatment	03/04/09	1230	6517	0.07	19.3	1.32	255					384
SVE Pretreatment	03/11/09	1215	6684.1	0.06	19.2	1.42	353			10/30		392
SVE Pretreatment	03/17/09	1030	6759.5	0.14	17.7	2.10	438			12/29		370
SVE Pretreatment	03/24/09	1130	6927	0.09	19.1	1.40	407			9/32		392
SVE Pretreatment	03/31/09	1040	7094.4	0.03	19.1	1.29	130			15/15		415
SVE Pretreatment	04/08/09	840	7284.6	0.08	19.1	1.22	355			11/29		384
SVE Pretreatment	04/13/09	1100	7406.4	0.06	19.3	1.22	330			12/27		384
SVE Pretreatment	04/22/09	1045	7576.3	0.1	18	1.72	350			12/25		384
SVE Pretreatment	04/29/09	845	7761.7	0.06	19.1	1.22	305			12/27		384
SVE Pretreatment	05/12/09	1030	8075.2	0	19.6	1.06	196			16/15		
SVE Effluent	05/19/09	800	8241.1	0	19.2	1.38	190			14/15		414
SVE Effluent	06/03/09	800	8264.9	0.11	17.2	2.05	285			13/13		
SVE Effluent	06/10/09	1120	8434.5	0.08	18.9	1.48	250			13/13		
SVE Effluent	06/16/09	1145	8602.8	0.07	18.9	1.56	252			13/12		
SVE Effluent	06/24/09	1045	8765	0.07	18.9	1.66	248			13/13		
SVE Effluent	06/30/09	930	8902.9	0.05	19.4	1.28	201			13/8		350
SVE Effluent	07/08/09	1239	8952.7	0.16	18.7	1.52	269			13/8		
SVE Effluent	07/20/09	1110	9237.3	0.12	19.4	1.40	247			13/8		350
SVE Effluent	08/04/09	1100	9597.2	0.14	19.2	1.54	223			13/8		
SVE Effluent	08/18/09	1200	9812.4	0.14	19	1.76	273			13/8		350
SVE Effluent	09/11/09	1100	n/c	0.25	17.1	2.75	375			13/10		
SVE Effluent	09/15/09	1130	10291.6	0.19	18.4	2.35	392			13/10		
SVE Effluent	09/29/09	1130	10624.4	0.1	18.7	1.98	222			13/11		442
SVE Effluent (AS System off)	09/30/09	1305		6	17.9	1.80		1.0	1580			
SVE Effluent (AS System on)	09/30/09	1446	10651	5	17.9	1.80		1.3	1720	11		469
SVE Effluent	10/15/09	1020	11007.2	0.1	18.9	1.82	165			13.5/11		
SVE Effluent	10/28/09	1100	11319.9	0.1	18.8	1.66	172			13.5/12		
SVE Effluent	11/11/09	800	11653.9	0.08	19.1	1.54	155			13/13		
SVE Effluent	12/01/09	1100	11657.8	0.17	17.8	2.15	270			13/11		
SVE Effluent	12/07/09	1100	11800.2	0.08	19.2	1.54	181			12.5/18		
SVE Effluent	12/22/09	1100	12160.2	0.07	19.2	1.52	184			12/20		
SVE Effluent	01/05/10		12495.5	0.07	19.2	1.42	141			13/24		
SVE Effluent	01/19/10	1100	12832.1	0	19	1.48	145			13/24		
SVE Effluent	02/03/10	1200	13193.2	0.06	18.9	1.48	240			13/26		
SVE Effluent	02/16/10	1130	13504.5	0.06	19.2	1.36	237			12/22		
SVE Effluent	03/03/10	830	13861.9	0.06	19	1.42	244			12/25		

AS System off  
AS System on

restarted

**Table 5**  
**SVE Total Emissions Field Readings**  
**Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release**  
**Rusk County, Wisconsin**

Source	Date	Time	Operational Timer	LEL	Oxygen	Carbon	PID	Methane	FID	Vac	Pressure	Airflow
				%	%	Dioxide %	(ppm)	%	(PSI/inches H <sub>2</sub> O)	(inches)	(SCFM)	
SVE Effluent	03/16/10	1130	14175.3	0	19.6	0.93	124			12/24		
SVE Effluent	03/29/10	1100	14487.1	0	19.6	0.85	85			11/22		
SVE Effluent	04/13/10	1145	14847.7	0	19.5	0.85	74			12/18		
SVE Effluent	04/27/10	1130	15182.4	0.07	19.8	0.68	206			10/30		
SVE Effluent	05/12/10	1045	15541.1	0.05	19.3	0.85	108			12/24		
SVE Effluent	05/26/10	1100	15846.3	0	19	1.12	92			13/29		
SVE Effluent	06/08/10	930	16146.6	0	19.3	0.97	59			12/24		
SVE Effluent	06/24/10	1030	16524.3	0	19.2	1.04	41			12/24		
SVE Effluent	07/07/10	1200	16819.2	0	19.3	1.06	40			12/24		
SVE Effluent	07/20/10	1110	17109.6	0	19.2	1.10	27.2			12/23		
SVE Effluent	08/03/10	1045	17430.1	0	19.1	1.20	105			12/22		
SVE Effluent	08/16/10	1130	17647.9	0	17.8	1.66	56			12/16		
SVE Effluent	08/31/10	1130	17988.2	0	19	1.30	40			13/16		
SVE Effluent	09/14/10	1200	18320.4	0	19.1	1.28	84			12/17		
SVE Effluent	09/27/10	1130	18631.9	0	19.1	1.14	63			11/19		
SVE Effluent	10/12/10	1130	18992	0	19.3	1.14	17.3			11/20		
SVE Effluent	10/25/10	1100	19303.6	0	19.4	1.08	50			11/20		
SVE Effluent	11/09/10	1200	19665.4	0	19.8	0.93	18			11/22		
SVE Effluent	11/30/10	1130	20169	0	19.4	0.87	13.8			11/26		
SVE Effluent	12/16/10	1100	20552.5	0	19.4	0.83	10			11/29		
SVE Effluent	12/28/10	1130	20817.4	0	19.5	0.82	8.8			10/30		
SVE Posttreatment	01/17/08	na	na	0	18.8	0.40	9.3					
SVE Posttreatment	01/17/08	1550	na	0	18.5	1.10	64					
SVE Posttreatment	01/18/08	1600	na	0	18.5	1.00	41.8					
SVE Posttreatment	01/19/08	1035	na	0	18.9	0.90	58	0.9				
SVE Posttreatment	01/19/08	1335	na	0	18.7	0.90	26.3	0.7				
SVE Posttreatment	01/20/08	955	na	0	19	0.80	6.9	0.7				
SVE Posttreatment	01/20/08	1230	na	0	18.8	0.90	107	2.3				
SVE Posttreatment	01/23/08	1230	na	0	20.9	0.70	70	0.9				
SVE Posttreatment	01/24/08	800	na	0	18.5	1.20	113					
SVE Posttreatment	01/31/08	700	na	0	18	1.50	15.5					
SVE Posttreatment	02/06/08	1015	na	3	19.4	1.00	1.6					
SVE Posttreatment	(re-start)	02/27/08	1500	na	0	11.2	7.20					na
SVE Posttreatment	02/28/08	1630	na	0	11.6		16					na
SVE Posttreatment	02/29/08	1000	na	0	14.3	4.20	7.5					na
SVE Posttreatment	03/06/08	830	na	0	9.3	8.60	2		2			na
SVE Posttreatment	03/12/08	1430	na	0	10.8	7.80	15		11			na
SVE Posttreatment	03/19/08	1100	na	0	15.9	5.30	23					na
SVE Posttreatment	03/26/08	930	na	0	12	7.20	56		165			na
SVE Posttreatment	04/01/08	1100	na	0	16.3	6.80			200			na
SVE Posttreatment	04/08/08	1100	na	0	12.8	4.20	161		363			na
SVE Posttreatment	04/21/08	1100	na	0	16	3.00	19.5		10.5			na
SVE Posttreatment	04/28/08	1200	na	0	14.4	4.50	121		310			na
SVE Posttreatment	05/06/08	1050	na	0	14.5	4.80	131		660			na
SVE Posttreatment	05/14/08	1100	na									na
SVE Posttreatment	05/22/08	1000	na	0	14.6	5.50	43		3			na
SVE Posttreatment	06/04/08	1000	na	0	13.8				112			na
SVE Posttreatment	06/27/08	1000	na	0	14.8	2.60	12.8		18			na
SVE Posttreatment	07/22/08	930	na	0	13	4.60	4.5		NM			na
SVE Posttreatment	07/30/08	1000	na	0	15.9	3.40	0		7			na
SVE Posttreatment	08/05/08	1000	na	2	15.8	3.40	0		20			na
SVE Posttreatment	08/12/08	930	na	0	16.4	3.30	2.6		16			na
SVE Posttreatment	08/19/08	1000	na	0	16.5	3.20	2.6		435			na
SVE Posttreatment	08/27/08	945	na	0	15.6	0.30	1		24			na
SVE Posttreatment	09/09/08	1130	na	0	18.2	1.00	0					na
SVE Posttreatment	09/16/08	1130	na	0	17.9	0.00	0					na
SVE Posttreatment	09/24/08	1130	na	0	17.8	4.00	0					na
SVE Posttreatment	09/30/08	1230	na	0	17.6	2.00	0					na
SVE Posttreatment	10/06/08	1230	na	0	16.6	3.05	0					na
SVE Posttreatment	10/14/08	1145	na	0	16.6	3.05	0					na
SVE Posttreatment	10/21/08	1145	na	0	16.7	2.95	0					na
SVE Posttreatment	11/04/08	830	na	0	18.5	1.85	0					na
SVE Posttreatment	11/11/08	1200	na	0	18.8	1.90	0					na
SVE Posttreatment	11/19/08	1115	na	0	19.1	1.42	0					na
SVE Posttreatment	12/04/08	1100	na	0.06	10.9	2.50	0					na
SVE Posttreatment	12/10/08	1130	na	0	17.1	2.32	0					na
SVE Posttreatment	12/26/08	1030	na									na
SVE Posttreatment	01/02/09	1015	na	0	16.2	3.85	0					na
SVE Posttreatment	01/09/09	1015	na									na
SVE Posttreatment	01/20/09	1225	na	0.11	19.2	1.50	165					na
SVE Posttreatment	01/27/09	1120	na	0	19.1	2.00	0					na
SVE Posttreatment	02/04/09	1030	na	0	17.9	2.30	0					na
SVE Posttreatment	02/17/09	1030	na	0	16.6	2.80	0					na
SVE Posttreatment	02/27/09	1130	na	0	16.5	2.82	0					na
SVE Posttreatment	03/04/09	1230	na	0	16.2	2.76	0					na
SVE Posttreatment	03/11/09	1215	na	0	16.9	2.68	0					na
SVE Posttreatment	03/17/09	1030	na	0	17.5	2.15	0					na
SVE Posttreatment	03/24/09	1130	na	0	16.9	2.17	0					na
SVE Posttreatment	03/31/09	1040	na	0	16.9	2.09	0					na
SVE Posttreatment	04/08/09	840	na	0	16.8	2.12	0					na
SVE Posttreatment	04/13/09	1100	na	0	18.9	1.48	0					na
SVE Posttreatment	04/22/09	1045	na	0	16.8	2.11	0					na
SVE Posttreatment	04/29/09	845	na	0	17.1	2.16	0					na
SVE Posttreatment	05/12/09	1030	na	0	16.4	2.18	0					na
SVE Posttreatment	05/19/09	800	na	0	16.2	2.11	0					na
Catalytic Oxidizer was removed												

Table 6  
SVE Total Hydrocarbon and Vapor Concentrations  
Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release  
Rusk County, Wisconsin  
(concentrations in mg/m3)

Location	Date	Lab	TPH as Gasoline	TPH as Diesel	Benzene	Ethyl benzene	Toluene	Xylene m & p	Xylene o-
SVE PRE	1/17/2008	CAS	830	800 AT	4.4 *	<0.26	4.6	<0.26	<0.26
SVE PRE	1/19/2008	CAS	680	280 AT	3.2 *	<0.23	1.3	<0.23	<0.23
SVE PRE	1/20/2008	CAS	1300	370 AT	9.6 *	<0.22	3.3	0.56	<0.22
SVE PRE	1/23/2008	CAS	440	510 AT	1.5	<0.36	0.53	<0.36	<0.36
SVE PRE	1/31/2008	CAS	2400	490 AT	5.3 *	<0.22	2.1	<0.22	<0.22
SVE PRE	2/6/2008	CAS	3200 AT	650 AT	7.0 *	<0.28	6.7	2.2	0.51 *
SVE PRE	2/27/2008	CAS	33000	9900 AT, BT, h	130 *	6.7 *	100	18	7.2
SVE PRE	2/28/2008	CAS	47000	12000 AT, BT	240 *	13 *	190	35	15
SVE PRE	2/29/2008	CAS	42000	7900 AT, BT	230 *	14 *	190	40	16
SVE PRE	3/6/2008	CAS	31000	9400 AT, BT	220	9.6	170	39	13
SVE PRE	3/12/2008	CAS	51000	8700 AT	350	12 *	280	61	22
SVE PRE	3/19/2008	CAS	23000	9300 AT	210 *	17 *	230	71	23
SVE PRE	3/26/2008	CAS	24000	24000 AT ,BT	340	30 *	380	140	42
SVE PRE	4/21/2008	CAS	12000	10000 AT	150 *	19 *	280	96	28
SVE PRE	5/22/2008	CAS	8100	9300 AT	77 *	17	200	80	26
SVE PRE	6/27/2008	CAS	5500	5900 AT	53 *	18	190	94	30
SVE PRE	7/22/2008	CAS	5800	6300 AT	48 *	12 *	150	65	22
SVE PRE	8/27/2008	CAS	4000	3200 AT	24 *	5.8 *	73	37	15
SVE PRE	9/24/2008	CAS	750	<5.0	4.2 *	<2.5	12	7.3	2.6
SVE PRE	10/28/2008	CAS	--	1200 AT	--	--	--	--	--
SVE PRE	11/19/2008	CAS	1500	2100 AT	9.3 *	3.0 *	22 *	15	6.5
SVE PRE	1/20/2009	CAS	2100	870 AT	21 *	4.0 *	41	23	7.7
SVE PRE	2/17/2009	CAS	3400	1100 AT	19 *	<1.8	44 *	19 *	11
SVE PRE	3/17/2009	CAS	2700	950 AT	19 *	11 *	51 *	28 *	14
SVE PRE	4/22/2009	CAS	2000	810 AT	8.7	0.92	17	5.5	2.0
SVE PRE	5/19/2009	CAS	1100	770 AT	5.4	0.93	14	5.7	2.2
SVE EFF	6/30/2009	CAS	1400	630 *	4.7	0.47	9.5	3.1	1.2
SVE EFF	7/20/2009	CAS	2100	930 Y	7.4	0.77	14	5.1	2.1
SVE EFF	8/18/2009	CAS	1500	890 Y	5.8	0.62	11	4.3	1.8
SVE EFF	9/29/2009	CAS	2000	1100 AT	3.9	0.5	8.7	4.1	1.8
SVE EFF	12/8/2009	CAS	1600		5.7				
SVE EFF	1/19/2010	CAS	1000		3.2				
SVE EFF	2/16/2010	CAS	790		1.9				
SVE EFF	3/16/2010	CAS	650		1.9				
SVE EFF	4/13/2010	CAS	660		2.1				
SVE EFF	5/12/2010	CAS	590		2.3				
SVE EFF	6/8/2010	CAS	490		1.8				
SVE EFF	7/7/2010	CAS	410		1.2				
SVE EFF	8/3/2010	CAS	290		0.79				
SVE EFF	9/27/2010	CAS	51		0.16				
SVE EFF	10/25/2010	CAS	140		0.38				
SVE EFF	11/30/2010	CAS	58		0.094				
SVE EFF	12/28/2010	CAS	<25		0.036				

SVE PRE = SVE system effluent prior to treatment with catalytic oxidizer

SVE EFF = SVE system effluent from same sampling port as SVE PRE, however, catalytic oxidizer was removed (direct SVE discharge)

Detections are presented in **bold**.

-- Not analyzed.

\* Estimated value, QA/QC criteria not met.

h EPA recommended sample preservation, extraction or analysis holding time was exceeded.

AT Sample chromatogram is noted to be atypical of a petroleum product.

BT Indicates possible breakthrough - result for back section at least 10% of result from front section of tube.

Y The chromatogram resembles a petroleum product but does not match the calibration standard

**Table 7**  
**Total Hydrocarbon Mass Removal**  
**Enbridge Energy, Limited Partnership - Line 14, MP 85 Crude Oil Release**  
**Rusk County, Wisconsin**

Date	SVE System			Biodegradation		
	Removal Rate (lbs/day)	Cumulative (lbs)	Cumulative (barrels)	Removal Rate (lbs/day)	Cumulative (lbs)	Cumulative (barrels)
2/27/2008	193	0	0	36	0	0
2/28/2008	265	243	1	--	--	--
2/29/2008	224	422	1	105	188	1
3/6/2008	523	2,760	9	328	2,135	7
3/12/2008	2,039	10,128	35	684	6,411	22
3/19/2008	1,103	20,900	72	237	8,037	28
3/26/2008	1,545	30,141	104	237	9,680	33
4/1/2008	--	--	--	240	11,134	38
4/8/2008	--	--	--	198	12,516	43
4/15/2008	--	--	--	198	13,882	48
4/21/2008	690	59,132	203	180	14,977	51
4/28/2008	--	--	--	159	16,095	55
5/6/2008	--	--	--	198	17,666	61
5/22/2008	601	79,228	272	212	21,044	72
6/4/2008				226	23,978	82
6/27/2008	394	97,125	334	508	35,660	123
7/22/2008	404	107,086	368	423	46,232	159
7/30/2008	--	--	--	367	49,174	169
8/5/2008	--	--	--	395	51,545	177
8/12/2008	--	--	--	320	53,780	185
8/19/2008	--	--	--	320	56,028	192
8/27/2008	269	119,365	410	534	60,291	207
9/9/2008	--	--	--	351	64,876	223
9/16/2008	--	--	--	437	67,938	223
9/24/2008	28	123,529	424	244	69,890	240
9/30/2008	--	--	--	262	71,470	246
10/6/2008	--	--	--	320	73,215	252
10/14/2008	--	--	--	334	75,820	260
10/21/2008	--	--	--	329	78,138	268
11/4/2008	--	--	--	305	82,535	284
11/11/2008	--	--	--	290	84,661	291
11/19/2008	134	128,076	440	244	86,787	298
12/4/2008	--	--	--	503	92,386	317
12/10/2008	--	--	--	396	95,094	327
1/2/2009	--	--	--	628	106,852	367
1/20/2009	119	135,956	467	294	115,197	396
1/27/2009	--	--	--	250	117,091	402
2/4/2009	--	--	--	354	119,500	411
2/17/2009	155	139,842	480	536	125,093	430
2/27/2009	--	--	--	536	130,711	449
3/7/2009	--	--	--	226	133,774	460
3/11/2009	--	--	--	245	134,713	463
3/17/2009	121	143,709	494	435	136,727	470
3/24/2009				259	139,171	478
3/31/2009				274	141,030	485
4/22/2009	103	147,428	507	320	148,263	509
5/19/2009	85	149,736	514	252	155,072	533
6/30/2009	44	151,575	521	93	158,971	546
7/20/2009	55	152,684	525	81	160,581	552
8/18/2009	70	154,726	532	117	163,967	563
9/29/2009	80	158,083	543	172	171,188	588
10/15/2009	121	160,018	550	243	175,075	602
11/11/2009	107	162,912	560	211	180,766	621
12/7/2009	18	163,384	561	42	181,870	625
1/19/2010	48	165,464	568	182	189,711	652
2/16/2010	33	166,397	572	182	194,820	669
3/16/2010	27	167,146	574	137	198,643	682
4/13/2010	24	167,828	577	114	201,836	693
5/12/2010	22	168,477	579	131	205,624	706
6/8/2010	17	168,946	580	131	209,174	719
7/7/2010	16	169,411	582	146	213,422	733
8/3/2010	13	169,756	583	163	217,811	748
9/27/2010	6	170,074	584	166	226,942	780
10/25/2010	3	170,170	585	157	231,339	795
11/30/2010	4	170,297	585	129	235,998	811
12/28/2010	1	170,336	585	115	239,229	822



## **VI. Laboratory Analytical Results**

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## LABORATORY REPORT

November 10, 2010

Michael Dupay  
Barr Engineering  
4700 West 77th Street  
Minneapolis, MN 55435

**RE: MP 85 Site Exland WI / 49/55-0029.00 Y09 003**

Dear Michael:

Enclosed are the results of the sample submitted to our laboratory on October 27, 2010. For your reference, these analyses have been assigned our service request number P1004009.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at [www.caslab.com](http://www.caslab.com). Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

Columbia Analytical Services, Inc. is certified by the California Department of Health Services, NELAP Laboratory Certificate No. 02115CA; Arizona Department of Health Services, Certificate No. AZ0694; Florida Department of Health, NELAP Certification E871020; New Jersey Department of Environmental Protection, NELAP Laboratory Certification ID #CA009; New York State Department of Health, NELAP NY Lab ID No: 11221; Oregon Environmental Laboratory Accreditation Program, NELAP ID: CA20007; The American Industrial Hygiene Association, Laboratory #101661; United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP), Certificate No. L10-3; Pennsylvania Registration No. 68-03307; TX Commission of Environmental Quality, NELAP ID T104704413-09-TX; Minnesota Department of Health, Certificate No. 11495AA; Washington State Department of Ecology, ELAP Lab ID: C946. Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact me for information corresponding to a particular certification.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

**Columbia Analytical Services, Inc.**

Kelly Horiuchi  
Laboratory Director

Client: Barr Engineering  
Project: MP 85 Site Exland WI / 49/55-0029.00 Y09 003

CAS Project No: P1004009

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### **CASE NARRATIVE**

The sample was received intact under chain of custody on October 27, 2010 and was stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the sample at the time of sample receipt.

#### Total Petroleum Hydrocarbons as Gasoline Analysis

The sample was analyzed for total petroleum hydrocarbons (TPH) as gasoline per modified EPA Method TO-3 using a gas chromatograph equipped with a flame ionization detector (FID).

#### Benzene Analysis

The sample was also analyzed for benzene in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.

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*The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for utilization of less than the complete report.*

**DETAIL SUMMARY REPORT**

Client: Barr Engineering  
 Project ID: MP 85 Site Exland WI / 49/55-0029.00 Y09 003

Service Request: P1004009

Date Received: 10/27/10  
 Time Received: 10:05

TO-3 Modified - TPHG Can	TO-15 - VOC Cans
--------------------------	------------------


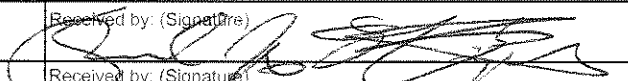
Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-3 Modified - TPHG Can	TO-15 - VOC Cans
SVE Effluent	P1004009-001	Air	10/25/10	12:00	1SC00844	-0.3	5.0	X	X

2655 Park Center Drive, Suite A  
 Simi Valley, California 93065  
 Phone (805) 526-7161  
 Fax (805) 526-7270

 Requested Turnaround Time in Business Days (Surcharges) please circle  
 1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day-Standard

 CAS Project No. P1004009

Company Name & Address (Reporting Information) <b>Barr Engineering</b> 4700 WEST 77th ST MINNEAPOLIS MINN				Project Name <b>MP-85 Site Extend WI</b>				CAS Contact:			
Project Manager <b>HANS WRONKA</b>				Project Number <b>49155-0029.00 Y09 003</b>				Analysis Method			
Phone <b>952-832-2777</b>		Fax <b>952-832-2601</b>		P.O. # / Billing Information				Comments e.g. Actual Preservative or specific instructions  <b>TPH GAS TO15 Benzene Only</b>			
Email Address for Result Reporting <b>hwronka@Barr.com</b>				Sampler (Print & Sign) <b>WARD MITCHELL Ward Mitchell</b>							
Client Sample ID <b>JUE EFFLUENT</b>	Laboratory ID Number <b>1</b>	Date Collected <b>10-25-10</b>	Time Collected <b>12:00</b>	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig				

<b>Report Tier Levels - please select</b>				Project Requirements (MRLs, QAPP)			
Tier I - (Results/Default if not specified) _____		Tier III (Data Validation Package) 10% Surcharge _____		EDD required Yes / No		Project Requirements (MRLs, QAPP)	
Tier II (Results + QC) _____		Tier V (client specified) _____		Type: _____			
Relinquished by: (Signature) 		Date: <b>7-26-10</b>	Time: <b>8:00 AM</b>	Received by: (Signature) 		Date: <b>10/27/10</b>	Time: <b>10:05</b>
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)		Date:	Time: Cooler / Blank Temperature _____ °C

**Sample Acceptance Check Form**

Client: Barr Engineering Work order: P1004009

Project: MP 85 Site Exland WI / 49/55-0029.00 Y09 003

Sample(s) received on: 10/27/10 Date opened: 10/27/10 by: SSTAPLES

**Note:** This form is used for all samples received by CAS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

		<b>Yes</b>	<b>No</b>	<b>N/A</b>
1	Were <b>sample containers</b> properly marked with client sample ID?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Container(s) <b>supplied by CAS</b> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Did <b>sample containers</b> arrive in good condition?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Was a <b>chain-of-custody</b> provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Was the <b>chain-of-custody</b> properly completed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Did <b>sample container labels</b> and/or tags agree with custody papers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Was <b>sample volume</b> received adequate for analysis?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Are samples within specified holding times?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Was proper <b>temperature</b> (thermal preservation) of cooler at receipt adhered to?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Cooler Temperature _____ °C      Blank Temperature _____ °C			
10	Was a <b>trip blank</b> received?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Trip blank supplied by CAS: _____			
11	Were <b>custody seals</b> on outside of cooler/Box?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Location of seal(s)? _____ Sealing Lid?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Were signature and date included?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Were seals intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Were custody seals on outside of sample container?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Location of seal(s)? _____ Sealing Lid?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Were signature and date included?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Were seals intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12	Do containers have appropriate <b>preservation</b> , according to method/SOP or Client specified information?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Is there a client indication that the submitted samples are <b>pH</b> preserved?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Were <b>VOA vials</b> checked for presence/absence of air bubbles?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Does the client/method/SOP require that the analyst check the sample pH and <u>if necessary</u> alter it?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13	<b>Tubes:</b> Are the tubes capped and intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Do they contain moisture?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14	<b>Badges:</b> Are the badges properly capped and intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Are dual bed badges separated and individually capped and intact?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1004009-001.01	1.0 L Source Can					

Explain any discrepancies: (include lab sample ID numbers): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\*Required pH: Phenols/COD/NH3/TOC/TOX/NO3+NO2/TKN/T.PHOS, H2SO4 (pH<2); Metals, HNO3 (pH<2); CN (NaOH or NaOH/Asc Acid) (pH>12); Diss. Sulfide, NaOH (pH>12); T. Sulfide, NaOH/ZnAc (pH>12)      RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

RESULTS OF ANALYSIS

Page 1 of 1

**Client:** Barr Engineering

**Client Project ID:** MP 85 Site Exland WI / 49/55-0029.00 Y09 003

CAS Project ID: P1004009

**Total Petroleum Hydrocarbons (TPH) as Gasoline**

Test Code: EPA TO-3 Modified  
 Instrument ID: HP 5890 II/GC19/FID  
 Analyst: Wade Henton  
 Sampling Media: 1.0 L Summa Canister(s)  
 Test Notes:

Date(s) Collected: 10/25/10  
 Date Received: 10/27/10  
 Date Analyzed: 10/28/10

Client Sample ID	CAS Sample ID	Canister Dilution Factor	Injection Volume ml(s)	Result mg/m <sup>3</sup>	MRL mg/m <sup>3</sup>	Result ppmV	MRL ppmV	Data Qualifier
SVE Effluent	P1004009-001	1.37	1.0	<b>140</b>	25	<b>40</b>	7.0	
Method Blank	P101028-MB	1.00	1.0	ND	18	ND	5.1	

Parts Per Million results are based on a Molecular Weight of 86.18.

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

## RESULTS OF ANALYSIS

Page 1 of 1

**Client:** Barr Engineering

**Client Project ID:** MP 85 Site Exland WI / 49/55-0029.00 Y09 003

CAS Project ID: P1004009

**Benzene**

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3

Analyst: Simon Cao

Sampling Media: 1.0 L Summa Canister(s)

Test Notes:

Date(s) Collected: 10/25/10

Date Received: 10/27/10

Date Analyzed: 11/1/10

Client Sample ID	CAS Sample ID	Injection	Canister	Result	MRL	Result	MRL	Data
		Volume	Dilution					
SVE Effluent	P1004009-001	25	1.37	<b>0.38</b>	0.027	<b>0.12</b>	0.0086	
Method Blank	P101101-MB	1,000	1.00	ND	0.00050	ND	0.00016	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.



## SURROGATE SPIKE RECOVERY RESULTS

Page 1 of 1

**Client:** Barr Engineering  
**Client Project ID:** MP 85 Site Exland WI / 49/55-0029.00 Y09 003

CAS Project ID: P1004009

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3  
 Analyst: Simon Cao  
 Sampling Media: 1.0 L Summa Canister(s)  
 Test Notes:

Date(s) Collected: 10/25/10  
 Date(s) Received: 10/27/10  
 Date(s) Analyzed: 11/1/10

Client Sample ID	CAS Sample ID	1,2-Dichloroethane-d4	Toluene-d8	Bromofluorobenzene	Acceptance Limits	Data Qualifier
		Percent Recovered	Percent Recovered	Percent Recovered		
Method Blank	P101101-MB	<b>84</b>	<b>103</b>	<b>113</b>	70-130	
SVE Effluent	P1004009-001	<b>83</b>	<b>96</b>	<b>105</b>	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.

Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

---

## LABORATORY REPORT

December 16, 2010

Michael Dupay  
Barr Engineering  
4700 West 77th Street  
Minneapolis, MN 55435

**RE: MP 85 Site Exland Wi / 49/55-0029.00 Y09 003**

Dear Michael:

Enclosed are the results of the sample submitted to our laboratory on December 2, 2010. For your reference, these analyses have been assigned our service request number P1004525.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at [www.caslab.com](http://www.caslab.com). Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

Columbia Analytical Services, Inc. is certified by the California Department of Health Services, NELAP Laboratory Certificate No. 02115CA; Arizona Department of Health Services, Certificate No. AZ0694; Florida Department of Health, NELAP Certification E871020; New Jersey Department of Environmental Protection, NELAP Laboratory Certification ID #CA009; New York State Department of Health, NELAP NY Lab ID No: 11221; Oregon Environmental Laboratory Accreditation Program, NELAP ID: CA20007; The American Industrial Hygiene Association, Laboratory #101661; United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP), Certificate No. L10-3; Pennsylvania Registration No. 68-03307; TX Commission of Environmental Quality, NELAP ID T104704413-09-TX; Minnesota Department of Health, Certificate No. 11495AA; Washington State Department of Ecology, ELAP Lab ID: C946. Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact me for information corresponding to a particular certification.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

**Columbia Analytical Services, Inc.**

Kelly Horiuchi  
Laboratory Director

Client: Barr Engineering  
Project: MP 85 Site Exland Wi / 49/55-0029.00 Y09 003

CAS Project No: P1004525

---

### **CASE NARRATIVE**

The sample was received intact under chain of custody on December 2, 2010 and was stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the sample at the time of sample receipt.

#### Total Petroleum Hydrocarbons as Gasoline Analysis

The sample was analyzed for total petroleum hydrocarbons (TPH) as gasoline per modified EPA Method TO-3 using a gas chromatograph equipped with a flame ionization detector (FID).

#### Benzene Analysis

The sample was also analyzed for benzene in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.

---

*The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for utilization of less than the complete report.*

**DETAIL SUMMARY REPORT**

Client: Barr Engineering  
 Project ID: MP 85 Site Exland Wi / 49/55-0029.00 Y09 003

Service Request: P1004525

Date Received: 12/2/2010  
 Time Received: 10:00

TO-3 Modified - TPHG Can	TO-15 - VOC Cans
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Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-3 Modified - TPHG Can	TO-15 - VOC Cans
SVE Effluent	P1004525-001	Air	11/30/2010	12:00	1SC00727	0.0	5.2	X	X

2655 Park Center Drive, Suite A  
 Simi Valley, California 93065  
 Phone (805) 526-7161  
 Fax (805) 526-7270

**Requested Turnaround Time in Business Days (Surcharges) please circle**  
 1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day-Standard

CAS Project No. **P1004525**

Company Name & Address (Reporting Information) Barr Engineering 4700 West 7th St Minneapolis Minn		Project Name MP-85 Site Exland W.		CAS Contact:	
Project Manager HANS WRONKA		Project Number 44/55-0029.00 409 003		<b>Analysis Method</b>	
Phone 952-832-2777	Fax 952-832-2605	P.O. # / Billing Information		TPHGAS TO15 Benzene Only X	
Email Address for Result Reporting hwronka@barr.com		Sampler (Print & Sign) Ward Mitchell Ward Mitchell			

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume			Comments e.g. Actual Preservative or specific instructions
SVE PFAUENT	①-0.1	11/30/10	12:10	13C00727		-29.10			X		

**Report Tier Levels - please select**

Tier I - (Results/Default if not specified) \_\_\_\_\_  
 Tier II (Results + QC) \_\_\_\_\_  
 Tier III (Data Validation Package) 10% Surcharge \_\_\_\_\_  
 Tier V (client specified) \_\_\_\_\_

EDD required Yes / No  
 Type: \_\_\_\_\_

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature) <i>Ward Mitchell</i>	Date: 11/30/10	Time: 4:30pm	Received by: (Signature) <i>[Signature]</i>	Date: 12/2/10	Time: 10:00
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

Cooler / Blank Temperature \_\_\_\_\_ °C

**Sample Acceptance Check Form**

Client: Barr Engineering Work order: P1004525

Project: MP 85 Site Exland Wi / 49/55-0029.00 Y09 003

Sample(s) received on: 12/02/10 Date opened: 12/02/10 by: MZAMORA

**Note:** This form is used for all samples received by CAS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

- |  | <b>Yes</b>                          | <b>No</b>                           | <b>N/A</b>                          |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| 1 Were <b>sample containers</b> properly marked with client sample ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 2 Container(s) <b>supplied by CAS?</b>   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 3 Did <b>sample containers</b> arrive in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 4 Was a <b>chain-of-custody</b> provided?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 5 Was the <b>chain-of-custody</b> properly completed?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 6 Did <b>sample container labels</b> and/or tags agree with custody papers?                                      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 7 Was <b>sample volume</b> received adequate for analysis?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 8 Are samples within specified holding times?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 9 Was proper <b>temperature</b> (thermal preservation) of cooler at receipt adhered to?                          | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Cooler Temperature _____ °C    Blank Temperature _____ °C  |                                     |                                     |                                     |
| 10 Was a <b>trip blank</b> received?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Trip blank supplied by CAS: _____  |                                     |                                     |                                     |
| 11 Were <b>custody seals</b> on outside of cooler/Box?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Location of seal(s)? _____ Sealing Lid?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were signature and date included?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were seals intact?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were custody seals on outside of sample container?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Location of seal(s)? _____ Sealing Lid?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were signature and date included?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were seals intact?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 12 Do containers have appropriate <b>preservation</b> , according to method/SOP or Client specified information? | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Is there a client indication that the submitted samples are <b>pH</b> preserved?                                 | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were <b>VOA vials</b> checked for presence/absence of air bubbles?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Does the client/method/SOP require that the analyst check the sample pH and <u>if necessary</u> alter it?        | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 13 <b>Tubes:</b> Are the tubes capped and intact?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Do they contain moisture?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 14 <b>Badges:</b> Are the badges properly capped and intact?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Are dual bed badges separated and individually capped and intact?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1004525-001.01	1.0 L Source Can					

Explain any discrepancies: (include lab sample ID numbers): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\*Required pH: Phenols/COD/NH3/TOC/TOX/NO3+NO2/TKN/T.PHOS, H2SO4 (pH<2); Metals, HNO3 (pH<2); CN (NaOH or NaOH/Asc Acid) (pH>12); Diss. Sulfide, NaOH (pH>12); T. Sulfide, NaOH/ZnAc (pH>12)      RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

RESULTS OF ANALYSIS

Page 1 of 1

**Client:** Barr Engineering

**Client Project ID:** MP 85 Site Exland Wi / 49/55-0029.00 Y09 003

CAS Project ID: P1004525

**Total Petroleum Hydrocarbons (TPH) as Gasoline**

Test Code: EPA TO-3 Modified  
 Instrument ID: HP 5890 II/GC19/FID  
 Analyst: Dante Munoz-Castaneda  
 Sampling Media: 1.0 L Summa Canister(s)  
 Test Notes:

Date(s) Collected: 11/30/10  
 Date Received: 12/2/10  
 Date Analyzed: 12/3/10

Client Sample ID	CAS Sample ID	Canister Dilution Factor	Injection Volume ml(s)	Result mg/m <sup>3</sup>	MRL mg/m <sup>3</sup>	Result ppmV	MRL ppmV	Data Qualifier
SVE Effluent	P1004525-001	1.35	1.0	58	24	16	6.9	
Method Blank	P101203-MB	1.00	1.0	ND	18	ND	5.1	

Parts Per Million results are based on a Molecular Weight of 86.18.

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Page 1 of 1

**Client:** Barr Engineering

**Client Project ID:** MP 85 Site Exland Wi / 49/55-0029.00 Y09 003

CAS Project ID: P1004525

**Benzene**

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8

Analyst: Elsa Moctezuma

Sampling Media: 1.0 L Summa Canister(s)

Test Notes:

Date(s) Collected: 11/30/10

Date Received: 12/2/10

Date Analyzed: 12/8/10

Client Sample ID	CAS Sample ID	Injection Volume ml(s)	Canister Dilution Factor	Result mg/m <sup>3</sup>	MRL mg/m <sup>3</sup>	Result ppmV	MRL ppmV	Data Qualifier
SVE Effluent	P1004525-001	15	1.35	<b>0.094</b>	0.045	<b>0.029</b>	0.014	
Method Blank	P101208-MB	1,000	1.00	ND	0.00050	ND	0.00016	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.



SURROGATE SPIKE RECOVERY RESULTS

Page 1 of 1

**Client:** Barr Engineering  
**Client Project ID:** MP 85 Site Exland Wi / 49/55-0029.00 Y09 003

CAS Project ID: P1004525

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS8  
 Analyst: Elsa Moctezuma  
 Sampling Media: 1.0 L Summa Canister(s)  
 Test Notes:

Date(s) Collected: 11/30/10  
 Date(s) Received: 12/2/10  
 Date(s) Analyzed: 12/8/10

Client Sample ID	CAS Sample ID	1,2-Dichloroethane-d4	Toluene-d8	Bromofluorobenzene	Acceptance Limits	Data Qualifier
		Percent Recovered	Percent Recovered	Percent Recovered		
Method Blank	P101208-MB	93	106	104	70-130	
SVE Effluent	P1004525-001	92	104	105	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.

Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

## LABORATORY REPORT

January 13, 2011

Michael Dupay  
Barr Engineering  
4700 West 77th Street  
Minneapolis, MN 55435

**RE: MP 85 Site Exland WI / 49/55-0029.00 Y09 003**

Dear Michael:

Enclosed are the results of the sample submitted to our laboratory on December 29, 2010. For your reference, these analyses have been assigned our service request number P1004946.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at [www.caslab.com](http://www.caslab.com). Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

Columbia Analytical Services, Inc. is certified by the California Department of Health Services, NELAP Laboratory Certificate No. 02115CA; Arizona Department of Health Services, Certificate No. AZ0694; Florida Department of Health, NELAP Certification E871020; New Jersey Department of Environmental Protection, NELAP Laboratory Certification ID #CA009; New York State Department of Health, NELAP NY Lab ID No: 11221; Oregon Environmental Laboratory Accreditation Program, NELAP ID: CA20007; The American Industrial Hygiene Association, Laboratory #101661; United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP), Certificate No. L10-3; Pennsylvania Registration No. 68-03307; TX Commission of Environmental Quality, NELAP ID T104704413-09-TX; Minnesota Department of Health, Certificate No. 11495AA; Washington State Department of Ecology, ELAP Lab ID: C946. Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact me for information corresponding to a particular certification.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

**Columbia Analytical Services, Inc.**

Kelly Horiuchi  
Laboratory Director

Client: Barr Engineering  
Project: MP 85 Site Exland WI / 49/55-0029.00 Y09 003

CAS Project No: P1004946

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## CASE NARRATIVE

The sample was received intact under chain of custody on December 29, 2010 and was stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the sample at the time of sample receipt.

### Total Petroleum Hydrocarbons as Gasoline Analysis

The sample was analyzed for total petroleum hydrocarbons (TPH) as gasoline per modified EPA Method TO-3 using a gas chromatograph equipped with a flame ionization detector (FID).

### Volatile Organic Compound Analysis

The sample was also analyzed for benzene in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. The analytical system was comprised of a gas chromatograph/mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.

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*The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for utilization of less than the complete report.*

**DETAIL SUMMARY REPORT**

Client: Barr Engineering  
 Project ID: MP 85 Site Exland WI / 49/55-0029.00 Y09 003

Service Request: P1004946

Date Received: 12/29/2010  
 Time Received: 10:05

TO-3 Modified - TPHG Can	TO-15 - VOC Cans
--------------------------	------------------

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	TO-3 Modified - TPHG Can	TO-15 - VOC Cans
Site Effluent	P1004946-001	Air	12/27/2010	13:00	1SC00286	-0.5	5.0	X	X

2655 Park Center Drive, Suite A  
 Simi Valley, California 93065  
 Phone (805) 526-7161  
 Fax (805) 526-7270

**Requested Turnaround Time in Business Days (Surcharges) please circle**  
 1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day-Standard

CAS Project No. 11004946

Company Name & Address (Reporting Information) <u>BARR ENGINEERING</u> <u>4700 WEST 77th ST</u> <u>MIRANDA &amp; PETER'S MIRR</u>		Project Name <u>MP-85 Site, Exland W.</u>		CAS Contact:	
Project Manager <u>HANS WROKA</u>		Project Number <u>49/55-0029,00 Y09 003</u>		Analysis Method	
Phone <u>952-832-2777</u>		P.O. # / Billing Information		Comments e.g. Actual Preservative or specific instructions	
Fax <u>952-832-2605</u>		Sampler (Print & Sign) <u>WARD MITCHELL</u>			

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure "Hg	Canister End Pressure "Hg/psig	Sample Volume	Analysis Method	Comments
<u>Site EFFLUENT</u>	<u>1</u>	<u>12/27</u>	<u>1:00pm</u>						<u>TPH GAS</u> <u>TO15 BENZENE ONLY</u>	

**Report Tier Levels - please select**

Tier I - (Results/Default if not specified) \_\_\_\_\_  
 Tier II (Results + QC) \_\_\_\_\_  
 Tier III (Data Validation Package) 10% Surcharge \_\_\_\_\_  
 Tier V (client specified) \_\_\_\_\_

EDD required Yes / No  
 Type: \_\_\_\_\_

Project Requirements (MRLs, QAPP)

Relinquished by: (Signature) <u>[Signature]</u>	Date: _____	Time: _____	Received by: (Signature) <u>[Signature]</u>	Date: <u>12/29/10</u>	Time: <u>1:05</u>
Relinquished by: (Signature)	Date: _____	Time: _____	Received by: (Signature)	Date: _____	Time: _____

Cooler / Blank Temperature \_\_\_\_\_ °C

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**Sample Acceptance Check Form**

Client: Barr Engineering Work order: P1004946

Project: MP 85 site Exland WI / 49/55-029 00 Y09 003

Sample(s) received on: 12/29/10 Date opened: 12/29/10 by: SSTAPLES

*Note:* This form is used for all samples received by CAS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

- |  | <b>Yes</b>                          | <b>No</b>                           | <b>N/A</b>                          |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| 1 Were <b>sample containers</b> properly marked with client sample ID?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 2 Container(s) <b>supplied by CAS?</b>   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 3 Did <b>sample containers</b> arrive in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 4 Was a <b>chain-of-custody</b> provided?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 5 Was the <b>chain-of-custody</b> properly completed?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 6 Did <b>sample container labels</b> and/or tags agree with custody papers?                                      | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 7 Was <b>sample volume</b> received adequate for analysis?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 8 Are samples within specified holding times?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 9 Was proper <b>temperature</b> (thermal preservation) of cooler at receipt adhered to?                          | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Cooler Temperature _____ °C Blank Temperature _____ °C   |                                     |                                     |                                     |
| 10 Was a <b>trip blank</b> received?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Trip blank supplied by CAS: _____  |                                     |                                     |                                     |
| 11 Were <b>custody seals</b> on outside of cooler/Box?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Location of seal(s)? _____ Sealing Lid?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were signature and date included?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were seals intact?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were custody seals on outside of sample container?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Location of seal(s)? _____ Sealing Lid?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were signature and date included?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were seals intact?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 12 Do containers have appropriate <b>preservation</b> , according to method/SOP or Client specified information? | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Is there a client indication that the submitted samples are <b>pH</b> preserved?                                 | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were <b>VOA vials</b> checked for presence/absence of air bubbles?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Does the client/method/SOP require that the analyst check the sample pH and <u>if necessary</u> alter it?        | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 13 <b>Tubes:</b> Are the tubes capped and intact?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Do they contain moisture?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 14 <b>Badges:</b> Are the badges properly capped and intact?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Are dual bed badges separated and individually capped and intact?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1004946-001.01	1.0 L Source Can					

Explain any discrepancies: (include lab sample ID numbers): \_\_\_\_\_  
 Sample ID does not match. COC reads "Site Effluent" container tag reads "SVE-Effluent"

\*Required pH: Phenols/COD/NH3/TOC/TOX/NO3+NO2/TKN/T.PHOS, H2SO4 (pH<2); Metals, HNO3 (pH<2); CN (NaOH or NaOH/Asc Acid) (pH>12);  
 Diss. Sulfide, NaOH (pH>12); T. Sulfide, NaOH/ZnAc (pH>12) RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

## RESULTS OF ANALYSIS

Page 1 of 1

**Client:** Barr Engineering

**Client Project ID:** MP 85 Site Exland WI / 49/55-0029.00 Y09 003

CAS Project ID: P1004946

**Total Petroleum Hydrocarbons (TPH) as Gasoline**

**Test Code:** EPA TO-3 Modified  
**Instrument ID:** HP 5890 II/GC19/FID  
**Analyst:** Dante Munoz-Castaneda  
**Sampling Media:** 1.0 L Summa Canister(s)  
**Test Notes:**

**Date(s) Collected:** 12/27/10  
**Date Received:** 12/29/10  
**Date Analyzed:** 1/7/11

Client Sample ID	CAS Sample ID	Canister	Injection	Result	MRL	Result	MRL	Data
		Dilution	Volume					
		Factor	ml(s)					
Site Effluent	P1004946-001	1.39	1.0	ND	25	ND	7.1	
Method Blank	P110107-MB	1.00	1.0	ND	18	ND	5.1	

Parts Per Million results are based on a Molecular Weight of 86.18.

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

RESULTS OF ANALYSIS

Page 1 of 1

**Client:** Barr Engineering

**Client Project ID:** MP 85 Site Exland WI / 49/55-0029.00 Y09 003

CAS Project ID: P1004946

**Benzene**

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3

Analyst: Simon Cao

Sampling Media: 1.0 L Summa Canister(s)

Test Notes:

Date(s) Collected: 12/27/10

Date Received: 12/29/10

Date Analyzed: 1/3/11

Client Sample ID	CAS Sample ID	Injection	Canister	Result	MRL	Result	MRL	Data
		Volume	Dilution					
Site Effluent	P1004946-001	100	1.39	<b>0.036</b>	0.0070	<b>0.011</b>	0.0022	
Method Blank	P110103-MB	1,000	1.00	ND	0.00050	ND	0.00016	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.



SURROGATE SPIKE RECOVERY RESULTS

Page 1 of 1

**Client:** Barr Engineering  
**Client Project ID:** MP 85 Site Exland WI / 49/55-0029.00 Y09 003

CAS Project ID: P1004946

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/HP5973/HP6890/MS3  
 Analyst: Simon Cao  
 Sampling Media: 1.0 L Summa Canister(s)  
 Test Notes:

Date(s) Collected: 12/27/10  
 Date(s) Received: 12/29/10  
 Date(s) Analyzed: 1/3/11

Client Sample ID	CAS Sample ID	1,2-Dichloroethane-d4	Toluene-d8	Bromofluorobenzene	Acceptance Limits	Data Qualifier
		Percent Recovered	Percent Recovered	Percent Recovered		
Method Blank	P110103-MB	97	100	103	70-130	
Site Effluent	P1004946-001	97	96	100	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.

Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.



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

January 13, 2011

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

Work Order Number: 1005192  
RE: 49550029

Enclosed are the results of analyses for samples received by the laboratory on 12/30/10. 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

A handwritten signature in cursive script that reads "Terri A. Olson".

Terri Olson  
Client Manager II  
tolson@legend-group.com

A handwritten signature in cursive script that reads "William Dahl".

William Dahl  
QA/QC Coordinator  
wdahl@legend-group.com

Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435	Project: 49550029 Project Number: 49550029.00 Y09.003 Project Manager: Ms. Andrea Nord	Work Order #: 1005192 Date Reported: 01/13/11
---	--	--

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-17	1005192-01	Water	12/27/10 13:53	12/30/10 10:00
MW-16	1005192-02	Water	12/27/10 14:29	12/30/10 10:00
MW-15	1005192-03	Water	12/27/10 14:55	12/30/10 10:00
MW-14	1005192-04	Water	12/27/10 15:37	12/30/10 10:00
MW-12	1005192-05	Water	12/27/10 15:22	12/30/10 10:00
MW-2	1005192-06	Water	12/28/10 08:55	12/30/10 10:00
MW-6	1005192-07	Water	12/27/10 15:55	12/30/10 10:00
MW-5	1005192-08	Water	12/28/10 09:18	12/30/10 10:00
MW-34	1005192-09	Water	12/28/10 10:04	12/30/10 10:00
MW-33	1005192-10	Water	12/28/10 10:35	12/30/10 10:00
MW-11	1005192-11	Water	12/28/10 11:30	12/30/10 10:00
Rinse Blank	1005192-12	Water	12/28/10 12:00	12/30/10 10:00
M-1	1005192-13	Water	12/28/10 00:00	12/30/10 10:00
Trip Blank	1005192-14	Water	12/09/10 00:00	12/30/10 10:00

**Shipping Container Information**

**Default Cooler**                      Temperature (°C): 7.9

Received on ice: Yes                      Temperature blank was present                      Received on ice pack: No  
 Received on melt water: No                      Ambient: No                      Acceptable (IH/ISO only): No  
 Custody seals: No

**Case Narrative:**

Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435	Project: 49550029 Project Number: 49550029.00 Y09.003 Project Manager: Ms. Andrea Nord	Work Order #: 1005192 Date Reported: 01/13/11
---	--	--

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

Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-17 (1005192-01) Water</b> Sampled: 12/27/10 13:53 Received: 12/30/10 10:00										
1,2,4-Trimethylbenzene	<1.0	1.0	0.16	ug/L	1	B1A0302	01/03/11	01/03/11	WI(95) GRO	
1,3,5-Trimethylbenzene	<1.0	1.0	0.17	ug/L	1	"	"	"	"	
Benzene	<1.0	1.0	0.11	ug/L	1	"	"	"	"	
Ethylbenzene	<1.0	1.0	0.095	ug/L	1	"	"	"	"	
Toluene	<1.0	1.0	0.16	ug/L	1	"	"	"	"	
Xylenes (total)	<3.0	3.0	0.19	ug/L	1	"	"	"	"	
Surrogate: 4-Fluorochlorobenzene	96.6			80-150 %		"	"	"	"	
<b>MW-16 (1005192-02) Water</b> Sampled: 12/27/10 14:29 Received: 12/30/10 10:00										
1,2,4-Trimethylbenzene	<1.0	1.0	0.16	ug/L	1	B1A0302	01/03/11	01/03/11	WI(95) GRO	
1,3,5-Trimethylbenzene	<1.0	1.0	0.17	ug/L	1	"	"	"	"	
Benzene	<1.0	1.0	0.11	ug/L	1	"	"	"	"	
Ethylbenzene	<1.0	1.0	0.095	ug/L	1	"	"	"	"	
Toluene	<1.0	1.0	0.16	ug/L	1	"	"	"	"	
Xylenes (total)	<3.0	3.0	0.19	ug/L	1	"	"	"	"	
Surrogate: 4-Fluorochlorobenzene	103			80-150 %		"	"	"	"	
<b>MW-15 (1005192-03) Water</b> Sampled: 12/27/10 14:55 Received: 12/30/10 10:00										
1,2,4-Trimethylbenzene	<1.0	1.0	0.16	ug/L	1	B1A0302	01/03/11	01/03/11	WI(95) GRO	
1,3,5-Trimethylbenzene	<1.0	1.0	0.17	ug/L	1	"	"	"	"	
Benzene	<1.0	1.0	0.11	ug/L	1	"	"	"	"	
Ethylbenzene	<1.0	1.0	0.095	ug/L	1	"	"	"	"	
Toluene	<1.0	1.0	0.16	ug/L	1	"	"	"	"	
Xylenes (total)	<3.0	3.0	0.19	ug/L	1	"	"	"	"	
Surrogate: 4-Fluorochlorobenzene	96.4			80-150 %		"	"	"	"	
<b>MW-14 (1005192-04) Water</b> Sampled: 12/27/10 15:37 Received: 12/30/10 10:00										
1,2,4-Trimethylbenzene	<1.0	1.0	0.16	ug/L	1	B1A0302	01/03/11	01/03/11	WI(95) GRO	
1,3,5-Trimethylbenzene	<1.0	1.0	0.17	ug/L	1	"	"	"	"	
Benzene	<1.0	1.0	0.11	ug/L	1	"	"	"	"	
Ethylbenzene	<1.0	1.0	0.095	ug/L	1	"	"	"	"	
Toluene	<1.0	1.0	0.16	ug/L	1	"	"	"	"	
Xylenes (total)	<3.0	3.0	0.19	ug/L	1	"	"	"	"	
Surrogate: 4-Fluorochlorobenzene	93.1			80-150 %		"	"	"	"	
<b>MW-12 (1005192-05) Water</b> Sampled: 12/27/10 15:22 Received: 12/30/10 10:00										
1,2,4-Trimethylbenzene	56	1.0	0.16	ug/L	1	B1A0302	01/03/11	01/03/11	WI(95) GRO	
1,3,5-Trimethylbenzene	25	1.0	0.17	ug/L	1	"	"	"	"	
Benzene	19	1.0	0.11	ug/L	1	"	"	"	"	
Ethylbenzene	13	1.0	0.095	ug/L	1	"	"	"	"	
Toluene	<1.0	1.0	0.16	ug/L	1	"	"	"	"	

Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435	Project: 49550029 Project Number: 49550029.00 Y09.003 Project Manager: Ms. Andrea Nord	Work Order #: 1005192 Date Reported: 01/13/11
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**WI(95) GRO/8015B**  
**Legend Technical Services, Inc.**

Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**MW-12 (1005192-05) Water** Sampled: 12/27/10 15:22 Received: 12/30/10 10:00

<b>Xylenes (total)</b>	<b>91</b>	3.0	0.19	ug/L	1	B1A0302	01/03/11	01/03/11	WI(95) GRO	
Surrogate: 4-Fluorochlorobenzene	104			80-150 %		"	"	"	"	

**MW-2 (1005192-06) Water** Sampled: 12/28/10 08:55 Received: 12/30/10 10:00

<b>1,2,4-Trimethylbenzene</b>	<b>6.1</b>	1.0	0.16	ug/L	1	B1A0302	01/03/11	01/03/11	WI(95) GRO	
<b>1,3,5-Trimethylbenzene</b>	<b>19</b>	1.0	0.17	ug/L	1	"	"	"	"	
<b>Benzene</b>	<b>24</b>	1.0	0.11	ug/L	1	"	"	"	"	
<b>Ethylbenzene</b>	<b>25</b>	1.0	0.095	ug/L	1	"	"	"	"	
Toluene	<1.0	1.0	0.16	ug/L	1	"	"	"	"	
<b>Xylenes (total)</b>	<b>17</b>	3.0	0.19	ug/L	1	"	"	"	"	
Surrogate: 4-Fluorochlorobenzene	98.3			80-150 %		"	"	"	"	

**MW-6 (1005192-07) Water** Sampled: 12/27/10 15:55 Received: 12/30/10 10:00

<b>1,2,4-Trimethylbenzene</b>	<b>&lt;1.0</b>	1.0	0.16	ug/L	1	B1A0302	01/03/11	01/03/11	WI(95) GRO	
<b>1,3,5-Trimethylbenzene</b>	<b>&lt;1.0</b>	1.0	0.17	ug/L	1	"	"	"	"	
<b>Benzene</b>	<b>1.7</b>	1.0	0.11	ug/L	1	"	"	"	"	
<b>Ethylbenzene</b>	<b>1.4</b>	1.0	0.095	ug/L	1	"	"	"	"	
Toluene	<1.0	1.0	0.16	ug/L	1	"	"	"	"	
<b>Xylenes (total)</b>	<b>&lt;3.0</b>	3.0	0.19	ug/L	1	"	"	"	"	
Surrogate: 4-Fluorochlorobenzene	95.8			80-150 %		"	"	"	"	

**MW-5 (1005192-08) Water** Sampled: 12/28/10 09:18 Received: 12/30/10 10:00

<b>1,2,4-Trimethylbenzene</b>	<b>9.7</b>	5.0	0.80	ug/L	5	B1A0302	01/03/11	01/03/11	WI(95) GRO	
<b>1,3,5-Trimethylbenzene</b>	<b>36</b>	5.0	0.85	ug/L	5	"	"	"	"	
<b>Benzene</b>	<b>510</b>	5.0	0.55	ug/L	5	"	"	"	"	
<b>Ethylbenzene</b>	<b>110</b>	5.0	0.48	ug/L	5	"	"	"	"	
Toluene	<b>8.0</b>	5.0	0.80	ug/L	5	"	"	"	"	
<b>Xylenes (total)</b>	<b>28</b>	15	0.95	ug/L	5	"	"	"	"	
Surrogate: 4-Fluorochlorobenzene	97.8			80-150 %		"	"	"	"	

**MW-34 (1005192-09) Water** Sampled: 12/28/10 10:04 Received: 12/30/10 10:00

<b>1,2,4-Trimethylbenzene</b>	<b>16</b>	5.0	0.80	ug/L	5	B1A0302	01/03/11	01/03/11	WI(95) GRO	
<b>1,3,5-Trimethylbenzene</b>	<b>15</b>	5.0	0.85	ug/L	5	"	"	"	"	
<b>Benzene</b>	<b>490</b>	5.0	0.55	ug/L	5	"	"	"	"	
<b>Ethylbenzene</b>	<b>52</b>	5.0	0.48	ug/L	5	"	"	"	"	
Toluene	<b>6.0</b>	5.0	0.80	ug/L	5	"	"	"	"	
<b>Xylenes (total)</b>	<b>47</b>	15	0.95	ug/L	5	"	"	"	"	
Surrogate: 4-Fluorochlorobenzene	97.8			80-150 %		"	"	"	"	

**MW-33 (1005192-10) Water** Sampled: 12/28/10 10:35 Received: 12/30/10 10:00

<b>1,2,4-Trimethylbenzene</b>	<b>16</b>	5.0	0.80	ug/L	5	B1A0302	01/03/11	01/03/11	WI(95) GRO	
<b>1,3,5-Trimethylbenzene</b>	<b>51</b>	5.0	0.85	ug/L	5	"	"	"	"	

Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435	Project: 49550029 Project Number: 49550029.00 Y09.003 Project Manager: Ms. Andrea Nord	Work Order #: 1005192 Date Reported: 01/13/11
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**WI(95) GRO/8015B**  
**Legend Technical Services, Inc.**

Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-33 (1005192-10) Water</b> Sampled: 12/28/10 10:35 Received: 12/30/10 10:00										
Benzene	840	5.0	0.55	ug/L	5	B1A0302	01/03/11	01/03/11	WI(95) GRO	
Ethylbenzene	70	5.0	0.48	ug/L	5	"	"	"	"	
Toluene	21	5.0	0.80	ug/L	5	"	"	"	"	
Xylenes (total)	59	15	0.95	ug/L	5	"	"	"	"	
Surrogate: 4-Fluorochlorobenzene	107			80-150 %		"	"	"	"	
<b>MW-11 (1005192-11) Water</b> Sampled: 12/28/10 11:30 Received: 12/30/10 10:00										
1,2,4-Trimethylbenzene	190	5.0	0.80	ug/L	5	B1A0302	01/03/11	01/03/11	WI(95) GRO	
1,3,5-Trimethylbenzene	66	5.0	0.85	ug/L	5	"	"	"	"	
Benzene	780	5.0	0.55	ug/L	5	"	"	"	"	
Ethylbenzene	220	5.0	0.48	ug/L	5	"	"	"	"	
Toluene	6.8	5.0	0.80	ug/L	5	"	"	"	"	
Xylenes (total)	1000	15	0.95	ug/L	5	"	"	"	"	
Surrogate: 4-Fluorochlorobenzene	95.3			80-150 %		"	"	"	"	
<b>Rinse Blank (1005192-12) Water</b> Sampled: 12/28/10 12:00 Received: 12/30/10 10:00										
1,2,4-Trimethylbenzene	<1.0	1.0	0.16	ug/L	1	B1A0302	01/03/11	01/03/11	WI(95) GRO	
1,3,5-Trimethylbenzene	<1.0	1.0	0.17	ug/L	1	"	"	"	"	
Benzene	<1.0	1.0	0.11	ug/L	1	"	"	"	"	
Ethylbenzene	<1.0	1.0	0.095	ug/L	1	"	"	"	"	
Toluene	<1.0	1.0	0.16	ug/L	1	"	"	"	"	
Xylenes (total)	<3.0	3.0	0.19	ug/L	1	"	"	"	"	
Surrogate: 4-Fluorochlorobenzene	93.5			80-150 %		"	"	"	"	
<b>M-1 (1005192-13) Water</b> Sampled: 12/28/10 00:00 Received: 12/30/10 10:00										
1,2,4-Trimethylbenzene	7.3	1.0	0.16	ug/L	1	B1A0302	01/03/11	01/03/11	WI(95) GRO	
1,3,5-Trimethylbenzene	22	1.0	0.17	ug/L	1	"	"	"	"	
Benzene	23	1.0	0.11	ug/L	1	"	"	"	"	
Ethylbenzene	27	1.0	0.095	ug/L	1	"	"	"	"	
Toluene	<1.0	1.0	0.16	ug/L	1	"	"	"	"	
Xylenes (total)	19	3.0	0.19	ug/L	1	"	"	"	"	
Surrogate: 4-Fluorochlorobenzene	98.2			80-150 %		"	"	"	"	
<b>Trip Blank (1005192-14) Water</b> Sampled: 12/09/10 00:00 Received: 12/30/10 10:00										
1,2,4-Trimethylbenzene	<1.0	1.0	0.16	ug/L	1	B1A0302	01/03/11	01/03/11	WI(95) GRO	H3b
1,3,5-Trimethylbenzene	<1.0	1.0	0.17	ug/L	1	"	"	"	"	
Benzene	<1.0	1.0	0.11	ug/L	1	"	"	"	"	
Ethylbenzene	<1.0	1.0	0.095	ug/L	1	"	"	"	"	
Toluene	<1.0	1.0	0.16	ug/L	1	"	"	"	"	
Xylenes (total)	<3.0	3.0	0.19	ug/L	1	"	"	"	"	
Surrogate: 4-Fluorochlorobenzene	91.3			80-150 %		"	"	"	"	

Barr Engineering Co. 4700 W 77th St Minneapolis, MN 55435	Project: 49550029 Project Number: 49550029.00 Y09.003 Project Manager: Ms. Andrea Nord	Work Order #: 1005192 Date Reported: 01/13/11
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**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
<b>Batch B1A0302 - EPA 5030 Water (Purge and Trap)</b>											
<b>Blank (B1A0302-BLK1)</b>						Prepared & Analyzed: 01/03/11					
1,2,4-Trimethylbenzene	< 1.0	1.0	0.16	ug/L							
1,3,5-Trimethylbenzene	< 1.0	1.0	0.17	ug/L							
Benzene	< 1.0	1.0	0.11	ug/L							
Ethylbenzene	< 1.0	1.0	0.095	ug/L							
Toluene	< 1.0	1.0	0.16	ug/L							
Xylenes (total)	< 3.0	3.0	0.19	ug/L							
Surrogate: 4-Fluorochlorobenzene	24.5			ug/L	25.0		98.2	80-150			
<b>LCS (B1A0302-BS1)</b>						Prepared & Analyzed: 01/03/11					
1,2,4-Trimethylbenzene	103	1.0	0.16	ug/L	100		103	80-120			
1,3,5-Trimethylbenzene	103	1.0	0.17	ug/L	100		103	80-120			
Benzene	97.5	1.0	0.11	ug/L	100		97.5	80-120			
Ethylbenzene	93.4	1.0	0.095	ug/L	100		93.4	80-120			
Toluene	96.0	1.0	0.16	ug/L	100		96.0	80-120			
Xylenes (total)	303	3.0	0.19	ug/L	300		101	80-120			
Surrogate: 4-Fluorochlorobenzene	24.0			ug/L	25.0		96.2	80-150			
<b>LCS Dup (B1A0302-BSD1)</b>						Prepared & Analyzed: 01/03/11					
1,2,4-Trimethylbenzene	91.7	1.0	0.16	ug/L	100		91.7	80-120	11.6	20	
1,3,5-Trimethylbenzene	96.9	1.0	0.17	ug/L	100		96.9	80-120	6.33	20	
Benzene	96.9	1.0	0.11	ug/L	100		96.9	80-120	0.607	20	
Ethylbenzene	89.4	1.0	0.095	ug/L	100		89.4	80-120	4.33	20	
Toluene	94.3	1.0	0.16	ug/L	100		94.3	80-120	1.87	20	
Xylenes (total)	289	3.0	0.19	ug/L	300		96.2	80-120	4.75	20	
Surrogate: 4-Fluorochlorobenzene	23.9			ug/L	25.0		95.5	80-150			
<b>Matrix Spike (B1A0302-MS1)</b>						Source: 1005192-01 Prepared & Analyzed: 01/03/11					
1,2,4-Trimethylbenzene	99.5	1.0	0.16	ug/L	100	<1.0	99.5	80-120			
1,3,5-Trimethylbenzene	103	1.0	0.17	ug/L	100	<1.0	103	80-120			
Benzene	96.8	1.0	0.11	ug/L	100	<1.0	96.8	80-120			
Ethylbenzene	92.5	1.0	0.095	ug/L	100	<1.0	92.5	80-120			
Toluene	94.6	1.0	0.16	ug/L	100	<1.0	94.6	80-120			
Xylenes (total)	300	3.0	0.19	ug/L	300	<3.0	100	80-120			
Surrogate: 4-Fluorochlorobenzene	25.3			ug/L	25.0		101	80-150			

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

Project: 49550029  
Project Number: 49550029.00 Y09.003  
Project Manager: Ms. Andrea Nord

Work Order #: 1005192  
Date Reported: 01/13/11

### Notes and Definitions

H3b The trip-blank sample was received and analyzed past holding time.  
< 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)



**Chain of Custody**

**BARR** 4700 West 77th Street  
 Minneapolis, MN 55435-4803  
 (952) 832-2600

1065792

Number of Containers/Preservative		COC _____ of _____	
Water	Soil		
VOCs (HCl) #1 VOCs (unpreserved) #2 Dissolved Metals (HNO <sub>3</sub> ) Total Metals (HNO <sub>3</sub> ) General (unpreserved) #3 Diesel Range Organics (HCl) Nutrients (H <sub>2</sub> SO <sub>4</sub> ) #4	VOCs (Iared MeOH) #1 GRO, BTEX (Iared MeOH) #1 DRO (Iared unpreserved) Metals (unpreserved) VOCs (unpreserved) #2 % Solids (plastic vial, unpres.)	Total Number Of Containers _____	

Project Number: 49/55-0029.00 Y09.003

Project Name: MP-85 Embriage Excn d Wi

Sample Origination State W (use two letter postal state abbreviation)

COC Number: No 28720

Location	Start Depth	Stop Depth	Depth Unit (m./ft. or in.)	Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix		Type		SVOCs (HCl) #1	SVOCs (unpreserved) #2	Dissolved Metals (HNO <sub>3</sub> )	Total Metals (HNO <sub>3</sub> )	General (unpreserved) #3	Diesel Range Organics (HCl)	Nutrients (H <sub>2</sub> SO <sub>4</sub> ) #4	VOCs (Iared MeOH) #1	GRO, BTEX (Iared MeOH) #1	DRO (Iared unpreserved)	Metals (unpreserved)	VOCs (unpreserved) #2	% Solids (plastic vial, unpres.)	Total Number Of Containers	
						Water	Soil	Grab	Comp.															OC
01. MW-17				12/27	1:53	X				X														
02. MW-16				12/27	2:29	X				X														
03. MW-15				12/27	2:55	X				X														
04. MW-14				12/27	3:37	X				X														
05. MW-12				12/27	3:22	X				X														
06. MW-2				12/28	8:55	X				X														
07. MW-6				12/27	3:55	X				X														
08. MW-5				12/28	9:18	X				X														
09. MW-34				12/28	10:04	X				X														
10. MW-33				12/28	10:35	X				X														

Common Parameter/Container - Preservation Key					
#1 - Volatile Organics = BTEX, GRO, TPH, 8260 Full List #2 - Semivolatile Organics = PAHs, PCP, Dioxins, 8270 Full List, Herbicide/Pesticide/PCBs #3 - General = pH, Chloride, Fluoride, Alkalinity, TSS, YDS, TS, Sulfate #4 - Nutrients = COD, TOC, Phenols, Ammonia Nitrogen, TKN					

Relinquished By: <u>[Signature]</u>	On Ice? <u>(Y) N</u>	Date <u>12/29</u>	Time <u>8:00m</u>	Received by: _____	Date _____	Time _____
Relinquished By: _____	On Ice? <u>Y N</u>	Date _____	Time _____	Received by: <u>[Signature]</u>	Date <u>12/30/10</u>	Time <u>10:00</u>
Samples Shipped VIA: <input type="checkbox"/> Air Freight <input type="checkbox"/> Federal Express <input type="checkbox"/> Sampler <input type="checkbox"/> Other: _____				Air Bill Number: _____		

Distribution: White-Original Accompanies Shipment to Lab; Yellow - Field Copy; Pink - Lab Coordinator

WB 7.9°

HLR\GSTD\FORMS\Chain Of Custody Form 2009 RLG Rev. 09/01/09

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.

**Chain of Custody**  
 4700 West 77th Street  
**BARR** Minneapolis, MN 55435-4803  
 (952) 832-2600

1005192

Project Number: 419/55-0029.00 Y09.003  
 Project Name: MP-85 Enbridge Exland W.  
 Sample Origination State W (use two letter postal state abbreviation)  
 COC Number: **No** 28721

Number of Containers/Preservative		COC _____ of _____
Water	Soil	
VOCs (HCl) #1	VOCs (tared MeOH) #1	Project Manager: <u>Wendy Wenka</u>  Project QC Contact: _____  Sampled by: <u>GSW</u>  Laboratory: <u>Legend</u>
SVOCs (unpreserved) #2	GRO, BTEX (tared MeOH) #1	
Dissolved Metals (HNO <sub>3</sub> )	DRO (tared unpreserved)	
Total Metals (HNO <sub>3</sub> )	Metals (unpreserved)	
General (unpreserved) #3	SVOCs (unpreserved) #2	
Diesel Range Organics (HCl)	% Solids (plastic vial, unpres.)	
Nutrients (H <sub>2</sub> SO <sub>4</sub> ) #4		
Total Number Of Containers		

Location	Start Depth	Stop Depth	Depth Unit (m./ft. or in.)	Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix		Type		VOCs (HCl) #1	SVOCs (unpreserved) #2	Dissolved Metals (HNO <sub>3</sub> )	Total Metals (HNO <sub>3</sub> )	General (unpreserved) #3	Diesel Range Organics (HCl)	Nutrients (H <sub>2</sub> SO <sub>4</sub> ) #4	VOCs (tared MeOH) #1	GRO, BTEX (tared MeOH) #1	DRO (tared unpreserved)	Metals (unpreserved)	SVOCs (unpreserved) #2	% Solids (plastic vial, unpres.)	Total Number Of Containers	
						Water	Soil	Grab	Comp.															OC
11 MW-11				12-28	11:30	X				X														
12 Rinse Blank				12-28	12:00	X				X														
13 M-1				12-28	—	X				X														
4.																								
5.																								
6.																								
7.																								
8.																								
9.																								
10.																								

**Common Parameter/Container - Preservation Key**  
 #1 - Volatile Organics = BTEX, GRO, TPH, 8260 Full List  
 #2 - Semivolatile Organics = PAHs, PCP, Dioxins, 8270 Full List, Herbicide/Pesticide/PCBs  
 General = pH, Chloride, Fluoride, Alkalinity, TSS, TS, Sulfate  
 #3 = COD, TOC, Phenols, Ammonia

Relinquished By: <u>[Signature]</u>	On Ice? <input checked="" type="radio"/> N	Date: 12/29	Time: 8:00	Received by:	Date:	Time:
Relinquished By:	On Ice? <input type="radio"/> Y <input type="radio"/> N	Date:	Time:	Received by: <u>BPham</u>	Date: 12/30/10	Time: 10:00
Samples Shipped VIA: <input type="checkbox"/> Air Freight <input type="checkbox"/> Federal Express <input type="checkbox"/> Sampler <input type="checkbox"/> Other: _____				Air Bill Number:		

Distribution: White-Original Accompanies Shipment to Lab; Yellow - Field Copy; Pink - Lab Coordinator

UPS 7.9c

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.