



Mitchell E. Daniels, Jr.  
Governor

Thomas W. Easterly  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
(800) 451-6027  
www.IN.gov/idem

TO: Interested Parties / Applicant  
DATE: July 9, 2007  
RE: Enbridge Energy, Limited Partnerships - Hartsdale/Griffith / 089-24839-00497  
FROM: Nisha Sizemore  
Chief, Permits Branch  
Office of Air Quality

### Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 and 326 IAC 2, this approval is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures  
FNPER-MOD.dot 03/23/06



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We make Indiana a cleaner, healthier place to live.*

Mitchell E. Daniels, Jr.  
Governor

Thomas W. Easterly  
Commissioner

100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
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Ms. Rachael Shetka  
Enbridge Energy, Limited Partnership – Hartsdale/Griffith  
119 North 25th Street East  
Superior, Wisconsin 54880

July 9, 2007

Re: 089-24839-00497  
Second Minor Source Modification to:  
Part 70 Permit No.: T 089-11137-00081 &  
Part 70 Permit No.: T 089-7802-00059

Dear Ms. Shetka:

Enbridge Energy, Limited Partnership –Hartsdale/Griffith was issued Part 70 Operating Permit 089-11137-00081 on May 1, 2001 for the Hartsdale Terminal and Part 70 Operating Permit 089-7802-00497 on September 24, 1998 for the Griffith Terminal, both for a stationary bulk petroleum storage source. An application to modify the source was received on May 24, 2007. Pursuant to 326 IAC 2-7-10.5(d), the following emission unit is approved for construction at the Griffith Terminal:

One (1) crude oil storage tank, identified as Tank 80, approved for construction in 2007, with an external floating roof, and with a maximum capacity of 188,000 barrels (7,896,000 gallons). Pursuant to 40 CFR 60, Subpart Kb, this is an affected facility.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit  
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

The source may begin construction when the source modification has been issued. The source must comply with the requirements of 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12 before operation of any of the proposed emission units can begin.

Pursuant to Contract No. A305-5-65, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Mr. Stephen Treimel, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7902 to speak directly to Mr. Treimel. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, or call (800) 451-6027 and ask for Duane Van Laningham or extension 3-6878, or dial (317) 233-6878.

Sincerely/Original Signed By,

Nisha Sizemore, Chief  
Permits Branch  
Office of Air Quality

#### Attachments

#### ERG/ST

cc: File – Lake County  
Lake County Health Department  
Northwest Regional Office  
Air Compliance Section Inspector Rick Massoels/Ramesh Tejuja  
Compliance Data Section  
Administrative and Development  
Billing, Licensing and Training Section – Dan Stamatkin



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**PART 70 MINOR SOURCE MODIFICATION  
OFFICE OF AIR QUALITY**

**Enbridge Energy, Limited Partnership - Hartsdale/Griffith  
1500 West Main Street and Lakehead Road  
Griffith, Indiana 46319**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-2 and 326 IAC 2-7-10.5, applicable to those conditions.

Second Minor Source Modification No.: 089-24839-00497	
Issued by/Original Signed By:  Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: July 9, 2007

## SECTION A

## SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

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The Permittee owns and operates a stationary bulk petroleum storage sources, known as Hartsdale Terminal and Griffith Terminal.

Responsible Official:	Scott W. Lounsbury
Source Address:	1500 West Main Street, Griffith, Indiana 46319
Mailing Address:	119 N. 25 <sup>th</sup> Street East, Superior, Wisconsin 54880-5247
General Source Phone Number:	219-922-3133
SIC Code:	4226
County Location:	Lake
Source Location Status:	Nonattainment for 8-hour Ozone, 1-hour Ozone, PM2.5, and Sulfur Dioxide
Source Status:	Attainment for all other criteria pollutants Part 70 Permit Program Major Source, under Emission Offset Rules; Minor Source, Section 112 of the Clean Air Act

### A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

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This bulk petroleum storage company consists of two (2) plants:

- - (a) Hartsdale Terminal with Plant ID 089-00081 is located at Central Avenue and Division Street, Schererville, Indiana 46375; and
  - (b) Griffith Terminal with Plant ID 089-00059 is located at West Main Street and Lakehead Road, Griffith, Indiana 46319

IDEM, OAQ has determined that these two (2) terminals are considered one plant and therefore, the two (2) Part 70 permits will be combined into one permit. The permit modification involves modification of the two Part 70 permits and combining them into one permit

### A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

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This stationary source consists of the following emission units and pollution control devices:

#### Hartsdale Terminal:

- (a) Nine (9) above ground, vertical, external floating roof, storage tanks, identified as 1601 through 1609, installed in 1958, capacity: 4,200,000 gallons (100,000 barrels) of crude oil each.
- (b) Spearhead project – consists of the installation of three (3) main line booster pumps and associated piping, metering, sampling and maintenance equipment. This project will result in an increase potential terminal throughput of 125,000 barrels per day. No physical modifications to the terminal's tanks will occur as part of the project.

This project will reverse the flow of the existing pipeline from Cushing, Oklahoma which currently transports crude oil to the Hartsdale and Griffith Terminals will now transport crude oil from Hartsdale and Griffith Terminals to Cushing, Oklahoma.

- (c) Piping component fugitive emission sources in VOC service.

**Griffith Terminal:**

- (a) One (1) crude oil storage tank, constructed in 2007, identified as Tank 79, with an external floating roof, with a maximum capacity of 370,000 barrels (15,543,440 gallons).
- (b) One (1) crude oil storage tank, constructed in 1969, identified as EU70, with an external floating roof, with a maximum capacity of 120,000 barrels.
- (c) One (1) crude oil storage tank, constructed in 1970, identified as EU71, with an external floating roof, with a maximum capacity of 217,000 barrels.
- (d) One (1) crude oil storage tank, constructed in 1971, identified as EU72, with an external floating roof, with a maximum capacity of 217,000 barrels.
- (e) One (1) crude oil storage tank, constructed in 1971, identified as EU73, with an external floating roof, with a maximum capacity of 217,000 barrels.
- (f) One (1) crude oil storage tank, constructed in 1972, identified as EU74, with an external floating roof, with a maximum capacity of 217,000 barrels.
- (g) One (1) crude oil storage tank, constructed in 1972, identified as EU75, with an external floating roof, with a maximum capacity of 217,000 barrels.
- (h) One (1) crude oil storage tank, constructed in 1973, identified as EU76, with an external floating roof, with a maximum capacity of 395,000 barrels.
- (i) One (1) crude oil storage tank, constructed in 1973, identified as EU77, with an external floating roof, with a maximum capacity of 395,000 barrels.
- (j) One (1) crude oil storage tank, constructed in 1979, identified as EU78, with an external floating roof, with a maximum capacity of 217,000 barrels.
- (k) One (1) crude oil storage tank, identified as Tank 80, approved for construction in 2007, with an external floating roof, and with a maximum capacity of 188,000 barrels (7,896,000 gallons). Pursuant to 40 CFR 60, Subpart Kb, this is an affected facility.
- (l) Piping component fugitive emission sources in VOC service.

A.4 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

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This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

- (a) Emergency diesel generator not exceeding 1,600 horsepower, rated at 175 horsepower.
- (b) Paved and unpaved roads and parking lots with public access.
- (c) Diesel generators not exceeding 1600 horsepower.
- (d) A laboratory as defined in 326 IAC 2-7-1(21)(C).
- (e) Stationary fire pumps.

A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

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This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

## SECTION D.2 FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

#### Griffith Terminal:

- (a) One (1) crude oil storage tank, constructed in 2007, identified as Tank 79, with an external floating roof, with a maximum capacity of 370,000 barrels (15,543,440 gallons).
- (b) One (1) crude oil storage tank, constructed in 1969, identified as EU70, with an external floating roof, with a maximum capacity of 120,000 barrels.
- (c) One (1) crude oil storage tank, constructed in 1970, identified as EU71, with an external floating roof, with a maximum capacity of 217,000 barrels.
- (d) One (1) crude oil storage tank, constructed in 1971, identified as EU72, with an external floating roof, with a maximum capacity of 217,000 barrels.
- (e) One (1) crude oil storage tank, constructed in 1971, identified as EU73, with an external floating roof, with a maximum capacity of 217,000 barrels.
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- (i) One (1) crude oil storage tank, constructed in 1973, identified as EU77, with an external floating roof, with a maximum capacity of 395,000 barrels.
- (j) One (1) crude oil storage tank, constructed in 1979, identified as EU78, with an external floating roof, with a maximum capacity of 217,000 barrels.
- (k) One (1) crude oil storage tank, identified as Tank 80, approved for construction in 2007, with an external floating roof, and with a maximum capacity of 188,000 barrels (7,896,000 gallons). Pursuant to 40 CFR 60, Subpart Kb, this is an affected facility.
- (l) Piping component fugitive emission sources in VOC service.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-4] [326 IAC 8-9]

- (a) Pursuant to 326 IAC 8-4-3, (Petroleum Liquid Storage Facilities), the following requirements shall be applicable to the eleven (11) external floating roof storage tanks identified as 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, and 80.
  - (1) The owner or operator shall not store petroleum liquid in these tanks unless:
    - (A) The facility has been fitted with:
      - (i) A continuous secondary seal extending from the floating roof to the tank wall (rim-mounted secondary seal); or
      - (ii) A closure or other device approved by the IDEM, OAQ which is equally effective.

- (B) All seal closure devices shall meet the following requirements:
    - (i) There are no visible holes, tears, or other openings in the seal(s) or seal fabric;
    - (ii) The seal(s) are intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall.
    - (iii) For vapor mounted primary seals, the accumulated gap area around the circumference of the secondary seal where a gap exceeding one-eighth (1/8) inch exists between the secondary seal and the tank wall shall not exceed 1.0 square inch per foot of tank diameter. There shall be no gaps exceeding one-half (1/2) inch between the secondary seal and the tank wall of welded tanks and no gaps exceeding one (1) inch between the secondary seal and the tank wall of riveted tanks.
  - (C) All openings in the external floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves, are:
    - (i) Equipped with covers, seals, or lids in the closed position except when the openings are in actual use; and
    - (ii) Equipped with projections into the tank which remain below the liquid surface at all times.
  - (D) Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports;
  - (E) Rim vents are set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting; and
  - (F) Emergency roof drains are provided with slotted membrane fabric covers or equivalent covers which cover at least ninety percent (90%) of the area of the opening.
- (b) Pursuant to 326 IAC 8-9-1, the ten (10) storage tanks identified as 70, 71, 72, 73, 74, 75, 76, 77, 78, and 79 shall comply with the requirements of 326 IAC 8-9-4(e). Standards applicable to each external floating roof are as follows shall be the following:
- (1) Each external floating roof shall be equipped with a closure device between the wall of the vessel and the roof edge. The closure device shall consist of two (2) seals, one (1) above the other. The lower seal shall be referred to as the primary seal; the upper seal shall be referred to as the secondary seal.
  - (2) The primary seal shall completely cover the annular space between the edge of the floating roof and vessel wall and shall be either a liquid-mounted seal or a shoe seal.
  - (3) The secondary seal shall completely cover the annular space between the external floating roof and the wall of the vessel in a continuous fashion.
  - (4) Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface.
  - (5) Except for automatic bleeder vents, rim space vents, roof drains and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal or lid that shall be maintained in a closed position at all times, without visible gap, except when the device is in actual use.

- (6) Automatic bleeder vents shall be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.
- (7) Rim vents shall be set to open when the roof is being floated off the roof leg supports or at the manufacturers recommended setting. Automatic bleeder vents and rim space vents shall be gasketed.
- (8) Each emergency roof drain shall be provided with a slotted membrane fabric that covers at least ninety percent (90%) of the area of the opening.
- (9) The roof shall be floating on the liquid at all times, for example, off the roof leg supports, except when the vessel is completely emptied and subsequently refilled. The process of filling, emptying or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as

D.2.2 New Source Performance Standard [326 IAC 12] [40 CFR 60.110a Subpart Ka]

- (a) Pursuant to 326 IAC 12 and 40 CFR 60.110a, Subpart Ka, the external floating roof for tank identified as 78 shall meet the following requirements:
  - (1) An external floating roof, consisting of a pontoon-type or double-deck-type cover that rests on the surface of the liquid contents and is equipped with a closure device between the tank wall and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal and the upper seal is referred to as the secondary seal. The roof is to be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill and when the tank is completely emptied and subsequently refilled. The process of emptying and refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.
    - (i) The primary seal is to be either a metallic shoe seal, a liquid mounted seal or a vapor mounted seal. Each seal is to meet the following requirements:
      - (A) The accumulated area of gaps between the tank wall and the metallic shoe seal or the liquid mounted seal shall not exceed 212 cm<sup>2</sup> per meter of tank diameter (10.0 in<sup>2</sup> per ft of tank diameter) and the width of any portion of any gap shall not exceed 3.81 cm (1.5 in).
      - (B) The accumulated area of gaps between the tank wall and the vapor-mounted seal shall not exceed 21.2 cm<sup>2</sup> per meter of tank diameter (1.0 in<sup>2</sup> per ft of tank diameter) and the width of any portion of any gap shall not exceed 1.27 cm (0.5 in).
      - (C) One end of the metallic shoe is to extend into the stored liquid and the other end is to extend a minimum vertical distance of 61 cm (24 in) above the stored liquid surface.
      - (D) There are to be no holes, tears or other openings in the shoe, seal fabric or seal envelope.
    - (ii) The secondary seal is to meet the following requirements:
      - (A) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall.

- (B) The accumulated area of gaps between the tank wall and the secondary seal used in combination with a metallic shoe or liquid-mounted primary seal shall not exceed 21.2 cm<sup>2</sup> per meter of tank diameter (1.0 in<sup>2</sup> per ft of tank diameter) and the width of any portion of any gap shall not exceed 1.27 cm (0.5 in). There shall be no gaps between the tank wall and the secondary seal used in combination with a vapor-mounted primary seal.
  - (C) There shall be no holes, tears or other openings in the seal or seal fabric.
  - (D) The owner or operator is exempted from the requirements for secondary seals and the secondary seal gap criteria when performing gap measurements of inspections of the primary seal.
- (iii) Each opening in the roof except for automatic bleeder vents and rim space vents is to provide a projection below the liquid surface. Each opening in the roof except for automatic bleeder vents, rim space vents and leg sleeves is to be equipped with a cover, seal or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.
  - (iv) Each emergency roof drain is to be provided with a slotted membrane fabric that covers at least 90 percent of the area of the opening.

#### D.2.3 New Source Performance Standard [326 IAC 12] [40 CFR 60.110b Subpart Kb]

Pursuant to 326 IAC 12 and 40 CFR 60.110b, Subpart Kb, the external floating roof for Tank 79 and Tank 80 shall meet the following requirements:

- (a) Be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two seals, the primary seal, and the secondary seal.
  - (1) The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal, and shall completely cover the annular space between the edge of the floating roof and tank wall.
  - (2) The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel.
- (b) All opening in a noncontact external floating roof except for automatic bleeder vents, rim space vents, and leg sleeve shall:
  - (1) Be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times, except when the device is in actual use;
  - (2) Provide a projection below the liquid surface.
  - (3) Automatic bleeder vents shall be closed at all times when the roof is floating except when the roof is being floated off the roof legs supports;
  - (4) Rim vents shall be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting;

- (5) Emergency roof drain shall be provided with slotted membrane fabric cover that covers at least ninety percent (90%) of the area of the opening.
- (c) All seal closure devices shall meet the following requirements:
- (1) The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 square centimeter (cm<sup>2</sup>) per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm.
    - (i) One end of the mechanical shoe shall extend into the stored liquid, and the other end shall extend a minimum vertical distance of 61 centimeter (cm).
    - (ii) There shall be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.
  - (2) The secondary seal shall be installed above the primary seal to completely cover the space between the roof edge and the tank wall.
  - (3) The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm<sup>2</sup> per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.
    - (i) There shall be no holes, tears, or other openings in the seal or seal fabric.
  - (4) The roof shall be floating on the liquid at all times except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

#### D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for Tank 78, Tank 79, and Tank 80 and their control devices.

### Compliance Determination Requirements

#### D.2.5 Volatile Organic Compounds: Testing and Procedures [326 IAC 8-9] [326 IAC 12 and 40 CFR 60.113b, Subpart Kb]

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- (a) Pursuant to 326 IAC 8-9, the tanks identified as 70, 71, 72, 73, 74, 75, 76, 77, 78, and 79 shall meet the following requirements:
- (1) The owner or operator of each vessel equipped with an external floating roof shall determine the gap areas and maximum gap widths between the primary seal and the wall of the vessel and between the secondary seal and the wall of the vessel according to the following frequency:
    - (A) Measurement of gaps between the vessel wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within 60 days of the initial fill with VOL and at least once every 5 years thereafter.
    - (B) Measurements of gaps between the vessel wall and the secondary seal shall be performed within 60 days of the initial fill with VOL and at least once per year thereafter.

- (C) If any source ceases to store VOL for a period of 1 year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill for purposes of these procedures.
- (2) Determine gap widths and areas in the primary and secondary seals individually by the following procedures:
- (A) Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.
  - (B) Measure seal gaps around the entire circumference of the vessel in each place where a one-eighth inch diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the vessel and measure the circumferential distance of each such location.
  - (C) The total surface area of each gap described in Section (2)(B) of this condition shall be determined by using probes of various widths to measure accurately the actual distance from the vessel wall to the seal and multiplying each such width by its respective circumferential distance.
- (3) Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each by the nominal diameter of the vessel and compare each ratio to the respective standards in the following section (4)(A) and(4)(B).
- (4) Make necessary repairs or empty the vessel within forty-five days of identification of seals not meeting the requirements listed in (4)(A) and (4)(B) as follows:
- (A) The accumulated area of gaps between the vessel wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 10 square inches per foot of vessel diameter, and the width of any portion of any gap shall not exceed one and five-tenths inches. There shall be no holes, tears or other openings in the shoe, seal fabric or seal envelope.
  - (B) The secondary seal shall meet the following requirements:
    - (i) The secondary seal shall be installed above the primary seal so that it completely covers the space between the roof edge and the vessel wall.
    - (ii) The accumulated area of gaps between the vessel wall and the secondary seal used in combination with a metallic shoe or liquid-mounted primary seal shall not exceed one square inch per foot of vessel diameter, and the width of any portion of any gap shall not exceed five-tenths inch. There shall be no gaps between the vessel wall and the secondary seal when used in combination with a vapor-mounted primary seal.
  - (C) If a failure is detected during inspections and can not be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the department. Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

- (b) Pursuant to 326 IAC 12 and 40 CFR 60.113b, Subpart Kb, the owner or operator of Tank 79 and Tank 80 equipped with an external floating roof shall meet the following requirements:
- (1) Determine the gap areas and gap widths, between the primary seal and the wall of the storage tank and between the secondary seal and the wall of the storage tank as follows:
    - (A) Measure the seal gaps between the tank wall and the primary seal during the hydrostatic testing of the vessel or within 60 days of the initial fill with VOL and at least once every 5 years thereafter;
    - (B) Measure the gaps between the tank wall and the secondary seal within 60 days of the initial fill with VOL and at least once per year thereafter; and
  - (2) If the tank ceases to store VOL for a period of 1 year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill.
  - (3) Determine the gap widths and areas in the primary and secondary seals individually as follows:
    - (A) Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.
    - (B) Measure seal gaps around the entire circumference of the tank in each place where a 0.32 cm diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the storage vessel and measure the circumferential distance of each such location.
    - (C) A failure (where the gap areas do not meet the standard) that is detected during inspections shall be repaired within forty-five (45) days.

If the tank cannot be emptied within 45 days, a thirty (3) day extension may be requested from the EPA and IDEM, OAQ in the inspection report. Such request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control will be repaired or the tank will be emptied as soon as possible.

### **Compliance Monitoring Requirements**

#### **D.2.6 Visual Inspections [326 IAC 8-9-5] [326 IAC 12] [40 CFR 60.113b, Subpart Kb]**

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- (a) Notify the department thirty days in advance of any gap measurements required to afford the department the opportunity to have an observer present.
- (b) Visually inspect the external floating roof, the primary seal, secondary seal and fittings each time the vessel is emptied and degassed. For all visual inspections, the following requirements shall apply:
  - (1) If the external floating roof has defects, the primary seal has holes, tears or other openings in the seal or the seal fabric, or the secondary seal has holes, tears or other openings in the seal fabric, the owner or operator shall repair the items as necessary so that none of the conditions specified in this clause exist before filling or refilling the vessel with VOL.

- (2) The owner or operator shall notify the department in writing at least thirty days prior to the filling or refilling of each vessel to afford the department the opportunity to inspect the vessel prior to the filling. If the inspection is not planned and the owner or operator could not have known about the inspection thirty days in advance of refilling the vessel, the owner or operator shall notify the department at least seven days prior to the refilling of the vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the department at least 7 days prior to the refilling.

### **Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### **D.2.7 Record Keeping Requirements [326 IAC 8-4] [326 IAC 8-9] [Part 60.7 and Part 60.115b, Subpart Kb]**

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- (a) The Permittee shall maintain a record and submit to the department a report containing the following information for each vessel:
  - (1) The vessel identification number.
  - (2) The vessel dimensions.
  - (3) The vessel capacity
  - (4) A description of the emission control equipment for each vessel or a schedule for installation of emission control equipment with a certification that the emission control equipment meets the applicable standards.
- (b) The owner or operator of each vessel equipped with an external floating roof shall comply with the following record keeping and reporting requirements:
  - (1) Keep a record of each gap measurement performed as required in Condition D.2.5. Each record shall identify the vessel in which the measurement was made and shall contain the following:
    - (A) The date of measurement.
    - (B) The raw data obtained in the measurement.
    - (C) The calculations described in Condition D.2.5(2) and D.2.5(3).
  - (2) Within sixty (60) days of performing the seal gap measurements required by Condition D.2.5, furnish the department with a report that contains the following:
    - (A) The date of measurement.
    - (B) The raw data obtained in the measurement.
    - (C) The calculations described in Condition D.2.5(2) and D.2.5(3).
  - (3) After each seal gap measurement that detects gaps exceeding the limitations specified in Condition D.2.1 and Condition D.2.3, submit a report to the department within thirty (30) days of the inspection. The report shall identify the vessel and contain the information specified in Section (2) of this condition and the date the vessel was emptied or the repairs made and date of repair.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### **D.2.8 Reporting Requirements [326 IAC 8-9-6] [Part 60.7 and Part 60.115b, Subpart Kb]**

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- (a) Pursuant to 326 IAC 8-9-6(d), the source shall:

- (1) Maintain a record and submit to the department a report containing the following information for each vessel:
    - (A) The vessel identification number.
    - (B) The vessel dimensions.
    - (C) The vessel capacity
    - (D) A description of the emission control equipment for each vessel or a schedule for installation of emission control equipment with a certification that the emission control equipment meets the applicable standards.
  - (2) Furnish the department, within 60 days of performing the seal gap measurement, a report that contains the following:
    - (A) The date of measurement.
    - (B) The raw data obtained in the measurement.
    - (C) The calculation described in D.2.5(2) and D.2.5(3).
  - (3) After each seal gap measurement that detects gaps exceeding the limitations, submit a report to the department within 30 days of the inspection. The report shall identify the vessel and contain the information specified in Section (2) of this condition and the date the vessel was emptied or the repairs made and date of repair.
- (b) Pursuant to Part 60.7 and Part 60.115b, Subpart Kb the source shall:
- (1) Furnish the EPA and IDEM, OAQ written notification of the actual initial start up date of Tank 79 and Tank 80 within fifteen (15) days after such date.
  - (2) Furnish report to EPA and IDEM, OAQ describing the control equipment for Tank 79 and Tank 80 and certifies that the control equipment meets the specifications required in this rule.
  - (3) Within sixty (60) days of performing the seal gap measurements, the owner or operator of storage tanks identified as Tank 79 and Tank 80 shall furnish EPA and IDEM, OAQ a report containing:
    - (A) The date of measurement;
    - (B) The raw data obtained in the measurement;
    - (C) The calculations in determining the gap widths and areas in the primary and secondary seals; and the gap surface area of each gap location for the primary and secondary seal.
  - (4) Submit reports within thirty (30) days of the inspection of each seal gap measurement that detects gaps exceeding the limitations in Condition D.2.1 and Condition D.2.3 for Tank 79 and Tank 80. The report shall include the date this tank was emptied or the repairs made and the date of repair.

**Indiana Department of Environmental Management  
Office of Air Quality**

**Technical Support Document (TSD)  
for a Part 70 Minor Source Modification  
and a Part 70 Minor Permit Modification.**

**Source Description and Location**

Source Name:	Enbridge Energy, Limited Partnership –Hartsdale/Griffith
Source Location:	1500 West Main Street, Griffith, Indiana 46319
County:	Lake
SIC Code:	4612, 4226
Operation Permit No. - Hartsdale Terminal:	T089-11137-00081
Issuance Date:	May 1, 2001
Operation Permit No. - Griffith Terminal:	T089-7802-00059
Issuance Date:	September 24, 1998
Minor Source Modification No.:	089-24839-00497
Minor Permit Modification No.:	089-24914-00497
Permit Reviewer:	ERG/ST

**Source Definition**

The Source Definition explained in the Minor Permit Modification 089-21442-00497, issued on November 1, 2005, was incorporated into this permit as follows:

This bulk petroleum storage company consists of two (2) plants:

- (a) Hartsdale Terminal with Plant ID 089-00081 is located at Central Avenue and Division Street, Schererville, Indiana 46375; and
- (b) Griffith Terminal with Plant ID 089-00059 is located at 1500 West Main Street and Lakehead Road, Griffith, Indiana 46319.

IDEM, OAQ has determined that these two (2) terminals are considered one plant and therefore, the two (2) Part 70 permits will be combined into one permit. Therefore, the term “source” in the Part 70 documents refers to both the Hartsdale Terminal and the Griffith Terminal as one source. The source ID number of the combined source is now 089-00497.

**Existing Approvals**

This combined source has been operating under Title V Operating Permit 089-7802-00059, issued on September 24, 1998, Title V Operating Permit 089-11137-00081, issued on May 1, 2001, and the following previous approvals:

- (a) Significant Source Modification to T089-11137-00081: SSM 089-14657-00081, issued on November 8, 2001;
- (b) Significant Permit Modification to T089-11137-00081: SPM 089-14902-00081, issued on November 27, 2001;
- (c) Reopening to T089-7802-00059: R 089-13365-00059, issued on February 6, 2002;
- (d) First Administrative Amendment to T089-7802-00059: AA089-18379-00059, issued on December 29, 2003;

- (e) First Administrative Amendment to T089-11137-00081: AA 089-19761-00081, issued on November 15, 2004;
- (f) Second Administrative Amendment to T089-11137-00081: AA 089-19406-00081, issued on February 15, 2005;
- (g) Minor Source Modification 089-21491-00497, issued on August 18, 2005; and
- (h) Minor Permit Modification 089-21442-00497, issued on November 1, 2005.

**County Attainment Status**

The source is located in Lake County.

Pollutant	Status
PM10	Maintenance Attainment
PM 2.5	Nonattainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	Attainment
8-hour Ozone	Nonattainment
CO	Attainment
Lead	Attainment

- (a) U.S.EPA in Federal Register Notice 70 FR 943 dated January 5, 2005 has designated Lake County as nonattainment for PM2.5. On March 7, 2005 the Indiana Attorney General's Office on behalf of IDEM filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of non-attainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for violation of the Clean Air Act, the OAQ is following the U.S. EPA's guidance to regulate PM10 emissions as a surrogate for PM2.5 emissions pursuant to the Nonattainment New Source Review requirements. See the State Rule Applicability – Entire Source section.
- (b) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the 8-hour ozone standard. Lake County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability for the source section.
- (c) Lake County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.
- (d) Fugitive Emissions  
 Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are counted toward the determination of PSD and Emission Offset applicability.
- (e) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.

**Source Status**

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Pollutant	Emissions (tons/year)
PM	0.21
PM10	0.21
SO <sub>2</sub>	0.20
VOC	118
CO	0.64
NO <sub>x</sub>	2.87
Single HAP (hexane)	2.91
Total HAPs	7.21

- (a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant is emitted at a rate of 100 tons per year or more, and it is in one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (b) This existing source is a major stationary source under Emission Offset (326 IAC 2-3) because VOC, a nonattainment regulated pollutant is emitted at a rate of 100 tons per year or more.
- (c) This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because HAPs emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).
- (d) These emissions are based upon the Technical Support Document for Minor Source Modification 089-21491-00497, issued on August 18, 2005.

**Actual Emissions**

The following table shows the actual emissions from the source. This information reflects the 2003 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	Not Reported
PM10	Not Reported
SO <sub>2</sub>	Not Reported
VOC	90
CO	Not Reported
NO <sub>x</sub>	Not Reported
HAP	Not Reported

**Description of Proposed Modification**

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Enbridge Energy, Limited Partnership – Hartsdale/Griffith on May 24, 2007, relating to the addition of a crude oil storage tank, with an external floating roof, and with a maximum capacity of 188,000 barrels (7,896,000 gallons) at the Griffith Terminal. The following is a description of the proposed emission unit:

One (1) crude oil storage tank, identified as Tank 80, approved for construction in 2007, with an external floating roof, and with a maximum capacity of 188,000 barrels (7,896,000 gallons).

**Enforcement Issues**

There are no pending enforcement actions related to this modification.

### Emission Calculations

See Appendix A of this document for detailed emission calculations.

### Permit Level Determination – Part 70

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency.”

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

The Potential to Emit for the proposed tank (EU80) and associated piping is as shown in the following table:

Pollutant	Potential To Emit (tons/year)
PM	0
PM10	0
SO <sub>2</sub>	0
VOC	10.04
CO	0
NO <sub>x</sub>	0
Hexane	0.368
Benzene	0.049
Toluene	0.032
Xylene	0.027
All Other HAPs	0.023
Total HAPs	0.499

This source modification is subject to 326 IAC 2-7-10.5(d)(3)(B)(iii), 326 IAC 2-7-10.5(d)(5), and 326 IAC 2-7-10.5(d)(9) because the potential to emit of VOC is greater than or equal to ten (10) tons per year but less than twenty-five (25) tons per year, the modification is subject to an NSPS (40 CFR 60, Subpart Kb) and this is the most stringent applicable requirement, and the source is located in Lake County, has a potential to emit greater than twenty-five (25) tons per year and the increase in emissions of VOC is greater than 15 pounds per day. Additionally, the modification will be incorporated into the Part 70 Operating Permit through a minor permit modification issued pursuant to 326 IAC 2-7-12(b) because this modification does not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the Part 70 permit and this modification does not add any new provisions under Title 1 of the Clean Air Act.

### Permit Level Determination – PSD or Emission Offset

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/Emission Unit	Potential to Emit (tons/year)					
	PM	PM10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>
Tank 80	0	0	0	10.04	0	0
PSD or Emission Offset Significant Level	25	15	40	40	100	40

This modification to an existing major stationary source is not major because the emissions increase for PM, SO<sub>2</sub>, CO and NO<sub>x</sub> is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

This modification to an existing major stationary source is not major because the emissions increase for PM10 and VOC is less than the Emission Offset significant levels. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

**Federal Rule Applicability Determination**

The following federal rules are applicable to the source due to this modification:

- (a) The proposed storage tank identified as Tank 80 is not subject to the requirements of 40 CFR Part 64, Compliance Assurance Monitoring. This storage tank does not have a potential to emit before controls equal to or greater than the major source threshold for VOC.
- (b) The petroleum storage tank identified as Tank 80 is subject to the New Source Performance Standard for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 (40 CFR 60, Subpart Kb) (326 IAC 12) because this storage tank contains a volatile organic liquid, will be constructed or modified after July 23, 1984, and, although it is used for petroleum storage prior to custody transfer, the storage capacity is greater than 420,000 gallons. The crude oil stored in this tank has a true vapor pressure of 3.4 psia (23.4 kPa) at 70 degrees Fahrenheit (AP 42, Table 7.1-2 (9/97)

The petroleum storage tank identified as Tank 80 is subject to the following portions of 40 CFR 60, Subpart Kb. Non applicable portions of the NSPS will not be included in the permit.

- (1) 40 CFR 60.110b(a), (b)
- (2) 40 CFR 60.111b
- (3) 40 CFR 60.112b(a)(2)
- (4) 40 CFR 60.113b(b)
- (5) 40 CFR 60.115b(b)
- (6) 40 CFR 60.116b(a), (b), (c), (d), (e)
- (7) 40 CFR 60.117b

The provisions of 40 CFR 60 Subpart A – General Provisions, which are incorporated as 326 IAC 12-1-1, apply to the facilities described in this section except when otherwise specified in 40 CFR 60, Subpart Kb. The requirements for this tank are already specified in the Part 70 permit for similar, existing storage tanks.

- (c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 326 IAC 20, 40 CFR 61, and 40 CFR 63) included in this permit for this modification. This source is not a major source of HAP, as defined in 40 CFR 63.2.

**State Rule Applicability Determination**

The following state rules are applicable to the source due to the modification:

326 IAC 2-2 and 2-3 (PSD and Emission Offset)

PSD and Emission Offset applicability is discussed under the Permit Level Determination - PSD and Emission Offset section.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of Tank 80 will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)

Since this source is located in Lake County and has a potential to emit VOC greater than or equal to twenty-five (25) tons per year, an emission statement covering the previous calendar year must be submitted by July 1 of each year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 8-1-6 (Volatile Organic Compounds)

The proposed storage tank EU80 is subject to the requirements of 326 IAC 8-4-3. Therefore, the requirements of 326 IAC 8-1-6 do not apply to this facility.

326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)

The source is located in Lake County. The proposed storage tank EU80 contains a petroleum liquid, has a maximum storage capacity greater than one hundred fifty thousand (150,000) liters (thirty-nine thousand (39,000) gallons) and contains a volatile organic compound (crude oil) with a true vapor pressure greater than 10.5 kPa (1.5 psia).

The proposed petroleum storage tank EU80 is equipped with an external floating roof, contains a liquid with a pour point of less than 50 degrees Fahrenheit, has a capacity greater than 420,000 gallons, contains a petroleum liquid with a true vapor pressure less than 27.6 kPa, and is of welded construction. The tank is fitted with primary and secondary seals meeting the requirements 326 IAC 8-4-3(c)(2).

Pursuant to 326 IAC 8-4-3(c)(2), the Permittee shall not store petroleum liquid in the proposed storage tank EU80 unless:

- (a) The storage tank has been fitted with:
  - (1) A continuous secondary seal extending from the floating roof to the tank wall (rim-mounted secondary seal); or
  - (2) A closure or other device approved by the commissioner which is equally effective.
- (b) All seal closure devices meet the following requirements:
  - (1) There are no visible holes, tears, or other openings in the seal(s) or seal fabric;
  - (2) The seal(s) are intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall.
  - (3) For vapor mounted primary seals, the accumulated gap area around the circumference of the secondary seal where a gap exceeding one-eighth (1/8) inch exists between the secondary seal and the tank wall shall not exceed one (1.0) square inch per foot of tank diameter. There shall be no gaps exceeding one-half (1/2) inch between the secondary seal and the tank wall of welded tanks and no gaps exceeding one (1) inch between the secondary seal and the tank wall of riveted tanks.
- (c) All openings in the external floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves, are:

- (1) Equipped with covers, seals, or lids in the closed position except when the openings are in actual use; and
  - (2) Equipped with projections into the tank which remain below the liquid surface at all times.
- (d) Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports;
  - (e) Rim vents are set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting; and
  - (f) Emergency roof drains are provided with slotted membrane fabric covers or equivalent covers which cover at least ninety percent (90%) of the area of the opening.

Pursuant to 326 IAC 8-4-3(d), the Permittee shall maintain records of:

- (a) The types of volatile petroleum liquid stored,
- (b) The maximum true vapor pressure of the liquid as stored, and
- (c) The results of the inspections performed on the storage vessel.

Records shall be maintained for a period of two (2) years and shall be made available to the commissioner upon written request.

#### 326 IAC 8-6 (Organic Solvent Emission Limitations)

This source is located in Lake County and was an existing source as of January 1, 1980. The potential to emit of VOC of this source is greater than 100 tons per year. However, this source is subject to another Article 8 rule (326 IAC 8-4). Therefore, the requirements of 326 IAC 8-6 (Organic Solvent Emission Limitations) do not apply.

#### 326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties)

This source is located in Lake County, and has the potential to emit volatile organic compounds at levels equal to or greater than twenty-five (25) tons per year. However, the petroleum storage tanks at this source are subject to 326 IAC 8-4. Therefore, pursuant to 326 IAC 8-7-2(a)(3)(C), the storage tanks are exempted from the requirements of 326 IAC 8-7-2.

#### 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)

The petroleum storage tank identified as EU80 is subject to the requirements of 40 CFR 60, Subpart Kb upon its construction. Therefore, pursuant to 326 IAC 8-9-2(8), the requirements of 326 IAC 8-9 do not apply to this storage tank

### **Compliance Determination and Monitoring Requirements**

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will

arise through a source's failure to take the appropriate corrective actions within a specific time period.

The Compliance Determination Requirements and Compliance Monitoring Requirements applicable to this modification are contained in 40 CFR 60, Subpart Kb, and are specified in the permit.

### Proposed Changes

The changes listed below have been made to Part 70 Operating Permit Nos. T089-7802-00059 and T089-11137-00081. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

1. Sections A.3 and D.2 of the permit have been changed to show the proposed new storage tank and its applicable requirements. Tank 79, approved for construction under MSM 089-21491-00497, was constructed in 2007 and the permit has been updated to reflect the construction date. The language in Conditions D.2.1(a) and D.2.8(b)(4) has been revised to correct typographical errors and clarify the intent of these conditions.
- A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]  
[326 IAC 2-7-5(15)]
- 
- This stationary source consists of the following emission units and pollution control devices:  
...
- Griffith Terminal:
- (a) ~~Proposed one~~ **One (1) crude oil storage tank, constructed in 2007**, identified as Tank 79, with an external floating roof, with a maximum capacity of 370,000 barrels (15,543,440 gallons).
  - ...
  - (k) **One (1) crude oil storage tank, identified as Tank 80, approved for construction in 2007, with an external floating roof, and with a maximum capacity of 188,000 barrels (7,896,000 gallons). Pursuant to 40 CFR 60, Subpart Kb, this is an affected facility.**
- ~~(k)(l)~~ Piping component fugitive emission sources in VOC service.

## SECTION D.2

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

Griffith Terminal:

- (a) ~~Proposed one~~ **One (1) crude oil storage tank, constructed in 2007**, identified as Tank 79, with an external floating roof, with a maximum capacity of 370,000 barrels (15,543,440 gallons)
  - ...
  - (k) **One (1) crude oil storage tank, identified as Tank 80, approved for construction in 2007, with an external floating roof, and with a maximum capacity of 188,000 barrels (7,896,000 gallons). Pursuant to 40 CFR 60, Subpart Kb, this is an affected facility.**
- ~~(k)(l)~~ Piping component fugitive emission sources in VOC service.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-4] [326 IAC 8-9]

- (a) Pursuant to 326 IAC 8-4-3, (Petroleum Liquid Storage Facilities), ~~the source shall comply with the requirements for external floating roofs for~~ the following requirements shall be applicable to the ~~nine (9) ten (10)~~ **eleven (11)** external floating roof storage tanks identified as 70, 71, 72, 73, 74, 75, 76, 77, ~~and 78, and 79, and 80.~~

...

D.2.3 New Source Performance Standard [326 IAC 12] [40 CFR 60.110b Subpart Kb]

Pursuant to 326 IAC 12 and 40 CFR 60.110b, Subpart Kb, the external floating roof for Tank 79 **and Tank 80** shall meet the following requirements:

...

D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for Tank 78, ~~and~~ Tank 79, **and Tank 80** and their control devices.

**Compliance Determination Requirements**

D.2.5 Volatile Organic Compounds: Testing and Procedures [326 IAC 8-9] [326 IAC 12 and 40 CFR 60.113b, Subpart Kb]

...

- (b) Pursuant to 326 IAC 12 and 40 CFR 60.113b, Subpart Kb, the owner or operator of Tank 79 **and Tank 80** equipped with an external floating roof shall meet the following requirements:

...

D.2.8 Reporting Requirements [326 IAC 8-9-6] [Part 60.7 and Part 60.115b, Subpart Kb]

...

- (b) Pursuant to Part 60.7 and Part 60.115b, Subpart Kb the source shall:
- (1) Furnish the EPA and IDEM, OAQ written notification of the actual initial start up date of tank 79 **and Tank 80** within fifteen (15) days after such date.
  - (2) Furnish report to EPA and IDEM, OAQ describing the control equipment for Tank 79 **and Tank 80** and certifies that the control equipment meets the specifications required in this rule.
  - (3) Within sixty (60) days of performing the seal gap measurements, the owner or operator of storage tanks, **identified as** Tank 79 **and Tank 80** shall furnish EPA and IDEM, OAQ a report containing:  
  
...
  - (4) ~~shall submit~~ **Submit** reports within thirty (30) days of the inspection of each seal gap measurement that detects gaps exceeding the limitations in Condition D.2.1 and Condition D.2.3 for Tank 79 **and Tank 80**. The report shall include the date this tank was emptied or the repairs made and the date of repair.

**Conclusion and Recommendation**

The construction and operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification No. 089-24839-00497 and Minor Permit Modification No. 089-24914-00497. The staff recommends to the Commissioner that this Part 70 Minor Source Modification and Minor Permit Modification be approved.



**Appendix A: Emission Calculations  
 VOC Emissions from Tank EU80**

Company Name: Enbridge Energy, Limited Partnership - Hartsdale/Griffith Terminal  
 Address: 1500 West Main Street, Griffith, Indiana 46319 and Central Avenue and Division Street, Schererville, Indiana 46375  
 MSM to TV: 089-24839-00059  
 Reviewer: ERG/ST  
 Date: June 11, 2007

Tank ID #	Fuel	Roof Type	Maximum Capacity (gal)	Number of Turnovers per year	Maximum Throughput (gal/year)	PTE of VOC (lbs/year)	PTE of VOC (tons/year)
EU80	Crude Oil	External Floating	7,896,000	67.13	530,058,480	20,016	10.01
New Piping	Crude Oil	NA	NA	NA	530,058,480	58.0	0.03

The potential to emit of VOC for the storage tank is calculated using EPA's TANKS 4.0.9d. The PTE includes VOC emissions due to landing losses. The PTE for new piping is calculated using U.S. EPA's "Protocol for Emission Leak Estimates" (Nov. 1995). Information on maximum capacity and number of turnovers per year provided by the source.

**Methodology:**

Maximum Throughput (gal/year) = Maximum capacity (gal) x Number of turnovers per year.

**Appendix A: Emission Calculations**  
**HAP Emissions from Tank EU80**

Company Name: Enbridge Energy, Limited Partnership - Hartsdale/Griffith Terminal

Address: 1500 West Main Street, Griffith, Indiana 46319 and Central Avenue and Division Street, Schererville, Indiana 46375

MSM to TV: 089-24839-00059

Reviewer: ERG/ST

Date: June 11, 2007

Tank ID #	Fuel Type	PTE of Hexane (tons/yr)	PTE of Benzene (tons/yr)	PTE of Toluene (tons/yr)	PTE of Ethylbenzene (tons/yr)	PTE of Xylenes (tons/yr)	PTE of Naphthalene (tons/yr)	PTE of All Other HAPs (tons/yr)
EU80	Crude Oil	0.368	0.049	0.032	0.008	0.027	0.003	0.012

<b>Total HAPs</b>	<b>0.499</b>
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Potential to Emit of HAPs is as reported by source. PTE is based on PTE of VOC (page 1) and crude oil speciation vapor weight fraction calculations. HAP emissions are calculated per API Manual of Petroleum Measurement Standards, Chapter 19.4 - Recommended Practice for Speciation of Evaporative Losses, Second Edition, 2005.  $\text{PTE HAPs (ton/yr)} = \text{PTE VOC (ton/yr)} \times \text{Vapor Weight Fraction HAPs}$