



*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: May 21, 2007

RE: BP Products North America - Whiting Business Unit / 089-24068-00453

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 permit modification 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) 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.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of a Title V operating permit or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impracticable to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency  
401 M Street  
Washington, D.C. 20406

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.



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May 21, 2007

Natalie Grimmer  
BP Products North America, Inc. Whiting Business Unit  
P.O. Box 710  
Whiting, Indiana 46394-0710

Re: 089-24068-00453  
First Significant Permit Modification to  
Part 70 Permit No.: T089-6741-00453

Dear Natalie Grimmer:

BP Products North America, Inc. Whiting Business Unit was issued a Part 70 Operating Permit No. T089-6741-00453 on December 14, 2006 for a refinery and marketing terminal. On February 20, 2007, BP Products North America, Inc., was issued a Minor Source Modification No. 089-23783-00453 for: (1) the construction of new storage tanks, new blending systems, and new loading racks at different locations in the refinery; (2) the modification of an existing storage tank to be used to store a different raw material; and (3) the construction of five (5) additional hot oil heaters to heat the new storage tanks and some of the existing tanks. The Indiana Department of Environmental Management (IDEM) is issuing this Significant Modification to Part 70 Operating Permit No. T089-6741-00453 to allow BP Products North America, Inc., to operate the new and modified emission units at their existing source.

Pursuant to 326 IAC 2-7-12, the following emission units are approved for operation at the source:

- (a) The following five (5) natural gas-fired hot oil heaters, each approved for construction in 2007, and each considered an insignificant activity, as defined in 326 IAC 2-7-1(21)(G)(i)(AA)(aa):

| Process Heater ID | Heat Input Capacity (MMBtu/hr) | Fuel        | Control Device |
|-------------------|--------------------------------|-------------|----------------|
| H-SP-1            | 9.9                            | Natural gas | none           |
| H-SP-2            | 9.9                            | Natural gas | none           |
| H-LG-1            | 9.9                            | Natural gas | none           |
| H-LG-2            | 9.9                            | Natural gas | none           |
| H-LG-3*           | 9.9                            | Natural gas | none           |

\*Hot oil heater H-LG-3 will exhaust to a steam generator that will be used to heat rejected loads of asphalt during unloading.

- (b) The following twenty-two (22) heated vertical storage tanks, each approved for construction in 2007, each with a fixed cone roof, and each in heavy liquid service, storing volatile organic liquids that have a vapor pressure less than 0.0435 psia, and exhausting to the atmosphere or to a biofilter system for odor and opacity control:

| Tank ID  | Liquid Stored               | Date Approved for Construction | Tank Storage Capacity (gallons) | Maximum Throughput (gallons/year) | Vapor Pressure of Liquid at Storage Temperature (psia) | Exhaust ID |
|----------|-----------------------------|--------------------------------|---------------------------------|-----------------------------------|--|------------|
| TK-3573  | Trim Gas Oil                | 2007                           | 966,000                         | 20,160,000                        | < 0.0435   | TK-3573    |
| TK-SP-1  | Residual Oil and/or Asphalt | 2007                           | 14,154,000                      | 141,120,000                       | < 0.0435   | biofilter  |
| TK-SP-2  | Residual Oil and/or Asphalt | 2007                           | 14,154,000                      | 141,120,000                       | < 0.0435   | biofilter  |
| TK-SP-3  | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | < 0.0435   | biofilter  |
| TK-SP-4  | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | < 0.0435   | biofilter  |
| TK-LG-1  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-2  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-3  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-4  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-5  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-6  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-7  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-8  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-9  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-10 | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | < 0.0435   | biofilter  |
| TK-LG-11 | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | < 0.0435   | biofilter  |
| TK-LG-12 | Asphalt with Polymer        | 2007                           | 2,100                           | 420,000                           | < 0.0435   | biofilter  |
| TK-LG-13 | Asphalt-Polymer Blend       | 2007                           | 31,500                          | 2,100,000                         | < 0.0435   | biofilter  |
| TK-LG-14 | Polymer Finished Asphalt    | 2007                           | 126,000                         | 2,520,000                         | < 0.0435   | biofilter  |
| TK-LG-15 | Polymer Finished Asphalt    | 2007                           | 126,000                         | 2,520,000                         | < 0.0435   | biofilter  |
| TK-LG-16 | Polymer Finished Asphalt    | 2007                           | 126,000                         | 2,520,000                         | < 0.0435   | biofilter  |
| TK-LG-17 | Polymer Finished Asphalt    | 2007                           | 126,000                         | 2,520,000                         | < 0.0435   | biofilter  |

Under 40 CFR 60, Subpart UU, storage tanks TK-SP-1, TK-SP-2, TK-LG-1 through TK-LG-9, and TK-LG-12 through TK-LG-17 are each considered an affected facility.

Under 40 CFR 63, Subpart CC, storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17 are each considered as Group 2 storage vessels that are part of the existing affected source.

- (c) one (1) truck loading rack, approved for construction in 2007, comprised of six (6) loading bays used for loading liquid asphalt product, with a total maximum loading capacity of 800,000 tons of asphalt product per year, exhausting to the atmosphere or to a biofilter system for odor control.
- (d) one (1) rail car loading rack, approved for construction in 2007, comprised of twenty-eight (28) loading bays used for loading liquid asphalt product, with a total maximum loading capacity of 800,000 tons of asphalt product per year, exhausting to the atmosphere or to a biofilter system for odor control.
- (e) Equipment leaks of VOC and HAP from valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges and/or other connectors.

Under 40 CFR 60, Subpart GGG, valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges and/or other connectors in VOC service, are considered part of the existing affected source.

- (f) The following heated vertical storage tank, with a fixed cone roof, in heavy liquid service, storing volatile organic liquids that have a vapor pressure less than 0.0435 psia, and exhausting to the atmosphere:

| Tank ID | Liquid Stored | Construction Date | Tank Storage Capacity (gallons) | Maximum Throughput (gallons/year) | Vapor Pressure of Liquid at Storage Temperature (psia) | Exhaust ID |
|---------|---------------|-------------------|---------------------------------|-----------------------------------|--|------------|
| TK-3570 | Trim Gas Oil  | 1971              | 2,730,000                       | 20,160,000                        | < 0.0435   | TK-3570    |

Under 40 CFR 63, Subpart CC, storage tank TK-3570 is considered as a Group 2 storage vessel that is part of the existing affected source.

- (g) The following trivial activity, as defined in 326 IAC 2-7-1(40)(J)(ii):

- (1) one (1) storage tank, for storage of liquid poly phosphoric acid, identified as TK-LG-18, approved for construction in 2007.

Pursuant to 326 IAC 2-7-12(d)(1), these changes are being made through a SPM to the Part 70 Permit. Pursuant to the provisions of 326 IAC 2-7-12 a SPM to this permit is hereby approved as described in the attached Technical Support Document.

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Nathan Bell, 100 North Senate Avenue, Indianapolis, Indiana, 46204-2251, at 317-234-3350 or at 1-800-451-6027 (ext 43350).

Original Signed By:

Nisha Sizemore, Chief  
Permits Branch  
Office of Air Quality

ncb

Attachments: Technical Support Document and revised permit pages

cc: File - Lake County  
U.S. EPA, Region V  
IDEM Northwest Regional Office  
Hammond Department of Environmental Management  
Lake County Health Department  
Air Compliance Section Inspector - Ramesh Tejuja  
Compliance Data Section  
Administrative and Development  
Technical Support and Modeling



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## PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

**BP Products North America Inc., Whiting Business Unit  
 2815 Indianapolis Blvd.  
 Whiting, Indiana 46394**

(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.

|   |   |
|---|---|
| Operation Permit No.: T089-6741-00453   |   |
| Original Issued and Signed by<br>Nisha Sizemore, Chief<br>Permits Branch<br>Office of Air Quality | Effective Date: January 1, 2007<br><br>Expiration Date: January 1, 2012   |
| First Significant Permit Modification (SPM) No. 089-24068-00453                                   | <u>Sections Affected:</u><br>Table of Contents, Sections A, D.27, D.32, E.1, E.4, E.13, E.17, and Part 70 Forms |
| Original Signed By:<br>Nisha Sizemore, Chief<br>Permits Branch<br>Office of Air Quality           | Issuance Date: May 21, 2007<br><br>Expiration Date: January 1, 2012   |

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

- D.3.14 Record Keeping Requirements
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### SECTION D.4 FACILITY OPERATION CONDITIONS - Sulfur Recovery Unit

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

- D.4.1 Particulate Matter [326 IAC 6.8-1-2]
- D.4.2 Lake County PM<sub>10</sub> Emission Limitations [326 IAC 6.8-2-6]
- D.4.3 Lake County Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations [326 IAC 7-4.1-3]
- D.4.4 Emission Offset [326 IAC 2-3]
- D.4.5 New Source Performance Standards [326 IAC 12] [40 CFR 60, Subpart J]
- D.4.6 Equipment Leaks of VOC [326 IAC 8-4-8]
- D.4.7 Wastewater [326 IAC 12] [40 CFR 60, Subpart QQQ]
- D.4.8 Requirements for 40 CFR Part 63, Subpart UUU

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- D.4.9 Operating Requirements
- D.4.10 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]
- D.4.11 Operating Requirement

#### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

- D.4.12 Monitoring for Equipment Leaks of VOC [326 IAC 8-4-8]

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- D.5.2 Wastewater / Waste Streams [326 IAC 20-16-1] [40 CFR 63, Subpart CC] [326 IAC 14] [40 CFR 61, Subpart FF] [40 CFR 60, Subpart QQQ]

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- D.5.3 Monitoring for Equipment Leaks of VOC [326 IAC 8-4-8]

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### SECTION D.6 FACILITY OPERATION CONDITIONS - Vapor Recovery Unit 300

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

- D.6.1 Equipment Leaks of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) Air Pollutants (HAP) [326 IAC 8-4-8] [326 IAC 20-16-1] [40 CFR 63, Subpart CC]
- D.6.2 Wastewater / Waste Streams [326 IAC 20-16-1] [40 CFR 63, Subpart CC] [326 IAC 14] [40 CFR 61, Subpart FF] [40 CFR 60, Subpart QQQ]
- D.6.3 Miscellaneous Process Vents [326 IAC 20-16-1] [40 CFR 63, Subpart CC]

#### Compliance Monitoring Requirements

- D.6.4 Monitoring for Equipment Leaks of VOC [326 IAC 8-4-8]

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

- D.6.5 Record Keeping Requirements
- D.6.6 Reporting Requirements

### SECTION D.7 FACILITY OPERATION CONDITIONS - Alkylation Unit

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

- D.7.1 Equipment Leaks of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) Air Pollutants (HAP) [326 IAC 8-4-8] [326 IAC 12] [40 CFR 60, Subpart GGG] [326 IAC 20-16-1] [40 CFR 63, Subpart CC]
- D.7.2 Miscellaneous Process Vents [326 IAC 20-16-1] [40 CFR 63, Subpart CC]
- D.7.3 Wastewater/Waste Streams [326 IAC 12] [40 CFR 60, Subpart QQQ]

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- D.7.4 Monitoring for Equipment Leaks of VOC [326 IAC 8-4-8]

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

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- D.8.1 Equipment Leaks of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 8-4-8] [326 IAC 20-16-1] [40 CFR 63, Subpart CC]

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

D.9.1 Lake County PM<sub>10</sub> Emission Limitations [326 IAC 6.8-2-6]

D.9.2 Lake County Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations [326 IAC 7-4.1-3]

D.9.3 Fuel Gas Hydrogen Sulfide (H<sub>2</sub>S) [326 IAC 12] [40 CFR 60, Subpart J]

D.9.4 Equipment Leaks of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 8-4-8] [326 IAC 20-16-1] [40 CFR 63, Subpart CC]

D.9.5 Miscellaneous Process Vents [326 IAC 20-16-1] [40 CFR 63, Subpart CC]

D.9.6 Wastewater/Waste Streams [326 IAC 20-16-1] [40 CFR 63, Subpart CC] [326 IAC 14] [40 CFR 61, Subpart FF]

D.9.7 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]

### Compliance Determination Requirements

D.9.8 Operating Requirement

D.9.9 Operating Requirement

### Compliance Monitoring Requirements

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D.10.1 Lake County PM<sub>10</sub> Emission Limitations [326 IAC 6.8-2-6]

D.10.2 Lake County Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations [326 IAC 7-4.1-3]

D.10.3 Fuel Gas Hydrogen Sulfide (H<sub>2</sub>S) [326 IAC 12] [40 CFR 60, Subpart J]

D.10.4 Equipment Leaks of Volatile Organic Compounds and Hazardous Air Pollutants [326 IAC 8-4-8] [326 IAC 20-16-1] [40 CFR 63, Subpart CC] [326 IAC 14] [40 CFR 61, Subpart J]

D.10.5 Wastewater/Waste Streams [326 IAC 20-16-1] [40 CFR 63, Subpart CC] [326 IAC 14] [40 CFR 61, Subpart FF]

D.10.6 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]

### Compliance Determination Requirements

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D.10.8 Operating Requirement

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

- D.11.1 Lake County PM<sub>10</sub> Emission Limitations [326 IAC 6.8-2-6]
- D.11.2 Lake County Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations [326 IAC 7-4.1-3]
- D.11.3 Fuel Gas Hydrogen Sulfide (H<sub>2</sub>S) [326 IAC 12] [40 CFR 60, Subpart J]
- D.11.4 Equipment Leaks of Volatile Organic Compounds (VOC) [326 IAC 8-4-8]
- D.11.5 Wastewater/Waste Streams [326 IAC 20-16-1] [40 CFR 63, Subpart CC] [326 IAC 14] [40 CFR 61, Subpart FF] [40 CFR 60, Subpart QQQ]
- D.11.6 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]

### **Compliance Determination Requirements**

- D.11.7 Operating Requirement
- D.11.8 Operating Requirement

### **Compliance Monitoring Requirements**

- D.11.9 Monitoring for Equipment Leaks of VOC [326 IAC 8-4-8]

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

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

- D.12.1 Equipment Leaks of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) [326 IAC 8-4-8] [326 IAC 20-16-1] [40 CFR 63, Subpart CC]
- D.12.2 Wastewater/Waste Streams [326 IAC 20-16-1] [40 CFR 63, Subpart CC] [326 IAC 14] [40 CFR 61, Subpart FF] [326 IAC 12] [40 CFR 60, Subpart QQQ]

### **Compliance Monitoring Requirements**

- D.12.3 Monitoring for Equipment Leaks of VOC [326 IAC 8-4-8]

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- D.12.4 Record Keeping Requirements
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### **Emission Limitations and Standards [326 IAC 2-7-5(1)]**

- D.13.1 Equipment Leaks of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) [326 IAC 8-4-8] [326 IAC 20-16-1] [40 CFR 63, Subpart CC]
- D.13.2 Wastewater/Waste Streams [326 IAC 20-16-1] [40 CFR 63, Subpart CC] [326 IAC 14] [40 CFR 61, Subpart FF] [326 IAC 12] [40 CFR 60, Subpart QQQ]

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

- D.14.1 Equipment Leaks of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 8-4-8] [326 IAC 20-16-1] [40 CFR 63, Subpart CC]
- D.14.2 General Conditions for Pressurized Storage Tanks

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- D.14.3 Monitoring for Equipment Leaks of VOC [326 IAC 8-4-8]

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

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

- D.15.1 Lake County PM<sub>10</sub> Emission Limitations [326 IAC 6.8-2-6]
- D.15.2 Lake County Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations [326 IAC 7-4.1-3]
- D.15.3 Fuel Gas Hydrogen Sulfide (H<sub>2</sub>S) [326 IAC 12] [40 CFR 60, Subpart J]
- D.15.4 Equipment Leaks of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) [326 IAC 8-4-8] [326 IAC 20-16-1] [40 CFR 63, Subpart CC]
- D.15.5 Miscellaneous Process Vents [326 IAC 20-16-1] [40 CFR 63, Subpart CC]
- D.15.6 Wastewater/Waste Streams [326 IAC 20-16-1] [40 CFR 63, Subpart CC] [326 IAC 14] [40 CFR 61, Subpart FF] [326 IAC 12] [40 CFR 60, Subpart QQQ]
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### **Compliance Determination Requirements**

- D.15.9 Operating Requirement
- D.15.10 Operating Requirement

### **Compliance Monitoring Requirements**

- D.15.11 Monitoring for Equipment Leaks of VOC [326 IAC 8-4-8]

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

- D.15.12 Record Keeping Requirements
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## **SECTION D.16 FACILITY OPERATION CONDITIONS - No. 4 Ultraformer Unit**

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

- D.16.1 Lake County PM<sub>10</sub> Emission Limitations [326 IAC 6.8-2-6]
- D.16.2 Lake County Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations [326 IAC 7-4.1-3]
- D.16.3 Fuel Gas Hydrogen Sulfide (H<sub>2</sub>S) [326 IAC 12] [40 CFR 60, Subpart J]
- D.16.4 Equipment Leaks of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 8-4-8] [326 IAC 20-16-1] [40 CFR 63, Subpart CC]
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- D.16.7 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]

### Compliance Determination Requirements

- D.16.8 Operating Requirement
- D.16.9 Operating Requirement

### Compliance Monitoring Requirements

- D.16.10 Monitoring for Equipment Leaks of VOC [326 IAC 8-4-8]

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

- D.16.11 Record Keeping Requirements
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## SECTION D.17 FACILITY OPERATION CONDITIONS - Hydrogen Unit

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

- D.17.1 Lake County PM<sub>10</sub> Emission Limitations [326 IAC 6.8-2-6]
- D.17.2 Lake County Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations [326 IAC 7-4.1-3]
- D.17.3 Fuel Gas Hydrogen Sulfide (H<sub>2</sub>S) [326 IAC 12] [40 CFR 60, Subpart J]
- D.17.4 Emission Offset and Prevention of Significant Deterioration [326 IAC 2-2] [326 IAC 2-3]
- D.17.5 Equipment Leaks of VOC and Hazardous Air Pollutants (HAPs)[326 IAC 8-4-8] [326 IAC 12] [40 CFR 60, Subpart, GGG] [326 IAC 20-16-1] [40 CFR 63, Subpart CC]
- D.17.6 Wastewater Requirements [326 IAC 12] [40 CFR 60, Subpart QQQ]
- D.17.7 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]

### Compliance Determination Requirements

- D.17.8 Operating Requirement
- D.17.9 Operating Requirement
- D.17.10 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

### Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- D.17.11 Monitoring for Equipment Leaks of VOC [326 IAC 8-4-8]

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

- D.17.12 Record Keeping Requirements
- D.17.13 Reporting Requirements

## SECTION D.18 FACILITY OPERATION CONDITIONS - Distillate Desulfurizer Unit

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

- D.18.1 Lake County PM<sub>10</sub> Emission Limitations [326 IAC 6.8-2-6]
- D.18.2 Lake County Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations [326 IAC 7-4.1-3]
- D.18.3 Fuel Gas Hydrogen Sulfide (H<sub>2</sub>S) [326 IAC 12] [40 CFR 60, Subpart J]
- D.18.4 Emission Offset and Prevention of Significant Deterioration (PSD) [326 IAC 2-2] [326 IAC 2-3]
- D.18.5 Equipment Leaks of VOC and Hazardous Air Pollutants (HAPs)[326 IAC 8-4-8] [326 IAC 12] [40 CFR 60, Subpart, GGG] [326 IAC 20-16-1] [40 CFR 63, Subpart CC]
- D.18.6 Wastewater/Waste Streams [326 IAC 20-16-1] [40 CFR 63, Subpart CC] [326 IAC 14] [40 CFR 61, Subpart FF] [40 CFR 60, Subpart QQQ]

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D.18.9 Operating Requirement

D.18.10 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

### **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

D.18.11 Monitoring for Equipment Leaks of VOC [326 IAC 8-4-8]

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D.18.12 Record Keeping Requirements

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## **SECTION D.19 FACILITY OPERATION CONDITIONS - Cat Feed Hydrotreating Unit**

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

D.19.1 Lake County PM<sub>10</sub> Emission Limitations [326 IAC 6.8-2-6]

D.19.2 Lake County Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations [326 IAC 7-4.1-3]

D.19.3 Fuel Gas Hydrogen Sulfide (H<sub>2</sub>S) [326 IAC 12] [40 CFR 60, Subpart J]

D.19.4 Equipment Leaks of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 8-4-8] [326 IAC 20-16-1] [40 CFR 63, Subpart CC] [326 IAC 12] [40 CFR 60, Subpart GGG]

D.19.5 Wastewater/Waste Streams [326 IAC 20-16-1] [40 CFR 63, Subpart CC] [326 IAC 14] [40 CFR 61, Subpart FF] [40 CFR 60, Subpart QQQ]

D.19.6 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]

### **Compliance Determination Requirements**

D.19.7 Operating Requirement

D.19.8 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

D.19.9 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

D.19.10 Operating Requirement

### **Compliance Monitoring Requirements**

D.19.11 Monitoring for Equipment Leaks of VOC [326 IAC 8-4-8]

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

D.19.12 Record Keeping Requirements

D.19.13 Reporting Requirements

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

D.20.1 Lake County PM<sub>10</sub> Emission Limitations [326 IAC 6.8-2-6]

D.20.2 Lake County Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations [326 IAC 7-4.1-3]

D.20.3 Fuel Gas Hydrogen Sulfide (H<sub>2</sub>S) [326 IAC 12] [40 CFR 60, Subpart J]

D.20.4 Equipment Leaks of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 20-16-1] [40 CFR 63, Subpart CC] [326 IAC 8-4-8] [326 IAC 12] [40 CFR 60, Subpart GGG]

D.20.5 Wastewater/Waste Streams [326 IAC 20-16-1] [40 CFR 63, Subpart CC] [326 IAC 14] [40 CFR 61, Subpart FF]

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D.20.9 NO<sub>x</sub> Emission Limitations Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

D.20.10 Operating Requirement

### Compliance Monitoring Requirements

D.20.11 Monitoring for Equipment Leaks of VOC [326 IAC 8-4-8]

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

D.20.12 Record Keeping Requirements

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## SECTION D.21 FACILITY OPERATION CONDITIONS - Fluidized Catalytic Cracking Unit 500

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

D.21.1 Lake County PM<sub>10</sub> Emission Limitations [326 IAC 6.8-2-6]

D.21.2 Lake County Sulfur Dioxide Emission Limitations [326 IAC 7-4.1-3]

D.21.3 State Operation Permit Requirements

D.21.4 Equipment Leaks of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 20-16-1] [40 CFR 63, Subpart CC] [326 IAC 8-4-8]

D.21.5 Requirements for 40 CFR Part 63, Subpart UUU

D.21.6 Wastewater/Waste Streams [326 IAC 20-16-1] [40 CFR 63, Subpart CC] [326 IAC 14] [40 CFR 61, Subpart FF] [326 IAC 12] [40 CFR 60, Subpart QQQ]

D.21.7 Alternative Opacity Requirements [326 IAC 5-1-3]

### Compliance Determination Requirements

D.21.8 Operating Requirement

### Compliance Monitoring Requirements

D.21.9 Inspection and Monitoring Requirements for the Electrostatic Precipitator [326 IAC 6.8-8-7]

D.21.10 Continuous Monitoring [326 IAC 3-5-1(e)] [326 IAC 6.8-8]

D.21.11 Monitoring for Equipment Leaks of VOC [326 IAC 8-4-8]

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

D.21.12 Record Keeping Requirements

D.21.13 Reporting Requirements

## SECTION D.22 FACILITY OPERATION CONDITIONS - Fluidized Catalytic Cracking Unit 600

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

D.22.1 Lake County PM<sub>10</sub> Emission Limitations [326 IAC 6.8-6]

D.22.2 Lake County Sulfur Dioxide Emission Limitations [326 IAC 7-4.1-3]

D.22.3 State Operation Permit Requirements

D.22.4 Equipment Leaks of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 20-16-1] [40 CFR 63, Subpart CC] [326 IAC 8-4-8]

D.22.5 Requirements for 40 CFR Part 63, Subpart UUU

D.22.6 Wastewater/Waste Streams [326 IAC 20-16-1] [40 CFR 63, Subpart CC] [326 IAC 14] [40 CFR 61, Subpart FF]

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- D.22.10 Continuous Monitoring [326 IAC 3-5] [326 IAC 6.8-8]
- D.22.11 Monitoring for Equipment Leaks of VOC [326 IAC 8-4-8]

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- D.22.12 Record Keeping Requirements
- D.22.13 Reporting Requirements

## **SECTION D.23 FACILITY OPERATION CONDITIONS - No. 1 Stanolind Power Station**

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

- D.23.1 Lake County PM<sub>10</sub> Emission Limitations [326 IAC 6.8-2-6]
- D.23.2 Lake County Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations [326 IAC 7-4.1-3]
- D.23.3 Fuel Gas Hydrogen Sulfide (H<sub>2</sub>S) [326 IAC 12] [40 CFR 60, Subpart J]
- D.23.4 Equipment Leaks of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) [326 IAC 20-16-1] [40 CFR 63, Subpart CC] [326 IAC 8-4-8]
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- D.23.6 Wastewater/Waste Streams [40 CFR 60, Subpart QQQ] [326 IAC 12]
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### **Compliance Determination Requirements**

- D.23.8 Operating Requirement

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## **PART 70 FORMS**

Certification  
Emergency Occurrence Report  
Quarterly Deviation and Compliance Monitoring Report  
Part 70 Quarterly Reports  
Appendix A - Fugitive Dust Control Plan

## SECTION A

## SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and Hammond Department of Environmental Management. The information describing the source contained in conditions A.1 through A.3 and A.4 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 refinery and marketing terminal.

|                              |  |
|------------------------------|--|
| Source Address:              | 2815 Indianapolis Blvd, Whiting, Indiana 46394-0170  |
| Mailing Address:             | P.O. Box 710, Whiting, Indiana 46394-170   |
| General Source Phone Number: | 219-473-3179   |
| SIC Code:                    | 2911   |
| County Location:             | Lake   |
| Source Location Status:      | Nonattainment for PM2.5 and 8-hour ozone standard<br>Attainment for all other criteria pollutants  |
| Source Status:               | Part 70 Permit Program<br>Major Source, under PSD and Emission Offset Rules<br>Major Source, Section 112 of the Clean Air Act<br>1 of 28 Source Categories |

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

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This stationary source consists of two (2) plants:

- (a) The Whiting Refinery (previously designated 089-00003), located at 2815 Indianapolis Boulevard, Whiting, Indiana 46394; and
- (b) The Marketing Terminal (previously designated 089-00004), located at 2530 Indianapolis Boulevard, Whiting, Indiana 46394.

Since the two (2) plants are located on contiguous or adjacent properties, the plants are under common control of the same entity, and the Whiting Refinery supports the Marketing Terminal, the two (2) plants are considered one (1) source.

In regards to the refinery and the chemical plant, neither plant has a major role in the day-to-day operations of the other plant. There is no contract between the two companies concerning the acceptance or usage of raw materials. Each plant is free to obtain raw materials from other sources. The chemical plant has obtained raw materials from other sources in the past when the refinery has been unable to supply it. Neither plant provides a majority of its output to the other plant. Neither plant has the right to assume control of the other under any circumstance.

Since there is no common control, the refinery and the chemical plant are not part of the same major source. There is no need to examine the other two criteria under the definition of major source. Therefore, the chemical plant is not included in this Title V Operating Permit. The chemical plant will receive a separate operating 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:

- (a) Nos. 11A and 11C Pipe Stills built in 1956, with a rated capacity of 220,800 barrels per day, and identified as Unit ID 120 process crude into various hydrocarbon fractions based on boiling points. This facility includes the following emission sources and may also include insignificant activities listed in Section A.4 of this permit:

- (1) The following process heaters, all of which are fired by natural gas, refinery gas, or liquified petroleum gas:

| Heater Identification | Maximum Heat Input Capacity (MMBtu/hr) | Stack Exhausted To | Emission Controls |
|-----------------------|--|--------------------|-------------------|
| H-1X                  | 250                                    | 120-01             | None              |
| H-2                   | 45                                     | 120-02             | None              |
| H-3                   | 55                                     | 120-03             | None              |
| H-200                 | 249.5                                  | 120-05             | None              |
| H-300                 | 180                                    | 120-06             | None              |

- (2) Two (2) vacuum hot wells (D-21, constructed in 1990 and D-26, constructed in 1997) and one (1) sump (D-20, constructed in 1990), with D-20, D-21, and D-26 each venting to S/V 120-07, at No. 11 A Pipe Still.
- (3) One (1) vacuum hot well (D-300), constructed in 1995 venting to S/V 120-08 at No. 11C Pipe Still.

The vacuum tower overhead system consists of a series of condensers, steam ejectors, and vacuum pumps. The majority of the overhead vapors are condensed and drained to the hotwell, which is pumped back to the front end of the unit for reprocessing. The gas compressors pull the remaining vapor that is not condensed in the overhead system into the wet gas system, where the hydrocarbon is reprocessed by down steam units. A thermocouple system (with temperature alarm) is used to monitor the vacuum on the system.

- (4) Leaks from equipment in the process, including pumps; compressors (K4 and K4A at No. 11A Pipe Still and K300A and K300-B at the No. 11C Pipe Still); pressure relief devices; sampling connection systems; open-ended lines or valves; and instrumentation systems.
- (5) One (1) storage tank (identified as Tank 3030) with a maximum storage capacity of 847,000 gallons. This tank was installed in 1957 and is equipped with an external floating roof.
- (b) No. 11B Coker, which processes heavy crude fractions into coke, and Coke Pile. These facilities are identified as Unit 120 and are rated at 2,000 tons of coke per day. The facility includes the following emission sources and may also include insignificant activities listed in Section A.4 of this permit:

- (1) Four (4) process heaters comprising:

| Heater Identification            | Maximum Heat Input Capacity (MMBtu/hr) | Stack Exhausted To | Emission Controls |
|----------------------------------|--|--------------------|-------------------|
| H-101<br>H-102<br>H-103<br>H-104 | 200 (total)                            | 120-04             | None              |

- (2) Storage and handling of the bulk material. Fugitive emissions are controlled by keeping the coke wetted and having a 15' sheet piling wall surrounding the coke pile. The coke pile height will not exceed 15'.
- (3) The No. 11B Coker is connected to the DDU flare system. The system is used to control VOC emissions during emergency situations, unit startups and shutdowns, and preparation of equipment for maintenance.
- (4) Leaks from process equipment, including pumps, compressors, pressure relief devices, sampling connection systems, open-ended lines or valves, flanges and other connectors.
- (c) No. 12 Pipe Still, constructed in 1959, which processes crude into various hydrocarbon fractions based on boiling points, and is identified as Unit ID 130 and is rated at 336,000 barrels per day. The facility includes the following emission sources and may also include insignificant activities listed in Section A.4 of this permit:

- (1) The following process heaters, all of which are fired by natural gas, refinery gas, or liquified petroleum gas:

| Heater Identification | Construction Date | Maximum Heat Input Capacity (MMBtu/hr) | Stack Exhausted To | Emission Controls                 |
|-----------------------|-------------------|--|--------------------|-----------------------------------|
| H-1AN                 | 1959              | 121.5                                  | 130-01             | None                              |
| H-1AS                 | 1959              | 121.5                                  | 130-01             | None                              |
| H-1B                  | 1959              | 243                                    | 130-01             | None                              |
| H-2                   | 1959              | 174                                    | 130-01             | Ultra low NO <sub>x</sub> burners |
| H-1CN                 | 1995              | 120                                    | 130-02             | Low NO <sub>x</sub> burners       |
| H-1CS                 | 1967              | a                                      | b                  | None                              |
| H-1CX                 | 1977              | 410                                    | 130-04             | Low NO <sub>x</sub> burners       |

a No longer in service -- was rated at 120 MMBtu/hour.

b No longer in service -- was exhausted to stack 130-03.

- (2) One (1) vacuum hot well, identified as D-7, constructed in 1995, and venting to S/V 130-05. The vacuum tower overhead system consists of a series of condensers, steam ejectors, and vacuum pumps. The majority of the overhead vapors are condensed and drained to the hotwell, which is pumped back to the front end of the unit for reprocessing. The gas compressors pull the remaining vapor that is not condensed in the overhead system into the wet gas system, where the hydrocarbon is reprocessed by down stream units. A thermocouple system (with temperature alarm) is used to monitor the vacuum on the system.
- (3) Leaks from process equipment.

- (d) The Sulfur Recovery Unit (SRU) Facility, identified as Unit ID 162, originally constructed in 1971 and expanded in 1981 and 1995, and rated at 600 long tons per day of sulfur. The facility includes the following and may also include insignificant activities listed in Section A.4 of this permit:
- (1) Three (3) three-stage Claus sulfur recovery trains, identified as A, B, and C trains.
  - (2) One (1) Beavon-Stretford tail gas unit (B/S TGU), a reduction system with a burner capacity of 24.3 MMBtu per hour, exhausting at stack S/V 162-02.
  - (3) One (1) tail gas unit (SBS TGU), an oxidation system with a burner capacity of 40 MMBtu per hour, exhausting at stack 162-04.
  - (4) One (1) caustic soda scrubbing tower to control sulfur dioxide emissions from the SBS TGU.
  - (5) One (1) cooling tower, identified as the SBS cooling tower, used to remove sodium bisulfite from the caustic scrubbing tower exhaust stream, equipped with a high-efficiency mist eliminator, and exhausting at stack 162-05.
  - (6) Gas quenching and cooling towers other than the SBS cooling tower.
  - (7) One (1) quench separator with mist eliminators.
  - (8) One (1) gas cooler and water condenser with sulfur dioxide stripper.
  - (9) Caustic soda storage tanks and sodium bisulfite storage tanks, and handling equipment.
  - (10) One (1) standby incinerator, used only in the event of an emergency, having stack ID S/V 162-01.
  - (11) One (1) flare, exhausting to stack S/V 162-03 which controls H<sub>2</sub>S and VOC emissions during emergency situations, unit start-ups/shut-downs, and preparation of equipment for maintenance. Refinery or natural gas is used as a constant purge stream. Pilot gas is natural gas.
  - (12) One (1) modular degassing unit, which removes gases that are emitted during the cooling of molten sulfur. Removed gases are vented to the SBS TGU.
  - (13) One (1) sour water storage tank, identified as TK-431, having a maximum storage capacity of 845,600 gallons and equipped with an external floating roof. The maximum true vapor pressure of the material stored in this tank is less than 0.5 psia.

Main Operating Scenario:

Approximately 80% of tail gases from the three trains are sent to the B/S TGU, with the remainder sent to the SBS TGU.

Alternate Operating Scenario #1:

One train and the B/S TGU are not operated. Tail gases from the other two trains are sent to the SBS TGU.

Alternate Operating Scenario #2:

The B/S TGU is not operated. Tail gases from the three trains are sent to the SBS TGU.

Alternate Operating Scenario #3

The SBS TGU is not operated. Tailgases from the three trains are sent to the B/S TGU.

- (e) Vapor Recovery Unit 100 (VRU-100) identified as Unit ID 241, and Vapor Recovery Unit 200 (VRU-200) identified as Unit ID 231. Gasoline and lighter products from the FCUs are separated in the VRUs using a series of distillation towers. The VRUs are connected to flare stack S/V 241-01, the VRU Flare, to control VOC emissions during emergency situations, unit startups and shutdowns, and preparation of equipment for maintenance. The facility includes leaks from process equipment including one (1) compressor (identified as J-3E located at VRU-100), pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, and an instrumentation system. The facility may also include insignificant activities listed in Section A.4 of this permit.
- (f) The Vapor Recovery Unit 300 (VRU 300), identified as Unit ID 150. Light ends and naphtha are separated in the VRU using a series of distillation towers. This unit is connected to flare stack S/V 241-01, the VRU Flare, to control VOC emissions during emergency situations, unit startups and shutdowns, and preparation of equipment for maintenance. The facility includes the following emission sources and may include insignificant activities listed in Section A.4 of this permit:
  - (1) One (1) off-gas knock out drum (D-400) which exhausts to flare stack S/V 241-01.
  - (2) Leaks from process equipment, including two (2) compressor (identified as K-340 and K-351), pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, and instrumentation system.
- (g) The Alkylation Unit, identified as Unit ID 140, combines isobutane with butylenes and propylenes to produce alkylate. The alkylate, a high octane naphtha, is blended into gasoline. This unit was built in 1961 and expanded in 1989. This unit is connected to flare stack S/V 140-01, the Alky Flare, to control VOC emissions emitted during emergency situations, unit startups and shutdowns, and preparation of equipment for maintenance. The facility includes the following emission sources and may include insignificant activities listed in Section A.4 of this permit:
  - (1) One (1) off gas knock-out drum (D-22), which exhausts to flare stacks S/V 140-01.
  - (2) One (1) spent acid stripper drum (D-13), which exhausts to flare stacks S/V 140-01.
  - (3) One (1) spent caustic drum (D-32), which exhausts to flare stacks S/V 140-01.
  - (4) Leaks from process equipment, including two (2) compressors (identified as K-1 and K-1A), valves, pumps, pressure relief devices, sampling connection systems, and instrumentation system.
- (h) The Propylene Concentration Unit (PCU), identified as Unit ID 145, purifies propylene for sale to chemical plants and eventual manufacture into polypropylene plastic. This unit also has a treating system, which purifies propane. This unit is connected to flare stack S/V 140-01 (the Alky Flare). The flare controls VOC emissions during emergency situations, unit startups and shutdowns, and preparation of equipment for maintenance. The facility includes a caustic degassing drum (D-100) that is vented to flare stack S/V 140-01 and leaks from process equipment, including one compressor (identified as k-104), pumps, pressure relief devices, sampling connection systems, open-ended lines or valves, and instrumentation system. This facility may include insignificant activities listed in Section A.4 of this permit.

(i) The Isomerization Unit (Isom), identified as Unit ID 210, was constructed in 1985 as a conversion of the No.2 Ultraformer. The Isomerization process converts low octane naphtha into high octane gasoline blending components. This unit is connected to flare stack S/V 220-04, the UIU Flare, to control VOC emissions during emergency situations, unit startups and shutdowns, and preparation of equipment for maintenance. The facility includes the following emission sources and may include insignificant activities listed in Section A.4 of this permit.

- (1) One (1) natural gas, refinery gas, or liquified petroleum gas-fired Process Heater H-1, rated at 190 MMBtu/hr and vented to stack S/V 210-01.
- (2) One (1) Flare Knock-out Drum (D-18) with emissions vented to vessel D-24, which exhausts to flare stack S/V 220-04.
- (3) Leaks from process equipment, including one (1) compressor (identified as K1), pumps, valves, process drains and pressure relief devices.

(j) The Aromatic Recovery Unit (ARU), identified as Unit ID 242, consists of the ARU 200 section and the ARU 300 section. The primary function is to remove light ends from naphtha to obtain a more desirable reforming feed. Its secondary function is to separate xylene, a chemical feedstock, from the Ultraformer product. The ARU utilizes a series of distillation towers to purify reformer feed and another set of towers to separate chemical feedstocks. The ARU includes the following process units and may also include insignificant activities listed in Section A.4 of this permit.

- (1) The following process heaters, which are fired with refinery gas, natural gas or liquified petroleum gas.

| Heater Identification | Construction Date | Maximum Heat Input Capacity (MMBtu/hr) | Stack Exhausted To | Emission Controls |
|-----------------------|-------------------|--|--------------------|-------------------|
| F-200A<br>F-200B      | 1978              | 249.5                                  | 242-01             | None              |
| F-200B                | 1978              | 249.5                                  | 242-02             | None              |

- (2) The ARU is connected to the 4UF flare stack, S/V 224-06. The flare is used to control VOC emissions during emergency situations, unit startups and shutdowns, and preparation of equipment for maintenance.
- (3) Leaks from process equipment.

(k) The Blending Oil Unit (BOU), identified as Unit ID 250, uses hydrogen to convert sulfur to hydrogen sulfide and remove it from distillate and gas oil streams to meet product specifications. The hydrogen sulfide is sent to the Claus Trains for further processing. The facility includes the following emission sources and may also include insignificant activities listed in Section A.4 of this permit:

- (1) One process Furnace F-401, constructed in 1972, which vents to stack ID S/V250-01. The furnace is rated at 35 million Btu and is fired by natural gas, refinery gas or liquid petroleum gas.
- (2) Leaks from process equipment, including pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, and instrumentation systems.

- (l) No. 2 Treatment Plant, identified as unit 601, removes disagreeable odors from various naphtha streams using a catalytic process. This facility has only fugitive emissions and/or other emissions that are considered insignificant.
- (m) No. 4 Treatment Plant, identified as unit 602, removes disagreeable odors from various naphtha and distillate streams using a catalytic process. This facility has only fugitive emissions and/or other emissions that are considered insignificant.
- (n) Butane, Propane and Propylene Storage and Loading Facilities, identified as Unit ID 604, includes the following sources of emissions and may also include insignificant activities listed in Section A.4 of this permit:
  - (1) One (1) butane storage cavern located in South Tank Field.
  - (2) Seven (7) pressurized butane storage spheres located southwest of the main Refinery near the J&L Tank Field with a capacity of 1,050,000 gallons each.
  - (3) Propane (LPG) storage caverns and above-grade pressurized storage vessels located near the J&L Tank Field.
  - (4) Propane (LPG) railcar loading facilities located near the J&L Tank Field. These can also be used for loading butane into railcars.
  - (5) Pressurized polymer grade propylene (PGP) and refinery grade propylene (RGP) storage vessels located at the north east end of the Refinery.
  - (6) Propylene truck and railcar loading facilities located at the north east end of the Refinery, with emissions vented to the PIB flare, which is owned and operated by INEOS USA, LLC (Plant I.D. 089-00076).
  - (7) One (1) LPG loading area flare stack having stack number S/V 604-01, installed in 1986, which is used as a safety device which burns any vented gases that might result from relieving pressure on equipment.
  - (8) Leaks from process equipment.
- (o) The No.3 Ultraformer Unit (No. 3 UF), identified as Unit ID 220, commissioned in 1958, upgrades low-octane naphtha to gasoline blending material and chemical feedstocks. The reforming section consists of a series of process furnaces and catalyst-filled reactors in which the naphtha is heated and converted from straight chain to aromatic compounds. The reactor products are separated by distillation for further processing or blending into gasoline. The No. 3 Ultraformer is connected to flare stack S/V 220-04, the UIU flare, to control VOC emissions during emergency situations, unit startups and shutdowns, preparation of equipment for maintenance and reactor regenerations. The No.3 Ultraformer includes the following sources of emissions and may also include insignificant activities listed in Section A.4 of this permit.

- (1) Three (3) process heaters, all of which burn refinery gas, natural gas, or liquified petroleum gas:

| Heater Identification | Maximum Heat Input Capacity (MMBtu/hr) | Stack Exhausted To | Emission Controls |
|-----------------------|--|--------------------|-------------------|
| H-1                   | 240                                    | 220-01             | None              |
| H-2                   | 185                                    | 220-02             | None              |
| F-7                   | 23                                     | 220-03             | None              |
| Regeneration Furnace  | Not in service                         | Not in service     | None              |

- (2) One (1) flare gas separator (D-18) with emissions vented to vessel D-24, which exhausts to flare stack S/V 220-04.
- (3) Five (5) catalyst-filled reactors, which are vented to flare stack S/V 220-04 during the initial catalyst depressuring and catalyst purging steps of the regeneration process.
- (4) One (1) internal scrubbing system, controlling the regeneration vent during the coke burn-off and catalyst rejuvenation steps of the regeneration process, which removes HAP emissions.
- (5) Leaks from process equipment, including one (1) compressor (identified as K-1), pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, and instrumentation systems.

(p) The No.4 Ultraformer Unit (no. 4 UF), identified as Unit ID 224, built in 1972, upgrades low-octane naphtha to gasoline blending material and chemical feedstocks. The reforming section consists of a series of process furnaces and catalyst-filled reactors in which the naphtha is heated and converted from straight chain to aromatic compounds. The reactor products are separated by distillation for further processing or blending into gasoline. The No.4 Ultraformer has a regeneration furnace which heats regeneration gas for use in catalyst regenerating. Reactors are taken off-Line and vented to the atmosphere during regeneration. The No. 4 Ultraformer includes the following sources of emissions and may also include insignificant activities listed in Section A.4 of this permit:

- (1) Nine (9) process heaters, all of which burn refinery gas, natural gas, or liquified petroleum gas:

| Heater Identification | Maximum Heat Input Capacity (MMBtu/hr) | Stack Exhausted To | Emission Controls |
|-----------------------|--|--------------------|-------------------|
| F-1                   | 68                                     | 224-01             | None              |
| F-8A                  | 163                                    | 224-01             | None              |
| F-8B                  | 163                                    | 224-01             | None              |
| F-2                   | 286                                    | 224-02             | None              |
| F-3                   | 242                                    | 224-03             | None              |
| F-4                   | 137                                    | 224-03             | None              |
| F-5                   | 99                                     | 224-04             | None              |
| F-6                   | 49                                     | 224-04             | None              |
| F-7                   | 52                                     | 224-05             | None              |

- (2) One (1) flare (identified as the 4UF flare), exhausting at stack S/V 224-06. The 4UF flare is used to control VOC emissions during emergency situations, unit startups and shutdowns, preparation of equipment for maintenance, and reactor regenerations.

- (3) Six (6) catalyst-filled reactors, which are vented to flare stack S/V 224-06 during the initial catalyst depressuring and catalyst purging steps of the regeneration process.
  - (4) Leaks from process equipment, including two (2) compressors (identified as K-1 and K-7), pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, and instrumentation systems.
  - (5) One (1) caustic scrubbing system, controlling the regeneration vent during the coke burn-off and catalyst rejuvenation steps of the regeneration process, which removes HAP emissions. The scrubber system includes:
    - (A) One (1) caustic scrubber exhausting to stack 224-07;
    - (B) One (1) carbon adsorption system used to treat waste scrubber liquor prior to disposal; and
    - (C) Caustic feed unloading, storage, and transfer equipment.
- (q) The Hydrogen Unit (HU), identified as Unit ID 698, commissioned in 1993, produces 99+% pure hydrogen needed for the refinery hydrotreating processes. The HU produces high purity hydrogen by reacting steam with methane. The reaction is carried out by heating the mixture in a furnace and reacting it in the presence of a catalyst. The HU includes the following sources of emissions and may also include insignificant activities listed in Section A.4 of this permit:
- (1) One (1) natural gas, refinery gas or liquified petroleum gas fired B-501 Process Heater rated at 366.3 MMBtu/hr, which exhausts at stack S/V 698-01. The Process Heater is equipped with low-NO<sub>x</sub> burners.
  - (2) One (1) DDU Flare exhausting at stack S/V 698-02, burning natural gas as the pilot gas, used to control VOC emissions during emergency situations, unit startups and shutdowns and depressuring equipment for maintenance.
  - (3) Leaks from process equipment.
- (r) The Distillate Desulfurizer Unit (DDU), identified as Unit ID 700, commissioned in 1993, removes sulfur from petroleum distillates. Distillate feed is mixed with hydrogen, heated in process furnaces and passed over a catalyst bed to convert sulfur compounds to H<sub>2</sub>S. The DDU includes the following emissions sources and may also include insignificant activities listed in Section A.4 of this permit:
- (1) Process Heater WB-301, rated at 64.8 MMBtu/hr and exhausting to stack S/V 700-01. The Process Heater is equipped with low-NO<sub>x</sub> burners and burns natural gas, refinery gas, or liquified petroleum gas.
  - (2) Process Heater WB-302, rated at 83.7 MMBtu/hr and having stack ID S/V 700-02. The Process Heater is equipped with low-NO<sub>x</sub> burners and burns natural gas, refinery gas, or liquified petroleum gas.
  - (3) Leaks from process equipment.
  - (4) The Distillate Desulfurization Unit is connected to the DDU Flare System. The system is used to control VOC emissions during emergency situations, unit startups and shutdowns and depressuring equipment for maintenance.

(s) The Cat Feed Hydrotreating Unit (CFHU), identified as Unit ID 171, built in 1982, removes sulfur from and improves the quality of gas oil feed to the Fluidized Cracking Units. The No. 4 Ultraformer Flare Stack, S/V 224-06, is used to control VOC emissions during emergency situations, unit startups and shutdowns, and preparation of equipment for maintenance. The CFHU is connected to the No. 4 Ultraformer flare stack. The flare is used to control VOC emissions, unit startups and shutdowns, and preparation of equipment for maintenance. The CFHU includes the following emission sources and may also include insignificant activities listed in Section A.4 of this permit:

(1) Three (3) process heaters, all of which burn refinery gas, natural gas, or liquified petroleum gas:

| Heater Identification | Maximum Heat Input Capacity (MMBtu/hr) | Stack Exhausted To | Emission Controls                 |
|-----------------------|--|--------------------|-----------------------------------|
| F-801 A/B             | 66.5                                   | 171-01             | low-NO <sub>x</sub> burners       |
| F-801C                | 60.0                                   | 171-02             | ultra low-NO <sub>x</sub> burners |

(2) Leaks from process equipment.

(t) The Catalytic Refining Unit (CRU), identified as Unit ID 201, which removes sulfur from petroleum naphthas and distillates. Naphtha or distillate feed is mixed with hydrogen, heated in process furnaces and passed over a catalyst bed inside one of two reactor trains, identified as D-114 and D-105, to convert sulfur compounds to hydrogen sulfide. Hydrogen sulfide is subsequently removed from the product by distillation followed by scrubbing with an amine. The CRU includes the following emission sources and may also include insignificant activities listed in Section A.4 of this permit:

(1) Two (2) heaters, all of which burn refinery gas, natural gas, or liquified petroleum gas:

| Heater Identification | Maximum Heat Input Capacity (MMBtu/hr) | Stack Exhausted To | Emission Controls           |
|-----------------------|--|--------------------|-----------------------------|
| F-101                 | 72                                     | 201-01             | Low-NO <sub>x</sub> Burners |
| F-102A                | 60                                     | 201-02             | Low-NO <sub>x</sub> Burners |

(2) The CRU is connected to the UIU flare stack, S/V 220-04. The flare is used to control VOC emissions during emergency situations, unit startups and shutdowns, and preparation of equipment for maintenance.

(3) Leaks from process equipment, including pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, and instrumentation systems.

Main Operating Scenario:

The CRU operates as a naphtha hydrotreater. Maximum production under this scenario is 27,000 barrels per day.

Alternative Operating Scenario:

The CRU operates as a distillate hydrotreater. Maximum production under this scenario is 40,000 barrels per day.

- (u) The Fluidized Catalytic Cracking Unit (FCU) 500, constructed in 1945, identified as Unit ID 230 and rated at 115,000 barrels per day. This facility converts hydrocarbons that boil above 500°F into lower molecular weight products, which include gasoline and LPG. The cracking takes place as the gas oil and catalyst stream mix in the reactor. This process results in the catalyst being coated with coke, which is subsequently burned off in a regenerator. The FCU 500 includes the following emission sources and may also include insignificant activities listed in Section A.4 of this permit:
- (1) One (1) catalyst regenerator. Flue gas from the regenerator passes through an ammonia injection system, a waste heat recovery unit which generates steam, an Electrostatic Precipitator for particulate matter control, and is exhausted through stack S/V 230-01. The ammonia injection system includes aqueous ammonia injection and handling equipment. Aqueous ammonia is transferred from the FCU 600 SCR system's storage tanks.
  - (2) Three (3) catalyst storage bins, one each for spent, equilibrium, and fresh catalyst. Particulate emissions from the spent catalyst storage bin, identified as Bin F-52, are controlled by one (1) cyclone, which exhausts to stack S/V 230-03.
  - (3) One (1) flare exhaust at stack S/V 241-01 (VRU Flare). The flare is used to control VOC emissions during emergency situations, unit startups and shutdowns, and preparation of equipment for maintenance.
  - (4) Leaks from process equipment, including two (2) compressors (identified as J-3D and J-3G), pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, and an instrumentation system.
- (v) The Fluidized Catalytic Cracking Unit (FCU) 600, constructed in 1946, identified as Unit ID 240 and rated at 80,000 barrels per day. This facility converts hydrocarbons that boil above 500°F into lower molecular weight products, which include gasoline and LPG. The cracking takes place as the gas oil and catalyst stream mix in the reactor. This process results in the catalyst being coated with coke, which is subsequently burned off in a regenerator. The FCU 600 includes the following emission sources and may also include insignificant activities listed in Section A.4 of this permit:
- (1) One (1) catalyst regenerator. Flue gas from the regenerator passes through a waste heat recovery unit, which generates steam and an Electrostatic Precipitator for particulate matter control. The flue gas is then directed to a selective catalytic reduction (SCR) system, which chemically reduces nitrogen oxide emissions by reaction with injected ammonia, and is exhausted through stack S/V 240-01.
  - (2) Two catalyst storage bins, one each for equilibrium and fresh catalyst. (Spent catalyst is stored in Bin F-52, which is associated with FCU 500.)
  - (3) One (1) flare exhausting at stack ID S/V 230-02 (FCU Flare). The flare is used to control VOC emissions during emergency situations, unit startups and shutdowns, and preparation of equipment for maintenance.
  - (4) Leaks from process equipment, including two (2) wet gas compressors (identified as J-3D and J-3E), pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, and an instrumentation system.
- (w) A portion of No. 1 Stanolind Power Station (SPS) constructed in 1928 and identified as Unit ID 501. The following boilers, all of which burn refinery gas, natural gas, or liquified petroleum gas, are NO<sub>x</sub> budget units:

- (1) The following boilers, all of which burn refinery gas, natural gas, or liquified petroleum gas:

| Boiler Identification | Maximum Heat Input Capacity (MMBtu/hr) | Stack Exhausted To | Emission Controls |
|-----------------------|--|--------------------|-------------------|
| #3 Boiler             | 265                                    | 501-01             | None              |
| #4 Boiler             | 265                                    | 501-01             | None              |
| #5 Boiler             | 265                                    | 501-02             | None              |
| #6 Boiler             | 265                                    | 501-02             | None              |
| #7 Boiler             | 265                                    | 501-02             | None              |

- (2) Leaks from process equipment, including pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, and instrumentation systems.

- (x) A portion of No. 3 Stanolind Power Station (SPS) constructed as listed below and identified as Unit ID 503. The following boilers, all of which burn refinery gas, natural gas, or liquified petroleum gas, are NO<sub>x</sub> budget units:

- (1) The following boilers, all of which burn refinery gas, natural gas, or liquified petroleum gas:

| Boiler Identification | Installation Date | Maximum Heat Input Capacity (MMBtu/hr) | Stack Exhausted To | Emission Controls  |
|-----------------------|-------------------|--|--------------------|--|
| #1 Boiler             | 1948              | 575                                    | 503-01             | low-NO <sub>x</sub> burners, an induced flue gas recirculation (IFGR) system, and an over fired air (OFA) system |
| #2 Boiler             | 1948              | 575                                    | 503-02             |  |
| #3 Boiler             | 1951              | 575                                    | 503-03             |  |
| #4 Boiler             | 1951              | 575                                    | 503-04             |  |
| #6 Boiler             | 1953              | 575                                    | 503-05             |  |

- (2) Leaks from process equipment, including pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, and instrumentation systems.

- (y) Fluid Bed Incinerator (FBI), identified as Unit ID 510, equipped with a wet venturi scrubber, wet electrostatic precipitator (WESP) and a carbon bed absorber. This is a refinery pollution control system for hazardous waste materials and regulated under the Resource Conservation and Recovery Act (RCRA) and the Hazardous Waste Combustion MACT Standards. It is designed to treat API separator sludge, DAF skimmings and biological solids from the waste water treatment plant. The WESP and carbon bed absorber were installed in 2003. This facility includes the following emission sources and may also include insignificant activities listed in Section A.4 of this permit:

- (1) The following incinerator fired by No.2 fuel oil:

| Incinerator | Construction Date | Maximum Heat Release Capacity | Stack Exhausted to | Control Devices   |
|-------------|-------------------|-------------------------------|--------------------|---|
| FBI         | 1972              | 82 MMBtu/hr                   | 510-01             | Wet venturi scrubber with demisting vanes for PM control<br><br>Wet Electrostatic Precipitator<br><br>Carbon Bed Adsorber |

- (z) Wastewater Treatment Plant (WWTP), identified as Unit ID 544. This facility treats the water used in the refining process that comes into contact with oil or chemicals. In the first step, the heavier solids are removed at the inlet to the WWTP and the floating oil is skimmed from the surface of the wastewater in the API separator boxes. The oil is then recycled back to the refinery. The water is then aerated in the Air Flotation Unit where additional solid impurities are floated and skimmed. Thereafter, it moves to the Activated Sludge Plant where special bacteria digest the remaining contaminants. The water then passes through a clarifier and then eight (8) final filters before being returned to Lake Michigan. This facility includes the following emission sources and may also include insignificant activities listed in section A.4 of this permit:

- (1) The following units are equipped with closed vent systems: oil sump P-1, oil sump P-2, and Diffused Air Flotation (DAF) Secondary Boxes, which vent to a biofilter and carbon canisters; Tank 569 is equipped with a conservation vent.
  - (2) The following units are equipped with a fixed-roof or floating roof: Interceptor Box, Diversion Box (from Tank 5051 to DAF), DAF Flash Mixer, DAF Influent Channel, DAF Effluent Channel, DAF Primary Boxes, and DAF Sump.
  - (3) One (1) storage tank (identified as Tank 5051) having a maximum storage capacity of 10,000,000 gallons, constructed in 1988 and equipped with an external floating roof.
  - (4) One (1) storage tank (identified as Tank 5050) having a maximum storage capacity of 10,000,000 gallons, constructed in 1988. This tank is used for storm event and upset impoundments.
  - (5) Seven (7) oil-water/solids separator units enclosed with a fixed-roof: Bar Screen, #7 API Separator Fixed Cover, #7 API Separator Primary Inlet, #7 API Separator Secondary Inlet, #7 API Separator Secondary Outlet, #7 API Separator Inlet Channel Section, and #7 API Separator Gear Boxes.
- (aa) Oil Movements, identified as Unit 640. This facility is used to store, blend, and ship products. Gasoline blending components are custom blended into various grades of gasoline. Additive and other compounds are blended into the products to give them their unique characteristics. Furnace oil and other distillates are also blended using components from process units or storage. Crude oil and feedstocks for process units and products are also stored at this location. Product loading operations include the pipeline and railcar racks. This facility includes the following emission sources and may also include insignificant activities listed in Section A.4 of this permit:

- (1) One (1) internal floating roof storage tank identified as 3730, storing ethanol, constructed in 1955, with a maximum storage capacity of 1,050,721 gallons.
- (2) Ten (10) external floating roof storage tanks storing petroleum hydrocarbon with vapor pressure less than 15 psia, comprising the following tanks:

| Tank No. | Year Built or Modified | Maximum Capacity (gallons) |
|----------|------------------------|----------------------------|
| 3529     | 1948                   | 858,000                    |
| 3637     | 1956                   | 6,353,000                  |
| 3901     | 1956                   | 1,906,000                  |
| 3902     | 1956                   | 1,906,000                  |
| 3915     | 1980                   | 6,353,460                  |
| 3916     | 1980                   | 13,666,998                 |
| 3917     | 1980                   | 25,413,839                 |
| 3918     | 1980                   | 13,666,998                 |
| 3919     | 1980                   | 13,666,998                 |
| 3920     | 1980                   | 13,666,998                 |

- (3) Sixty-seven (67) internal floating roof storage tanks, storing petroleum hydrocarbon with vapor pressure less than 15 psia, comprising the following tanks:

| Tank No. | Year Built or Modified | Maximum Capacity (gallons) |
|----------|------------------------|----------------------------|
| 3474     | 1992                   | 3,734,422                  |
| 3475     | 1994                   | 3,865,445                  |
| 3476     | 1984                   | 3,085,016                  |
| 3477     | 1971                   | 4,066,214                  |
| 3480     | 1982                   | 4,026,505                  |
| 3482     | 1972                   | 169,426                    |
| 3483     | 1924                   | 3,382,264                  |
| 3484     | 1996                   | 3,865,445                  |
| 3486     | 1979                   | 4,026,505                  |
| 3487     | 1980                   | 4,026,505                  |
| 3488     | 1994                   | 3,865,445                  |
| 3489     | 1996                   | 3,865,445                  |
| 3492     | 1925/1971              | 3,382,000                  |
| 3493     | 1995                   | 3,865,445                  |
| 3510     | 1949                   | 4,235,640                  |
| 3511     | 1973                   | 4,066,214                  |
| 3512     | 1958                   | 4,066,214                  |
| 3513     | 1971                   | 4,066,214                  |
| 3514     | 1984                   | 4,066,214                  |
| 3525     | 1981                   | 4,026,505                  |
| 3526     | 1943/1979              | 4,026,505                  |
| 3527     | 1991                   | 3,382,264                  |
| 3528     | 1993                   | 3,865,445                  |
| 3531     | 1948/1997              | 857,717                    |
| 3532     | 1953                   | 868,306                    |
| 3533     | 1953                   | 4,235,640                  |
| 3534     | 1955/1973              | 71,000                     |
| 3549     | 1993                   | 588,283                    |
| 3553     | 1981                   | 5,070,343                  |
| 3554     | 1981                   | 5,070,343                  |

| Tank No. | Year Built or Modified | Maximum Capacity (gallons) |
|----------|------------------------|----------------------------|
| 3558     | 1972/1986              | 376,501                    |
| 3600     | 1993                   | 847,128                    |
| 3601     | 1977                   | 3,702,020                  |
| 3602     | 1979                   | 3,856,271                  |
| 3604     | 1980                   | 3,856,271                  |
| 3605     | 1977                   | 3,702,000                  |
| 3622     | 1993                   | 3,865,445                  |
| 3624     | 1932                   | 3,382,264                  |
| 3629     | 1992                   | 3,865,445                  |
| 3631     | 1944                   | 3,382,000                  |
| 3633     | 1950                   | 5,282,000                  |
| 3635     | 1954                   | 5,070,000                  |
| 3639     | 1956                   | 6,353,460                  |
| 3641     | 1956                   | 6,353,460                  |
| 3701     | 1943/1993              | 3,382,264                  |
| 3702     | 1943/1982/1997         | 3,382,264                  |
| 3703     | 1944/1982              | 3,382,264                  |
| 3704     | 1944/1980              | 3,382,264                  |
| 3705     | 1944                   | 3,382,264                  |
| 3706     | 1944                   | 3,382,264                  |
| 3707     | 1944/2000              | 3,382,264                  |
| 3708     | 1943                   | 853,895                    |
| 3709     | 1943                   | 825,434                    |
| 3710     | 1943                   | 2,059,000                  |
| 3715     | 1945/1987/1998         | 3,382,264                  |
| 3716     | 1996                   | 3,865,445                  |
| 3727     | 1948                   | 857,717                    |
| 3728     | 1970                   | 857,717                    |
| 3860     | 1993                   | 211,782                    |
| 3900     | 1956/2005              | 1,906,000                  |
| 3904     | 1956/1986              | 3,388,512                  |
| 3905     | 1956                   | 6,353,460                  |
| 3907     | 1956/1996              | 3,388,512                  |
| 3909     | 1956                   | 3,388,512                  |
| 3911     | 1956/1986              | 3,388,512                  |
| 3912     | 1956                   | 6,353,460                  |
| 3914     | 1956                   | 3,388,512                  |

(4) Miscellaneous Storage tanks including the following:

| Tank ID | Location     | Description      | Tank Construction Dates | Tank Capacity | Vapor Pressure of Liquid (psia) |
|---------|--------------|------------------|-------------------------|---------------|---------------------------------|
| D-424   | 4ULTRAFORMER | Methanol Tank    | --                      | 3,744         | <0.5                            |
| F-011   | 4B TREATER   | Casper Dewaterer | 1949                    | 17,624        | <0.5                            |
| TK-0563 | INCINERATOR  | Aux. Fuel Oil    | 1971                    | 49,378        | <0.5                            |
| TK-3228 | CRUDE STA    | Decanted Oil     | 1948                    | 596,570       | <0.5                            |
| TK-3234 | CRUDE STA    | Decanted Oil     | 1940                    | 858,298       | <0.5                            |
| TK-3464 | BERRY LAKE   | Decanted Oil     | 1957                    | 2,705,472     | <0.5                            |
| TK-3465 | BERRY LAKE   | Plant Fuel       | 1973                    | 3,413,088     | <0.5                            |
| TK-3468 | BERRY LAKE   | TGO              | 1958                    | 3,381,840     | <0.5                            |
| TK-3491 | SO. TK FLD.  | Lsho             | 1992                    | 3,876,768     | <0.5                            |
| TK-3496 | SO. TK FLD.  | Distillate       | 1992                    | 3,876,768     | <0.5                            |

| Tank ID | Location     | Description                        | Tank Construction Dates | Tank Capacity | Vapor Pressure of Liquid (psia) |
|---------|--------------|------------------------------------|-------------------------|---------------|---------------------------------|
| TK-3498 | SO. TK FLD.  | Amoco Premier Diesel [Future Lsfo] | 1929                    | 3,373,413     | <0.5                            |
| TK-3499 | SO. TK FLD.  | Amoco Premier Diesel [Future Lsfo] | 1996                    | 3,870,720     | <0.5                            |
| TK-3500 | SO. TK FLD.  | Furnace Oil [Future Hmd]           | 1996                    | 3,870,720     | <0.5                            |
| TK-3505 | SO. ANNEX    | Heater Oil                         | 1949                    | 4,254,768     | <0.5                            |
| TK-3509 | SO. TK FLD.  | Furnace Oil                        | 1948                    | 3,381,840     | <0.5                            |
| TK-3546 | SO. TK FLD.  | Bronze Dye                         | 1962                    | 16,800        | <0.5                            |
| TK-3547 | SO. TK FLD.  | Purple Dye                         | 1962                    | 16,800        | <0.5                            |
| TK-3548 | SO. TK FLD.  | Isonox 133                         | 1962                    | 16,800        | <0.5                            |
| TK3567  | --           | --                                 | --                      | 17,000        | <0.5                            |
| TK-3569 | MARINE DOCK  | DCO                                | 1981                    | 4,796,064     | <0.5                            |
| TK-3571 | MARINE DOCK  | HS Resid/Black Oil                 | 1971                    | 5,539,968     | >0.5 and <0.75                  |
| TK-3572 | MARINE DOCK  | HS Resid/Black Oil                 | 1971                    | 5,539,968     | >0.5 and <0.75                  |
| TK-3606 | STIGLITZ PK. | Amoco Jet Fuel A [New 1996]        | 1996                    | 3,701,376     | <0.5                            |
| TK-3607 | STIGLITZ PK. | Amoco Jet Fuel A                   | 1993                    | 3,729,600     | <0.5                            |
| TK-3609 | STIGLITZ PK. | HS Resid                           | 1973                    | 9,652,608     | <0.5                            |
| TK-3610 | STIGLITZ PK. | HS Resid                           | 1973                    | 9,652,608     | <0.5                            |
| TK-3611 | STIGLITZ PK. | HS Resid                           | 1973                    | 8,513,400     | <0.5                            |
| TK-3613 | STIGLITZ PK. | HS Resid                           | 1992                    | 3,876,768     | <0.5                            |
| TK-3711 | IND. TK FLD. | Lcco                               | 1993                    | 2,818,368     | <0.5                            |
| TK-3712 | IND. TK FLD. | Lcco                               | 1945                    | 3,357,600     | <0.5                            |
| TK-3714 | IND. TK FLD. | Distillate/Gas Oil                 | 1999                    | 3,852,576     | <0.5                            |
| TK-3717 | IND. TK FLD. | Fcu Feed Mixed                     | 1943                    | 3,263,190     | <0.5                            |
| TK-3718 | IND. TK FLD. | Gas Oil                            | 1996                    | 3,871,379     | <0.5                            |
| TK-3719 | IND. TK FLD. | Gas Oil                            | 1943                    | 3,357,600     | <0.5                            |
| TK-3720 | IND. TK FLD. | Gas Oil                            | 1946                    | 3,357,600     | <0.5                            |
| TK-3721 | IND. TK FLD. | Gas Oil                            | 1946                    | 3,357,600     | <0.5                            |
| TK-3722 | IND. TK FLD. | Gas Oil                            | 1952                    | 4,227,300     | <0.5                            |
| TK-3723 | IND. TK FLD. | Gas Oil                            | 1954                    | 3,386,880     | <0.5                            |
| TK-3726 | IND. TK FLD. | Amoco Jet Fuel A                   | 1948                    | 857,356       | <0.5                            |
| TK-3733 | IND. TK FLD. | Cru / Bou Distillate Feed          | 1971                    | 3,383,520     | <0.5                            |
| TK-3734 | IND. TK FLD. | Cru / Bou Distillate Feed          | 1971                    | 3,383,520     | >0.5 and <0.75                  |
| TK-3735 | IND. TK FLD. | Cru / Bou Distillate Feed          | 1971                    | 3,411,072     | <0.5                            |
| TK-3867 | SO. TK FLD.  | Stadis 450                         | 1967                    | 17,640        | <0.5                            |
| TK-3868 | SO. TK FLD.  | Amogard                            | 1953                    | 17,640        | >0.5 and <0.75                  |
| TK-3869 | SO. TK FLD.  | Pour Depressant                    | 1956                    | 23,436        | <0.5                            |
| TK-3872 | CRUDE STA    | Used Motor Oil                     | 1985                    | 15,120        | <0.5                            |
| TK3876  | South TF     | Cetane Improver                    | 1993                    | 14,381        | <0.5                            |
| TK-3906 | J&L TK FLD.  | Lsfo                               | 1956                    | 3,381,840     | >0.5 and <0.75                  |

| Tank ID | Location     | Description          | Tank Construction Dates | Tank Capacity | Vapor Pressure of Liquid (psia) |
|---------|--------------|----------------------|-------------------------|---------------|---------------------------------|
| TK-3908 | J&L TK FLD.  | Amoco Premier Diesel | 1956                    | 3,381,840     | <0.5                            |
| TK-3910 | J&L TK FLD.  | Furnace Oil [Hs]     | 1956                    | 3,381,840     | <0.5                            |
| TK-3913 | J&L TK FLD.  | Furnace Oil [Ls]     | 1956                    | 3,402,977     | <0.5                            |
| TK-6078 | ASPHALT      | HS Resid/Black Oil   | 1948                    | 1,931,000     | <0.5                            |
| TK-6113 | ASPHALT      | Paving Base          | 1944                    | 810,600       | <0.5                            |
| TK-6114 | ASPHALT      | Paving Base          | 1944                    | 810,600       | <0.5                            |
| TK-6125 |              | Paving Base          | 1998                    | 3108932       | <0.5                            |
| TK-6126 |              | Paving Base          | 1999                    | 3,108,000     | <0.5                            |
| TK-6127 |              | Paving Base          | 2000                    | 3,108,000     | <0.5                            |
| TK-6128 |              | Paving Base          | 1971                    | 3,225,600     | <0.5                            |
| TK-6129 |              | Paving Base          | 2005                    | 3,108,000     | <0.5                            |
| TK-6148 |              | Paving Base          | 1948                    | 3,108,000     | <0.5                            |
| TK-6149 |              | Paving Base          | 1948                    | 3,108,000     | <0.5                            |
| TK-6150 |              | HS Resid             | 1986                    | 810,600       | <0.5                            |
| TK-6153 |              | HS Resid             | 1979                    | 1,386,000     | <0.5                            |
| TK-6248 | ASPHALT      | Low Sul Resid        | 1973                    | 7,218,928     | <0.5                            |
| TK-6249 | ASPHALT      | Low Sul Resid        | 1973                    | 7,218,928     | <0.5                            |
| TK-6250 | ASPHALT      | HS Resid             | 1971                    | 7,218,928     | <0.5                            |
| TK-6251 | ASPHALT      | Paving Base          | 1971                    | 7,218,928     | <0.5                            |
| TK-6252 | ASPHALT      | HS Resid             | 1972                    | 7,215,268     | <0.5                            |
| TK-6253 | ASPHALT      | Paving Base          | 1971                    | 7,218,928     | <0.5                            |
| TK-6261 | ASPHALT      | HS Resid             | 1973                    | 451,183       | <0.5                            |
| TK-6262 | ASPHALT      | HS Resid             | 1972                    | 451,183       | <0.5                            |
| BT-002  | MARINE DOCK  | Out of Service       | 1968                    | 874,944       | --                              |
| TK-0559 | ASU          | Out of Service       | 1989                    | 146,869       | --                              |
| TK-0560 | ASU          | Out of Service       | 1948                    | 587,477       | --                              |
| TK-0568 |              | Out of Service       | Before 1973             | --            | --                              |
| TK-3167 |              | Out of Service       | 1926                    | 3,361,114     | --                              |
| TK-3168 |              | Out of Service       | 1926                    | 1,931,170     | --                              |
| TK-3169 |              | Out of Service       | 1926                    | 3,361,114     | --                              |
| TK-3232 | CRUDE STA    | Out of Service       | 1940                    | 857,356       | --                              |
| TK-3259 | CRUDE STA    | Out of Service       | 1951                    | 846,720       | --                              |
| TK-3260 | CRUDE STA    | Out of Service       | 1930                    | 375,986       | --                              |
| TK-3279 | MARINE DOCK  | Out of Service       | 1951                    | 85,302        | --                              |
| TK-3309 | CRUDE STA    | Out of Service       | NA                      | 7,050         | --                              |
| TK-3373 |              | Out of Service       | --                      | --            | --                              |
| TK-3471 | SO. TK FLD.  | Out of Service       | 1973                    | 7,050         | --                              |
| TK-3485 | SO. TK FLD.  | Out of Service       | 1924                    | 3,373,413     | --                              |
| TK-3494 | SO. TK FLD.  | Out of Service       | 1926                    | 3,373,413     | --                              |
| TK-3497 | SO. TK FLD.  | Out of Service       | 1926                    | 3,373,413     | --                              |
| TK-3506 | SO. ANNEX    | Out of Service       | 1936                    | 3,373,413     | --                              |
| TK-3507 | SO. ANNEX    | Out of Service       | 1936                    | 3,373,413     | --                              |
| TK-3508 | SO. ANNEX    | Out of Service       | 1936                    | 3,366,720     | --                              |
| TK-3603 | STIGLITZ PK. | Out of Service       | 1922                    | 3,084,480     | --                              |
| TK-3608 | STIGLITZ PK. | Out of Service       | 1954                    | 3,849,300     | --                              |
| TK-3713 | IND. TK FLD. | Out of Service       | 1944                    | 3,357,600     | --                              |
| TK-3903 | J&L TK FLD.  | Out of Service       | 1956                    | 3,381,840     | --                              |
| TK-6222 |              | Out of Service       | --                      | 3,000         | --                              |
| TK-6223 |              | Out of Service       | --                      | 211,400       | --                              |
| TK-6224 |              | Out of Service       | --                      | 211,400       | --                              |
| W-306   | MWTP         | Out of Service       | --                      | --            | --                              |

"--" - no data provided.

- (5) One (1) oil-water separator identified as the J&L Separator.

- (6) Leaks from process equipment, including pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, and instrumentation systems.
- (bb) The general facility remediation system, identified as Unit 999. Remediation includes multiple well point systems. The well point system extracts groundwater which may have a small hydrocarbon fraction. Depending on the VOC concentration, emissions generated by these systems may be routed to the atmosphere or to a thermal oxidizer. Additionally, one or more systems may route to the same oxidizer. Each system uses a common horizontal vacuum header to collect groundwater through a series of wells, and any entrained air is discharged through a vent at the vacuum pump. Recovered groundwater is then transferred to either a vapor/liquid separation tank or directly to another unit for further processing/treatment. Remediation includes the following emission sources and may also include insignificant activities listed in section A.4 of this permit.
- (1) The following well point systems:

| Facility I.D. | Installation Date           | S/V I.D. | Normal Venting  | Controls  |
|---------------|-----------------------------|----------|---|---|
| J-136         | 1993                        | 999-01   | Vented Separately   | Uncontrolled  |
| J-137         | 1992                        | 999-02   | Vented Separately   | Uncontrolled  |
| J-138         | 1991<br>Extension 1994      | 999-03   | J-138, J-139 and J-140 are vented with D-138 (vapor/liquid separation tank) | 0.685 MMBtu per hour<br>Thermal Oxidizer ITF                  |
| J-139         | 1981                        | 999-04   |   |   |
| J-140         | 1981                        | 999-05   |   |   |
| J-141         | 1988<br>Extension 1993      | 999-06   | Vented Separately   | Uncontrolled  |
| J-156         | 1968-1970                   | 999-07   | Vented Separately   | Uncontrolled  |
| J-157         | 1968-1970                   | 999-08   | Vented Separately   | Uncontrolled  |
| J-158         | 1968-1970                   | 999-10   | J-158, & J-159 vents are common   | Electric Catalytic Oxidizer<br>600°F min. temp., @ 1,000 scfm |
| J-159         | 1968-1970                   | 999-11   |   |   |
| J-160         | 1968-1970<br>Extension 1994 | 999-12   | Vented Separately   | Electric Catalytic Oxidizer, 600°F min. temp., @ 1,000 acfm   |
| J-161         | 1992                        | 999-13   | Vented Separately   | 0.685 MMBtu per hour<br>Thermal Oxidizer BLTF                 |
| J-162         | 1996                        | 999-14   | Vented Separately   | Uncontrolled  |
| J-163         | 1996                        | 999-15   | Vented Separately   | Uncontrolled  |

- (cc) The Mechanical Shop, identified as Unit 693. The Mechanical Shop includes the following emission sources and may also include insignificant activities listed in Section A.4 of this permit:
- (1) Two (2) Heat Treat Furnaces that are considered insignificant sources.

(2) Leaks from facility fuel gas lines.

(dd) One bulk truck loading facility, identified as the Marketing Terminal, and consisting of one (1) truck loading rack, constructed in 1972 and modified in 1992, comprised of 7 bays used for loading gasoline products and fuel oil. Four bays are dedicated to loading distillates, while the other three bays are dedicated to loading gasoline products. The maximum throughput for the truck loading facility is 1,103,760,000 gallons per year. Emissions of volatile organic compounds are controlled using a vapor combustion unit (identified as VCU).

(ee) One (1) cooling tower (identified as Cooling Tower No.6), constructed in 1996, with a maximum capacity of 20,000 gallons of water per minute. Cooling Tower No.6 is located at the No.12 Pipestill.

(ff) One (1) Asphalt Facility used to store, blend and transfer asphalt products. The facility has six blenders used for loading asphalt into railcars and trucks. Process heaters are used to keep certain tanks at the proper temperature for shipping. This facility includes the following emission sources and may also include insignificant activities listed in Section A.4 of this permit:

(1) The following two (2) process heaters:

| Process Heater ID         | Heat Input Capacity (MMBtu/hr) | Fuel        | Control Device |
|---------------------------|--------------------------------|-------------|----------------|
| F-1 Asphalt Heater        | 12                             | Natural gas | none           |
| F-2 Steiglitz Park Heater | 28                             | Natural gas | none           |

(2) The following seven (7) asphalt storage tanks used to store volatile organic liquids that have a vapor pressure less than 0.75 psi:

| Identification | Storage Capacity (gallons) | Year Constructed |
|----------------|----------------------------|------------------|
| 125            | 3,108,000                  | 1998             |
| 126            | 3,108,000                  | 1999             |
| 127            | 3,108,000                  | 2000             |
| 129            | 3,108,000                  | 2003             |
| 150            | 1,386,000                  | 1986             |
| 569            | 5,544,000                  | 1981             |
| 613            | 8,866,200                  | 1992             |

(3) The following twenty-five (25) asphalt storage tanks used to store volatile organic liquids that have a vapor pressure less than 0.5 psi.

| Identification | Storage Capacity (gallons) | Year Constructed |
|----------------|----------------------------|------------------|
| 78             | 1,814,400                  | 1947             |
| 113            | 810,600                    | 1944             |
| 114            | 810,600                    | 1944             |
| 128            | 3,225,600                  | 1971             |
| 148            | 810,600                    | 1948             |
| 149            | 810,600                    | 1948             |
| 153            | 932,400                    | 1979             |
| 222            | 210,000                    | 1955             |
| 223            | 210,000                    | 1955             |
| 224            | 210,000                    | 1955             |

| Identification | Storage Capacity (gallons) | Year Constructed |
|----------------|----------------------------|------------------|
| 225            | 361,200                    | 1950             |
| 248            | 6,967,800                  | 1973             |
| 249            | 6,967,800                  | 1973             |
| 250            | 6,967,800                  | 1971             |
| 251            | 6,967,800                  | 1971             |
| 252            | 6,967,800                  | 1972             |
| 253            | 6,967,800                  | 1971             |
| 261            | 441,000                    | 1973             |
| 262            | 441,000                    | 1972             |
| 468            | 3,108,000                  | 1956             |
| 571            | 5,040,000                  | 1971             |
| 572            | 5,040,000                  | 1971             |
| 609            | 5,649,000                  | 1973             |
| 611            | 8,513,400                  | 1973             |

- (4) The following twenty-two (22) heated vertical storage tanks, each approved for construction in 2007, each with a fixed cone roof, and each in heavy liquid service, storing volatile organic liquids that have a vapor pressure less than 0.0435 psia, and exhausting to the atmosphere or to a biofilter system for odor and opacity control:

| Tank ID  | Liquid Stored               | Date Approved for Construction | Tank Storage Capacity (gallons) | Maximum Throughput (gallons/year) | Exhaust ID |
|----------|-----------------------------|--------------------------------|---------------------------------|-----------------------------------|------------|
| TK-3573  | Trim Gas Oil                | 2007                           | 966,000                         | 20,160,000                        | TK-3573    |
| TK-SP-1  | Residual Oil and/or Asphalt | 2007                           | 14,154,000                      | 141,120,000                       | biofilter  |
| TK-SP-2  | Residual Oil and/or Asphalt | 2007                           | 14,154,000                      | 141,120,000                       | biofilter  |
| TK-SP-3  | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | biofilter  |
| TK-SP-4  | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | biofilter  |
| TK-LG-1  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-2  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-3  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-4  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-5  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-6  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-7  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-8  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-9  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-10 | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | biofilter  |
| TK-LG-11 | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | biofilter  |
| TK-LG-12 | Asphalt with Polymer        | 2007                           | 2,100                           | 420,000                           | biofilter  |

| Tank ID  | Liquid Stored            | Date Approved for Construction | Tank Storage Capacity (gallons) | Maximum Throughput (gallons/year) | Exhaust ID |
|----------|--------------------------|--------------------------------|---------------------------------|-----------------------------------|------------|
| TK-LG-13 | Asphalt-Polymer Blend    | 2007                           | 31,500                          | 2,100,000                         | biofilter  |
| TK-LG-14 | Polymer Finished Asphalt | 2007                           | 126,000                         | 2,520,000                         | biofilter  |
| TK-LG-15 | Polymer Finished Asphalt | 2007                           | 126,000                         | 2,520,000                         | biofilter  |
| TK-LG-16 | Polymer Finished Asphalt | 2007                           | 126,000                         | 2,520,000                         | biofilter  |
| TK-LG-17 | Polymer Finished Asphalt | 2007                           | 126,000                         | 2,520,000                         | biofilter  |

Under 40 CFR 60, Subpart UU, storage tanks TK-SP-1, TK-SP-2, TK-LG-1 through TK-LG-9, and TK-LG-12 through TK-LG-17 are each considered an affected facility.

Under 40 CFR 63, Subpart CC, storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17 are each considered as Group 2 storage vessels that are part of the existing affected source.

- (5) The following heated vertical storage tank, with a fixed cone roof, in heavy liquid service, storing volatile organic liquids that have a vapor pressure less than 0.0435 psia, and exhausting to the atmosphere:

| Tank ID | Liquid Stored | Construction Date | Tank Storage Capacity (gallons) | Maximum Throughput (gallons/year) | Exhaust ID |
|---------|---------------|-------------------|---------------------------------|-----------------------------------|------------|
| TK-3570 | Trim Gas Oil  | 1971              | 2,730,000                       | 20,160,000                        | TK-3570    |

Under 40 CFR 63, Subpart CC, storage tank TK-3570 is considered as a Group 2 storage vessel that is part of the existing affected source.

- (6) one (1) truck loading rack, approved for construction in 2007, comprised of six (6) loading bays used for loading liquid asphalt product, with a total maximum loading capacity of 800,000 tons of asphalt product per year, exhausting to the atmosphere or to a biofilter system for odor control.
- (7) one (1) rail car loading rack, approved for construction in 2007, comprised of twenty-eight (28) loading bays used for loading liquid asphalt product, with a total maximum loading capacity of 800,000 tons of asphalt product per year, exhausting to the atmosphere or to a biofilter system for odor control.
- (8) Equipment leaks of VOC and HAP from valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges and/or other connectors.

Under 40 CFR 60, Subpart GGG, valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges and/or other connectors in VOC service, are considered part of the existing affected source.

- (gg) One (1) pipeline (Cogen Steam Transfer Line) connecting BP's boilers (identified as emission units 501 and 503) with Whiting Clean Energy's heat recovery steam operator. The pipeline is used to exchange steam between the two facilities. The pipeline was constructed in 2001.
- (hh) One (1) pipeline (US Steel Stream Transfer Line) connecting BP's steam header with US Steel East Chicago (Plant ID #089-00300). This pipeline was constructed 2005 through 2006 and is used to transfer steam from BP to US Steel.
- (ii) One (1) Marine Dock Facility used to store and transfer products. The facility has three dock berths. A process heater is used to keep certain tanks at the proper temperature for shipping. This facility includes the following emission sources and may also include insignificant activities listed in Section A.4 of this permit:
  - (1) One (1) natural gas-fired process heater (identified as Marine Dock Heater F-100), having a maximum heat input capacity of 7 MMBtu per hour.
  - (2) One (1) storage tank (identified as BT-1), constructed in 1990, with a maximum storage capacity of 706,000 gallons and used to store petroleum hydrocarbons with a vapor pressure less than 15 psia. The tank is equipped with a fixed roof and an internal floating roof.
- (jj) The refinery operates eight hydrocarbon flares. The flares are used to control VOC emissions during emergency situations, unit startups and shutdowns, and preparation of equipment for maintenance.

The flares are identified as follows:

| Flare       | Stack ID. | Date of Installation | Dimensions                   | Process Units Normally Tied Into the Flare System * | Maximum Capacity (mmBTU/hr) | Pilot Fuel Type          |
|-------------|-----------|----------------------|------------------------------|---|-----------------------------|--------------------------|
| 4UF Flare   | 224-06    | 1972                 | H = 200 ft.<br>D = 2.5 ft.   | ARU, CFU, BOU, 4UF                                  | 15,000                      | Fuel Gas and Natural Gas |
| FCU flare   | 230-02    | 1945                 | H = 200 ft.<br>D = 2.0 ft.   | FCU 600   | 5620                        | Fuel Gas and Natural Gas |
| UIU Flare   | 220-04    | 1958                 | H = 199.5 ft.<br>D = 2.5 ft. | ISOM, 3UF, 2TP, CRU                                 | 7550                        | Fuel Gas and Natural Gas |
| VRU Flare   | 241-01    | Unknown              | H = 200 ft.<br>D = 2.0 ft.   | VRU 100, VRU200, VRU 300, FCU 500                   | 1596                        | Fuel Gas and Natural Gas |
| Alky Flare  | 140-01    | 1961                 | H = 199.5 ft.<br>D = 2.5 ft. | PCU, Alky   | 3920                        | Fuel Gas and Natural Gas |
| SRU Flare   | 162-03    | 1971                 | H = 300 ft.<br>D = 1.5 ft.   | SRU   | 688                         | Fuel Gas and Natural Gas |
| DDU Flare   | 698-02    | 1993                 | H = 200 ft.<br>D = 1.5 ft.   | DDU, HU, Coker, DHT                                 | 6000                        | Fuel Gas and Natural Gas |
| LPG Flare   | 604-01    | 1986                 | H = 50 ft.<br>D = 1.2 ft.    | LPG storage vessels and loading facilities          | 30                          | LPG                      |
| PIB Flare** | 2         | 1982                 | H = 250 ft.<br>D = 3.0 ft.   | RGP/PGP Loading Rack                                | 540,000 lb/hr               | Fuel Gas and Natural Gas |

\* - During emergencies or flare outages, some emission units or streams may be controlled by an alternate flare system that complies with the same applicable requirements as the flare normally used to control the emissions for those units.

\*\* - Owned and operated by INEOS USA, LLC. (Plant I.D. 089-00076).

- (kk) The OSBL area includes the pipe alleys, laboratory dock and waste transfer pad. The pipe alleys contain pipes that transfer hydrocarbon streams from one process unit to another or to storage. This facility includes leaks from process equipment, including open-ended valves or lines and flanges. This facility also contains area drains and an oil/water separator. This facility may also include insignificant activities listed in section A.4 of this permit.
- (ll) The Distillate Hydrotreating (DHT) Unit, identified as Unit ID 720 and rated at 45,000 barrels per day, which removes sulfur from petroleum distillates. Distillate feed is mixed with hydrogen, heated in a process furnace and passed over a catalyst bed to convert sulfur compounds to H<sub>2</sub>S. The DHT Unit was constructed in 2005/2006 and includes the following emission units:
- (1) DHT Unit Heater B-601, rated at 20 MMBtu per hour and constructed in May 2005. NO<sub>x</sub> emissions are controlled by ultra low-NO<sub>x</sub> burners having an emission rate of 0.04 pounds per million Btu heat input or less. Emissions are exhausted to a stack identified as 720-01.
  - (2) Associated valves, pumps, compressors, pressure relief devices, sampling connection systems, open-ended lines or valves, flanges or other connectors, and instrumentation systems.

The DHT Unit shares the DDU Flare, used to control VOC emissions during emergency situations, unit startups and shutdowns.

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

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

- (a) Paved and unpaved roads and parking lots with public access, including road sweeping [326 IAC 6.8-10-3] [326 IAC 2-7-1(21)(G)(xiii)];
- (b) Asbestos abatement projects regulated by 326 IAC 14-10 [326 IAC 2-7-1(21)(G)(xvi)];
- (c) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment [326 IAC 6.8-1-2(a)] [326 IAC 2-7-1(21)(G)(vi)(EE)];
- (d) Machining where an aqueous cutting coolant continuously floods the machining interface [326 IAC 6.8-1-2(a)] [326 IAC 2-7-1(21)(G)(vi)(BB)];
- (e) Stockpiled soils from soil remediation activities that are covered and waiting transport for disposal [326 IAC 6.8-10-3] [326 IAC 2-7-1(21)(G)(xii)];
- (f) Emission units with PM and PM<sub>10</sub> emissions less than five (5) tons per year, SO<sub>2</sub>, NO<sub>x</sub>, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, lead emissions less than two-tenths (0.2) tons per year, single HAP emissions less than one (1) ton per year, and combination of HAPs emissions less than two and a half (2.5) tons per year [326 IAC 2-1.1-3(e)(1) and 326 IAC 2-7-1(21)(A)-(C)]:
  - (1) FCU catalyst handling including truck loading/unloading [326 IAC 6.8-1-2(a)];
  - (2) Power Station soot blows [326 IAC 6.8-1-2(a)];
  - (3) General excavations for site remediation activities [326 IAC 6.8-10-3];
  - (4) Fugitive dust from coke yard, sulfur piles, and sulfur pits [326 IAC 6.8-10-3]; and

- (5) Soil Screening [326 IAC 6.8-10-3].
- (g) Emissions from a laboratory, as defined in 326 IAC 2-7-1(21)(D).
- (h) Combustion activities related to the following [326 IAC 2-7-1(21)(G)(i)]:
  - (1) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:
    - (i) Natural gas, provided the heat input of the unit is equal to or less than 10 MMBtu/hr.
    - (ii) The following five (5) natural gas-fired hot oil heaters, each approved for construction in 2007, and each considered an insignificant activity, as defined in 326 IAC 2-7-1(21)(G)(i)(AA)(aa):

| Process Heater ID | Heat Input Capacity (MMBtu/hr) | Fuel        | Control Device |
|-------------------|--------------------------------|-------------|----------------|
| H-SP-1            | 9.9                            | Natural gas | none           |
| H-SP-2            | 9.9                            | Natural gas | none           |
| H-LG-1            | 9.9                            | Natural gas | none           |
| H-LG-2            | 9.9                            | Natural gas | none           |
| H-LG-3*           | 9.9                            | Natural gas | none           |

\*Hot oil heater H-LG-3 will exhaust to a steam generator that will be used to heat rejected loads of asphalt during unloading.

- (iii) Propane, liquified petroleum gas, or butane, provided the heat input of the unit is equal to or less than 6 MMBtu/hr.
    - (iv) Fuel oil, provided the heat input of the unit is equal to or less than 2 MMBtu/hr and the fuel contains equal to or less than 0.5% sulfur by weight.
  - (2) Equipment powered by diesel fuel fired or natural gas fired internal combustion engines of capacity equip to or less than 500,000 Btu per hour.
  - (3) Combustion source flame safety purging on startup.
- (i) One (1) fuel dispensing operation, constructed in 2005, dispensing less than or equal to 1,300 gal/day into motor vehicle fuel tanks and with emissions less than the insignificant activity emission thresholds in 326 IAC 2-7-1(21)(A) through (C). The dispensing facility consists of a vapor balance system to control emissions and the following two (2) storage tanks [326 IAC 8-4-6]:
  - (A) One (1) gasoline storage tank, constructed in 2005, having a maximum storage capacity of 12,000 gallons.
  - (B) One (1) diesel storage tank, constructed in 2005, having a maximum storage capacity of 6,000 gallons.
- (j) The following VOC and HAP storage containers [326 IAC 2-7-1(21)(G)(iii)]:
  - (1) Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughputs equal to or less than twelve thousand (12,000) gallons.
  - (2) Vessels storing lubricating oils, hydraulic oils, machining oils, or machining fluids.

- (k) Production related activities, including the application of oils, greases, lubricants, and non-volatile material such as temporary protective coatings [326 IAC 2-7-1(21)(G)(vi)(AA)].
- (l) Degreasing operations that do not exceed 145 gallons per twelve (12) months, except if subject to 326 IAC 20-6 [326 IAC 2-7-1(21)(G)(vi)(CC)] [326 IAC 8-3-2] [326 IAC 8-3-5].
- (m) Cleaners and solvents with a vapor pressure equal to or less than 0.3 psia at 100°F or 0.1 psia at 68°F and for which the combined use for all materials does not exceed 145 gallons per 12 months [326 IAC 2-7-1(21)(G)(vi)(DD)].
- (n) Closed loop heating and cooling systems [326 IAC 2-7-1(21)(G)(vi)(FF)].
- (o) Ground water oil recovery wells [326 IAC 2-7-1(21)(G)(vii)(BB)].
- (p) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume [326 IAC 2-7-1(21)(G)(ix)(AA)].
- (q) Water run-off ponds for petroleum coke-cutting and coke storage piles [326 IAC 2-7-1(21)(G)(viii)(BB)].
- (r) Any operation using aqueous solvents containing less than or equal to 1% by weight of VOCs excluding HAPs [326 IAC 2-7-1(21)(G)(viii)(DD)].
- (s) Non-contact cooling tower systems with either natural draft or forced and induced draft systems not regulated under a NESHAP [326 IAC 2-7-1(21)(G)(viii)(FF)].
- (t) Activities associates with the transportation and treatment of sanitary sewage, provided discharge to the treatment plant is under the control of the owner or operator, that is, an on-site sewage treatment facility [326 IAC 2-7-1(21)(G)(viii)(CC)].
- (u) Repair activities including the following [326 IAC 2-7-1(21)(G)(x)]:
  - (1) Replacement or repair of ESPs, bags in baghouses, and filters in other air filtration equipment.
  - (2) Heat exchanger cleaning and repair.
  - (3) Process vessel degassing and cleaning to prepare for internal repairs.
- (v) Coke conveying operations, as provided in 326 IAC 2-7-1(21)(G)(xiv).
- (w) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment [326 IAC 2-7-1(21)(G)(xix)].
- (x) Blowdown for sight glasses, boilers, cooling towers, compressors, or pumps [326 IAC 2-7-1(21)(G)(xx)].
- (y) Emergency generators meeting one of the following criteria [326 IAC 2-7-1(21)(G)(xxii)(BB)]:
  - (1) Gasoline generators not exceeding 110 horsepower.
  - (2) Diesel generators not exceeding 1,600 horsepower.

- (3) Natural gas turbines or reciprocating engines not exceeding 16,000 horsepower.
- (z) Other activities associated with emergencies, including on-site fire training approved by the department and stationary fire pump engines [326 IAC 2-7-1(21)(G)(xxii)]
- (aa) A warehouse identified as the Calumet Warehouse that includes the following emission sources and may also include other insignificant activities listed in Section A.4 of this permit [326 IAC 6.8-1-2(b)]:
  - (1) Kewanee Boiler No. 1 with a maximum design capacity of 5.5 MMBtu/hr heat input and is natural gas-fired only, venting to stack, S-1.
  - (2) Kewanee Boiler No. 2 with a maximum design capacity of 5.5 MMBtu/hr heat input and is natural gas-fired only, venting to stack, S-2.
- (bb) Routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process, including the following [326 IAC 2-7-1(21)(G)(xvii)]:
  - (1) Purging of gas lines.
  - (2) Purging of vessels.
- (cc) Flue gas conditioning systems and associated chemicals, such as the following [326 IAC 2-7-1(21)(G)(xviii)]:
  - (1) Sodium sulfate.
  - (2) Ammonia.
  - (3) Sulfur trioxide.
- (dd) Purge double block and bleed valves [326 IAC 2-7-1(21)(G)(xxiv)].
- (ee) Filter or coalescer media changeout [326 IAC 2-7-1(21)(G)(xxv)].

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

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.27 FACILITY OPERATION CONDITIONS - Oil Movements**

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

(aa) Oil Movements, identified as Unit 640. This facility is used to store, blend, and ship products. Gasoline blending components are custom blended into various grades of gasoline. Additive and other compounds are blended into the products to give them their unique characteristics. Furnace oil and other distillates are also blended using components from process units or storage. Crude oil and feedstocks for process units and products are also stored at this location. Product loading operations include the pipeline and railcar racks. This facility includes the following emission sources and may also include insignificant activities listed in section A.4 of this permit:

- (1) One (1) internal floating roof storage tank identified as 3730, storing ethanol, constructed in 1955, with a maximum storage capacity of 1,050,721 gallons.
- (2) Ten (10) external floating roof storage tanks storing petroleum hydrocarbon with vapor pressure less than 15 psia, comprising the following tanks:

| Tank No. | Year Built or Modified | Maximum Capacity (gallons) |
|----------|------------------------|----------------------------|
| 3529     | 1948                   | 858,000                    |
| 3637     | 1956                   | 6,353,000                  |
| 3901     | 1956                   | 1,906,000                  |
| 3902     | 1956                   | 1,906,000                  |
| 3915     | 1980                   | 6,353,460                  |
| 3916     | 1980                   | 13,666,998                 |
| 3917     | 1980                   | 25,413,839                 |
| 3918     | 1980                   | 13,666,998                 |
| 3919     | 1980                   | 13,666,998                 |
| 3920     | 1980                   | 13,666,998                 |

- (3) Sixty-seven (67) internal floating roof storage tanks, storing petroleum hydrocarbon with vapor pressure less than 15 psia, comprising the following tanks:

| Tank No. | Year Built or Modified | Maximum Capacity (gallons) |
|----------|------------------------|----------------------------|
| 3474     | 1992                   | 3,734,422                  |
| 3475     | 1994                   | 3,865,445                  |
| 3476     | 1984                   | 3,085,016                  |
| 3477     | 1971                   | 4,066,214                  |
| 3480     | 1982                   | 4,026,505                  |
| 3482     | 1972                   | 169,426                    |
| 3483     | 1924                   | 3,382,264                  |
| 3484     | 1996                   | 3,865,445                  |
| 3486     | 1979                   | 4,026,505                  |
| 3487     | 1980                   | 4,026,505                  |
| 3488     | 1994                   | 3,865,445                  |
| 3489     | 1996                   | 3,865,445                  |
| 3492     | 1925/1971              | 3,382,000                  |
| 3493     | 1995                   | 3,865,445                  |
| 3510     | 1949                   | 4,235,640                  |
| 3511     | 1973                   | 4,066,214                  |
| 3512     | 1958                   | 4,066,214                  |
| 3513     | 1971                   | 4,066,214                  |
| 3514     | 1984                   | 4,066,214                  |
| 3525     | 1981                   | 4,026,505                  |
| 3526     | 1943/1979              | 4,026,505                  |
| 3527     | 1991                   | 3,382,264                  |
| 3528     | 1993                   | 3,865,445                  |
| 3531     | 1948/1997              | 857,717                    |

|      |                |           |
|------|----------------|-----------|
| 3532 | 1953           | 868,306   |
| 3533 | 1953           | 4,235,640 |
| 3534 | 1955/1973      | 71,000    |
| 3549 | 1993           | 588,283   |
| 3553 | 1981           | 5,070,343 |
| 3554 | 1981           | 5,070,343 |
| 3558 | 1972/1986      | 376,501   |
| 3600 | 1993           | 847,128   |
| 3601 | 1977           | 3,702,020 |
| 3602 | 1979           | 3,856,271 |
| 3604 | 1980           | 3,856,271 |
| 3605 | 1977           | 3,702,000 |
| 3622 | 1993           | 3,865,445 |
| 3624 | 1932           | 3,382,264 |
| 3629 | 1992           | 3,865,445 |
| 3631 | 1944           | 3,382,000 |
| 3633 | 1950           | 5,282,000 |
| 3635 | 1954           | 5,070,000 |
| 3639 | 1956           | 6,353,460 |
| 3641 | 1956           | 6,353,460 |
| 3701 | 1943/1993      | 3,382,264 |
| 3702 | 1943/1982/1997 | 3,382,264 |
| 3703 | 1944/1982      | 3,382,264 |
| 3704 | 1944/1980      | 3,382,264 |
| 3705 | 1944           | 3,382,264 |
| 3706 | 1944           | 3,382,264 |
| 3707 | 1944           | 3,382,264 |
| 3708 | 1943           | 853,895   |
| 3709 | 1943           | 825,434   |
| 3710 | 1943           | 2,059,000 |
| 3715 | 1945/1987/1998 | 3,382,264 |
| 3716 | 1996           | 3,865,445 |
| 3727 | 1948           | 857,717   |
| 3728 | 1970           | 857,717   |
| 3860 | 1993           | 211,782   |
| 3900 | 1956/2005      | 1,906,000 |
| 3904 | 1956/1986      | 3,388,512 |
| 3905 | 1956           | 6,353,460 |
| 3907 | 1956/1996      | 3,388,512 |
| 3909 | 1956           | 3,388,512 |
| 3911 | 1956/1986      | 3,388,512 |
| 3912 | 1956           | 6,353,460 |
| 3914 | 1956           | 3,388,512 |

(4) Miscellaneous Storage tanks including the following:

| Tank ID | Location     | Description      | Tank Construction Dates | Tank Capacity | Vapor Pressure of Liquid (psia) |
|---------|--------------|------------------|-------------------------|---------------|---------------------------------|
| D-424   | 4ULTRAFORMER | Methanol Tank    | --                      | 3,744         | <0.5                            |
| F-011   | 4B TREATER   | Casper Dewaterer | 1949                    | 17,624        | <0.5                            |
| TK-0563 | INCINERATOR  | Aux. Fuel Oil    | 1971                    | 49,378        | <0.5                            |
| TK-3228 | CRUDE STA    | Decanted Oil     | 1948                    | 596,570       | <0.5                            |
| TK-3234 | CRUDE STA    | Decanted Oil     | 1940                    | 858,298       | <0.5                            |
| TK-3464 | BERRY LAKE   | Decanted Oil     | 1957                    | 2,705,472     | <0.5                            |
| TK-3465 | BERRY LAKE   | Plant Fuel       | 1973                    | 3,413,088     | <0.5                            |
| TK-3468 | BERRY LAKE   | TGO              | 1958                    | 3,381,840     | <0.5                            |

|         |              |                                       |      |           |                |
|---------|--------------|---------------------------------------|------|-----------|----------------|
| TK-3491 | SO. TK FLD.  | Lsho                                  | 1992 | 3,876,768 | <0.5           |
| TK-3496 | SO. TK FLD.  | Distillate                            | 1992 | 3,876,768 | <0.5           |
| TK-3498 | SO. TK FLD.  | Amoco Premier Diesel<br>[Future Lsfo] | 1929 | 3,373,413 | <0.5           |
| TK-3499 | SO. TK FLD.  | Amoco Premier Diesel<br>[Future Lsfo] | 1996 | 3,870,720 | <0.5           |
| TK-3500 | SO. TK FLD.  | Furnace Oil [Future Hmd]              | 1996 | 3,870,720 | <0.5           |
| TK-3505 | SO. ANNEX    | Heater Oil                            | 1949 | 4,254,768 | <0.5           |
| TK-3509 | SO. TK FLD.  | Furnace Oil                           | 1948 | 3,381,840 | <0.5           |
| TK-3546 | SO. TK FLD.  | Bronze Dye                            | 1962 | 16,800    | <0.5           |
| TK-3547 | SO. TK FLD.  | Purple Dye                            | 1962 | 16,800    | <0.5           |
| TK-3548 | SO. TK FLD.  | IsoNO <sub>x</sub> 133                | 1962 | 16,800    | <0.5           |
| TK3567  | --           | --                                    | --   | 17,000    | <0.5           |
| TK-3569 | MARINE DOCK  | DCO                                   | 1981 | 4,796,064 | <0.5           |
| TK-3571 | MARINE DOCK  | HS Resid/Black Oil                    | 1971 | 5,539,968 | >0.5 and <0.75 |
| TK-3572 | MARINE DOCK  | HS Resid/Black Oil                    | 1971 | 5,539,968 | >0.5 and <0.75 |
| TK-3606 | STIGLITZ PK. | Amoco Jet Fuel A [New 1996]           | 1996 | 3,701,376 | <0.5           |
| TK-3607 | STIGLITZ PK. | Amoco Jet Fuel A                      | 1993 | 3,729,600 | <0.5           |
| TK-3609 | STIGLITZ PK. | HS Resid                              | 1973 | 9,652,608 | <0.5           |
| TK-3610 | STIGLITZ PK. | HS Resid                              | 1973 | 9,652,608 | <0.5           |
| TK-3611 | STIGLITZ PK. | HS Resid                              | 1973 | 8,513,400 | <0.5           |
| TK-3613 | STIGLITZ PK. | HS Resid                              | 1992 | 3,876,768 | <0.5           |
| TK-3711 | IND. TK FLD. | Lcco                                  | 1993 | 2,818,368 | <0.5           |
| TK-3712 | IND. TK FLD. | Lcco                                  | 1945 | 3,357,600 | <0.5           |
| TK-3714 | IND. TK FLD. | Distillate/Gas Oil                    | 1999 | 3,852,576 | <0.5           |
| TK-3717 | IND. TK FLD. | Fcu Feed Mixed                        | 1943 | 3,263,190 | <0.5           |
| TK-3718 | IND. TK FLD. | Gas Oil                               | 1996 | 3,871,379 | <0.5           |
| TK-3719 | IND. TK FLD. | Gas Oil                               | 1943 | 3,357,600 | <0.5           |
| TK-3720 | IND. TK FLD. | Gas Oil                               | 1946 | 3,357,600 | <0.5           |
| TK-3721 | IND. TK FLD. | Gas Oil                               | 1946 | 3,357,600 | <0.5           |
| TK-3722 | IND. TK FLD. | Gas Oil                               | 1952 | 4,227,300 | <0.5           |
| TK-3723 | IND. TK FLD. | Gas Oil                               | 1954 | 3,386,880 | <0.5           |
| TK-3726 | IND. TK FLD. | Amoco Jet Fuel A                      | 1948 | 857,356   | <0.5           |
| TK-3733 | IND. TK FLD. | Cru / Bou Distillate Feed             | 1971 | 3,383,520 | <0.5           |
| TK-3734 | IND. TK FLD. | Cru / Bou Distillate Feed             | 1971 | 3,383,520 | >0.5 and <0.75 |
| TK-3735 | IND. TK FLD. | Cru / Bou Distillate Feed             | 1971 | 3,411,072 | <0.5           |
| TK-3867 | SO. TK FLD.  | Stadis 450                            | 1967 | 17,640    | <0.5           |
| TK-3868 | SO. TK FLD.  | Amogard                               | 1953 | 17,640    | >0.5 and <0.75 |
| TK-3869 | SO. TK FLD.  | Pour Depressant                       | 1956 | 23,436    | <0.5           |
| TK-3872 | CRUDE STA    | Used Motor Oil                        | 1985 | 15,120    | <0.5           |
| TK-3876 | South TF     | Cetane Improver                       | 1993 | 14,381    | <0.5           |
| TK-3906 | J&L TK FLD.  | Lsfo                                  | 1956 | 3,381,840 | >0.5 and <0.75 |
| TK-3908 | J&L TK FLD.  | Amoco Premier Diesel                  | 1956 | 3,381,840 | <0.5           |
| TK-3910 | J&L TK FLD.  | Furnace Oil [Hs]                      | 1956 | 3,381,840 | <0.5           |
| TK-3913 | J&L TK FLD.  | Furnace Oil [Ls]                      | 1956 | 3,402,977 | <0.5           |
| TK-6078 | ASPHALT      | HS Resid/Black Oil                    | 1948 | 1,931,000 | <0.5           |
| TK-6113 | ASPHALT      | Paving Base                           | 1944 | 810,600   | <0.5           |
| TK-6114 | ASPHALT      | Paving Base                           | 1944 | 810,600   | <0.5           |
| TK-6125 |              | Paving Base                           | 1998 | 3108932   | <0.5           |
| TK-6126 |              | Paving Base                           | 1999 | 3,108,000 | <0.5           |
| TK-6127 |              | Paving Base                           | 2000 | 3,108,000 | <0.5           |
| TK-6128 |              | Paving Base                           | 1971 | 3,225,600 | <0.5           |
| TK-6129 |              | Paving Base                           | 2005 | 3,108,000 | <0.5           |
| TK-6148 |              | Paving Base                           | 1948 | 3,108,000 | <0.5           |
| TK-6149 |              | Paving Base                           | 1948 | 3,108,000 | <0.5           |
| TK-6150 |              | HS Resid                              | 1986 | 810,600   | <0.5           |
| TK-6153 |              | HS Resid                              | 1979 | 1,386,000 | <0.5           |
| TK-6248 | ASPHALT      | Low Sul Resid                         | 1973 | 7,218,928 | <0.5           |
| TK-6249 | ASPHALT      | Low Sul Resid                         | 1973 | 7,218,928 | <0.5           |
| TK-6250 | ASPHALT      | HS Resid                              | 1971 | 7,218,928 | <0.5           |
| TK-6251 | ASPHALT      | Paving Base                           | 1971 | 7,218,928 | <0.5           |

|         |              |                |             |           |      |
|---------|--------------|----------------|-------------|-----------|------|
| TK-6252 | ASPHALT      | HS Resid       | 1972        | 7,215,268 | <0.5 |
| TK-6253 | ASPHALT      | Paving Base    | 1971        | 7,218,928 | <0.5 |
| TK-6261 | ASPHALT      | HS Resid       | 1973        | 451,183   | <0.5 |
| TK-6262 | ASPHALT      | HS Resid       | 1972        | 451,183   | <0.5 |
| BT-002  | MARINE DOCK  | Out of Service | 1968        | 874,944   | --   |
| TK-0559 | ASU          | Out of Service | 1989        | 146,869   | --   |
| TK-0560 | ASU          | Out of Service | 1948        | 587,477   | --   |
| TK-0568 |              | Out of Service | Before 1973 | --        | --   |
| TK-3167 |              | Out of Service | 1926        | 3,361,114 | --   |
| TK-3168 |              | Out of Service | 1926        | 1,931,170 | --   |
| TK-3169 |              | Out of Service | 1926        | 3,361,114 | --   |
| TK-3232 | CRUDE STA    | Out of Service | 1940        | 857,356   | --   |
| TK-3259 | CRUDE STA    | Out of Service | 1951        | 846,720   | --   |
| TK-3260 | CRUDE STA    | Out of Service | 1930        | 375,986   | --   |
| TK-3279 | MARINE DOCK  | Out of Service | 1951        | 85,302    | --   |
| TK-3309 | CRUDE STA    | Out of Service | NA          | 7,050     | --   |
| TK-3373 |              | Out of Service | --          | --        | --   |
| TK-3471 | SO. TK FLD.  | Out of Service | 1973        | 7,050     | --   |
| TK-3485 | SO. TK FLD.  | Out of Service | 1924        | 3,373,413 | --   |
| TK-3494 | SO. TK FLD.  | Out of Service | 1926        | 3,373,413 | --   |
| TK-3497 | SO. TK FLD.  | Out of Service | 1926        | 3,373,413 | --   |
| TK-3506 | SO. ANNEX    | Out of Service | 1936        | 3,373,413 | --   |
| TK-3507 | SO. ANNEX    | Out of Service | 1936        | 3,373,413 | --   |
| TK-3508 | SO. ANNEX    | Out of Service | 1936        | 3,366,720 | --   |
| TK-3603 | STIGLITZ PK. | Out of Service | 1922        | 3,084,480 | --   |
| TK-3608 | STIGLITZ PK. | Out of Service | 1954        | 3,849,300 | --   |
| TK-3713 | IND. TK FLD. | Out of Service | 1944        | 3,357,600 | --   |
| TK-3903 | J&L TK FLD.  | Out of Service | 1956        | 3,381,840 | --   |
| TK-6222 |              | Out of Service | --          | 3,000     | --   |
| TK-6223 |              | Out of Service | --          | 211,400   | --   |
| TK-6224 |              | Out of Service | --          | 211,400   | --   |
| W-306   | MWTP         | Out of Service | --          | --        | --   |

"--" - no data provided.

- (5) One (1) oil-water separator identified as the J & L Separator.
- (6) Leaks from process equipment, including pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, and instrumentation systems.

(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.27.1 Equipment Leaks of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAPs) and Benzene [326 IAC 20-16-1] [40 CFR 63, Subpart CC] [326 IAC 8-4-8] [326 IAC 14] [40 CFR 61, Subpart J]

- (a) Pursuant to 326 IAC 8-4-8, the Permittee shall control leaks of VOC from pumps, compressors, valves, process drains, and pressure relief devices according to the Leak Detection and Repair (LDAR) Plan submitted by the Permittee. The Permittee shall update the LDAR Plan as necessary and shall submit a copy of the revised LDAR Plan to IDEM OAQ for approval. If IDEM, OAQ determines that the procedures specified in the LDAR Plan will not demonstrate compliance with the fugitive emission limitations, IDEM, OAQ may require the Permittee to revise the plan.
- (b) Pursuant to 40 CFR 63, Subpart CC, the Permittee shall comply with the requirements specified in Sections E.1 and E.4 for equipment leaks of HAP from pumps, compressors, pressure relief devices, sampling connection systems, open-ended lines or valves, and instrumentation systems.

- (c) Pursuant to 40 CFR 61, Subpart J, the Permittee shall comply with the requirements specified in Section E.5 for leaks of benzene from pumps, pressure relief devices, sampling connection systems, open-ended lines or valves, and valves.
- (d) Pursuant to 40 CFR 63.640(p), equipment that is subject to 40 CFR 63, Subpart CC and 40 CFR 61, Subpart J is required only to comply with the provisions of 40 CFR 63, Subpart CC specified in Section E.1.
- (e) Pursuant to 40 CFR 60, Subpart GGG, the Permittee shall comply with the requirements specified in Section E.13 for equipment leaks of VOC from compressors and other process equipment that is located at the J & L Tank Field and was modified after modified January 4, 1983. Pursuant to 40 CFR 63.640(p), equipment that is subject to both 40 CFR 60, Subpart GGG and 40 CFR 63, Subpart CC are required to comply only with the provisions of 40 CFR 63, Subpart CC specified in Section E.1.

#### D.27.2 Petroleum Liquid Storage Facilities [326 IAC 8-4-3]

Pursuant to 326 IAC 8-4-3(a), the Permittee shall comply with the requirements in this condition for all petroleum liquid storage vessels with capacities greater than 39,000 gallons containing volatile organic compounds whose true vapor pressure is greater than 1.52 psi. Tanks subject to this condition include: 3474, 3475, 3476, 3477, 3480, 3482, 3483, 3484, 3486, 3487, 3488, 3489, 3493, 3511, 3512, 3513, 3514, 3525, 3526, 3527, 3528, 3531, 3532, 3533, 3549, 3553, 3554, 3558, 3601, 3605, 3629, 3639, 3641, 3701, 3702, 3703, 3704, 3707, 3716, 3728, 3730, 3900, 3904, 3905, 3907, 3909, 3911, 3912, 3914, 3916, 3917, 3918, 3919, 3920, BT-002, 3492, 3529, 3631, 3637, 3706, 3860, and 3901.

Pursuant to 326 IAC 8-4-3(a), the Permittee shall comply with the following requirements for all petroleum liquid storage vessels with capacities greater than 39,000 gallons containing volatile organic compounds whose true vapor pressure is greater than 1.52 psi.

- (a) Pursuant to 326 IAC 8-4-3(b), the Permittee shall not permit the use of an affected fixed roof tank unless:
  - (1) The tank has been retrofitted with an internal floating roof equipped with a closure seal, or seals, to close the space between the roof edge and tank wall unless the source has been retrofitted with equally effective alternate control which has been approved,
  - (2) The facility is maintained such that there are no visible holes, tears or other opening in the seal or any seal fabric or materials,
  - (3) All openings, except stub drains, are equipped with covers, lids or seals such that:
    - (A) the cover, lid or seal is in the closed position at all times except when in actual use;
    - (B) automatic bleeder vents are closed at all times except when in actual use;
    - (C) rim vents if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.
- (b) Pursuant to 326 IAC 8-4-3(c)(1), the Permittee shall not store petroleum liquid in an affected open top tank having a cover consisting of a double deck or pontoon single deck which rests upon and is supported by the petroleum liquid being contained and is

equipped with a closure seal or seals to close the space between the roof edge and tank wall shall not be used to store volatile organic liquids unless:

- (1) The tank has been fitted with:
  - (A) a continuous secondary seal extending from the floating roof to the tank wall (rim-mounted secondary seal); or
  - (B) a closure or other device approved by the commissioner which is equally effective.
- (2) All seal closure devices meet the following requirements:
  - (A) there are no visible holes, tears, or other openings in the seal(s) or seal fabric;
  - (B) the seal(s) are intact and uniformly in place around the circumference of the floating roof between the floating roof and the tank wall;
  - (C) 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 in 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.
- (3) All openings in the external floating roof, except for automatic bleeder vents, rim space vents, and leg sleeves, are:
  - (A) equipped with covers, seals, or lids in the closed position except when the openings are in actual use; and
  - (B) equipped with projections into the tank which remain below the liquid surface at all times.
- (4) automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports;
- (5) rim vents are set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting ; and
- (6) emergency roof drains are provided with slotted membrane fabric covers or equivalent covers which cover at least ninety percent (90%) of the opening.

#### D.27.3 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]

Pursuant to 326 IAC 8-9, the Permittee shall comply with the following requirements for storage tanks 3529, 3637, 3901, 3902, 3912, 3477, 3482, 3483, 3492, 3510, 3512, 3513, 3532, 3624, 3631, 3633, 3635, 3639, 3641, 3705, 3706, 3709, 3728, 3730, 3905, 3909, 3914, 3511, 3601, 3480, 3486, 3487, 3525, 3526, 3553, 3554, 3605, 3703, 3704, 3533, 3915, 3916, 3917, 3918, 3919, 3920, D-424, F-011, TK-3546, TK-3547, TK-3548, TK-3567, TK-3867, TK-3868, TK-3869, TK-3872, TK-3876, TK-0563, TK-3228, TK-3234, TK-3464, TK-3465, TK-3468, TK-3491, TK-3496, TK-3498, TK-3499, TK-3500, TK-3505, TK-3509, TK-3569, TK-3606, TK-3607, TK-3609, TK-3610, TK-3611, TK-3613, TK-3711, TK-3712, TK-3714, TK-3717, TK-3718, TK-3719, TK-3720, TK-3721, TK-3722, TK-3723, TK-3726, TK-3733, TK-3735, TK-3908, TK-3910, TK-3913, TK-6078, TK-6113, TK-6114, TK-6125, TK-6126, TK-6127, TK-6128, TK-6129, TK-6148, TK-6149, TK-6150, TK-6153, TK-6248, TK-6249, TK-6250, TK-6251,

TK-6252, TK-6253, TK-6261, TK-6262, TK-3571, TK-3572, TK-3734, and TK-3906. For Storage tanks 3534, 3602, 3604, 3708, 3727, D-424, F-011, TK-3546, TK-3547, TK-3548, TK-3567, TK-3867, TK-3868, TK-3869, TK-3872, TK-3876, TK-0563, TK-3228, TK-3234, TK-3464, TK-3465, TK-3468, TK-3491, TK-3496, TK-3498, TK-3499, TK-3500, TK-3505, TK-3509, TK-3569, TK-3606, TK-3607, TK-3609, TK-3610, TK-3611, TK-3613, TK-3711, TK-3712, TK-3714, TK-3717, TK-3718, TK-3719, TK-3720, TK-3721, TK-3722, TK-3723, TK-3726, TK-3733, TK-3735, TK-3908, TK-3910, TK-3913, TK-6078, TK-6113, TK-6114, TK-6125, TK-6126, TK-6127, TK-6128, TK-6129, TK-6148, TK-6149, TK-6150, TK-6153, TK-6248, TK-6249, TK-6250, TK-6251, TK-6252, TK-6253, TK-6261, TK-6262, TK-3571, TK-3572, TK-3734, and TK-3906, which are used to store liquids with vapor pressures less than 0.5 psia, the Permittee shall comply only with the reporting requirements specified in Condition D.27.9(e). For storage tanks 3633, 3635, 3710, 3571, TK-3572, TK-3734, and TK-3906, which are used to store liquids with vapor pressures between 0.5 and 0.75 psia, the Permittee shall comply only with the requirements specified in Condition D.27.9(e) and (i).

- (a) Pursuant to 326 IAC 8-9-4(a), the Permittee shall comply with the following requirements for each vessel having a capacity greater than or equal to thirty-nine thousand (39,000) gallons, that stores VOL with a maximum true vapor pressure greater than or equal to seventy-five hundredths (0.75) pound per square inch absolute (psia) but less than eleven and one-tenth (11.1) psia:
- (1) On or before May 1, 1996, for each vessel having a permanently affixed roof, the Permittee shall install one (1) of the following:
    - (A) An internal floating roof meeting the standards in section (b) of this Condition.
    - (B) An equivalent emissions control system resulting in equivalent emissions reductions to that obtained in paragraph (a)(1)(A).
  - (2) For each vessel having an internal floating roof, install one (1) of the following:
    - (A) At the time of the next scheduled cleaning, but not later than ten (10) years after May 1, 1996, an internal floating roof meeting the standards in section (b) of this Condition,
    - (B) On or before May 1, 1996, an equivalent emissions control system resulting in equivalent emissions reductions to that obtained in paragraph (a)(2)(A).
  - (3) For each vessel having an external floating roof, install one (1) of the following:
    - (A) At the time of the next scheduled cleaning, but not later than ten (10) years after May 1, 1996, an external floating roof meeting the standards in section (c) of this Condition.
    - (B) On or before May 1, 1996, an equivalent emissions control system resulting in equivalent emissions reductions to that obtained in paragraph (a)(3)(A) of this condition.
- (b) Pursuant to 326 IAC 8-9-4(c), for each internal floating roof, the Permittee shall comply with the following standards:
- (1) The internal floating roof shall float on the liquid surface, but not necessarily in complete contact with it, inside a vessel that has a permanently affixed roof.

- (2) The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the vessel is completely emptied or subsequently emptied and refilled.
  - (3) When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.
  - (4) Each internal floating roof shall be equipped with one (1) of the following closure devices between the wall of the vessel and the edge of the internal floating roof:
    - (A) A foam or liquid-filled seal mounted in contact with the liquid (liquid-mount seal).
    - (B) Two (2) seals mounted one (1) above the other so that each forms a continuous closure that completely covers the space between the wall of the vessel and the edge of the internal floating roof. The lower seal may be vapor mounted, but both shall be continuous.
    - (C) A mechanical shoe seal that consists of a metal sheet held vertically against the wall of the vessel by springs or weighted levers and that is connected by braces to the floating roof. A flexible coated fabric, or envelope, spans the annular space between the metal sheet and the floating roof.
  - (5) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents shall provide a projection below the liquid surface.
  - (6) Each opening in a noncontact internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover or lid that shall be maintained in a closed position at all times (with no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.
  - (7) Automatic bleeder vents shall be equipped with a gasket and 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.
  - (8) Rim space vents shall be equipped with a gasket and shall be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.
  - (9) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least ninety percent (90%) of the opening.
  - (10) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.
- (c) Pursuant to 326 IAC 8-9-4(e), the Permittee shall comply with the following standards applicable to each external floating roof:
- (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) Except as provided in 326 IAC 8-9-5(c)(4), 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 except as allowed in 326 IAC 8-9-5(c)(4).
- (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 manufacturer's 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 cover 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 possible.

D.27.4 VOC and HAP Emissions From Storage Vessels [326 IAC 12] [40 CFR 60, Subpart K] [40 CFR 60, Subpart Ka] [40 CFR 60, Subpart Kb] [326 IAC 20-16-1] [40 CFR 63, Subpart CC]

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- (a) Pursuant to 40 CFR 60.110a, storage vessels 3480, 3486, 3487, 3525, 3526, 3553, 3554, 3602, 3604, 3703, 3704, 3915, 3916, 3917, 3918, 3919, and 3920 are affected facilities under 40 CFR 60, Subpart Ka. Unless otherwise specified in paragraph (d) of this condition, the Permittee shall operate these storage tanks in compliance with the requirements specified in Section E.8. For storage tanks 3602 and 3604, the Permittee shall comply only with the record keeping requirements in Section E.8.
  - (b) Pursuant to 40 CFR 60.110b, storage vessels 3474, 3475, 3476, 3484, 3488, 3489, 3493, 3514, 3527, 3528, 3531, 3549, 3558, 3600, 3622, 3629, 3701, 3702, 3715, 3716, 3860, 3900, 3904, 3907, and 3911 are affected facilities under 40 CFR 60, Subpart Kb. Unless otherwise specified in paragraph (d) of this condition, the Permittee shall operate these storage tanks in compliance with the requirements specified in Section E.9.
  - (c) Pursuant to 40 CFR 60.110, storage vessels 3534, 3601, and 3605 are affected facilities under 40 CFR 60, Subpart K. Unless otherwise specified in paragraph (d) of this condition, the Permittee shall operate these storage tanks in compliance with the requirements specified in Section E.7.

- (d) Pursuant to 40 CFR 63, Subpart CC:
- (1) The Permittee shall comply with the requirements specified in Section E.1, for the following Group I storage vessels: 3477, 3474, 3475, 3476, 3480, 3482, 3483, 3484, 3486, 3487, 3488, 3489, 3493, 3510, 3511, 3512, 3513, 3514, 3525, 3526, 3527, 3528, 3529, 3531, 3532, 3534, 3537, 3533, 3553, 3554, 3601, 3605, 3624, 3629, 3631, 3633, 3635, 3637, 3639, 3641, 3701, 3702, 3703, 3704, 3705, 3706, 3707, 3710, 3715, 3716, 3728, 3900, 3901, 3902, 3904, 3905, 3907, 3909, 3912, 3914, 3915, 3916, 3917, 3918, 3919, and 3920.
  - (2) Pursuant to 40 CFR 63.640(n)(5), Group 1 storage vessels that are also subject to the provisions of 40 CFR 60, Subparts K or Ka are required to only comply with the provisions of 40 CFR 63, Subpart CC specified in Section E.1.
  - (3) Pursuant to 40 CFR 63.640(n)(1), Group 1 and Group 2 storage vessels that are also subject to the provisions of 40 CFR Part 60, Subpart Kb, are required to comply only with the requirements of 40 CFR 60, Subpart Kb, except as provided in 40 CFR 63.640(n)(8).

**D.27.5 Wastewater/Waste Streams [326 IAC 20-16-1] [40 CFR 63, Subpart CC] [326 IAC 14] [40 CFR 61, Subpart FF] [40 CFR 60, Subpart QQQ] [326 IAC 12]**

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- (a) Pursuant to 40 CFR 63, Subpart CC and 40 CFR 61, Subpart FF, the Permittee shall comply with the requirements in Sections E.1 and E.3 for individual drain systems, oil-water separators, and closed vent systems and control devices.
- (b) Pursuant to 40 CFR 60, Subpart QQQ, the Permittee shall comply with the requirements specified in Section E.6 for individual drain systems subject to 40 CFR 60, Subpart QQQ.
- (c) Pursuant to 40 CFR 63.640(o)(1), a Group 1 wastewater stream that is managed in a piece of equipment subject to 40 CFR 63, Subpart CC and 40 CFR 60, Subpart QQQ is required to comply with only the provisions of 40 CFR 63, Subpart CC specified in Section E.1.

**D.27.6 Petroleum Refineries - Separators [326 IAC 8-4-2]**

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Pursuant to 326 IAC 8-4-2(2), the Permittee shall equip oil-water separators, forebay, and openings in covers with lids or seals such that the lids or seals are in the closed position at all times except when in actual use.

**Compliance Monitoring Requirements**

**D.27.7 Monitoring for Equipment Leaks of VOC [326 IAC 8-4-8]**

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Pursuant to 326 IAC 8-4-8, the Permittee shall monitor for leaks of VOC according to the LDAR plan submitted by the Permittee.

**D.27.8 Storage Vessel Inspections [326 IAC 8-9]**

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- (a) Pursuant to 326 IAC 8-9-5(a), the Permittee shall meet the requirements of paragraph (b), (c), or (d) for each vessel subject to 326 IAC 8-9-4(a):
  - (b) On and after May 1, 1996, except as provided in 326 IAC 8-9-4(a)(2), the Permittee shall meet the following requirements for each vessel equipped with an internal floating roof:
    - (1) Visually inspect the internal floating roof, the primary seal, and the secondary seal, if one is in service, prior to filling the vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the Permittee shall repair the items before filling the vessel.

- (2) For vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal, if one is in service, through manholes and roof hatches on the fixed roof at least once every twelve (12) months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the Permittee shall repair the items or empty and remove the vessel from service within forty-five (45) days. If a failure that is detected during inspections required in this section cannot be repaired in forty-five (45) days and if the vessel cannot be emptied within forty-five (45) days, a thirty (30) day extension may be requested from the department in the inspection report required in 326 IAC 8-9-6(c)(3). Such a request for an extension shall 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.
  - (3) For vessels equipped with both primary and secondary seals:
    - (A) visually inspect the vessel as specified in paragraph (b)(4) of this Condition, at least every five (5) years; or
    - (B) Visually inspect the vessel as specified in paragraph (b)(2) of this Condition.
  - (4) Visually inspect the internal floating roof, the primary seal, the secondary seal, if one is in service, gaskets, slotted membranes, and sleeve seals each time the vessel is emptied and degassed. If the internal 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 or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than ten percent (10%) open area, the Permittee shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the vessel with VOL.
  - (5) In no event shall the inspections required by this Condition occur at intervals greater than ten (10) years in the case of vessels conducting the annual visual inspection as specified in paragraphs (b)(2) and (b)(3)(B) of this Condition and at intervals no greater than five (5) years in the case of vessels specified in subdivision (b)(3)(A).
- (c) On and after May 1, 1996, except as provided in 326 IAC 8-9-4(a)(3), the Permittee shall meet the following requirements for each vessel equipped with an external floating roof:
- (1) 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) Measurements of gaps between the vessel wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within sixty (60) days of the initial fill with VOL and at least once every five (5) years thereafter.
    - (B) Measurements of gaps between the vessel wall and the secondary seal shall be performed within sixty (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 one (1) year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill for purposes of paragraph (c)(1) of this Condition.
- (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 (1) 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 (1/8) 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 paragraph (c)(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 paragraph (c)(4) of this Condition.
  - (4) Make necessary repairs or empty the vessel within forty-five (45) days of identification of seals not meeting the requirements listed in paragraphs (A) and (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 ten (10) square inches per foot of vessel diameter, and the width of any portion of any gap shall not exceed one and five-tenths (1.5) 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 except as provided in paragraph (c)(2)(C) of this Condition.
      - (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 (1) square inch per foot of vessel diameter, and the width of any portion of any gap shall not exceed five-tenths (0.5) inch. There shall be no gaps between the vessel wall and the secondary seal when used in combination with a vapor-mounted primary seal.
      - (iii) There shall be no holes, tears, or other openings in the seal or seal fabric.

- (C) If a failure that is detected during inspections required in paragraph (c) of this condition cannot be repaired within forty-five (45) days and if the vessel cannot be emptied within forty-five (45) days, a thirty (30) day extension may be requested from the department in the inspection report required in section 6(d)(3) of 326 IAC 8-9. Such extension request shall include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.
- (5) Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed. 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 Permittee shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the vessel with VOL.
- (d) For each vessel that is equipped with a closed vent system and control device described in 326 IAC 8-9-4(a)(1)(B), (a)(2)(B), or (a)(3)(B) and meeting the requirements of 326 IAC 8-9-4(d), other than a flare, the Permittee shall operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the department in accordance with 326 IAC 8-9-5(d)(1).
- (e) For each vessel that is equipped with a closed vent system and a flare to meet the requirements in 326 IAC 8-9-4(a)(4) or (d), the Permittee shall meet the requirements specified in the general control device requirements in 40 CFR 60.18(e) and 40 CFR 60.18(f)

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

#### **D.27.9 Record Keeping Requirements**

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- (a) Pursuant to 326 IAC 8-4-8 and to document compliance with Condition D.27.1(a), the Permittee shall comply with equipment leak record keeping requirements specified in the LDAR plan.
- (b) Pursuant to 40 CFR 63, Subpart CC and to document compliance with Condition D.27.1(b), the Permittee shall keep records as specified in Sections E.1 and E.4.
- (c) Pursuant to 40 CFR 61, Subpart J, and to document compliance with Condition D.27.1(c), the Permittee shall keep records as specified in Section E.5.
- (d) Pursuant to 326 IAC 8-4-3(d) and to document compliance with Condition D.27.2, the Permittee shall maintain the following records for storage vessels subject to 326 IAC 8-4-3:
  - (1) type of petroleum liquid stored,
  - (2) maximum true vapor pressure to the liquid as stored, and
  - (3) results of inspections performed on storage vessels.
- (e) Pursuant to 326 IAC 8-9-6(b) and to document compliance with Condition D.27.3, the Permittee shall maintain, for the life of the vessel, a record of the following for each vessel to which 326 IAC 8-9 applies:
  - (1) The vessel identification number,

- (2) The vessel dimensions,
  - (3) The vessel capacity, and
  - (4) A description of the emission control equipment for each vessel described in section 4(a) or 4(b) of 326 IAC 8-9, or a schedule for installation of emission control equipment on vessels described in section 4(a) or 4(b) of 326 IAC 8-9 with a certification that the emission control equipment meets the applicable standards.
- (f) Pursuant to 326 IAC 8-9-6(c) and to document compliance with Condition D.27.3(a), the Permittee shall maintain the following records for each vessel equipped with a permanently affixed roof and internal floating roof:
- (1) A record of each inspection performed as required by section 5(b)(1) through 5(b)(4) of 326 IAC 8-9. Each record shall identify the following:
    - (A) The vessel inspected by identification number.
    - (B) The date the vessel was inspected.
    - (C) The observed condition of each component of the control equipment, including the following:
      - (i) Seals
      - (ii) Internal floating roof.
      - (iii) Fittings
  - (2) If any of the conditions described in 326 IAC 8-9-5(b)(2) are detected during the required annual visual inspection, a record that includes the following shall be maintained:
    - (A) The vessel by identification number.
    - (B) The nature of the defects.
    - (C) The date the vessel was emptied or the nature of and date the repair was made.
  - (3) After each inspection required by 326 IAC 8-9-5(b)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in 326 IAC 8-9-5(b)(3)(B) a record that includes the following shall be maintained:
    - (A) The vessel by identification number.
    - (B) The reason the vessel did not meet the specifications of 326 IAC 8-9-4(a)(1)(A), 8-9-4(a)(2)(A), or 8-9-5(b) and list each repair made.
- (g) Pursuant to 326 IAC 8-9-6(d) and to document compliance with Condition D.27.8(c), the Permittee shall comply with the following record keeping requirements for each vessel equipped with an external floating roof:

- (1) Keep a record of each gap measurement performed as required by section 5(c) of 326 IAC 8-9. 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 section 5(c)(2) and 5(c)(3) of 326 IAC 8-9.
- (2) For each seal gap measurement that detects gaps exceeding the limitations specified in section 5(c) of 326 IAC 8-9, the Permittee shall maintain a record of the following:
  - (A) The date of measurement.
  - (B) The raw data obtained in the measurement.
  - (C) The calculations described in section 5(c)(2) and 5(c)(3) of 326 IAC 8-9.
  - (D) The date the vessel was emptied or the repairs made and date of repair.
- (h) Pursuant to 326 IAC 8-9-6(e) and to document compliance with Condition D.27.4(a), the Permittee shall comply with the following record keeping requirements for any vessel with a closed vent system with a control device:
  - (1) The Permittee shall maintain records of the following for any vessel equipped with a control device other than a flare:
    - (A) The operating plan.
    - (B) Measured values of the parameters monitored according to section 5(d)(2) of 326 IAC 8-9.
  - (2) The Permittee shall meet the following requirements for any vessel equipped with a closed vent system and a flare:
    - (A) Keep records of all periods of operation during which the flare pilot flame is absent.
    - (B) Keep records of measurements required by 40 CFR 60.18(f)(1) through 40 CFR 60.18(f)(5) as required by 40 CFR 60.8.
- (i) Pursuant to 326 IAC 8-9-6(g) and (h), the Permittee shall maintain the following records for storage tanks 3633, 3635, 3710, 3571, TK-3572, TK-3734, and TK-3906, which have a design capacity greater than or equal to thirty-nine thousand (39,000) gallons and store a VOL with a maximum true vapor pressure greater than or equal to 0.5 but less than 0.75 pound per square inch absolute (psia):
  - (1) The type of VOL stored.
  - (2) The dates of the VOL stored.
  - (3) For each day of VOL storage, the average stored temperature for VOLs stored above or below the ambient temperature or average ambient temperature for VOLs stored at ambient temperature, and the corresponding maximum true vapor pressure.

- (4) The Permittee shall maintain a record and notify the department within thirty (30) days when the maximum true vapor of the liquid exceeds 0.75 psia.
- (j) Pursuant to 40 CFR 60, Subpart Ka and to document compliance with Condition D.27.4(a), the Permittee shall maintain records as specified in Section E.8.
- (k) Pursuant to 40 CFR 60, Subpart Kb and to document compliance with Condition D.27.4(b), the Permittee shall maintain records as specified in Section E.9.
- (l) Pursuant to 40 CFR 60, Subpart K and to document compliance with Condition D.27.4(c), the Permittee shall maintain records as specified in Section E.7.
- (m) Pursuant to 40 CFR 63, Subpart CC and to document compliance with Condition D.27.4(d), the Permittee shall maintain records as specified in Section E.1.
- (n) Pursuant to 40 CFR 63, Subpart CC and 40 CFR 61, Subpart FF and to document compliance with Condition D.27.5(a), the Permittee shall keep records as specified in Sections E.1 and E.3.
- (o) Pursuant to 40 CFR 60, Subpart QQQ and to document compliance with Condition D.27.5(b), the Permittee shall keep records as specified in Section E.6.
- (p) Pursuant to 40 CFR 60, Subpart GGG and to document compliance with Condition D.27.2(e), the Permittee shall keep records as specified in Section E.13.

#### D.27.10 Reporting Requirements

- (a) Pursuant to 326 IAC 8-4-8 and to document compliance with Condition D.27.1(a), the Permittee shall submit reports as specified in the LDAR plan.
- (b) Pursuant to 40 CFR 63, Subpart CC and to document compliance with Condition D.27.1(b), the Permittee shall submit reports as specified in Section E.1 and E.4.
- (c) Pursuant to 40 CFR 61, Subpart J, and to document compliance with Condition D.27.1(c), the Permittee shall submit reports as specified in Section E.5.
- (d) Pursuant to 326 IAC 8-9-6(c) and to document compliance with Condition D.27.2(a):
  - (1) If any of the conditions described in 326 IAC 8-9-5(b)(2) are detected during the required annual visual inspection, the Permittee shall furnish a report to the department within (30) days of the inspection. Each report shall identify the following:
    - (A) The vessel by identification number.
    - (B) The nature of the defects.
    - (C) The date the vessel was emptied or the nature of and date the repair was made.
  - (2) After each inspection required by 326 IAC 8-9-5(b)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in 326 IAC 8-9-5(b)(3)(B), the Permittee shall furnish a report to the department within thirty (30) days of the inspection. The report shall identify the following:
    - (A) The vessel by identification number.

- (B) The reason the vessel did not meet the specifications of section 4(a)(1)(A), 4(a)(2)(A), or 5(b) of 326 IAC 8-9 and list each repair made.
- (e) Pursuant to 326 IAC 8-9-6(d) and to document compliance with Condition D.27.8(c):
  - (1) Within sixty (60) days of performing the seal gap measurements required by section 5(c)(1) of 326 IAC 8-9, the Permittee shall 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 section 5(c)(2) and 5(c)(3) of 326 IAC 8-9.
  - (2) After each seal gap measurement that detects gaps exceeding the limitations specified in section 5(c) of 326 IAC 8-9, the Permittee shall submit a report to the department within thirty (30) days of the inspection. The report shall identify the vessel and contain the following information:
    - (A) The date of measurement.
    - (B) The raw data obtained in the measurement.
    - (C) The calculations described in section 5(c)(2) and 5(c)(3) of 326 IAC 8-9.
    - (D) The date the vessel was emptied or the repairs made and date of repair.
- (f) Pursuant to 326 IAC 8-9-6(e) and to document compliance with Condition D.27.3(a), the Permittee shall meet the following requirements for any vessel equipped with a closed vent system and a flare:
  - (1) Furnish the department with a report containing the measurements required by 40 CFR 60.18(f)(1) through 40 CFR 60.18(f)(5) as required by 40 CFR 60.8. This report shall be submitted within six (6) months of the initial start-up date.
  - (2) Furnish the department with a semiannual report of all periods recorded under 40 CFR 60.115 in which the pilot flame was absent.
- (g) Pursuant to 326 IAC 8-9-5(b)(5) and 326 IAC 8-9-5(c)(6)(B), the Permittee shall notify the department in writing at least thirty (30) days prior to the filling or refilling of each vessel for which an inspection is required by 326 IAC 8-9-5(b)(1) to afford the department the opportunity to have an observer present. If the inspection required by 326 IAC 8-9-5(b)(4) or (c)(6) is not planned and the Permittee could not have known about the inspection thirty (30) days in advance of refilling the vessel, the Permittee shall notify the department at least seven (7) 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 seven (7) days prior to the refilling.
- (h) The Permittee shall notify the department in writing at least thirty (30) 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 required by this subdivision is not planned and the Permittee could not have known about the inspection thirty (30) days in advance of refilling the vessel, the Permittee shall notify the department at least seven (7) 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 seven (7) days prior to the refilling.

- (i) Pursuant to 326 IAC 8-9-5(c)(5), the Permittee shall notify the department thirty (30) days in advance of any gap measurements required by 326 IAC 8-9-5(c)(1) to afford the department the opportunity to have an observer present.
- (j) Pursuant to 40 CFR 60, Subpart Ka and to document compliance with Condition D.27.4(a), the Permittee shall submit reports as specified in Section E.8.
- (k) Pursuant to 40 CFR 60, Subpart Kb and to document compliance with Condition D.27.4(b), the Permittee shall submit reports as specified in Section E.9.
- (l) Pursuant to 40 CFR 60, Subpart K and to document compliance with Condition D.27.4(c), the Permittee shall submit reports as specified in Section E.7.
- (m) Pursuant to 40 CFR 63, Subpart CC and to document compliance with Condition D.27.4(d), the Permittee shall submit reports as specified in Section E.1.
- (n) Pursuant to 40 CFR 63, Subpart CC and 40 CFR 61, Subpart FF and to document compliance with Condition D.27.5(a), the Permittee shall submit reports as specified in Sections E.1 and E.3.
- (o) Pursuant to 40 CFR 60, Subpart QQQ and to document compliance with Condition D.27.5(b), the Permittee shall submit reports as specified in Section E.6.
- (p) To document compliance with Condition D.27.4(d)(2), the Permittee shall submit the following reports:

Pursuant to 40 CFR 63.654(g)(6), the Permittee shall submit Notification of Compliance Status reports no later than 60 days after the end of the 6-month period after an existing Group 1 storage tank was brought into compliance. The Notification of Compliance Status Report may be combined with the periodic report. The notifications shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V  
Director, Air and Radiation Division  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

The notifications require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (q) Pursuant to 40 CFR 60, Subpart GGG and to document compliance with Condition D.27.2(e), the Permittee shall submit reports as specified in Section E.13.

**SECTION D.32 FACILITY OPERATION CONDITIONS - Asphalt Facility**

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

(ff) One (1) Asphalt Facility used to store, blend and transfer asphalt products. The facility has six blenders used for loading asphalt into railcars and trucks. Process heaters are used to keep certain tanks at the proper temperature for shipping. This facility includes the following emission sources and may also include insignificant activities listed in section A.4 of this permit:

(1) The following two (2) process heaters:

| Process Heater ID         | Heat Input Capacity (MMBtu/hr) | Fuel        | Control Device |
|---------------------------|--------------------------------|-------------|----------------|
| F-1 Asphalt Heater        | 12                             | Natural gas | none           |
| F-2 Steiglitz Park Heater | 28                             | Natural gas | none           |

(2) The following seven (7) asphalt storage tanks used to store volatile organic liquids that have a vapor pressure less than 0.75 psi:

| Identification | Storage Capacity (gallons) | Year Constructed |
|----------------|----------------------------|------------------|
| 125            | 3,108,000                  | 1998             |
| 126            | 3,108,000                  | 1999             |
| 127            | 3,108,000                  | 2000             |
| 129            | 3,108,000                  | 2003             |
| 150            | 1,386,000                  | 1986             |
| 569            | 5,544,000                  | 1981             |
| 613            | 8,866,200                  | 1992             |

(3) The following twenty-five (25) asphalt storage tanks used to store volatile organic liquids that have a vapor pressure less than 0.5 psi.

| Identification | Storage Capacity (gallons) | Year Constructed |
|----------------|----------------------------|------------------|
| 78             | 1,814,400                  | 1947             |
| 113            | 810,600                    | 1944             |
| 114            | 810,600                    | 1944             |
| 128            | 3,225,600                  | 1971             |
| 148            | 810,600                    | 1948             |
| 149            | 810,600                    | 1948             |
| 153            | 932,400                    | 1979             |
| 222            | 210,000                    | 1955             |
| 223            | 210,000                    | 1955             |
| 224            | 210,000                    | 1955             |
| 225            | 361,200                    | 1950             |
| 248            | 6,967,800                  | 1973             |
| 249            | 6,967,800                  | 1973             |
| 250            | 6,967,800                  | 1971             |
| 251            | 6,967,800                  | 1971             |
| 252            | 6,967,800                  | 1972             |
| 253            | 6,967,800                  | 1971             |
| 261            | 441,000                    | 1973             |
| 262            | 441,000                    | 1972             |
| 468            | 3,108,000                  | 1956             |
| 571            | 5,040,000                  | 1971             |

|     |           |      |
|-----|-----------|------|
| 572 | 5,040,000 | 1971 |
| 609 | 5,649,000 | 1973 |
| 611 | 8,513,400 | 1973 |

- (4) The following twenty-two (22) heated vertical storage tanks, each approved for construction in 2007, each with a fixed cone roof, and each in heavy liquid service, storing volatile organic liquids that have a vapor pressure less than 0.0435 psia, and exhausting to the atmosphere or to a biofilter system for odor and opacity control:

| Tank ID  | Liquid Stored               | Date Approved for Construction | Tank Storage Capacity (gallons) | Maximum Throughput (gallons/year) | Vapor Pressure of Liquid at Storage Temperature (psia) | Exhaust ID |
|----------|-----------------------------|--------------------------------|---------------------------------|-----------------------------------|--|------------|
| TK-3573  | Trim Gas Oil                | 2007                           | 966,000                         | 20,160,000                        | < 0.0435   | TK-3573    |
| TK-SP-1  | Residual Oil and/or Asphalt | 2007                           | 14,154,000                      | 141,120,000                       | < 0.0435   | biofilter  |
| TK-SP-2  | Residual Oil and/or Asphalt | 2007                           | 14,154,000                      | 141,120,000                       | < 0.0435   | biofilter  |
| TK-SP-3  | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | < 0.0435   | biofilter  |
| TK-SP-4  | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | < 0.0435   | biofilter  |
| TK-LG-1  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-2  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-3  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-4  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-5  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-6  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-7  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-8  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-9  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-10 | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | < 0.0435   | biofilter  |
| TK-LG-11 | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | < 0.0435   | biofilter  |
| TK-LG-12 | Asphalt with Polymer        | 2007                           | 2,100                           | 420,000                           | < 0.0435   | biofilter  |
| TK-LG-13 | Asphalt-Polymer Blend       | 2007                           | 31,500                          | 2,100,000                         | < 0.0435   | biofilter  |
| TK-LG-14 | Polymer Finished Asphalt    | 2007                           | 126,000                         | 2,520,000                         | < 0.0435   | biofilter  |
| TK-LG-15 | Polymer Finished Asphalt    | 2007                           | 126,000                         | 2,520,000                         | < 0.0435   | biofilter  |
| TK-LG-16 | Polymer Finished Asphalt    | 2007                           | 126,000                         | 2,520,000                         | < 0.0435   | biofilter  |
| TK-LG-17 | Polymer Finished Asphalt    | 2007                           | 126,000                         | 2,520,000                         | < 0.0435   | biofilter  |

Under 40 CFR 60, Subpart UU, storage tanks TK-SP-1, TK-SP-2, TK-LG-1 through TK-LG-9, and TK-LG-12 through TK-LG-17 are each considered an affected facility.

Under 40 CFR 63, Subpart CC, storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17 are each considered as Group 2 storage vessels that are part of the existing affected source.

- (5) The following heated vertical storage tank, with a fixed cone roof, in heavy liquid service, storing volatile organic liquids that have a vapor pressure less than 0.0435 psia, and exhausting to the atmosphere:

| Tank ID | Liquid Stored | Construction Date | Tank Storage Capacity (gallons) | Maximum Throughput (gallons/year) | Vapor Pressure of Liquid at Storage Temperature (psia) | Exhaust ID |
|---------|---------------|-------------------|---------------------------------|-----------------------------------|--|------------|
| TK-3570 | Trim Gas Oil  | 1971              | 2,730,000                       | 20,160,000                        | < 0.0435   | TK-3570    |

Under 40 CFR 63, Subpart CC, storage tank TK-3570 is considered as a Group 2 storage vessel that is part of the existing affected source.

- (6) one (1) truck loading rack, approved for construction in 2007, comprised of six (6) loading bays used for loading liquid asphalt product, with a total maximum loading capacity of 800,000 tons of asphalt product per year, exhausting to the atmosphere or to a biofilter system for odor control.
- (7) one (1) rail car loading rack, approved for construction in 2007, comprised of twenty-eight (28) loading bays used for loading liquid asphalt product, with a total maximum loading capacity of 800,000 tons of asphalt product per year, exhausting to the atmosphere or to a biofilter system for odor control.
- (8) Equipment leaks of VOC and HAP from valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges and/or other connectors.

Under 40 CFR 60, Subpart GGG, valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges and/or other connectors in VOC service, are considered part of the existing affected source.

- (9) The following five (5) natural gas-fired hot oil heaters, each approved for construction in 2007, and each considered an insignificant activity, as defined in 326 IAC 2-7-1(21)(G)(i)(AA)(aa):

| Process Heater ID | Heat Input Capacity (MMBtu/hr) | Fuel        | Control Device |
|-------------------|--------------------------------|-------------|----------------|
| H-SP-1            | 9.9                            | Natural gas | none           |
| H-SP-2            | 9.9                            | Natural gas | none           |
| H-LG-1            | 9.9                            | Natural gas | none           |
| H-LG-2            | 9.9                            | Natural gas | none           |
| H-LG-3*           | 9.9                            | Natural gas | none           |

\*Hot oil heater H-LG-3 will exhaust to a steam generator that will be used to heat rejected loads of asphalt during unloading.

(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.32.1 Lake County PM<sub>10</sub> Emission Limitations [326 IAC 6.8-2-6]

- (a) Pursuant to 326 IAC 6.8-2-6 (formerly 326 IAC 6-1-10.1(d)), the Permittee must comply with the following PM<sub>10</sub> emission limitations for the Asphalt facility process heaters:

| Process Heater            | PM <sub>10</sub> Limit (lbs/MMBtu) | PM <sub>10</sub> Limit (lbs/hour) |
|---------------------------|------------------------------------|-----------------------------------|
| F-1 Asphalt Heater        | 0.004                              | 0.048                             |
| F-2 Steiglitz Park Heater | 0.008                              | 0.208                             |

- (b) Pursuant to 326 IAC 6.8-8 (formerly 326 IAC 6-1-10.1(l)(3)), the Permittee shall operate the emission units listed in paragraph (a) of this condition in accordance with the Continuous Compliance Plan (CCP). Pursuant to 326 IAC 6.8-8(c) (formerly 326 IAC 6-10.1-1(u)), the Permittee shall update the CCP as needed, retain a copy of any changes and updates to the CCP onsite, and make the revised CCP available for inspection by IDEM, OAQ. The Permittee shall submit the revised CCP to IDEM, OAQ, within thirty (30) days of the update. If IDEM, OAQ determines that the procedures specified in the plan will not demonstrate compliance with 326 IAC 6.8-8, IDEM, OAQ may require the Permittee to revise the plan.

#### D.32.2 Lake County Sulfur Dioxide Emission Limitations [326 IAC 7-4.1-3]

Pursuant to 326 IAC 7- 4.1-3, the Permittee shall comply with the following sulfur dioxide emission limitations for the Asphalt Facility process heaters:

| Process Heater       | SO <sub>2</sub> Limit (lbs/MMBtu) | SO <sub>2</sub> Limit (lbs/hour) |
|----------------------|-----------------------------------|----------------------------------|
| F-1 Asphalt Heater   | 0.033                             | 0.43                             |
| F-2 Steiglitz Heater | 0.033                             | 0.90                             |

#### D.32.3 Fuel Gas Hydrogen Sulfide (H<sub>2</sub>S) [326 IAC 12] [40 CFR 60, Subpart J]

Pursuant to 40 CFR 60.104(a)(1), the Permittee shall comply with the requirements specified in Section E.2 for the process heaters F-1 and F-2.

#### D.32.4 NSPS Requirements [326 IAC 12-1] [40 CFR 60, Subpart UU]

Pursuant to the 40 CFR 60.470, the Permittee shall comply with the requirements specified in Section E.17 for storage tanks 125, 126, 127, 129, 150, 569, 613, TK-SP-1, TK-SP-2, TK-LG-1 through TK-LG-9, and TK-LG-12 through TK-LG-17.

#### D.32.5 National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters [40 CFR Part 63, Subpart DDDDD]

Pursuant to 40 CFR 63, Subpart DDDDD, the Permittee shall comply with the requirements specified in Section E.20 for the process heaters F-1 and F-2, which comprise the affected source for the large gaseous fuel subcategory.

#### D.32.6 Particulate Matter [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2(a), the particulate matter emissions from the storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17, and TK-3570, the hot oil heaters H-SP-1, H-SP-2, H-LG-1, H-LG-2, and H-LG-3, and the liquid asphalt truck and rail car loading racks shall each be limited to 0.03 grains per dry standard cubic foot.

**D.32.7 NESHAP Requirements [40 CFR Part 63, Subpart CC] [326 IAC 20-16]**

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Pursuant to 40 CFR 63.640, the Permittee shall comply with the requirements specified in Section E.1 for storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17, and TK-3570.

**D.32.8 Equipment Leaks of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) [326 IAC 8-4-8] [40 CFR 60, Subpart GGG]**

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- (a) Pursuant to 326 IAC 8-4-8, the Permittee shall control leaks of VOC from pumps, compressors, valves, process drains, and pressure relief devices according to the Leak Detection and Repair (LDAR) Plan submitted by the Permittee. The Permittee shall update the LDAR Plan as necessary and shall submit a copy of the revised LDAR Plan to IDEM OAQ for approval. If IDEM, OAQ determines that the procedures specified in the LDAR Plan will not demonstrate compliance with the fugitive emission limitations, IDEM, OAQ may require the Permittee to revise the plan.
- (b) Pursuant to 40 CFR 60, Subpart GGG, the Permittee shall comply with the requirements specified in Sections E.4 and E.13 for valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges and/or other connectors in VOC service.

**D.32.9 Natural Gas Usage Limit [326 IAC 2-2] [326 IAC 2-3]**

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The total natural gas usage shall not exceed 255 million cubic feet per twelve (12) consecutive month period for hot oil heaters H-SP-1, H-SP-2, H-LG-1, H-LG-2, and H-LG-3. Compliance with this limit shall ensure compliance with the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset).

**D.32.10 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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A Preventive Maintenance Plan (PMP), in accordance with Section B - Preventive Maintenance Plan, of Part 70 Operating Permit No. T089-6741-00453, is required for the biofilter system. The Permittee shall prepare and maintain the PMP for the biofilter system on or before initial startup of the biofilter system.

**Compliance Determination Requirements**

**D.32.11 Operating Requirement**

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Pursuant to SPM 089-15202-00003, issued April 24, 2002, effective June 1, 2003, fuel oil shall not be used as fuel in the Steiglitz Park Process Heater F-2 and the F-1 Asphalt Heater.

**D.32.12 Operating Requirement**

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Pursuant to 326 IAC 7-4.1-3(b)(1) and except as specified in 326 IAC 7-4.1-2(d) and 326 IAC 7-2-1(c)(3), compliance with the sulfur dioxide emission limitations in Condition D.32.2 shall be determined based on the daily average sulfur dioxide emission rate, in pounds per hour.

**D.32.13 Opacity Control**

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In order to comply with Condition D.32.4 (40 CFR Part 60, Subpart UU), opacity from storage tanks TK-SP-1, TK-SP-2, TK-LG-1 through TK-LG-9, and TK-LG-12 through TK-LG-17 shall be controlled by the biofilter system at all times that the storage tanks are in operation.

**Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]**

**D.32.14 Monitoring for Equipment Leaks of VOC [326 IAC 8-4-8]**

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Pursuant to 326 IAC 8-4-8, the Permittee shall monitor for leaks of VOC according to the LDAR plan submitted by the Permittee.

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

### **D.32.15 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]**

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- (a) Pursuant to 326 IAC 8-9-6(a) and (b), the Permittee shall maintain the following information for storage tanks 125, 126, 127, 129, 150, 569, 613, 78, 113, 114, 128, 148, 149, 153, 222, 223, 224, 225, 248, 249, 250, 251, 252, 253, 261, 262, 468, 571, 572, 609, 611, TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17, and TK-3570:
- (1) The vessel identification number.
  - (2) The vessel dimensions.
  - (3) The vessel capacity.
- The Permittee shall maintain records described in (1) through (3) of this condition for the life of the vessel.
- (b) Pursuant to 326 IAC 8-9-6(h), the Permittee shall maintain a record and notify IDEM, OAQ within thirty (30) days when the maximum true vapor pressure of the liquid stored in vessels 125, 126, 127, 129, 150, 569, 613, TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-11, TK-LG-14 through TK-LG-17, or TK-3570 exceeds seventy-five hundredths (0.75) psia.

### **D.32.16 Record Keeping Requirements**

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- (a) Pursuant to 326 IAC 7-4.1-3(b)(1)(A) and to document compliance with Conditions D.32.2, and D.32.11, the Permittee shall maintain a daily record of the following for the F-1 and F-2 process heaters:
- (1) fuel type,
  - (2) average daily sulfur content for each fuel type,
  - (3) average daily fuel gravity for each fuel type,
  - (4) total daily fuel usage for each type, and
  - (5) heat content of each fuel type.
- (b) Pursuant to 326 IAC 6.8-8-7 (formerly 326 IAC 6-1-10.1(n)(5)) and to document compliance with Condition D.32.1, the Permittee shall maintain records for the Asphalt Heater F-1 and the Steiglitz Park Heater F-2 as specified in the Continuous Compliance Plan.
- (c) Pursuant to 40 CFR 60, Subpart J and to document compliance with Condition D.32.3, the Permittee shall maintain records as specified in Section E.2.
- (d) Pursuant to 40 CFR 60, Subpart UU and to document compliance with Condition D.32.4, the Permittee shall maintain records as specified in Section E.17.
- (e) Pursuant to 40 CFR 63, Subpart CC and to document compliance with Condition D.32.7, the Permittee shall keep records as specified in Section E.1.
- (f) Pursuant to 40 CFR 60, Subpart GGG and to document compliance with Condition D.32.8(b), the Permittee shall keep records as specified in Sections E.4 and E.13.

- (g) Pursuant to 326 IAC 8-4-8 and to document compliance with Condition D.32.8(a), the Permittee shall comply with equipment leak record keeping requirements specified in the LDAR plan.
- (h) To document compliance with Condition D.32.9, the Permittee shall record the total natural gas usage for hot oil heaters H-SP-1, H-SP-2, H-LG-1, H-LG-2, and H-LG-3 on a monthly basis;

#### D.32.17 Reporting Requirements

- (a) Pursuant to 326 IAC 7-4.1-3(b)(2) and to document compliance with Conditions D.32.2 and D.32.11, the Permittee shall submit a report to IDEM, OAQ department within thirty (30) days after the end of each calendar quarter containing the average daily sulfur dioxide emission rate, for the F-1 Asphalt Heater and F-2 Steiglitz Heater.
- (b) Pursuant to 40 CFR 60, Subpart J and to document compliance with Condition D.32.3, the Permittee shall submit to IDEM, OAQ the reports specified in Section E.2.
- (c) Pursuant to 40 CFR 60, Subpart UU and to document compliance with Condition D.32.4, the Permittee shall submit to IDEM, OAQ the reports specified in Section E.17.
- (d) Pursuant to 40 CFR 63, Subpart CC and to document compliance with Condition D.32.7, the Permittee shall submit reports as specified in Section E.1.
- (e) Pursuant to 40 CFR 60, Subpart GGG and to document compliance with Condition D.32.8(b), the Permittee shall submit to IDEM, OAQ the reports specified in Sections E.4 and E.13.
- (f) Pursuant to 326 IAC 8-4-8 and to document compliance with Condition D.32.8(a), the Permittee shall submit reports as specified in the LDAR plan.
- (g) A quarterly summary of the information to document compliance with Condition D.32.9 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

## **SECTION E.1 40 CFR Part 63, Subpart CC – National Emission Standards for Hazardous Air Pollutants For Petroleum Refineries**

### **E.1.1 General Provisions Relating to NESHAP Subpart CC [40 CFR Part 63, Subpart CC] [326 IAC 20-1]**

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Pursuant to 40 CFR 63.640, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, as specified in Table 6 of 40 CFR Part 63, Subpart CC in accordance with the schedule in 40 CFR Part 63, Subpart CC.

### **E.1.2 NESHAP Subpart CC Requirements [40 CFR Part 63, Subpart CC] [326 IAC 20-16]**

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Pursuant to 40 CFR 63.640, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart CC, which are incorporated by reference in 326 IAC 20-16, for all affected storage tanks, process vents, wastewater streams and wastewater treatment operations, equipment leaks, gasoline loading racks, and marine vessel loading operations:

#### **§63.640 Applicability and designation of affected source.**

(a) This subpart applies to petroleum refining process units and to related emission points that are specified in paragraphs (c)(5) through (c)(7) of this section that are located at a plant site that meet the criteria in paragraphs (a)(1) and (a)(2) of this section;

(1) Are located at a plant site that is a major source as defined in section 112(a) of the Clean Air Act; and

(2) Emit or have equipment containing or contacting one or more of the hazardous air pollutants listed in table 1 of this subpart.

(c) For the purpose of this subpart, the affected source shall comprise all emission points, in combination, listed in paragraphs (c)(1) through (c)(7) of this section that are located at a single refinery plant site.

(1) All miscellaneous process vents from petroleum refining process units meeting the criteria in paragraph (a) of this section;

(2) All storage vessels associated with petroleum refining process units meeting the criteria in paragraph (a) of this section;

(3) All wastewater streams and treatment operations associated with petroleum refining process units meeting the criteria in paragraph (a) of this section;

(4) All equipment leaks from petroleum refining process units meeting the criteria in paragraph (a) of this section;

(5) All gasoline loading racks classified under Standard Industrial Classification code 2911 meeting the criteria in paragraph (a) of this section;

(6) All marine vessel loading operations located at a petroleum refinery meeting the criteria in paragraph (a) of this section and the applicability criteria of subpart Y, §63.560; and

(7) All storage vessels and equipment leaks associated with a bulk gasoline terminal or pipeline breakout station classified under Standard Industrial Classification code 2911 located within a contiguous area and under common control with a refinery meeting the criteria in paragraph (a) of this section.

(d) The affected source subject to this subpart does not include the emission points listed in paragraphs (d)(1) through (d)(5) of this section.

(1) Stormwater from segregated stormwater sewers;

(2) Spills;

(3) Any pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, or instrumentation system that is intended to operate in organic hazardous air pollutant service, as defined in §63.641 of this subpart, for less than 300 hours during the calendar year;

(4) Catalytic cracking unit and catalytic reformer catalyst regeneration vents, and sulfur plant vents; and

(5) Emission points routed to a fuel gas system, as defined in §63.641 of this subpart. No testing, monitoring, recordkeeping, or reporting is required for refinery fuel gas systems or emission points routed to refinery fuel gas systems.

(e) The owner or operator shall follow the procedures specified in paragraphs (e)(1) and (e)(2) of this section to determine whether a storage vessel is part of a source to which this subpart applies.

(1) Where a storage vessel is used exclusively by a process unit, the storage vessel shall be considered part of that process unit.

(i) If the process unit is a petroleum refining process unit subject to this subpart, then the storage vessel is part of the affected source to which this subpart applies.

(ii) If the process unit is not subject to this subpart, then the storage vessel is not part of the affected source to which this subpart applies.

(2) If a storage vessel is not dedicated to a single process unit, then the applicability of this subpart shall be determined according to the provisions in paragraphs (e)(2)(i) through (e)(2)(iii) of this section.

(i) If a storage vessel is shared among process units and one of the process units has the predominant use, as determined by paragraphs (e)(2)(i)(A) and (e)(2)(i)(B) of this section, then the storage vessel is part of that process unit.

(A) If the greatest input on a volume basis into the storage vessel is from a process unit that is located on the same plant site, then that process unit has the predominant use.

(B) If the greatest input on a volume basis into the storage vessel is provided from a process unit that is not located on the same plant site, then the predominant use shall be the process unit that receives the greatest amount of material on a volume basis from the storage vessel at the same plant site.

(ii) If a storage vessel is shared among process units so that there is no single predominant use, and at least one of those process units is a petroleum refining process unit subject to this subpart, the storage vessel shall be considered to be part of the petroleum refining process unit that is subject to this subpart. If more than one petroleum refining process unit is subject to this subpart, the owner or operator may assign the storage vessel to any of the petroleum refining process units subject to this subpart.

(iii) If the predominant use of a storage vessel varies from year to year, then the applicability of this subpart shall be determined based on the utilization of that storage vessel during the year preceding promulgation of this subpart. This determination shall be reported as specified in §63.654(h)(6)(ii) of this subpart.

(f) The owner or operator shall follow the procedures specified in paragraphs (f)(1) through (f)(5) of this section to determine whether a miscellaneous process vent from a distillation unit is part of a source to which this subpart applies.

(1) If the greatest input to the distillation unit is from a process unit located on the same plant site, then the distillation unit shall be assigned to that process unit.

(2) If the greatest input to the distillation unit is provided from a process unit that is not located on the same plant site, then the distillation unit shall be assigned to the process unit located at the same plant site that receives the greatest amount of material from the distillation unit.

(3) If a distillation unit is shared among process units so that there is no single predominant use, as described in paragraphs (f)(1) and (f)(2) of this section, and at least one of those process units is a petroleum refining process unit subject to this subpart, the distillation unit shall be assigned to the petroleum refining process unit that is subject to this subpart. If more than one petroleum refining process unit is subject to this subpart, the owner or operator may assign the distillation unit to any of the petroleum refining process units subject to this rule.

(4) If the process unit to which the distillation unit is assigned is a petroleum refining process unit subject to this subpart and the vent stream contains greater than 20 parts per million by volume total organic hazardous air pollutants, then the vent from the distillation unit is considered a miscellaneous process vent (as defined in §63.641 of this subpart) and is part of the source to which this subpart applies.

(5) If the predominant use of a distillation unit varies from year to year, then the applicability of this subpart shall be determined based on the utilization of that distillation unit during the year preceding promulgation of this subpart. This determination shall be reported as specified in §63.654(h)(6)(iii).

(g) The provisions of this subpart do not apply to the processes specified in paragraphs (g)(1) through (g)(7) of this section.

(1) Research and development facilities, regardless of whether the facilities are located at the same plant site as a petroleum refining process unit that is subject to the provisions of this subpart;

(2) Equipment that does not contain any of the hazardous air pollutants listed in table 1 of this subpart that is located within a petroleum refining process unit that is subject to this subpart;

(3) Units processing natural gas liquids;

(4) Units that are used specifically for recycling discarded oil;

(5) Shale oil extraction units;

(6) Ethylene processes; and

(7) Process units and emission points subject to subparts F, G, H, and I of this part.

(h) Except as provided in paragraphs (k), (l), or (m) of this section, sources subject to this subpart are required to achieve compliance on or before the dates specified in paragraphs (h)(1) through (h)(4) of this section.

(1) New sources that commence construction or reconstruction after July 14, 1994 shall be in compliance with this subpart upon initial startup or the date of promulgation of this subpart, whichever is later, as provided in §63.6(b) of subpart A of this part.

(2) Except as provided in paragraphs (h)(3) through (h)(5) of this section, existing sources shall be in compliance with this subpart no later than August 18, 1998, except as provided in §63.6(c) of subpart A of this part, or unless an extension has been granted by the Administrator as provided in §63.6(i) of subpart A of this part.

(3) Marine tank vessels at existing sources shall be in compliance with this subpart no later than August 18, 1999 unless the vessels are included in an emissions average to generate emission credits. Marine tank vessels used to generate credits in an emissions average shall be in compliance with this subpart no later than August 18, 1998 unless an extension has been granted by the Administrator as provided in §63.6(i).

(4) Existing Group 1 floating roof storage vessels shall be in compliance with §63.646 at the first degassing and cleaning activity after August 18, 1998, or within 10 years after promulgation of the rule, whichever is first.

(5) An owner or operator may elect to comply with the provisions of §63.648 (c) through (i) as an alternative to the provisions of §63.648 (a) and (b). In such cases, the owner or operator shall comply no later than the dates specified in paragraphs (h)(5)(i) through (h)(5)(iii) of this section.

(i) Phase I (see table 2 of this subpart), beginning on August 18, 1998;

(ii) Phase II (see table 2 of this subpart), beginning no later than August 18, 1999; and

(iii) Phase III (see table 2 of this subpart), beginning no later than February 18, 2001.

(i) If an additional petroleum refining process unit is added to a plant site that is a major source as defined in section 112(a) of the Clean Air Act, the addition shall be subject to the requirements for a new source if it meets the criteria specified in paragraphs (i)(1) through (i)(3) of this section:

(1) It is an addition that meets the definition of construction in §63.2 of subpart A of this part;

(2) Such construction commenced after July 14, 1994; and

(3) The addition has the potential to emit 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants.

(j) If any change is made to a petroleum refining process unit subject to this subpart, the change shall be subject to the requirements for a new source if it meets the criteria specified in paragraphs (j)(1) and (j)(2) of this section:

(1) It is a change that meets the definition of reconstruction in §63.2 of subpart A of this part; and

(2) Such reconstruction commenced after July 14, 1994.

(k) If an additional petroleum refining process unit is added to a plant site or a change is made to a petroleum refining process unit and the addition or change is determined to be subject to the new source requirements according to paragraphs (i) or (j) of this section it must comply with the requirements specified in paragraphs (k)(1) and (k)(2) of this section:

(1) The reconstructed source, addition, or change shall be in compliance with the new source requirements upon initial startup of the reconstructed source or by the date of promulgation of this subpart, whichever is later; and

(2) The owner or operator of the reconstructed source, addition, or change shall comply with the reporting and recordkeeping requirements that are applicable to new sources. The applicable reports include, but are not limited to:

(i) The application for approval of construction or reconstruction shall be submitted as soon as practical before the construction or reconstruction is planned to commence (but it need not be sooner than 90 days after the date of promulgation of this subpart);

(ii) The Notification of Compliance Status report as required by §63.654(f) for a new source, addition, or change;

(iii) Periodic Reports and Other Reports as required by §63.654 (g) and (h);

(iv) Reports and notifications required by §60.487 of subpart VV of part 60 or §63.182 of subpart H of this part. The requirements for subpart H are summarized in table 3 of this subpart;

(v) Reports required by 40 CFR 61.357 of subpart FF;

(vi) Reports and notifications required by §63.428 (b), (c), (g)(1), and (h)(1) through (h)(3) of subpart R. These requirements are summarized in table 4 of this subpart; and

(vii) Reports and notifications required by §§63.565 and 63.567 of subpart Y of this part. These requirements are summarized in table 5 of this subpart.

(l) If an additional petroleum refining process unit is added to a plant site or if a miscellaneous process vent, storage vessel, gasoline loading rack, or marine tank vessel loading operation that meets the criteria in paragraphs (c)(1) through (c)(7) of this section is added to an existing petroleum refinery or if another deliberate operational process change creating an additional Group 1 emission point(s) (as defined in §63.641) is made to an existing petroleum refining process unit, and if the addition or process change is not subject to the new source requirements as determined according to paragraphs (i) or (j) of this section, the requirements in paragraphs (l)(1) through (l)(3) of this section shall apply. Examples of process changes include, but are not limited to, changes in production capacity, or feed or raw material where the change requires construction or physical alteration of the existing equipment or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. For purposes of this paragraph and paragraph (m) of this section, process changes do not include: Process upsets, unintentional temporary process changes, and changes that are within the equipment configuration and operating conditions documented in the Notification of Compliance Status report required by §63.654(f).

(1) The added emission point(s) and any emission point(s) within the added or changed petroleum refining process unit are subject to the requirements for an existing source.

(2) The added emission point(s) and any emission point(s) within the added or changed petroleum refining process unit shall be in compliance with this subpart by the dates specified in paragraphs (l)(2)(i) or (l)(2)(ii) of this section, as applicable.

(i) If a petroleum refining process unit is added to a plant site or an emission point(s) is added to any existing petroleum refining process unit, the added emission point(s) shall be in compliance upon initial startup of any added petroleum refining process unit or emission point(s) or by 3 years after the date of promulgation of this subpart, whichever is later.

(ii) If a deliberate operational process change to an existing petroleum refining process unit causes a Group 2 emission point to become a Group 1 emission point (as defined in §63.641), the owner or operator shall be in compliance upon initial startup or by 3 years after the date of promulgation of this subpart, whichever is later, unless the owner or operator demonstrates to the Administrator that achieving compliance will take longer than making the change. If this demonstration is made to the Administrator's satisfaction, the owner or operator shall follow the procedures in paragraphs (m)(1) through (m)(3) of this section to establish a compliance date.

(3) The owner or operator of a petroleum refining process unit or of a storage vessel, miscellaneous process vent, wastewater stream, gasoline loading rack, or marine tank vessel loading operation meeting the criteria in paragraphs (c)(1) through (c)(7) of this section that is added to a plant site and is subject to the requirements for existing sources shall comply with the reporting and recordkeeping requirements that are applicable to existing sources including, but not limited to, the reports listed in paragraphs (l)(3)(i) through (l)(3)(vii) of this section. A process change to an existing petroleum refining process unit shall be subject to the reporting requirements for existing sources including, but not limited to, the reports listed in paragraphs (l)(3)(i) through (l)(3)(vii) of this section. The applicable reports include, but are not limited to:

(i) The Notification of Compliance Status report as required by §63.654(f) for the emission points that were added or changed;

(ii) Periodic Reports and other reports as required by §63.654 (g) and (h);

(iii) Reports and notifications required by sections of subpart A of this part that are applicable to this subpart, as identified in table 6 of this subpart.

(iv) Reports and notifications required by §63.182, or 40 CFR 60.487. The requirements of subpart H of this part are summarized in table 3 of this subpart;

(v) Reports required by §61.357 of subpart FF;

(vi) Reports and notifications required by §63.428 (b), (c), (g)(1), and (h)(1) through (h)(3) of subpart R of this part. These requirements are summarized in table 4 of this subpart; and

(vii) Reports and notifications required by §63.567 of subpart Y of this part. These requirements are summarized in table 5 of this subpart.

(4) If pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, or instrumentation systems are added to an existing source, they are subject to the equipment leak standards for existing sources in §63.648. A notification of compliance status report shall not be required for such added equipment.

(m) If a change that does not meet the criteria in paragraph (l) of this section is made to a petroleum refining process unit subject to this subpart, and the change causes a Group 2 emission point to become a Group 1 emission point (as defined in §63.641), then the owner or operator shall comply with the requirements of this subpart for existing sources for the Group 1 emission point as expeditiously as practicable, but in no event later than 3 years after the emission point becomes Group 1.

(1) The owner or operator shall submit to the Administrator for approval a compliance schedule, along with a justification for the schedule.

(2) The compliance schedule shall be submitted within 180 days after the change is made, unless the compliance schedule has been previously submitted to the permitting authority. If it is not possible to determine until after the change is implemented whether the emission point has become Group 1, the compliance schedule shall be submitted within 180 days of the date when the affect of the change is known to the source. The compliance schedule may be submitted in the next Periodic Report if the change is made after the date the Notification of Compliance Status report is due.

(3) The Administrator shall approve or deny the compliance schedule or request changes within 120 calendar days of receipt of the compliance schedule and justification. Approval is automatic if not received from the Administrator within 120 calendar days of receipt.

(n) Overlap of subpart CC with other regulations for storage vessels.

(1) After the compliance dates specified in paragraph (h) of this section, a Group 1 or Group 2 storage vessel that is part of an existing source and is also subject to the provisions of 40 CFR part 60, subpart Kb, is required to comply only with the requirements of 40 CFR part 60, subpart Kb, except as provided in paragraph (n)(8) of this section.

(2) After the compliance dates specified in paragraph (h) of this section a Group 1 storage vessel that is part of a new source and is subject to 40 CFR part 60, subpart Kb is required to comply only with this subpart.

(3) After the compliance dates specified in paragraph (h) of this section, a Group 2 storage vessel that is part of a new source and is subject to the control requirements in §60.112b of 40 CFR part 60, subpart Kb is required to comply only with 40 CFR part 60, subpart Kb except as provided in paragraph (n)(8) of this section.

(4) After the compliance dates specified in paragraph (h) of this section, a Group 2 storage vessel that is part of a new source and is subject to 40 CFR 60.110b, but is not required to apply controls by 40 CFR 60.110b or 60.112b is required to comply only with this subpart.

(5) After the compliance dates specified in paragraph (h) of this section a Group 1 storage vessel that is also subject to the provisions of 40 CFR part 60, subparts K or Ka is required to only comply with the provisions of this subpart.

(6) After compliance dates specified in paragraph (h) of this section, a Group 2 storage vessel that is subject to the control requirements of 40 CFR part 60, subparts K or Ka is required to comply only with the provisions of 40 CFR part 60, subparts K or Ka except as provided for in paragraph (n)(9) of this section.

(7) After the compliance dates specified in paragraph (h) of this section, a Group 2 storage vessel that is subject to 40 CFR part 60, subparts K or Ka, but not to the control requirements of 40 CFR part 60, subparts K or Ka, is required to comply only with this subpart.

(8) Storage vessels described by paragraphs (n)(1) and (n)(3) of this section are to comply with 40 CFR part 60, subpart Kb except as provided for in paragraphs (n)(8)(i) through (n)(8)(vi) of this section.

(i) Storage vessels that are to comply with §60.112b(a)(2) of subpart Kb are exempt from the secondary seal requirements of §60.112b(a)(2)(i)(B) during the gap measurements for the primary seal required by §60.113b(b) of subpart Kb.

(ii) If the owner or operator determines that it is unsafe to perform the seal gap measurements required in §60.113b(b) of subpart Kb or to inspect the vessel to determine compliance with §60.113b(a) of subpart Kb because the roof appears to be structurally unsound and poses an imminent danger to inspecting personnel, the owner or operator shall comply with the requirements in either §63.120(b)(7)(i) or §63.120(b)(7)(ii) of subpart G.

(iii) If a failure is detected during the inspections required by §60.113b(a)(2) or during the seal gap measurements required by §60.113b(b)(1), and the vessel cannot be repaired within 45 days and the vessel cannot be emptied within 45 days, the owner or operator may utilize up to two extensions of up to 30 additional calendar days each. The owner or operator is not required to provide a request for the extension to the Administrator.

(iv) If an extension is utilized in accordance with paragraph (n)(8)(iii) of this section, the owner or operator shall, in the next periodic report, identify the vessel, provide the information listed in §60.113b(a)(2) or §60.113b(b)(4)(iii), and describe the nature and date of the repair made or provide the date the storage vessel was emptied.

(v) Owners and operators of storage vessels complying with subpart Kb of part 60 may submit the inspection reports required by §§60.115b(a)(3), (a)(4), and (b)(4) of subpart Kb as part of the periodic reports required by this subpart, rather than within the 30-day period specified in §§60.115b(a)(3), (a)(4), and (b)(4) of subpart Kb.

(vi) The reports of rim seal inspections specified in §60.115b(b)(2) are not required if none of the measured gaps or calculated gap areas exceed the limitations specified in §60.113b(b)(4). Documentation of the inspections shall be recorded as specified in §60.115b(b)(3).

(9) Storage vessels described by paragraph (n)(6) of this section that are to comply with 40 CFR part 60, subpart Ka, are to comply with only subpart Ka except as provided for in paragraphs (n)(9)(i) through (n)(9)(iv) of this section.

(i) If the owner or operator determines that it is unsafe to perform the seal gap measurements required in §60.113a(a)(1) of subpart Ka because the floating roof appears to be structurally unsound and poses an imminent danger to inspecting personnel, the owner or operator shall comply with the requirements in either §63.120(b)(7)(i) or §63.120(b)(7)(ii) of subpart G.

(ii) If a failure is detected during the seal gap measurements required by §60.113a(a)(1) of subpart Ka, and the vessel cannot be repaired within 45 days and the vessel cannot be emptied within 45 days, the owner or operator may utilize up to 2 extensions of up to 30 additional calendar days each.

(iii) If an extension is utilized in accordance with paragraph (n)(9)(ii) of this section, the owner or operator shall, in the next periodic report, identify the vessel, describe the nature and date of the repair made or provide the date the storage vessel was emptied. The owner or operator shall also provide documentation of the decision to utilize an extension including a description of the failure, documentation that alternate storage capacity is unavailable, and a schedule of actions that will ensure that the control equipment will be repaired or the vessel emptied as soon as possible.

(iv) Owners and operators of storage vessels complying with subpart Ka of part 60 may submit the inspection reports required by §60.113a(a)(1)(i)(E) of subpart Ka as part of the periodic reports required by this subpart, rather than within the 60-day period specified in §60.113a(a)(1)(i)(E) of subpart Ka.

(o) Overlap of this subpart CC with other regulations for wastewater.

(1) After the compliance dates specified in paragraph (h) of this section a Group 1 wastewater stream managed in a piece of equipment that is also subject to the provisions of 40 CFR part 60, subpart QQQ is required to comply only with this subpart.

(p) Overlap of subpart CC with other regulations for equipment leaks. After the compliance dates specified in paragraph (h) of this section equipment leaks that are also subject to the provisions of 40 CFR parts 60 and 61 are required to comply only with the provisions specified in this subpart.

(q) For overlap of subpart CC with local or State regulations, the permitting authority for the affected source may allow consolidation of the monitoring, recordkeeping, and reporting requirements under this subpart with the monitoring, recordkeeping, and reporting requirements under other applicable requirements in 40 CFR parts 60, 61, or 63, and in any 40 CFR part 52 approved State implementation plan provided the implementation plan allows for approval of alternative monitoring, reporting, or recordkeeping requirements and provided that the permit contains an equivalent degree of compliance and control.

(r) Overlap of subpart CC with other regulations for gasoline loading racks. After the compliance dates specified in paragraph (h) of this section, a Group 1 gasoline loading rack that is part of a source subject to subpart CC and also is subject to the provisions of 40 CFR part 60, subpart XX is required to comply only with this subpart.

#### **§ 63.641 Definitions.**

All terms used in this subpart shall have the meaning given them in the Clean Air Act, subpart A of this part, and in this section. If the same term is defined in subpart A and in this section, it shall have the meaning given in this section for purposes of this subpart.

*Affected source* means the collection of emission points to which this subpart applies as determined by the criteria in §63.640.

*Aliphatic* means open-chained structure consisting of paraffin, olefin and acetylene hydrocarbons and derivatives.

*Annual average true vapor pressure* means the equilibrium partial pressure exerted by the stored liquid at the temperature equal to the annual average of the liquid storage temperature for liquids stored above or below the ambient temperature or at the local annual average temperature reported by the National Weather Service for liquids stored at the ambient temperature, as determined:

(1) In accordance with methods specified in §63.111 of subpart G of this part;

(2) From standard reference texts; or

(3) By any other method approved by the Administrator.

*Boiler* means any enclosed combustion device that extracts useful energy in the form of steam and is not an incinerator.

*By compound* means by individual stream components, not by carbon equivalents.

*Car-seal* means a seal that is placed on a device that is used to change the position of a valve (e.g., from opened to closed) in such a way that the position of the valve cannot be changed without breaking the seal.

*Closed vent system* means a system that is not open to the atmosphere and is configured of piping, ductwork, connections, and, if necessary, flow inducing devices that transport gas or vapor from an emission point to a control device or back into the process. If gas or vapor from regulated equipment is routed to a process (e.g., to a petroleum refinery fuel gas system), the process shall not be considered a closed vent system and is not subject to closed vent system standards.

*Combustion device* means an individual unit of equipment such as a flare, incinerator, process heater, or boiler used for the combustion of organic hazardous air pollutant vapors.

*Connector* means flanged, screwed, or other joined fittings used to connect two pipe lines or a pipe line and a piece of equipment. A common connector is a flange. Joined fittings welded completely around the circumference of the interface are not considered connectors for the purpose of this regulation. For the purpose of reporting and recordkeeping, connector means joined fittings that are accessible.

*Continuous record* means documentation, either in hard copy or computer readable form, of data values measured at least once every hour and recorded at the frequency specified in §63.654(i).

*Continuous recorder* means a data recording device recording an instantaneous data value or an average data value at least once every hour.

*Control device* means any equipment used for recovering, removing, or oxidizing organic hazardous air pollutants. Such equipment includes, but is not limited to, absorbers, carbon adsorbers, condensers, incinerators, flares, boilers, and process heaters. For miscellaneous process vents (as defined in this section), recovery devices (as defined in this section) are not considered control devices.

*Delayed coker vent* means a vent that is typically intermittent in nature, and usually occurs only during the initiation of the depressuring cycle of the decoking operation when vapor from the coke drums cannot be sent to the fractionator column for product recovery, but instead is routed to the atmosphere through a closed blowdown system or directly to the atmosphere in an open blowdown system. The emissions from the decoking phases of delayed coker operations, which include coke drum deheading, draining, or decoking (coke cutting), are not considered to be delayed coker vents.

*Distillate receiver* means overhead receivers, overhead accumulators, reflux drums, and condenser(s) including ejector-condenser(s) associated with a distillation unit.

*Distillation unit* means a device or vessel in which one or more feed streams are separated into two or more exit streams, each exit stream having component concentrations different from those in the feed stream(s). The separation is achieved by the redistribution of the components between the liquid and the vapor phases by vaporization and condensation as they approach equilibrium within the distillation unit. Distillation unit includes the distillate receiver, reboiler, and any associated vacuum pump or steam jet.

*Emission point* means an individual miscellaneous process vent, storage vessel, wastewater stream, or equipment leak associated with a petroleum refining process unit; an individual storage vessel or equipment leak associated with a bulk gasoline terminal or pipeline breakout station classified under Standard Industrial Classification code 2911; a gasoline loading rack classified under Standard Industrial Classification code 2911; or a marine tank vessel loading operation located at a petroleum refinery.

*Equipment leak* means emissions of organic hazardous air pollutants from a pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, or instrumentation system "in organic hazardous air pollutant service" as defined in this section. Vents from wastewater collection and conveyance systems (including, but not limited to wastewater drains, sewer vents, and sump drains), tank mixers, and sample valves on storage tanks are not equipment leaks.

*Flame zone* means the portion of a combustion chamber of a boiler or process heater occupied by the flame envelope created by the primary fuel.

*Flexible operation unit* means a process unit that manufactures different products periodically by alternating raw materials or operating conditions. These units are also referred to as campaign plants or blocked operations.

*Flow indicator* means a device that indicates whether gas is flowing, or whether the valve position would allow gas to flow, in a line.

*Fuel gas system* means the offsite and onsite piping and control system that gathers gaseous streams generated by refinery operations, may blend them with sources of gas, if available, and transports the blended gaseous fuel at suitable pressures for use as fuel in heaters, furnaces, boilers, incinerators, gas turbines, and other combustion devices located within or outside of the refinery. The fuel is piped directly to each individual combustion device, and the system typically operates at pressures over atmospheric. The gaseous streams can contain a mixture of methane, light hydrocarbons, hydrogen and other miscellaneous species.

*Gasoline* means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater that is used as a fuel for internal combustion engines.

*Gasoline loading rack* means the loading arms, pumps, meters, shutoff valves, relief valves, and other piping and valves necessary to fill gasoline cargo tanks.

*Group 1 gasoline loading rack* means any gasoline loading rack classified under Standard Industrial Classification code 2911 that is located within a bulk gasoline terminal that has a gasoline throughput greater than 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput for the terminal as may be limited by compliance with enforceable conditions under Federal, State, or local law and discovered by the Administrator and any other person.

*Group 1 marine tank vessel* means a vessel at an existing source loaded at any land- or sea-based terminal or structure that loads liquid commodities with vapor pressures greater than or equal to 10.3 kilopascals in bulk onto marine tank vessels, that emits greater than 9.1 megagrams of any individual HAP or 22.7 megagrams of any combination of HAP annually after August 18, 1999, or a vessel at a new source loaded at any land- or sea-based terminal or structure that loads liquid commodities with vapor pressures greater than or equal to 10.3 kilopascals onto marine tank vessels.

*Group 1 miscellaneous process vent* means a miscellaneous process vent for which the total organic HAP concentration is greater than or equal to 20 parts per million by volume, and the total volatile organic compound emissions are greater than or equal to 33 kilograms per day for existing sources and 6.8 kilograms per day for new sources at the outlet of the final recovery device (if any) and prior to any control device and prior to discharge to the atmosphere.

*Group 1 storage vessel* means a storage vessel at an existing source that has a design capacity greater than or equal to 177 cubic meters and stored-liquid maximum true vapor pressure greater than or equal to 10.4 kilopascals and stored-liquid annual average true vapor pressure greater than or equal to 8.3 kilopascals and annual average HAP liquid concentration greater than 4 percent by weight total organic HAP; a storage vessel at a new source that has a design storage capacity greater than or equal to 151 cubic meters and stored-liquid maximum true vapor pressure greater than or equal to 3.4 kilopascals and annual average HAP liquid concentration greater than 2 percent by weight total organic HAP; or a storage vessel at a new source that has a design storage capacity greater than or equal to 76 cubic meters and less than 151 cubic meters and stored-liquid maximum true vapor pressure greater than or equal to 77 kilopascals and annual average HAP liquid concentration greater than 2 percent by weight total organic HAP.

*Group 1 wastewater stream* means a wastewater stream at a petroleum refinery with a total annual benzene loading of 10 megagrams per year or greater as calculated according to the procedures in 40 CFR 61.342 of subpart FF of part 61 that has a flow rate of 0.02 liters per minute or greater, a benzene concentration of 10 parts per million by weight or greater, and is not exempt from control requirements under the provisions of 40 CFR part 61, subpart FF.

*Group 2 gasoline loading rack* means a gasoline loading rack classified under Standard Industrial Classification code 2911 that does not meet the definition of a Group 1 gasoline loading rack.

*Group 2 marine tank vessel* means a marine tank vessel that does not meet the definition of a Group 1 marine tank vessel.

*Group 2 miscellaneous process vent* means a miscellaneous process vent that does not meet the definition of a Group 1 miscellaneous process vent.

*Group 2 storage vessel* means a storage vessel that does not meet the definition of a Group 1 storage vessel.

*Group 2 wastewater stream* means a wastewater stream that does not meet the definition of Group 1 wastewater stream.

*Hazardous air pollutant or HAP* means one of the chemicals listed in section 112(b) of the Clean Air Act.

*Incinerator* means an enclosed combustion device that is used for destroying organic compounds. Auxiliary fuel may be used to heat waste gas to combustion temperatures. Any energy recovery section present is not physically formed into one manufactured or assembled unit with the combustion section; rather, the energy recovery section is a separate section following the combustion section and the two are joined by ducts or connections carrying flue gas.

*In heavy liquid service* means that the piece of equipment is not in gas/vapor service or in light liquid service.

*In light liquid service* means that the piece of equipment contains a liquid that meets the conditions specified in §60.593(d) of part 60, subpart GGG.

*In organic hazardous air pollutant service* means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP's as determined according to the provisions of §63.180(d) of subpart H of this part and table 1 of this subpart. The provisions of §63.180(d) of subpart H also specify how to determine that a piece of equipment is not in organic HAP service.

*Leakless valve* means a valve that has no external actuating mechanism.

*Maximum true vapor pressure* means the equilibrium partial pressure exerted by the stored liquid at the temperature equal to the highest calendar-month average of the liquid storage temperature for liquids stored above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for liquids stored at the ambient temperature, as determined:

- (1) In accordance with methods specified in §63.111 of subpart G of this part;
- (2) From standard reference texts; or
- (3) By any other method approved by the Administrator.

*Miscellaneous process vent* means a gas stream containing greater than 20 parts per million by volume organic HAP that is continuously or periodically discharged during normal operation of a petroleum refining process unit meeting the criteria specified in §63.640(a). Miscellaneous process vents include gas streams that are discharged directly to the atmosphere, gas streams that are routed to a control device prior to discharge to the atmosphere, or gas streams that are diverted through a product recovery device prior to control or discharge to the atmosphere. Miscellaneous process vents include vent streams from: caustic wash accumulators, distillation tower condensers/accumulators, flash/knockout drums, reactor vessels, scrubber overheads, stripper overheads, vacuum (steam) ejectors, wash tower overheads, water wash accumulators, blowdown condensers/accumulators, and delayed coker vents. Miscellaneous process vents do not include:

- (1) Gaseous streams routed to a fuel gas system;
- (2) Relief valve discharges;
- (3) Leaks from equipment regulated under §63.648;
- (4) Episodic or nonroutine releases such as those associated with startup, shutdown, malfunction, maintenance, depressuring, and catalyst transfer operations;
- (5) In situ sampling systems (onstream analyzers);
- (6) Catalytic cracking unit catalyst regeneration vents;
- (7) Catalytic reformer regeneration vents;
- (8) Sulfur plant vents;
- (9) Vents from control devices such as scrubbers, boilers, incinerators, and electrostatic precipitators applied to catalytic cracking unit catalyst regeneration vents, catalytic reformer regeneration vents, and sulfur plant vents;
- (10) Vents from any stripping operations applied to comply with the wastewater provisions of this subpart, subpart G of this part, or 40 CFR part 61, subpart FF;
- (11) Coking unit vents associated with coke drum depressuring at or below a coke drum outlet pressure of 15 pounds per square inch gauge, deheading, draining, or decoking (coke cutting) or pressure testing after decoking;
- (12) Vents from storage vessels;
- (13) Emissions from wastewater collection and conveyance systems including, but not limited to, wastewater drains, sewer vents, and sump drains; and
- (14) Hydrogen production plant vents through which carbon dioxide is removed from process streams or through which steam condensate produced or treated within the hydrogen plant is degassed or deaerated.

*Operating permit* means a permit required by 40 CFR parts 70 or 71.

*Organic hazardous air pollutant* or *organic HAP* in this subpart, means any of the organic chemicals listed in table 1 of this subpart.

*Petroleum-based solvents* means mixtures of aliphatic hydrocarbons or mixtures of one and two ring aromatic hydrocarbons.

*Periodically discharged* means discharges that are intermittent and associated with routine operations. Discharges associated with maintenance activities or process upsets are not considered periodically discharged miscellaneous process vents and are therefore not regulated by the petroleum refinery miscellaneous process vent provisions.

*Petroleum refining process unit* means a process unit used in an establishment primarily engaged in petroleum refining as defined in the Standard Industrial Classification code for petroleum refining (2911), and used primarily for the following:

- (1) Producing transportation fuels (such as gasoline, diesel fuels, and jet fuels), heating fuels (such as kerosene, fuel gas distillate, and fuel oils), or lubricants;
- (2) Separating petroleum; or
- (3) Separating, cracking, reacting, or reforming intermediate petroleum streams.

(4) Examples of such units include, but are not limited to, petroleum-based solvent units, alkylation units, catalytic hydrotreating, catalytic hydrorefining, catalytic hydrocracking, catalytic reforming, catalytic cracking, crude distillation, lube oil processing, hydrogen production, isomerization, polymerization, thermal processes, and blending, sweetening, and treating processes. Petroleum refining process units also include sulfur plants.

*Plant site* means all contiguous or adjoining property that is under common control including properties that are separated only by a road or other public right-of-way. Common control includes properties that are owned, leased, or operated by the same entity, parent entity, subsidiary, or any combination thereof.

*Primary fuel* means the fuel that provides the principal heat input (i.e., more than 50 percent) to the device. To be considered primary, the fuel must be able to sustain operation without the addition of other fuels.

*Process heater* means an enclosed combustion device that primarily transfers heat liberated by burning fuel directly to process streams or to heat transfer liquids other than water.

*Process unit* means the equipment assembled and connected by pipes or ducts to process raw and/or intermediate materials and to manufacture an intended product. A process unit includes any associated storage vessels. For the purpose of this subpart, process unit includes, but is not limited to, chemical manufacturing process units and petroleum refining process units.

*Process unit shutdown* means a work practice or operational procedure that stops production from a process unit or part of a process unit during which it is technically feasible to clear process material from a process unit or part of a process unit consistent with safety constraints and during which repairs can be accomplished. An unscheduled work practice or operational procedure that stops production from a process unit or part of a process unit for less than 24 hours is not considered a process unit shutdown. An unscheduled work practice or operational procedure that would stop production from a process unit or part of a process unit for a shorter period of time than would be required to clear the process unit or part of the process unit of materials and start up the unit, or would result in greater emissions than delay of repair of leaking components until the next scheduled process unit shutdown is not considered a process unit shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping production are not considered process unit shutdowns.

*Recovery device* means an individual unit of equipment capable of and used for the purpose of recovering chemicals for use, reuse, or sale. Recovery devices include, but are not limited to, absorbers, carbon adsorbers, and condensers.

*Reference control technology for gasoline loading racks* means a vapor collection and processing system used to reduce emissions due to the loading of gasoline cargo tanks to 10 milligrams of total organic compounds per liter of gasoline loaded or less.

*Reference control technology for marine vessels* means a vapor collection system and a control device that reduces captured HAP emissions by 97 percent.

*Reference control technology for miscellaneous process vents* means a combustion device used to reduce organic HAP emissions by 98 percent, or to an outlet concentration of 20 parts per million by volume.

*Reference control technology for storage vessels* means either:

- (1) An internal floating roof meeting the specifications of §63.119(b) of subpart G except for §63.119 (b)(5) and (b)(6);
- (2) An external floating roof meeting the specifications of §63.119(c) of subpart G except for §63.119(c)(2);
- (3) An external floating roof converted to an internal floating roof meeting the specifications of §63.119(d) of subpart G except for §63.119(d)(2); or
- (4) A closed-vent system to a control device that reduces organic HAP emissions by 95-percent, or to an outlet concentration of 20 parts per million by volume.

(5) For purposes of emissions averaging, these four technologies are considered equivalent.

*Reference control technology for wastewater* means the use of:

(1) Controls specified in §§61.343 through 61.347 of subpart FF of part 61;

(2) A treatment process that achieves the emission reductions specified in table 7 of this subpart for each individual HAP present in the wastewater stream or is a steam stripper that meets the specifications in §63.138(g) of subpart G of this part; and

(3) A control device to reduce by 95 percent (or to an outlet concentration of 20 parts per million by volume for combustion devices) the organic HAP emissions in the vapor streams vented from treatment processes (including the steam stripper described in paragraph (2) of this definition) managing wastewater.

*Refinery fuel gas* means a gaseous mixture of methane, light hydrocarbons, hydrogen, and other miscellaneous species (nitrogen, carbon dioxide, hydrogen sulfide, etc.) that is produced in the refining of crude oil and/or petrochemical processes and that is separated for use as a fuel in boilers and process heaters throughout the refinery.

*Relief valve* means a valve used only to release an unplanned, nonroutine discharge. A relief valve discharge can result from an operator error, a malfunction such as a power failure or equipment failure, or other unexpected cause that requires immediate venting of gas from process equipment in order to avoid safety hazards or equipment damage.

*Research and development facility* means laboratory and pilot plant operations whose primary purpose is to conduct research and development into new processes and products, where the operations are under the close supervision of technically trained personnel, and is not engaged in the manufacture of products for commercial sale, except in a de minimis manner.

*Shutdown* means the cessation of a petroleum refining process unit or a unit operation (including, but not limited to, a distillation unit or reactor) within a petroleum refining process unit for purposes including, but not limited to, periodic maintenance, replacement of equipment, or repair.

*Startup* means the setting into operation of a petroleum refining process unit for purposes of production. Startup does not include operation solely for purposes of testing equipment. Startup does not include changes in product for flexible operation units.

*Storage vessel* means a tank or other vessel that is used to store organic liquids. Storage vessel does not include:

(1) Vessels permanently attached to motor vehicles such as trucks, railcars, barges, or ships;

(2) Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere;

(3) Vessels with capacities smaller than 40 cubic meters;

(4) Bottoms receiver tanks; or

(5) Wastewater storage tanks. Wastewater storage tanks are covered under the wastewater provisions.

*Temperature monitoring device* means a unit of equipment used to monitor temperature and having an accuracy of  $\pm 1$  percent of the temperature being monitored expressed in degrees Celsius or  $\pm 0.5$  °C, whichever is greater.

*Total annual benzene* means the total amount of benzene in waste streams at a facility on an annual basis as determined in §61.342 of 40 CFR part 61, subpart FF.

*Total organic compounds* or *TOC*, as used in this subpart, means those compounds excluding methane and ethane measured according to the procedures of Method 18 of 40 CFR part 60, appendix A. Method 25A may be used alone or in combination with Method 18 to measure TOC as provided in §63.645 of this subpart.

*Wastewater* means water or wastewater that, during production or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product and is discharged into any individual drain system. Examples are feed tank drawdown; water formed during a chemical reaction or used as a reactant; water used to wash impurities from organic products or reactants; water used to cool or quench organic vapor streams through direct contact; and condensed steam from jet ejector systems pulling vacuum on vessels containing organics.

#### **§63.642 General standards.**

(a) Each owner or operator of a source subject to this subpart is required to apply for a part 70 or part 71 operating permit from the appropriate permitting authority. If the EPA has approved a State operating permit program under part 70, the permit shall be obtained from the State authority. If the State operating permit program has not been approved, the source shall apply to the EPA Regional Office pursuant to part 71.

(c) Table 6 of this subpart specifies the provisions of subpart A of this part that apply and those that do not apply to owners and operators of sources subject to this subpart.

(d) Initial performance tests and initial compliance determinations shall be required only as specified in this subpart.

(1) Performance tests and compliance determinations shall be conducted according to the schedule and procedures specified in this subpart.

(2) The owner or operator shall notify the Administrator of the intention to conduct a performance test at least 30 days before the performance test is scheduled.

(3) Performance tests shall be conducted according to the provisions of §63.7(e) except that performance tests shall be conducted at maximum representative operating capacity for the process. During the performance test, an owner or operator shall operate the control device at either maximum or minimum representative operating conditions for monitored control device parameters, whichever results in lower emission reduction.

(4) Data shall be reduced in accordance with the EPA-approved methods specified in the applicable section or, if other test methods are used, the data and methods shall be validated according to the protocol in Method 301 of appendix A of this part.

(e) Each owner or operator of a source subject to this subpart shall keep copies of all applicable reports and records required by this subpart for at least 5 years except as otherwise specified in this subpart. All applicable records shall be maintained in such a manner that they can be readily accessed within 24 hours. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.

(f) All reports required under this subpart shall be sent to the Administrator at the addresses listed in §63.13 of subpart A of this part. If acceptable to both the Administrator and the owner or operator of a source, reports may be submitted on electronic media.

(g) The owner or operator of an existing source subject to the requirements of this subpart shall control emissions of organic HAP's to the level represented by the following equation:

$$E_A = 0.02\sum EPV_1 + \sum EPV_2 + 0.05\sum ES_1 + \sum ES_2 + \sum EGLR_{1C} + \sum EGLR_2 + (R) \sum EMV_1 + \sum EMV_2 + \sum EWW_{1C} + \sum EWW_2$$

where:

$E_A$  = Emission rate, megagrams per year, allowed for the source.

$0.02\sum EPV_1$  = Sum of the residual emissions, megagrams per year, from all Group 1 miscellaneous process vents, as defined in §63.641.

$\sum EPV_2$  = Sum of the emissions, megagrams per year, from all Group 2 process vents, as defined in §63.641.

$0.05\sum ES_1$  = Sum of the residual emissions, megagrams per year, from all Group 1 storage vessels, as defined in §63.641.

$\sum ES_2$  = Sum of the emissions, megagrams per year, from all Group 2 storage vessels, as defined in §63.641.

$\sum EGLR_{1C}$  = Sum of the residual emissions, megagrams per year, from all Group 1 gasoline loading racks, as defined in §63.641.

$\sum EGLR_2$  = Sum of the emissions, megagrams per year, from all Group 2 gasoline loading racks, as defined in §63.641.

$(R)\sum EMV_1$  = Sum of the residual emissions megagrams per year, from all Group 1 marine tank vessels, as defined in §63.641.

$R = 0.03$  for existing sources,  $0.02$  for new sources.

$\sum EMV_2$  = Sum of the emissions, megagrams per year from all Group 2 marine tank vessels, as defined in §63.641.

$\sum EWW_{1C}$  = Sum of the residual emissions from all Group 1 wastewater streams, as defined in §63.641. This term is calculated for each Group 1 stream according to the equation for  $EWW_{ic}$  in §63.652(h)(6).

$\sum EWW_2$  = Sum of emissions from all Group 2 wastewater streams, as defined in §63.641.

The emissions level represented by this equation is dependent on the collection of emission points in the source. The level is not fixed and can change as the emissions from each emission point change or as the number of emission points in the source changes.

(i) The owner or operator of an existing source shall demonstrate compliance with the emission standard in paragraph (g) of this section by following the procedures specified in paragraph (k) of this section for all emission points, or by following the emissions averaging compliance approach specified in paragraph (l) of this section for specified emission points and the procedures specified in paragraph (k) of this section for all other emission points within the source.

(k) The owner or operator of an existing source may comply, and the owner or operator of a new source shall comply, with the miscellaneous process vent provisions in §§63.643 through 63.645, the storage vessel provisions in §63.646, the wastewater provisions in §63.647, the gasoline loading rack provisions in §63.650, and the marine tank vessel loading operation provisions in §63.651 of this subpart.

(1) The owner or operator using this compliance approach shall also comply with the requirements of §63.654 as applicable.

(2) The owner or operator using this compliance approach is not required to calculate the annual emission rate specified in paragraph (g) of this section.

(m) A State may restrict the owner or operator of an existing source to using only the procedures in paragraph (k) of this section to comply with the emission standard in paragraph (g) of this section. Such a restriction would preclude the source from using an emissions averaging compliance approach.

### **§63.643 Miscellaneous process vent provisions.**

(a) The owner or operator of a Group 1 miscellaneous process vent as defined in §63.641 shall comply with the requirements of either paragraphs (a)(1) or (a)(2) of this section.

(1) Reduce emissions of organic HAP's using a flare that meets the requirements of §63.11(b) of subpart A of this part.

### **§63.644 Monitoring provisions for miscellaneous process vents.**

(a) Except as provided in paragraph (b) of this section, each owner or operator of a Group 1 miscellaneous process vent that uses a combustion device to comply with the requirements in §63.643(a) shall install the monitoring equipment specified in paragraph (a)(1), (a)(2), (a)(3), or (a)(4) of this section, depending on the type of combustion device used. All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment will monitor accurately.

(2) Where a flare is used, a device (including but not limited to a thermocouple, an ultraviolet beam sensor, or an infrared sensor) capable of continuously detecting the presence of a pilot flame is required.

(c) The owner or operator of a Group 1 miscellaneous process vent using a vent system that contains bypass lines that could divert a vent stream away from the control device used to comply with paragraph (a) of this section shall comply with either paragraph (c)(1) or (c)(2) of this section. Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, pressure relief valves needed for safety reasons, and equipment subject to §63.648 are not subject to this paragraph.

(1) Install, calibrate, maintain, and operate a flow indicator that determines whether a vent stream flow is present at least once every hour. Records shall be generated as specified in §63.654(h) and (i). The flow indicator shall be installed at the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere; or

(2) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and the vent stream is not diverted through the bypass line.

(d) The owner or operator shall establish a range that ensures compliance with the emissions standard for each parameter monitored under paragraphs (a) and (b) of this section. In order to establish the range, the information required in §63.654(f)(3) shall be submitted in the Notification of Compliance Status report.

(e) Each owner or operator of a control device subject to the monitoring provisions of this section shall operate the control device in a manner consistent with the minimum and/or maximum operating parameter value or procedure required to be monitored under paragraphs (a) and (b) of this section. Operation of the control device in a manner that constitutes a period of excess emissions, as defined in §63.654(g)(6), or failure to perform procedures required by this section shall constitute a violation of the applicable emission standard of this subpart.

### **§63.645 Test methods and procedures for miscellaneous process vents.**

(a) To demonstrate compliance with §63.643, an owner or operator shall follow §63.116 except for §63.116 (a)(1), (d) and (e) of subpart G of this part except as provided in paragraphs (b) through (d) and paragraph (i) of this section.

(b) All references to §63.113(a)(1) or (a)(2) in §63.116 of subpart G of this part shall be replaced with §63.643(a)(1) or (a)(2), respectively.

(c) In §63.116(c)(4)(ii)(C) of subpart G of this part, organic HAP's in the list of HAP's in table 1 of this subpart shall be considered instead of the organic HAP's in table 2 of subpart F of this part.

(d) All references to §63.116(b)(1) or (b)(2) shall be replaced with paragraphs (d)(1) and (d)(2) of this section, respectively.

(1) Any boiler or process heater with a design heat input capacity of 44 megawatts or greater.

(2) Any boiler or process heater in which all vent streams are introduced into the flame zone.

(e) For purposes of determining the TOC emission rate, as specified under paragraph (f) of this section, the sampling site shall be after the last product recovery device (as defined in §63.641 of this subpart) (if any recovery devices are present) but prior to the inlet of any control device (as defined in §63.641 of this subpart) that is present, prior to any dilution of the process vent stream, and prior to release to the atmosphere.

(1) Methods 1 or 1A of 40 CFR part 60, appendix A, as appropriate, shall be used for selection of the sampling site.

(2) No traverse site selection method is needed for vents smaller than 0.10 meter in diameter.

(f) Except as provided in paragraph (g) of this section, an owner or operator seeking to demonstrate that a process vent TOC mass flow rate is less than 33 kilograms per day for an existing source or less than 6.8 kilograms per day for a new source in accordance with the Group 2 process vent definition of this subpart shall determine the TOC mass flow rate by the following procedures:

(1) The sampling site shall be selected as specified in paragraph (e) of this section.

(2) The gas volumetric flow rate shall be determined using Methods 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate.

(3) Method 18 or Method 25A of 40 CFR part 60, appendix A shall be used to measure concentration; alternatively, any other method or data that has been validated according to the protocol in Method 301 of appendix A of this part may be used. If Method 25A is used, and the TOC mass flow rate calculated from the Method 25A measurement is greater than or equal to 33 kilograms per day for an existing source or 6.8 kilograms per day for a new source, Method 18 may be used to determine any non-VOC hydrocarbons that may be deducted to calculate the TOC (minus non-VOC hydrocarbons) concentration and mass flow rate. The following procedures shall be used to calculate parts per million by volume concentration:

(i) The minimum sampling time for each run shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15-minute intervals during the run.

(ii) The TOC concentration ( $C_{\text{TOC}}$ ) is the sum of the concentrations of the individual components and shall be computed for each run using the following equation if Method 18 is used:

$$C_{\text{TOC}} = \frac{\sum_{i=1}^x \left( \sum_{j=1}^n C_{ji} \right)}{x}$$

where:

$C_{\text{TOC}}$ =Concentration of TOC (minus methane and ethane), dry basis, parts per million by volume.

$C_{ji}$ =Concentration of sample component j of the sample i, dry basis, parts per million by volume.

n=Number of components in the sample.

x=Number of samples in the sample run.

(4) The emission rate of TOC (minus methane and ethane) ( $E_{\text{TOC}}$ ) shall be calculated using the following equation if Method 18 is used:

$$E = K_2 \left[ \sum_{j=1}^n C_j M_j \right] Q_s$$

where:

E=Emission rate of TOC (minus methane and ethane) in the sample, kilograms per day.

$K_2$  = Constant,  $5.986 \times 10^{-5}$  (parts per million)<sup>-1</sup> (gram-mole per standard cubic meter) (kilogram per gram) (minute per day), where the standard temperature (standard cubic meter) is at 20 °C.

$C_j$ =Concentration on a dry basis of organic compound j in parts per million as measured by Method 18 of 40 CFR part 60, appendix A, as indicated in paragraph (f)(3) of this section.  $C_j$  includes all organic compounds measured minus methane and ethane.

$M_j$ =Molecular weight of organic compound j, gram per gram-mole.

$Q_s$ =Vent stream flow rate, dry standard cubic meters per minute, at a temperature of 20 °C.

(5) If Method 25A is used, the emission rate of TOC ( $E_{\text{TOC}}$ ) shall be calculated using the following equation: –

$$E_{\text{TOC}} = K_2 C_{\text{TOC}} M Q_s$$

where:

$E_{\text{TOC}}$ =Emission rate of TOC (minus methane and ethane) in the sample, kilograms per day.

$K_2$ =Constant,  $5.986 \times 10^{-5}$  (parts per million)<sup>-1</sup> (gram-mole per standard cubic meter) (kilogram per gram)(minute per day), where the standard temperature (standard cubic meter) is at 20 °C.

$C_{\text{TOC}}$ =Concentration of TOC on a dry basis in parts per million volume as measured by Method 25A of 40 CFR part 60, appendix A, as indicated in paragraph (f)(3) of this section.

M=Molecular weight of organic compound used to express units of  $C_{\text{TOC}}$ , gram per gram-mole.

$Q_s$ =Vent stream flow rate, dry standard cubic meters per minute, at a temperature of 20 °C.

(g) Engineering assessment may be used to determine the TOC emission rate for the representative operating condition expected to yield the highest daily emission rate.

(1) Engineering assessment includes, but is not limited to, the following:

(i) Previous test results provided the tests are representative of current operating practices at the process unit.

(ii) Bench-scale or pilot-scale test data representative of the process under representative operating conditions.

(iii) TOC emission rate specified or implied within a permit limit applicable to the process vent.

(iv) Design analysis based on accepted chemical engineering principles, measurable process parameters, or physical or chemical laws or properties. Examples of analytical methods include, but are not limited to:

(A) Use of material balances based on process stoichiometry to estimate maximum TOC concentrations;

(B) Estimation of maximum flow rate based on physical equipment design such as pump or blower capacities; and

(C) Estimation of TOC concentrations based on saturation conditions.

(v) All data, assumptions, and procedures used in the engineering assessment shall be documented.

(h) The owner or operator of a Group 2 process vent shall recalculate the TOC emission rate for each process vent, as necessary, whenever process changes are made to determine whether the vent is in Group 1 or Group 2. Examples of process changes include, but are not limited to, changes in production capacity, production rate, or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. For purposes of this paragraph, process changes do not include: process upsets; unintentional, temporary process changes; and changes that are within the range on which the original calculation was based.

(1) The TOC emission rate shall be recalculated based on measurements of vent stream flow rate and TOC as specified in paragraphs (e) and (f) of this section, as applicable, or on best engineering assessment of the effects of the change. Engineering assessments shall meet the specifications in paragraph (g) of this section.

(2) Where the recalculated TOC emission rate is greater than 33 kilograms per day for an existing source or greater than 6.8 kilograms per day for a new source, the owner or operator shall submit a report as specified in §63.654 (f), (g), or (h) and shall comply with the appropriate provisions in §63.643 by the dates specified in §63.640.

(i) A compliance determination for visible emissions shall be conducted within 150 days of the compliance date using Method 22 of 40 CFR part 60, appendix A, to determine visible emissions.

#### **§63.646 Storage vessel provisions.**

(a) Each owner or operator of a Group 1 storage vessel subject to this subpart shall comply with the requirements of §§63.119 through 63.121 except as provided in paragraphs (b) through (l) of this section.

(b) As used in this section, all terms not defined in §63.641 shall have the meaning given them in 40 CFR part 63, subparts A or G. The Group 1 storage vessel definition presented in §63.641 shall apply in lieu of the Group 1 storage vessel definitions presented in tables 5 and 6 of §63.119 of subpart G of this part.

(1) An owner or operator may use good engineering judgment or test results to determine the stored liquid weight percent total organic HAP for purposes of group determination. Data, assumptions, and procedures used in the determination shall be documented.

(2) When an owner or operator and the Administrator do not agree on whether the annual average weight percent organic HAP in the stored liquid is above or below 4 percent for a storage vessel at an existing source or above or below 2 percent for a storage vessel at a new source, Method 18 of 40 CFR part 60, appendix A shall be used.

(c) The following paragraphs do not apply to storage vessels at existing sources subject to this subpart: §63.119 (b)(5), (b)(6), (c)(2), and (d)(2).

(d) References shall apply as specified in paragraphs (d)(1) through (d)(10) of this section.

(1) All references to §63.100(k) of subpart F of this part (or the schedule provisions and the compliance date) shall be replaced with §63.640(h),

(2) All references to April 22, 1994 shall be replaced with August 18, 1995.

(3) All references to December 31, 1992 shall be replaced with July 15, 1994.

(4) All references to the compliance dates specified in §63.100 of subpart F shall be replaced with §63.640 (h) through (m).

(5) All references to §63.150 in §63.119 of subpart G of this part shall be replaced with §63.652.

(6) All references to §63.113(a)(2) of subpart G shall be replaced with §63.643(a)(2) of this subpart.

(7) All references to §63.126(b)(1) of subpart G shall be replaced with §63.422(b) of subpart R of this part.

(8) All references to §63.128(a) of subpart G shall be replaced with §63.425, paragraphs (a) through (c) and (e) through (h) of subpart R of this part.

(9) All references to §63.139(d)(1) in §63.120(d)(1)(ii) of subpart G are not applicable. For sources subject to this subpart, such references shall mean that 40 CFR 61.355 is applicable.

(10) All references to §63.139(c) in §63.120(d)(1)(ii) of subpart G are not applicable. For sources subject to this subpart, such references shall mean that §63.647 of this subpart is applicable.

(e) When complying with the inspection requirements of §63.120 of subpart G of this part, owners and operators of storage vessels at existing sources subject to this subpart are not required to comply with the provisions for gaskets, slotted membranes, and sleeve seals.

(f) The following paragraphs (f)(1), (f)(2), and (f)(3) of this section apply to Group 1 storage vessels at existing sources:

(1) If a cover or lid is installed on an opening on a floating roof, the cover or lid shall remain closed except when the cover or lid must be open for access.

(2) Rim space vents are to be set to open only when the floating roof is not floating or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.

(3) 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.

(g) Failure to perform inspections and monitoring required by this section shall constitute a violation of the applicable standard of this subpart.

(h) References in §§63.119 through 63.121 to §63.122(g)(1), §63.151, and references to initial notification requirements do not apply.

(i) References to the Implementation Plan in §63.120, paragraphs (d)(2) and (d)(3)(i) shall be replaced with the Notification of Compliance Status report.

(j) References to the Notification of Compliance Status report in §63.152(b) shall be replaced with §63.654(f).

(k) References to the Periodic Reports in §63.152(c) shall be replaced with §63.654(g).

(l) The State or local permitting authority can waive the notification requirements of §§63.120(a)(5), 63.120(a)(6), 63.120(b)(10)(ii), and 63.120(b)(10)(iii) for all or some storage vessels at petroleum refineries subject to this subpart. The State or local permitting authority may also grant permission to refill storage vessels sooner than 30 days after submitting the notifications in §§63.120(a)(6) or 63.120(b)(10)(iii) for all storage vessels at a refinery or for individual storage vessels on a case-by-case basis.

### **§63.647 Wastewater provisions.**

(a) Except as provided in paragraph (b) of this section, each owner or operator of a Group 1 wastewater stream shall comply with the requirements of §§61.340 through 61.355 of 40 CFR part 61, subpart FF for each process wastewater stream that meets the definition in §63.641.

(b) As used in this section, all terms not defined in §63.641 shall have the meaning given them in the Clean Air Act or in 40 CFR part 61, subpart FF, §61.341.

(c) Each owner or operator required under subpart FF of 40 CFR part 61 to perform periodic measurement of benzene concentration in wastewater, or to monitor process or control device operating parameters shall operate in a manner consistent with the minimum or maximum (as appropriate) permitted concentration or operating parameter values. Operation of the process, treatment unit, or control device resulting in a measured concentration or operating parameter value outside the permitted limits shall constitute a violation of the emission standards. Failure to perform required leak monitoring for closed vent systems and control devices or failure to repair leaks within the time period specified in subpart FF of 40 CFR part 61 shall constitute a violation of the standard.

### **§63.648 Equipment leak standards.**

(a) Each owner or operator of an existing source subject to the provisions of this subpart shall comply with the provisions of 40 CFR part 60 subpart VV and paragraph (b) of this section except as provided in paragraphs (a)(1), (a)(2), and (c) through (i) of this section. Each owner or operator of a new source subject to the provisions of this subpart shall comply with subpart H of this part except as provided in paragraphs (c) through (i) of this section.

(1) For purposes of compliance with this section, the provisions of 40 CFR part 60, subpart VV apply only to equipment in organic HAP service, as defined in §63.641 of this subpart.

(b) The use of monitoring data generated before August 18, 1995 to qualify for less frequent monitoring of valves and pumps as provided under 40 CFR part 60 subpart VV or subpart H of this part and paragraph (c) of this section (i.e., quarterly or semiannually) is governed by the requirements of paragraphs (b)(1) and (b)(2) of this section.

(1) Monitoring data must meet the test methods and procedures specified in §60.485(b) of 40 CFR part 60, subpart VV or §63.180(b)(1) through (b)(5) of subpart H of this part except for minor departures.

(2) Departures from the criteria specified in §60.485(b) of 40 CFR part 60 subpart VV or §63.180(b)(1) through (b)(5) of subpart H of this part or from the monitoring frequency specified in subpart VV or in paragraph (c) of this section (such as every 6 weeks instead of monthly or quarterly) are minor and do not significantly affect the quality of the data. An example of a minor departure is monitoring at a slightly different frequency (such as every 6 weeks instead of monthly or quarterly). Failure to use a calibrated instrument is not considered a minor departure.

(g) Compressors in hydrogen service are exempt from the requirements of paragraphs (a) and (c) of this section if an owner or operator demonstrates that a compressor is in hydrogen service.

(1) Each compressor is presumed not to be in hydrogen service unless an owner or operator demonstrates that the piece of equipment is in hydrogen service.

(2) For a piece of equipment to be considered in hydrogen service, it must be determined that the percentage hydrogen content can be reasonably expected always to exceed 50 percent by volume.

(i) For purposes of determining the percentage hydrogen content in the process fluid that is contained in or contacts a compressor, the owner or operator shall use either:

(A) Procedures that conform to those specified in §60.593(b)(2) of 40 part 60, subpart GGG.

(B) Engineering judgment to demonstrate that the percentage content exceeds 50 percent by volume, provided the engineering judgment demonstrates that the content clearly exceeds 50 percent by volume.

(1) When an owner or operator and the Administrator do not agree on whether a piece of equipment is in hydrogen service, the procedures in paragraph (g)(2)(i)(A) of this section shall be used to resolve the disagreement.

(2) If an owner or operator determines that a piece of equipment is in hydrogen service, the determination can be revised only by following the procedures in paragraph (g)(2)(i)(A) of this section.

(h) Each owner or operator of a source subject to the provisions of this subpart must maintain all records for a minimum of 5 years.

(i) Reciprocating compressors are exempt from seal requirements if recasting the distance piece or compressor replacement is required.

**§63.649 Alternative means of emission limitation: Connectors in gas/vapor service and light liquid service.**

(e) Delay of repair of connectors for which leaks have been detected is allowed if repair is not technically feasible by normal repair techniques without a process unit shutdown. Repair of this equipment shall occur by the end of the next process unit shutdown.

(1) Delay of repair is allowed for equipment that is isolated from the process and that does not remain in organic HAP service.

(2) Delay of repair for connectors is also allowed if:

(i) The owner or operator determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair, and

(ii) When repair procedures are accomplished, the purged material would be collected and destroyed or recovered in a control device.

**§63.650 Gasoline loading rack provisions.**

(a) Except as provided in paragraphs (b) through (c) of this section, each owner or operator of a gasoline loading rack classified under Standard Industrial Classification code 2911 located within a contiguous area and under common control with a petroleum refinery shall comply with subpart R, §§63.421, 63.422 (a) through (c), 63.425 (a) through (c), 63.425 (e) through (h), 63.427 (a) and (b), and 63.428 (b), (c), (g)(1), and (h)(1) through (h)(3).

(b) As used in this section, all terms not defined in §63.641 shall have the meaning given them in subpart A or in 40 CFR part 63, subpart R. The §63.641 definition of “affected source” applies under this section.

(c) Gasoline loading racks regulated under this subpart are subject to the compliance dates specified in §63.640(h).

**§63.651 Marine tank vessel loading operation provisions.**

(a) Except as provided in paragraphs (b) through (d) of this section, each owner or operator of a marine tank vessel loading operation located at a petroleum refinery shall comply with the requirements of §§63.560 through 63.567.

(b) As used in this section, all terms not defined in §63.641 shall have the meaning given them in subpart A or in 40 CFR part 63, subpart Y. The §63.641 definition of “affected source” applies under this section.

(c) The Initial Notification Report under §63.567(b) is not required.

(d) The compliance time of 4 years after promulgation of 40 CFR part 63, subpart Y does not apply. The compliance time is specified in §63.640(h)(3).

#### **§63.654 Reporting and recordkeeping requirements.**

(a) Each owner or operator subject to the wastewater provisions in §63.647 shall comply with the recordkeeping and reporting provisions in §§61.356 and 61.357 of 40 CFR part 61, subpart FF unless they are complying with the wastewater provisions specified in paragraph (o)(2)(ii) of §63.640. There are no additional reporting and recordkeeping requirements for wastewater under this subpart unless a wastewater stream is included in an emissions average. Recordkeeping and reporting for emissions averages are specified in §63.653 and in paragraphs (f)(5) and (g)(8) of this section.

(b) Each owner or operator subject to the gasoline loading rack provisions in §63.650 shall comply with the recordkeeping and reporting provisions in §63.428 (b) and (c), (g)(1), and (h)(1) through (h)(3) of subpart R of this part. These requirements are summarized in table 4 of this subpart. There are no additional reporting and recordkeeping requirements for gasoline loading racks under this subpart unless a loading rack is included in an emissions average. Recordkeeping and reporting for emissions averages are specified in §63.653 and in paragraphs (f)(5) and (g)(8) of this section.

(c) Each owner or operator subject to the marine tank vessel loading operation standards in §63.651 shall comply with the recordkeeping and reporting provisions in §§63.566 and 63.567(a) and §63.567 (c) through (i) of subpart Y of this part. These requirements are summarized in table 5 of this subpart. There are no additional reporting and recordkeeping requirements for marine tank vessel loading operations under this subpart unless marine tank vessel loading operations are included in an emissions average. Recordkeeping and reporting for emissions averages are specified in §63.653 and in paragraphs (f)(5) and (g)(8) of this section.

(d) Each owner or operator subject to the equipment leaks standards in §63.648 shall comply with the recordkeeping and reporting provisions in paragraphs (d)(1) through (d)(6) of this section.

(1) Sections 60.486 and 60.487 of subpart VV of part 60 except as specified in paragraph (d)(1)(i) of this section; or §§63.181 and 63.182 of subpart H of this part except for §§63.182(b), (c)(2), and (c)(4).

(i) The signature of the owner or operator (or designate) whose decision it was that a repair could not be effected without a process shutdown is not required to be recorded. Instead, the name of the person whose decision it was that a repair could not be effected without a process shutdown shall be recorded and retained for 2 years.

(2) The Notification of Compliance Status report required by §63.182(c) of subpart H and the initial semiannual report required by §60.487(b) of 40 CFR part 60, subpart VV shall be submitted within 150 days of the compliance date specified in §63.640(h); the requirements of subpart H of this part are summarized in table 3 of this subpart.

(3) An owner or operator who determines that a compressor qualifies for the hydrogen service exemption in §63.648 shall also keep a record of the demonstration required by §63.648.

(4) An owner or operator must keep a list of identification numbers for valves that are designated as leakless per §63.648(c)(10).

(5) An owner or operator must identify, either by list or location (area or refining process unit), equipment in organic HAP service less than 300 hours per year within refining process units subject to this subpart.

(6) An owner or operator must keep a list of reciprocating pumps and compressors determined to be exempt from seal requirements as per §§63.648 (f) and (i).

(e) Each owner or operator of a source subject to this subpart shall submit the reports listed in paragraphs (e)(1) through (e)(3) of this section except as provided in paragraph (h)(5) of this section, and shall keep records as described in paragraph (i) of this section.

(1) A Notification of Compliance Status report as described in paragraph (f) of this section;

(2) Periodic Reports as described in paragraph (g) of this section; and

(3) Other reports as described in paragraph (h) of this section.

(f) Each owner or operator of a source subject to this subpart shall submit a Notification of Compliance Status report within 150 days after the compliance dates specified in §63.640(h) with the exception of Notification of Compliance Status reports submitted to comply with §63.640(l)(3) and for storage vessels subject to the compliance schedule specified in §63.640(h)(4). Notification of Compliance Status reports required by §63.640(l)(3) and for storage vessels subject to the compliance dates specified in §63.640(h)(4) shall be submitted according to paragraph (f)(6) of this section. This information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination of the three. If the required information has been submitted before the date 150 days after the compliance date specified in §63.640(h), a separate Notification of Compliance Status report is not required within 150 days after the compliance dates specified in §63.640(h). If an owner or operator submits the information specified in paragraphs (f)(1) through (f)(5) of this section at different times, and/or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the previously submitted information. Each owner or operator of a gasoline loading rack classified under Standard Industrial Classification Code 2911 located within a contiguous area and under common control with a petroleum refinery subject to the standards of this subpart shall submit the Notification of Compliance Status report required by subpart R of this part within 150 days after the compliance dates specified in §63.640(h) of this subpart.

(1) The Notification of Compliance Status report shall include the information specified in paragraphs (f)(1)(i) through (f)(1)(v) of this section.

(i) For storage vessels, this report shall include the information specified in paragraphs (f)(1)(i)(A) through (f)(1)(i)(D) of this section.

(A) Identification of each storage vessel subject to this subpart, and for each Group 1 storage vessel subject to this subpart, the information specified in paragraphs (f)(1)(i)(A)(1) through (f)(1)(i)(A)(3) of this section. This information is to be revised each time a Notification of Compliance Status report is submitted for a storage vessel subject to the compliance schedule specified in §63.640(h)(4) or to comply with §63.640(l)(3).

(1) For each Group 1 storage vessel complying with §63.646 that is not included in an emissions average, the method of compliance (i.e., internal floating roof, external floating roof, or closed vent system and control device).

(2) For storage vessels subject to the compliance schedule specified in §63.640(h)(4) that are not complying with §63.646, the anticipated compliance date.

(3) For storage vessels subject to the compliance schedule specified in §63.640(h)(4) that are complying with §63.646 and the Group 1 storage vessels described in §63.640(l), the actual compliance date.

(B) If a closed vent system and a control device other than a flare is used to comply with §63.646 the owner or operator shall submit:

(1) A description of the parameter or parameters to be monitored to ensure that the control device is being properly operated and maintained, an explanation of the criteria used for selection of that parameter (or parameters), and the frequency with which monitoring will be performed; and either

(2) The design evaluation documentation specified in §63.120(d)(1)(i) of subpart G, if the owner or operator elects to prepare a design evaluation; or

(3) If the owner or operator elects to submit the results of a performance test, identification of the storage vessel and control device for which the performance test will be submitted, and identification of the

emission point(s) that share the control device with the storage vessel and for which the performance test will be conducted.

(C) If a closed vent system and control device other than a flare is used, the owner or operator shall submit:

(1) The operating range for each monitoring parameter. The specified operating range shall represent the conditions for which the control device is being properly operated and maintained.

(2) If a performance test is conducted instead of a design evaluation, results of the performance test demonstrating that the control device achieves greater than or equal to the required control efficiency. A performance test conducted prior to the compliance date of this subpart can be used to comply with this requirement, provided that the test was conducted using EPA methods and that the test conditions are representative of current operating practices.

(D) If a closed vent system and a flare is used, the owner or operator shall submit:

(1) Flare design (e.g., steam-assisted, air-assisted, or nonassisted);

(2) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determination required by §63.120(e) of subpart G of this part; and

(3) All periods during the compliance determination when the pilot flame is absent.

(ii) For miscellaneous process vents, identification of each miscellaneous process vent subject to this subpart, whether the process vent is Group 1 or Group 2, and the method of compliance for each Group 1 miscellaneous process vent that is not included in an emissions average (e.g., use of a flare or other control device meeting the requirements of §63.643(a)).

(iii) For miscellaneous process vents controlled by control devices required to be tested under §63.645 of this subpart and §63.116(c) of subpart G of this part, performance test results including the information in paragraphs (f)(1)(iii)(A) and (B) of this section. Results of a performance test conducted prior to the compliance date of this subpart can be used provided that the test was conducted using the methods specified in §63.645 and that the test conditions are representative of current operating conditions.

(A) The percentage of reduction of organic HAP's or TOC, or the outlet concentration of organic HAP's or TOC (parts per million by volume on a dry basis corrected to 3 percent oxygen), determined as specified in §63.116(c) of subpart G of this part; and

(B) The value of the monitored parameters specified in table 10 of this subpart, or a site-specific parameter approved by the permitting authority, averaged over the full period of the performance test,

(iv) For miscellaneous process vents controlled by flares, performance test results including the information in paragraphs (f)(1)(iv)(A) and (B) of this section;

(A) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determination required by §63.645 of this subpart and §63.116(a) of subpart G of this part, and

(B) A statement of whether a flame was present at the pilot light over the full period of the compliance determination.

(v) For equipment leaks complying with §63.648(c) (i.e., complying with the requirements of subpart H of this part), the Notification of Compliance Report Status report information required by §63.182(c) of subpart H and whether the percentage of leaking valves will be reported on a process unit basis or a sourcewide basis.

(2) If initial performance tests are required by §§63.643 through 63.653 of this subpart, the Notification of Compliance Status report shall include one complete test report for each test method used for a particular source.

(i) For additional tests performed using the same method, the results specified in paragraph (f)(1) of this section shall be submitted, but a complete test report is not required.

(ii) A complete test report shall include a sampling site description, description of sampling and analysis procedures and any modifications to standard procedures, quality assurance procedures, record of operating conditions during the test, record of preparation of standards, record of calibrations, raw data sheets for field sampling, raw data sheets for field and laboratory analyses, documentation of calculations, and any other information required by the test method.

(iii) Performance tests are required only if specified by §§63.643 through 63.653 of this subpart. Initial performance tests are required for some kinds of emission points and controls. Periodic testing of the same emission point is not required.

(3) For each monitored parameter for which a range is required to be established under §63.120(d) of subpart G of this part for storage vessels or §63.644 for miscellaneous process vents, the Notification of Compliance Status report shall include the information in paragraphs (f)(3)(i) through (f)(3)(iii) of this section.

(i) The specific range of the monitored parameter(s) for each emission point;

(ii) The rationale for the specific range for each parameter for each emission point, including any data and calculations used to develop the range and a description of why the range ensures compliance with the emission standard.

(A) If a performance test is required by this subpart for a control device, the range shall be based on the parameter values measured during the performance test supplemented by engineering assessments and manufacturer's recommendations. Performance testing is not required to be conducted over the entire range of permitted parameter values.

(B) If a performance test is not required by this subpart for a control device, the range may be based solely on engineering assessments and manufacturers' recommendations.

(iii) A definition of the source's operating day for purposes of determining daily average values of monitored parameters. The definition shall specify the times at which an operating day begins and ends.

(4) Results of any continuous monitoring system performance evaluations shall be included in the Notification of Compliance Status report.

(5) For emission points included in an emissions average, the Notification of Compliance Status report shall include the values of the parameters needed for input to the emission credit and debit equations in §63.652(g) and (h), calculated or measured according to the procedures in §63.652(g) and (h), and the resulting credits and debits for the first quarter of the year. The first quarter begins on the compliance date specified in §63.640.

(6) Notification of Compliance Status reports required by §63.640(l)(3) and for storage vessels subject to the compliance dates specified in §63.640(h)(4) shall be submitted no later than 60 days after the end of the 6-month period during which the change or addition was made that resulted in the Group 1 emission point or the existing Group 1 storage vessel was brought into compliance, and may be combined with the periodic report. Six-month periods shall be the same 6-month periods specified in paragraph (g) of this section. The Notification of Compliance Status report shall include the information specified in paragraphs (f)(1) through (f)(5) of this section. This information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, as part of the periodic report, or in any combination of these four. If the required information has been submitted before the date 60 days after the end of the 6-month period in which the addition of the Group 1 emission point took place, a

separate Notification of Compliance Status report is not required within 60 days after the end of the 6-month period. If an owner or operator submits the information specified in paragraphs (f)(1) through (f)(5) of this section at different times, and/or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the previously submitted information.

(g) The owner or operator of a source subject to this subpart shall submit Periodic Reports no later than 60 days after the end of each 6-month period when any of the compliance exceptions specified in paragraphs (g)(1) through (g)(6) of this section occur. The first 6-month period shall begin on the date the Notification of Compliance Status report is required to be submitted. A Periodic Report is not required if none of the compliance exceptions specified in paragraphs (g)(1) through (g)(6) of this section occurred during the 6-month period unless emissions averaging is utilized. Quarterly reports must be submitted for emission points included in emissions averages, as provided in paragraph (g)(8) of this section. An owner or operator may submit reports required by other regulations in place of or as part of the Periodic Report required by this paragraph if the reports contain the information required by paragraphs (g)(1) through (g)(8) of this section.

(1) For storage vessels, Periodic Reports shall include the information specified for Periodic Reports in paragraph (g)(2) through (g)(5) of this section except that information related to gaskets, slotted membranes, and sleeve seals is not required for storage vessels that are part of an existing source.

(2) An owner or operator who elects to comply with §63.646 by using a fixed roof and an internal floating roof or by using an external floating roof converted to an internal floating roof shall submit the results of each inspection conducted in accordance with §63.120(a) of subpart G of this part in which a failure is detected in the control equipment.

(i) For vessels for which annual inspections are required under §63.120(a)(2)(i) or (a)(3)(ii) of subpart G of this part, the specifications and requirements listed in paragraphs (g)(2)(i)(A) through (g)(2)(i)(C) of this section apply.

(A) A failure is defined as any time in which the internal floating roof is not resting on the surface of the liquid inside the storage vessel and is not resting on the leg supports; or there is liquid on the floating roof; or the seal is detached from the internal floating roof; or there are holes, tears, or other openings in the seal or seal fabric; or there are visible gaps between the seal and the wall of the storage vessel.

(B) Except as provided in paragraph (g)(2)(i)(C) of this section, each Periodic Report shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also describe the nature of and date the repair was made or the date the storage vessel was emptied.

(C) If an extension is utilized in accordance with §63.120(a)(4) of subpart G of this part, the owner or operator shall, in the next Periodic Report, identify the vessel; include the documentation specified in §63.120(a)(4) of subpart G of this part; and describe the date the storage vessel was emptied and the nature of and date the repair was made.

(ii) For vessels for which inspections are required under §63.120(a)(2)(ii), (a)(3)(i), or (a)(3)(iii) of subpart G of this part (i.e., internal inspections), the specifications and requirements listed in paragraphs (g)(2)(ii)(A) and (g)(2)(ii)(B) of this section apply.

(A) A failure is defined as any time in which the internal floating roof has defects; or the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal (if one has been installed) has holes, tears, or other openings in the seal or the seal fabric; or, for a storage vessel that is part of a new source, the gaskets no longer close off the liquid surface from the atmosphere; or, for a storage vessel that is part of a new source, the slotted membrane has more than a 10 percent open area.

(B) Each Periodic Report shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also describe the nature of and date the repair was made.

(3) An owner or operator who elects to comply with §63.646 by using an external floating roof shall meet the periodic reporting requirements specified in paragraphs (g)(3)(i) through (g)(3)(iii) of this section.

(i) The owner or operator shall submit, as part of the Periodic Report, documentation of the results of each seal gap measurement made in accordance with §63.120(b) of subpart G of this part in which the seal and seal gap requirements of §63.120(b)(3), (b)(4), (b)(5), or (b)(6) of subpart G of this part are not met. This documentation shall include the information specified in paragraphs (g)(3)(i)(A) through (g)(3)(i)(D) of this section.

(A) The date of the seal gap measurement.

(B) The raw data obtained in the seal gap measurement and the calculations described in §63.120(b)(3) and (b)(4) of subpart G of this part.

(C) A description of any seal condition specified in §63.120(b)(5) or (b)(6) of subpart G of this part that is not met.

(D) A description of the nature of and date the repair was made, or the date the storage vessel was emptied.

(ii) If an extension is utilized in accordance with §63.120(b)(7)(ii) or (b)(8) of subpart G of this part, the owner or operator shall, in the next Periodic Report, identify the vessel; include the documentation specified in §63.120(b)(7)(ii) or (b)(8) of subpart G of this part, as applicable; and describe the date the vessel was emptied and the nature of and date the repair was made.

(iii) The owner or operator shall submit, as part of the Periodic Report, documentation of any failures that are identified during visual inspections required by §63.120(b)(10) of subpart G of this part. This documentation shall meet the specifications and requirements in paragraphs (g)(3)(iii)(A) and (g)(3)(iii)(B) of this section.

(A) A failure is defined as any time in which the external floating roof has defects; or the primary seal has holes or other openings in the seal or the seal fabric; or the secondary seal has holes, tears, or other openings in the seal or the seal fabric; or, for a storage vessel that is part of a new source, the gaskets no longer close off the liquid surface from the atmosphere; or, for a storage vessel that is part of a new source, the slotted membrane has more than 10 percent open area.

(B) Each Periodic Report shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also describe the nature of and date the repair was made.

(4) An owner or operator who elects to comply with §63.646 by using an external floating roof converted to an internal floating roof shall comply with the periodic reporting requirements of paragraph (g)(2) of this section.

(5) An owner or operator who elects to comply with §63.646 by installing a closed vent system and control device shall submit, as part of the next Periodic Report, the information specified in paragraphs (g)(5)(i) through (g)(5)(iii) of this section.

(i) The Periodic Report shall include the information specified in paragraphs (g)(5)(i)(A) and (g)(5)(i)(B) of this section for those planned routine maintenance operations that would require the control device not to meet the requirements of §63.119(e)(1) or (e)(2) of subpart G of this part, as applicable.

(A) A description of the planned routine maintenance that is anticipated to be performed for the control device during the next 6 months. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.

(B) A description of the planned routine maintenance that was performed for the control device during the previous 6 months. This description shall include the type of maintenance performed and the total number

of hours during those 6 months that the control device did not meet the requirements of §63.119 (e)(1) or (e)(2) of subpart G of this part, as applicable, due to planned routine maintenance.

(ii) If a control device other than a flare is used, the Periodic Report shall describe each occurrence when the monitored parameters were outside of the parameter ranges documented in the Notification of Compliance Status report. The description shall include: Identification of the control device for which the measured parameters were outside of the established ranges, and causes for the measured parameters to be outside of the established ranges.

(iii) If a flare is used, the Periodic Report shall describe each occurrence when the flare does not meet the general control device requirements specified in §63.11(b) of subpart A of this part and shall include: Identification of the flare that does not meet the general requirements specified in §63.11(b) of subpart A of this part, and reasons the flare did not meet the general requirements specified in §63.11(b) of subpart A of this part.

(6) For miscellaneous process vents for which continuous parameter monitors are required by this subpart, periods of excess emissions shall be identified in the Periodic Reports and shall be used to determine compliance with the emission standards.

(i) Period of excess emission means any of the following conditions:

(A) An operating day when the daily average value of a monitored parameter, except presence of a flare pilot flame, is outside the range specified in the Notification of Compliance Status report. Monitoring data recorded during periods of monitoring system breakdown, repairs, calibration checks and zero (low-level) and high-level adjustments shall not be used in computing daily average values of monitored parameters.

(B) An operating day when all pilot flames of a flare are absent.

(C) An operating day when monitoring data required to be recorded in paragraphs (i)(3) (i) and (ii) of this section are available for less than 75 percent of the operating hours.

(D) For data compression systems approved under paragraph (h)(5)(iii) of this section, an operating day when the monitor operated for less than 75 percent of the operating hours or a day when less than 18 monitoring values were recorded.

(ii) For miscellaneous process vents, excess emissions shall be reported for the operating parameters specified in table 10 of this subpart unless other site-specific parameter(s) have been approved by the operating permit authority.

(iii) Periods of startup and shutdown that meet the definition of §63.641, and malfunction that meet the definition in §63.2 and periods of performance testing and monitoring system calibration shall not be considered periods of excess emissions. Malfunctions may include process unit, control device, or monitoring system malfunctions.

(7) If a performance test for determination of compliance for a new emission point subject to this subpart or for an emission point that has changed from Group 2 to Group 1 is conducted during the period covered by a Periodic Report, the results of the performance test shall be included in the Periodic Report.

(i) Results of the performance test shall include the percentage of emissions reduction or outlet pollutant concentration reduction (whichever is needed to determine compliance) and the values of the monitored operating parameters.

(ii) The complete test report shall be maintained onsite.

(8) The owner or operator of a source shall submit quarterly reports for all emission points included in an emissions average.

(i) The quarterly reports shall be submitted no later than 60 calendar days after the end of each quarter. The first report shall be submitted with the Notification of Compliance Status report no later than 150 days after the compliance date specified in §63.640.

(ii) The quarterly reports shall include:

(A) The information specified in this paragraph and in paragraphs (g)(2) through (g)(7) of this section for all storage vessels and miscellaneous process vents included in an emissions average;

(B) The information required to be reported by §63.428 (h)(1), (h)(2), and (h)(3) for each gasoline loading rack included in an emissions average, unless this information has already been submitted in a separate report;

(C) The information required to be included in quarterly reports by §§63.567(f) and 63.567(i)(2) of subpart Y of this part for each marine tank vessel loading operation included in an emissions average, unless the information has already been submitted in a separate report;

(D) Any information pertaining to each wastewater stream included in an emissions average that the source is required to report under the Implementation Plan for the source;

(E) The credits and debits calculated each month during the quarter;

(F) A demonstration that debits calculated for the quarter are not more than 1.30 times the credits calculated for the quarter, as required under §§63.652(e)(4);

(G) The values of any inputs to the credit and debit equations in §63.652 (g) and (h) that change from month to month during the quarter or that have changed since the previous quarter; and

(H) Any other information the source is required to report under the Implementation Plan for the source.

(iii) Every fourth quarterly report shall include the following:

(A) A demonstration that annual credits are greater than or equal to annual debits as required by §63.652(e)(3); and

(B) A certification of compliance with all the emissions averaging provisions in §63.652 of this subpart.

(h) Other reports shall be submitted as specified in subpart A of this part and as follows:

(1) Reports of startup, shutdown, and malfunction required by §63.10(d)(5). Records and reports of startup, shutdown, and malfunction are not required if they pertain solely to Group 2 emission points, as defined in §63.641, that are not included in an emissions average. For purposes of this paragraph, startup and shutdown shall have the meaning defined in §63.641, and malfunction shall have the meaning defined in §63.2; and

(2) For storage vessels, notifications of inspections as specified in paragraphs (h)(2)(i) and (h)(2)(ii) of this section;

(i) In order to afford the Administrator the opportunity to have an observer present, the owner or operator shall notify the Administrator of the refilling of each Group 1 storage vessel that has been emptied and degassed.

(A) Except as provided in paragraphs (h)(2)(i) (B) and (C) of this section, the owner or operator shall notify the Administrator in writing at least 30 calendar days prior to filling or refilling of each storage vessel with organic HAP's to afford the Administrator the opportunity to inspect the storage vessel prior to refilling.

(B) Except as provided in paragraph (h)(2)(i)(C) of this section, if the internal inspection required by §§63.120(a)(2), 63.120(a)(3), or 63.120(b)(10) of subpart G of this part is not planned and the owner or operator could not have known about the inspection 30 calendar days in advance of refilling the vessel

with organic HAP's, the owner or operator shall notify the Administrator at least 7 calendar days prior to refilling of the storage vessel. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. This notification, including the written documentation, may also be made in writing and sent so that it is received by the Administrator at least 7 calendar days prior to the refilling.

(C) The State or local permitting authority can waive the notification requirements of paragraphs (h)(2)(i)(A) and/or (h)(2)(i)(B) of this section for all or some storage vessels at petroleum refineries subject to this subpart. The State or local permitting authority may also grant permission to refill storage vessels sooner than 30 days after submitting the notification required by paragraph (h)(2)(i)(A) of this section, or sooner than 7 days after submitting the notification required by paragraph (h)(2)(i)(B) of this section for all storage vessels, or for individual storage vessels on a case-by-case basis.

(ii) In order to afford the Administrator the opportunity to have an observer present, the owner or operator of a storage vessel equipped with an external floating roof shall notify the Administrator of any seal gap measurements. The notification shall be made in writing at least 30 calendar days in advance of any gap measurements required by §63.120 (b)(1) or (b)(2) of subpart G of this part. The State or local permitting authority can waive this notification requirement for all or some storage vessels subject to the rule or can allow less than 30 calendar days' notice.

(3) For owners or operators of sources required to request approval for a nominal control efficiency for use in calculating credits for an emissions average, the information specified in §63.652(h).

(4) The owner or operator who requests approval to monitor a different parameter than those listed in §63.644 for miscellaneous process vents or who is required by §63.653(a)(8) to establish a site-specific monitoring parameter for a point in an emissions average shall submit the information specified in paragraphs (h)(4)(i) through (h)(4)(iii) of this section. For new or reconstructed sources, the information shall be submitted with the application for approval of construction or reconstruction required by §63.5(d) of subpart A and for existing sources, and the information shall be submitted no later than 18 months prior to the compliance date. The information may be submitted in an operating permit application, in an amendment to an operating permit application, or in a separate submittal.

(i) A description of the parameter(s) to be monitored to determine whether excess emissions occur and an explanation of the criteria used to select the parameter(s).

(ii) A description of the methods and procedures that will be used to demonstrate that the parameter can be used to determine excess emissions and the schedule for this demonstration. The owner or operator must certify that they will establish a range for the monitored parameter as part of the Notification of Compliance Status report required in paragraphs (e) and (f) of this section.

(iii) The frequency and content of monitoring, recording, and reporting if: monitoring and recording are not continuous; or if periods of excess emissions, as defined in paragraph (g)(6) of this section, will not be identified in Periodic Reports required under paragraphs (e) and (g) of this section. The rationale for the proposed monitoring, recording, and reporting system shall be included.

(5) An owner or operator may request approval to use alternatives to the continuous operating parameter monitoring and recordkeeping provisions listed in paragraph (i) of this section.

(i) Requests shall be submitted with the Application for Approval of Construction or Reconstruction for new sources and no later than 18 months prior to the compliance date for existing sources. The information may be submitted in an operating permit application, in an amendment to an operating permit application, or in a separate submittal. Requests shall contain the information specified in paragraphs (h)(5)(iii) through (h)(5)(iv) of this section, as applicable.

(ii) The provisions in §63.8(f)(5)(i) of subpart A of this part shall govern the review and approval of requests.

(iii) An owner or operator may request approval to use an automated data compression recording system that does not record monitored operating parameter values at a set frequency (for example, once every hour) but records all values that meet set criteria for variation from previously recorded values.

(A) The requested system shall be designed to:

(1) Measure the operating parameter value at least once every hour.

(2) Record at least 24 values each day during periods of operation.

(3) Record the date and time when monitors are turned off or on.

(4) Recognize unchanging data that may indicate the monitor is not functioning properly, alert the operator, and record the incident.

(5) Compute daily average values of the monitored operating parameter based on recorded data.

(B) The request shall contain a description of the monitoring system and data compression recording system including the criteria used to determine which monitored values are recorded and retained, the method for calculating daily averages, and a demonstration that the system meets all criteria of paragraph (h)(5)(iii)(A) of this section.

(iv) An owner or operator may request approval to use other alternative monitoring systems according to the procedures specified in §63.8(f) of subpart A of this part.

(6) The owner or operator shall submit the information specified in paragraphs (h)(6)(i) through (h)(6)(iii) of this section, as applicable. For existing sources, this information shall be submitted in the initial Notification of Compliance Status report. For a new source, the information shall be submitted with the application for approval of construction or reconstruction required by §63.5(d) of subpart A of this part. The information may be submitted in an operating permit application, in an amendment to an operating permit application, or in a separate submittal.

(i) The determination of applicability of this subpart to petroleum refining process units that are designed and operated as flexible operation units.

(ii) The determination of applicability of this subpart to any storage vessel for which use varies from year to year.

(iii) The determination of applicability of this subpart to any distillation unit for which use varies from year to year.

(i) *Recordkeeping.* (1) Each owner or operator subject to the storage vessel provisions in §63.646 shall keep the records specified in §63.123 of subpart G of this part except as specified in paragraphs (i)(1)(i) through (i)(1)(iv) of this section.

(i) Records related to gaskets, slotted membranes, and sleeve seals are not required for storage vessels within existing sources.

(ii) All references to §63.122 in §63.123 of subpart G of this part shall be replaced with §63.654(e),

(iii) All references to §63.150 in §63.123 of subpart G of this part shall be replaced with §63.652.

(iv) If a storage vessel is determined to be Group 2 because the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent for existing sources or 2 percent for new sources, a record of any data, assumptions, and procedures used to make this determination shall be retained.

(2) Each owner or operator required to report the results of performance tests under paragraphs (f) and (g)(7) of this section shall retain a record of all reported results as well as a complete test report, as described in paragraph (f)(2)(ii) of this section for each emission point tested.

(3) Each owner or operator required to continuously monitor operating parameters under §63.644 for miscellaneous process vents or under §§63.652 and 63.653 for emission points in an emissions average shall keep the records specified in paragraphs (i)(3)(i) through (i)(3)(v) of this section unless an alternative recordkeeping system has been requested and approved under paragraph (h) of this section.

(i) The monitoring system shall measure data values at least once every hour.

(ii) The owner or operator shall record either:

(A) Each measured data value; or

(B) Block average values for 1 hour or shorter periods calculated from all measured data values during each period. If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the hourly (or shorter period) block average instead of all measured values.

(iii) Daily average values of each continuously monitored parameter shall be calculated for each operating day and retained for 5 years except as specified in paragraph (i)(3)(iv) of this section.

(A) The daily average shall be calculated as the average of all values for a monitored parameter recorded during the operating day. The average shall cover a 24-hour period if operation is continuous, or the number of hours of operation per day if operation is not continuous.

(B) The operating day shall be the period defined in the Notification of Compliance Status report. It may be from midnight to midnight or another daily period.

(iv) If all recorded values for a monitored parameter during an operating day are within the range established in the Notification of Compliance Status report, the owner or operator may record that all values were within the range and retain this record for 5 years rather than calculating and recording a daily average for that day. For these days, the records required in paragraph (i)(3)(ii) of this section shall also be retained for 5 years.

(v) Monitoring data recorded during periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments shall not be included in any average computed under this subpart. Records shall be kept of the times and durations of all such periods and any other periods during process or control device operation when monitors are not operating.

(4) All other information required to be reported under paragraphs (a) through (h) of this section shall be retained for 5 years.

#### **§ 63.655 Implementation and enforcement.**

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or Tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the requirements in §§63.640, 63.642(g) through (l), 63.643, and 63.646 through 63.652. Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart. Where these standards reference another subpart and modify the requirements, the requirements shall be modified as described in this

subpart. Delegation of the modified requirements will also occur according to the delegation provisions of the referenced subpart.

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart.

(3) Approval of major alternatives to monitoring under §63.8(f), as defined in §63.90, and as required in this subpart.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.

| Chemical name   | CAS No.<br>a\ |
|---|---------------|
| Benzene   | 71432         |
| Biphenyl  | 92524         |
| Butadiene (1,3)   | 10990         |
| Carbon disulfide  | 75150         |
| Carbonyl sulfide  | 463581        |
| Cresol (mixed isomers b\)   | 1319773       |
| Cresol (m-)   | 108394        |
| Cresol (o-)   | 95487         |
| Cresol (p-)   | 106445        |
| Cumene  | 98828         |
| Dibromoethane (1,2) (ethylene dibromide)  | 106934        |
| Dichloroethane (1,2)  | 107062        |
| Diethanolamine  | 111422        |
| Ethylbenzene  | 100414        |
| Ethylene glycol   | 107211        |
| Hexane  | 110543        |
| Methanol  | 67561         |
| Methyl ethyl ketone (2-butanone)  | 78933         |
| Methyl isobutyl ketone (hexone)   | 108101        |
| Methyl tert butyl ether   | 1634044       |
| Naphthalene   | 91203         |
| Phenol  | 108952        |
| Toluene   | 108883        |
| Trimethylpentane (2,2,4)  | 540841        |
| Xylene (mixed isomers b\)   | 1330207       |
| xylene (m-)   | 108383        |
| xylene (o-)   | 95476         |
| xylene (p-)   | 106423        |
| a\ CAS number = Chemical Abstract Service registry number assigned to specific compounds, isomers, or mixtures of compounds.<br>b\ Isomer means all structural arrangements for the same number of atoms of each element and does not mean salts, esters, or derivatives. |               |

| Table 4 Gasoline Distribution Emission Point Recordkeeping and Reporting Requirements \a\   |  |   |
|---|--|---|
| Reference<br>(section of subpart R of this part)  | Description  | Comment   |
| 63.428(b)   | Records of test results for each gasoline cargo tank loaded at the facility. |   |
| 63.428(c)   | Continuous monitoring data recordkeeping requirements.                       |   |
| 63.428(g)(1)  | Semiannual report loading rack information.                                  | Required to be submitted with the periodic report required under 40 CFR part 63 subpart CC. |
| 63.428 (h)(1) through (h)(3)  | Excess emissions report loading rack information.                            | Required to be submitted with the periodic report required under 40 CFR part 63 subpart CC. |
| a This table does not include all the requirements delineated under the referenced sections. See referenced sections for specific requirements. |  |   |

| Table 5 Marine Vessel Loading and Unloading Operations Recordkeeping and Reporting Requirements \a\   |  |   |
|---|--|---|
| Reference<br>(section of subpart Y of this part)  | Description  | Comment   |
| 63.565(a)   | Performance test/site test plan.                           | The information required under this paragraph is to be submitted with the notification of compliance status report required under 40 CFR part 63, subpart CC. |
| 63.565(b)   | Performance test data requirements                         |   |
| 63.567(a)   | General Provisions (subpart A) applicability               |   |
| 63.567(c)   | Vent system valve bypass recordkeeping requirements        |   |
| 63.567(d)   | Continuous equipment monitoring recordkeeping requirements |   |
| 63.567(e)   | Flare recordkeeping requirements                           |   |
| 63.567(f)   | Quarterly report requirements                              | The information required under this paragraph is to be submitted with the periodic report required under 40 CFR part 63 subpart CC.                           |
| 63.567(g)   | Marine vessel vapor-tightness documentation                |   |
| 63.567(h)   | Documentation file maintenance                             |   |
| 63.567(i)   | Emission estimation reporting and recordkeeping procedures |   |
| a This table does not include all the requirements delineated under the referenced sections. See referenced sections for specific requirements. |  |   |

| Table 6 General Provisions Applicability to Subpart CC \a\ |                       |  |
|--|-----------------------|--|
| Reference  | Applies to subpart CC | Comment  |
| 63.1(a)(1)   | Yes                   |  |
| 63.1(a)(2)   | Yes                   |  |
| 63.1(a)(3)   | Yes                   |  |
| 63.1(a)(4)   | No                    | Subpart CC (this table) specifies applicability of each paragraph in subpart A to subpart CC.  |
| 63.1(a)(5)-63.1(a)(9)                                      | No                    |  |
| 63.1(a)(10)  | No                    | Subpart CC and other cross-referenced subparts specify calendar or operating day.  |
| 63.1(a)(11)  | Yes                   |  |
| 63.1(a)(12)  | Yes                   |  |
| 63.1(a)(13)  | Yes                   |  |
| 63.1(a)(14)  | Yes                   |  |
| 63.1(b)(1)   | No                    | Subpart CC specifies its own applicability.  |
| 63.1(b)(2)   | Yes                   |  |
| 63.1(b)(3)   | No                    |  |
| 63.1(c)(1)   | No                    | Subpart CC explicitly specifies requirements that apply.   |
| 63.1(c)(2)   | No                    | Area sources are not subject to subpart CC.  |
| 63.1(c)(3)   | No                    |  |
| 63.1(c)(4)   | Yes                   |  |
| 63.1(c)(5)   | Yes                   | Except that sources are not required to submit notifications overridden by this table.   |
| 63.1(d)  | No                    |  |
| 63.1(e)  | No                    |  |
| 63.2   | Yes                   | § 63.641 of subpart CC specifies that if the same term is defined in subparts A and CC, it shall have the meaning given in subpart CC.   |
| 63.3   | No                    | Units of measure are spelled out in subpart CC.  |
| 63.4(a)(1)-63.4(a)(3)                                      | Yes                   |  |
| 63.4(a)(4)   | No                    | Reserved.  |
| 63.4(a)(5)   | Yes                   |  |
| 63.4(b)  | Yes                   |  |
| 63.4(c)  | Yes                   |  |
| 63.5(a)(1)   | Yes                   | Except replace term "source" and "stationary source" in § 63.5(a)(1) of subpart A with "affected source."  |
| 63.5(a)(2)   | Yes                   |  |
| 63.5(b)(1)   | Yes                   |  |
| 63.5(b)(2)   | No                    | Reserved.  |
| 63.5(b)(3)   | Yes                   |  |
| 63.5(b)(4)   | Yes                   | Except the cross- reference to § 63.9(b) is changed to § 63.9(b) (4) and (5). Subpart CC overrides § 63.9 (b)(2) and (b)(3).   |
| 63.5(b)(5)   | Yes                   |  |
| 63.5(b)(6)   | Yes                   |  |
| 63.5(c)  | No                    | Reserved.  |
| 63.5(d)(1)(i)  | Yes                   | Except that the application shall be submitted as soon as practicable before startup but no later than 90 days (rather than 60 days) after the promulgation date of subpart CC if the construction or reconstruction had commenced and initial startup had not occurred before the promulgation of subpart CC. |
| 63.5(d)(1)(ii)   | Yes                   | Except that for affected sources subject to subpart CC, emission estimates specified in § 63.5(d)(1)(ii)(H) are not required.  |
| 63.5(d)(1)(iii)  | No                    | Subpart CC requires submittal of the notification of compliance status report in § 63.654(e).  |
| 63.5(d)(2)   | No                    |  |

| Table 6 General Provisions Applicability to Subpart CC \a\ |                       |   |
|--|-----------------------|---|
| Reference  | Applies to subpart CC | Comment   |
| 63.5(d)(3)   | Yes                   | Except § 63.5(d)(3)(ii) does not apply.   |
| 63.5(d)(4)   | Yes                   |   |
| 63.5(e)  | Yes                   |   |
| 63.5(f)(1)   | Yes                   |   |
| 63.5(f)(2)   | Yes                   | Except that the "60 days" in the cross- referenced § 63.5(d)(1) is changed to "90 days," and the cross-reference to (b)(2) does not apply.  |
| 63.6(a)  | Yes                   |   |
| 63.6(b)(1)   | No                    | Subpart CC specifies compliance dates for sources subject to subpart CC.  |
| 63.6(b)(2)   | No                    |   |
| 63.6(b)(3)   | Yes                   |   |
| 63.6(b)(4)   | No                    | May apply when standards are proposed under section 112(f) of the Clean Air Act.  |
| 63.6(b)(5)   | No                    | § 63.654(d) of subpart CC includes notification requirements.   |
| 63.6(b)(6)   | No                    |   |
| 63.6(b)(7)   | No                    |   |
| 63.6(c)(1)   | No                    | § 63.640 of subpart CC specifies the compliance date.   |
| 63.6(c)(2)-63.6(c)(4)                                      | No                    |   |
| 63.6(c)(5)   | Yes                   |   |
| 63.6(d)  | No                    |   |
| 63.6(e)  | Yes                   | Does not apply to Group 2 emission points. \b\ The startup, shutdown, and malfunction plan specified in § 63.6(e)(3) is not required for wastewater operations that are not subject to subpart G of this part.<br><br>Except that actions taken during a startup, shutdown, or malfunction that are not consistent with the startup, shutdown, and malfunction plan do not need to be reported within 2 and 7 days of commencing and completing the action, respectively, but must be included in the next periodic report. |
| 63.6(f)(1)   | Yes                   |   |
| 63.6(f)(2)(i)  | Yes                   |   |
| 63.6(f)(2)(ii)   | Yes                   | Subpart CC specifies the use of monitoring data in determining compliance with subpart CC.  |
| 63.6(f)(2)(iii) (A), (B), and (C)                          | Yes                   |   |
| 63.6(f)(2)(iii)(D)   | No                    |   |
| 63.6(f)(2)(iv)   | Yes                   |   |
| 63.6(f)(2)(v)  | Yes                   |   |
| 63.6(f)(3)   | Yes                   |   |
| 63.6(g)  | Yes                   |   |
| 63.6(h) (1) and (2)  | Yes                   |   |
| 63.6(h) (4) and (5)  | No                    | Visible emission requirements and timing in subpart CC.   |
| 63.6(h)(6)   | Yes                   |   |
| 63.6(h) (7) through (9)                                    | No                    | Subpart CC does not require opacity standards.  |
| 63.6(i)  | Yes                   | Except for § 63.6(i)(15), which is reserved.  |
| 63.6(j)  | Yes                   |   |
| 63.7(a)(1)   | No                    | Subpart CC specifies required testing and compliance demonstration procedures.  |

| Table 6 General Provisions Applicability to Subpart CC \a\ |                       |  |
|--|-----------------------|--|
| Reference  | Applies to subpart CC | Comment  |
| 63.7(a)(2)   | No                    | Test results must be submitted in the notification of compliance status report due 150 days after compliance date, as specified in § 63.654(d) of subpart CC.  |
| 63.7(a)(3)   | Yes                   |  |
| 63.7(b)  | No                    |  |
| 63.7(c)  | No                    |  |
| 63.7(d)  | Yes                   |  |
| 63.7(e)(1)   | Yes                   |  |
| 63.7(e)(2)   | Yes                   |  |
| 63.7(e)(3)   | No                    | Subpart CC specifies test methods and procedures.  |
| 63.7(e)(4)   | Yes                   |  |
| 63.7(f)  | No                    | Subpart CC specifies applicable methods and provides alternatives.   |
| 63.7(g)  | No                    | Performance test reporting specified in § 63.654(d).   |
| 63.7(h)(1)   | Yes                   |  |
| 63.7(h)(2)   | Yes                   |  |
| 63.7(h)(3)   | Yes                   | Yes, except site- specific test plans shall not be required, and where § 63.7(g)(3) specifies submittal by the date the site- specific test plan is due, the date shall be 90 days prior to the notification of compliance status report in § 63.654(d).   |
| 63.7(h)(4)   | No                    |  |
| 63.7(h)(5)   | Yes                   |  |
| 63.8(a)  | No                    |  |
| 63.8(b)(1)   | Yes                   |  |
| 63.8(b)(2)   | No                    | Subpart CC specifies locations to conduct monitoring.  |
| 63.8(b)(3)   | Yes                   |  |
| 63.8(c)(1)(i)  | Yes                   |  |
| 63.8(c)(1)(ii)   | No                    | Addressed by periodic reports in § 63.654(e) of subpart CC.  |
| 63.8(c)(1)(iii)  | Yes                   |  |
| 63.8(c)(2)   | Yes                   |  |
| 63.8(c)(3)   | Yes                   | Except that verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system or other written procedures that provide adequate assurance that the equipment would monitor accurately. |
| 63.8(c)(4)   | No                    | Subpart CC specifies monitoring frequency in § 63.641 and § 63.654(g)(3) of subpart CC.  |
| 63.8(c)(5)-63.8(c)(8)                                      | No                    |  |
| 63.8(d)  | No                    |  |
| 63.8(e)  | No                    |  |
| 63.8(f)(1)   | Yes                   |  |
| 63.8(f)(2)   | Yes                   |  |
| 63.8(f)(3)   | Yes                   |  |
| 63.8(f)(4)(i)  | No                    | Timeframe for submitting request is specified in § 63.654(f)(4) of subpart CC.   |
| 63.8(f)(4)(ii)   | Yes                   |  |
| 63.8(f)(4)(iii)  | No                    |  |
| 63.8(f)(5)(i)  | Yes                   |  |
| 63.8(f)(5)(ii)   | No                    |  |
| 63.8(f)(5)(iii)  | Yes                   |  |
| 63.8(f)(6)   | No                    | Subpart CC does not require continuous emission monitors.  |
| 63.8(g)  | No                    | Subpart CC specifies data reduction procedures in § 63.654(h)(3).  |

| Table 6 General Provisions Applicability to Subpart CC \a\   |                       |   |
|--|-----------------------|---|
| Reference  | Applies to subpart CC | Comment   |
| 63.9(a)  | Yes                   | Except that the owner or operator does not need to send a copy of each notification submitted to the Regional Office of the EPA as stated in § 63.9(a)(4)(ii).  |
| 63.9(b)(1)(i)  | No                    | Specified in § 63.654(d)(2) of subpart CC.  |
| 63.9(b)(1)(ii)   | No                    |   |
| 63.9(b)(2)   | No                    | An initial notification report is not required under subpart CC.  |
| 63.9(b)(3)   | No                    |   |
| 63.9(b)(4)   | Yes                   | Except that the notification in § 63.9(b)(4)(i) shall be submitted at the time specified in § 63.654(d)(2) of subpart CC.   |
| 63.9(b)(5)   | Yes                   | Except that the notification in § 63.9(b)(5) shall be submitted at the time specified in § 63.654(d)(2) of subpart CC.  |
| 63.9(c)  | Yes                   |   |
| 63.9(d)  | Yes                   |   |
| 63.9(e)  | No                    |   |
| 63.9(f)  | No                    |   |
| 63.9(g)  | No                    |   |
| 63.9(h)  | No                    | Subpart CC § 63.652(d) specifies notification of compliance status report requirements.   |
| 63.9(i)  | Yes                   |   |
| 63.9(j)  | No                    |   |
| 63.10(a)   | Yes                   |   |
| 63.10(b)(1)  | No                    | § 63.644(d) of subpart CC specifies record retention requirements.  |
| 63.10(b)(2)(i)   | Yes                   |   |
| 63.10(b)(2)(ii)  | Yes                   |   |
| 63.10(b)(2)(iii)   | No                    |   |
| 63.10(b)(2)(iv)  | Yes                   |   |
| 63.10(b)(2)(v)   | Yes                   |   |
| 63.10(b)(2)(vi)-(ix)   | No                    |   |
| 63.10(b)(2)(x)   | Yes                   |   |
| 63.10(b)(2)(xii)-(xiv)   | No                    |   |
| 63.10(b)(3)  | No                    |   |
| 63.10(c)   | No                    |   |
| 63.10(d)(1)  | No                    |   |
| 63.10(d)(2)  | No                    | § 63.654(d) of subpart CC specifies performance test reporting.   |
| 63.10(d)(3)  | No                    |   |
| 63.10(d)(4)  | Yes                   |   |
| 63.10(d)(5)(i)   | Yes \b\               | Except that reports required by § 63.10(d)(5)(i) may be submitted at the same time as periodic reports specified in § 63.654(e) of subpart CC.  |
| 63.10(d)(5)(ii)  | Yes                   | Except that actions taken during a startup, shutdown, or malfunction that are not consistent with the startup, shutdown, and malfunction plan do not need to be reported within 2 and 7 days of commencing and completing the action, respectively, but must be included in the next periodic report. |
| 63.10(e)   | No                    |   |
| 63.10(f)   | Yes                   |   |
| 63.11-63.15  | Yes                   |   |
| \a\ Wherever subpart A specifies "postmark" dates, submittals may be sent by methods other than the U.S. Mail (e.g., by fax or courier). Submittals shall be sent by the specified dates, but a postmark is not required.<br>\b\ The plan, and any records or reports of startup, shutdown, and malfunction do not apply to Group 2 emission points. |                       |   |

E.1.3 Deadlines Relating to National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries [40 CFR Part 63, Subpart CC]

The Permittee shall comply with the below requirements by the dates listed for storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17, and TK-3570, which are considered part of an existing affected source.

| Requirement  | Rule Citations   | Applicable To                            | Deadline   |
|--|--|--|--|
| Notification of Compliance Status report for emission points that are added or changed | 40 CFR 63.640(l)(3)<br>40 CFR 63.654(f)(1)(i)(A)<br>40 CFR 63.9(h) | New Group 2 Storage Tanks <sup>(1)</sup> | Submitted in the next Notification of Compliance Status for the existing affected source (after startup of the new Group 2 storage tanks)<br><br>or<br><br>Submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination of the three |

(1) Group 2 storage tanks include storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17, and TK-3570.

## **SECTION E.4 40 CFR Part 60, Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry**

### **E.4.1 NSPS Subpart VV Requirements [40 CFR Part 60, Subpart VV] [326 IAC 12]**

Pursuant to 40 CFR 60.590 and 63.648, the Permittee shall comply with the applicable provisions of 40 CFR Part 60, Subpart VV for all affected pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves and lines, valves, connectors, and closed vent systems as specified below:

#### **Subpart VV—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry**

##### **§60.482-1 Standards: General.**

(a) Each owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of §§60.482–1 through 60.482–10 or §60.480(e) for all equipment within 180 days of initial startup.

(b) Compliance with §§60.482–1 to 60.482–10 will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in §60.485.

(c)(1) An owner or operator may request a determination of equivalence of a means of emission limitation to the requirements of §§60.482–2, 60.482–3, 60.482–5, 60.482–6, 60.482–7, 60.482–8, and 60.482–10 as provided in §60.484.

(2) If the Administrator makes a determination that a means of emission limitation is at least equivalent to the requirements of §§60.482–2, 60.482–3, 60.482–5, 60.482–6, 60.482–7, 60.482–8, or 60.482–10, an owner or operator shall comply with the requirements of that determination.

(d) Equipment that is in vacuum service is excluded from the requirements of §§60.482–2 to 60.482–10 if it is identified as required in §60.486(e)(5).

##### **§60.482-2 Standards: Pumps in light liquid service.**

(a)(1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in §60.485(b), except as provided in §60.482–1(c) and paragraphs (d), (e), and (f) of this section.

(2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

(b)(1) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(2) If there are indications of liquids dripping from the pump seal, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482–9.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (a), Provided the following requirements are met:

(1) Each dual mechanical seal system is—

(i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or

(ii) Equipment with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of §60.482–10; or

(iii) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(2) The barrier fluid system is in heavy liquid service or is not in VOC service.

(3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4) Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

(5)(i) Each sensor as described in paragraph (d)(3) is checked daily or is equipped with an audible alarm, and

(ii) The owner or operator determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(6)(i) If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined in paragraph (d)(5)(ii), a leak is detected.

(ii) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482–9.

(iii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) Any pump that is designated, as described in §60.486(e)(1) and (2), for no detectable emission, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a), (c), and (d) of this section if the pump:

(1) Has no externally actuated shaft penetrating the pump housing,

(2) Is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in §60.485(c), and

(3) Is tested for compliance with paragraph (e)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

(f) If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of §60.482–10, it is exempt from paragraphs (a) through (e) of this section.

(g) Any pump that is designated, as described in §60.486(f)(1), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of paragraphs (a) and (d)(4) through (6) of this section if:

(1) The owner or operator of the pump demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a) of this section; and

(2) The owner or operator of the pump has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in paragraph (c) of this section if a leak is detected.

### **§60.482-3 Standards: Compressors.**

(a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in §60.482–1(c) and paragraph (h) and (i) of this section.

(b) Each compressor seal system as required in paragraph (a) shall be:

(1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or

(2) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of §60.482–10; or

(3) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(c) The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.

(d) Each barrier fluid system as described in paragraph (a) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e)(1) Each sensor as required in paragraph (d) shall be checked daily or shall be equipped with an audible alarm.

(2) The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(f) If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under paragraph (e)(2), a leak is detected.

(g)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482–9.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(h) A compressor is exempt from the requirements of paragraphs (a) and (b) of this section, if it is equipped with a closed vent system to capture and transport leakage from the compressor drive shaft back to a process or fuel gas system or to a control device that complies with the requirements of §60.482–10, except as provided in paragraph (i) of this section.

(i) Any compressor that is designated, as described in §60.486(e) (1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a)–(h) if the compressor:

(1) Is demonstrated to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the methods specified in §60.485(c); and

(2) Is tested for compliance with paragraph (i)(1) of this section initially upon designation, annually, and at other times requested by the Administrator.

(j) Any existing reciprocating compressor in a process unit which becomes an affected facility under provisions of §60.14 or §60.15 is exempt from §60.482(a), (b), (c), (d), (e), and (h), provided the owner or operator demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of paragraphs (a) through (e) and (h) of this section.

**§60.482-4 Standards: Pressure relief devices in gas/vapor service.**

(a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in §60.485(c).

(b)(1) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in §60.482-9.

(2) No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in §60.485(c).

(c) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in §60.482-10 is exempted from the requirements of paragraphs (a) and (b) of this section.

(d)(1) Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of paragraphs (a) and (b) of this section, provided the owner or operator complies with the requirements in paragraph (d)(2) of this section.

(2) After each pressure release, a new rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §60.482-9.

**§60.482-5 Standards: Sampling connection systems.**

(a) Each sampling connection system shall be equipped with a closed-purged, closed-loop, or closed-vent system, except as provided in §60.482-1(c). Gases displaced during filling of the sample container are not required to be collected or captured.

(b) Each closed-purge, closed-loop, or closed-vent system as required in paragraph (a) of this section shall comply with the requirements specified in paragraphs (b)(1) through (4) of this section:

(1) Return the purged process fluid directly to the process line; or

(2) Collect and recycle the purged process fluid to a process; or

(3) Be designed and operated to capture and transport all the purged process fluid to a control device that complies with the requirements of §60.482-10; or

(4) Collect, store, and transport the purged process fluid to any of the following systems or facilities:

(i) A waste management unit as defined in 40 CFR 63.111, if the waste management unit is subject to, and operated in compliance with the provisions of 40 CFR part 63, subpart G, applicable to Group 1 wastewater streams;

(ii) A treatment, storage, or disposal facility subject to regulation under 40 CFR part 262, 264, 265, or 266; or

(iii) A facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261.

(c) In situ sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (a) and (b) of this section.

**§60.482-6 Standards: Open-ended valves or lines.**

- (a)(1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §60.482-1(c).
- (2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.
- (b) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.
- (c) When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (a) at all other times.
- (d) Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (a), (b) and (c) of this section.
- (e) Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraphs (a) through (c) of this section are exempt from the requirements of paragraphs (a) through (c) of this section.

**§60.482-7 Standards: Valves in gas/vapor service and in light liquid service.**

- (a) Each valve shall be monitored monthly to detect leaks by the methods specified in §60.485(b) and shall comply with paragraphs (b) through (e), except as provided in paragraphs (f), (g), and (h), §60.483-1, 2, and §60.482-1(c).
- (b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
- (c)(1) Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected.
- (2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.
- (d)(1) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in §60.482-9.
- (2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
- (e) First attempts at repair include, but are not limited to, the following best practices where practicable:
- (1) Tightening of bonnet bolts;
  - (2) Replacement of bonnet bolts;
  - (3) Tightening of packing gland nuts;
  - (4) Injection of lubricant into lubricated packing.
- (f) Any valve that is designated, as described in §60.486(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraph (a) if the valve:
- (1) Has no external actuating mechanism in contact with the process fluid,

(2) Is operated with emissions less than 500 ppm above background as determined by the method specified in §60.485(c), and

(3) Is tested for compliance with paragraph (f)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

(g) Any valve that is designated, as described in §60.486(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of paragraph (a) if:

(1) The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a), and

(2) The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

(h) Any valve that is designated, as described in §60.486(f)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph (a) if:

(1) The owner or operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.

(2) The process unit within which the valve is located either becomes an affected facility through §60.14 or §60.15 or the owner or operator designates less than 3.0 percent of the total number of valves as difficult-to-monitor, and

(3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

**§60.482-8 Standards: Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors.**

(a) If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors, the owner or operator shall follow either one of the following procedures:

(1) The owner or operator shall monitor the equipment within 5 days by the method specified in §60.485(b) and shall comply with the requirements of paragraphs (b) through (d) of this section.

(2) The owner or operator shall eliminate the visual, audible, olfactory, or other indication of a potential leak.

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482-9.

(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) First attempts at repair include, but are not limited to, the best practices described under §60.482-7(e).

**§60.482-9 Standards: Delay of repair.**

(a) Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.

(b) Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.

(c) Delay of repair for valves will be allowed if:

(1) The owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and

(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §60.482–10.

(d) Delay of repair for pumps will be allowed if:

(1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and

(2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

(e) Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

**§60.482-10 Standards: Closed vent systems and control devices.**

(a) Owners or operators of closed vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section.

(c) Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 °C.

(d) Flares used to comply with this subpart shall comply with the requirements of §60.18.

(e) Owners or operators of control devices used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs.

(f) Except as provided in paragraphs (i) through (k) of this section, each closed vent system shall be inspected according to the procedures and schedule specified in paragraphs (f)(1) and (f)(2) of this section.

(1) If the vapor collection system or closed vent system is constructed of hard-piping, the owner or operator shall comply with the requirements specified in paragraphs (f)(1)(i) and (f)(1)(ii) of this section:

(i) Conduct an initial inspection according to the procedures in §60.485(b); and

(ii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

(g) Leaks, as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections, shall be repaired as soon as practicable except as provided in paragraph (h) of this section.

(1) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(2) Repair shall be completed no later than 15 calendar days after the leak is detected.

(h) Delay of repair of a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown.

(j) Any parts of the closed vent system that are designated, as described in paragraph (l)(1) of this section, as unsafe to inspect are exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section if they comply with the requirements specified in paragraphs (j)(1) and (j)(2) of this section:

(1) The owner or operator determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraphs (f)(1)(i) or (f)(2) of this section; and

(2) The owner or operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

(k) Any parts of the closed vent system that are designated, as described in paragraph (l)(2) of this section, as difficult to inspect are exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section if they comply with the requirements specified in paragraphs (k)(1) through (k)(3) of this section:

(1) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

(2) The process unit within which the closed vent system is located becomes an affected facility through §§60.14 or 60.15, or the owner or operator designates less than 3.0 percent of the total number of closed vent system equipment as difficult to inspect; and

(3) The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years. A closed vent system is exempt from inspection if it is operated under a vacuum.

(l) The owner or operator shall record the information specified in paragraphs (l)(1) through (l)(5) of this section.

(1) Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.

(2) Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.

(3) For each inspection during which a leak is detected, a record of the information specified in §60.486(c).

(5) For each visual inspection conducted in accordance with paragraph (f)(1)(ii) of this section during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(m) Closed vent systems and control devices used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

#### **§60.485 Test methods and procedures.**

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).

(b) The owner or operator shall determine compliance with the standards in §§60.482, 60.483, and 60.484 as follows:

(1) Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21. The following calibration gases shall be used:

(i) Zero air (less than 10 ppm of hydrocarbon in air); and

(ii) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane.

(c) The owner or operator shall determine compliance with the no detectable emission standards in §§60.482-2(e), 60.482-3(i), 60.482-4, 60.482-7(f), and 60.482-10(e) as follows:

(1) The requirements of paragraph (b) shall apply.

(2) Method 21 shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

(d) The owner or operator shall test each piece of equipment unless he demonstrates that a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10 percent by weight. For purposes of this demonstration, the following methods and procedures shall be used:

(1) Procedures that conform to the general methods in ASTM E260-73, 91, or 96, E168-67, 77, or 92, E169-63, 77, or 93 (incorporated by reference—see §60.17) shall be used to determine the percent VOC content in the process fluid that is contained in or contacts a piece of equipment.

(2) Organic compounds that are considered by the Administrator to have negligible photochemical reactivity may be excluded from the total quantity of organic compounds in determining the VOC content of the process fluid.

(3) Engineering judgment may be used to estimate the VOC content, if a piece of equipment had not been shown previously to be in service. If the Administrator disagrees with the judgment, paragraphs (d) (1) and (2) of this section shall be used to resolve the disagreement.

(e) The owner or operator shall demonstrate that an equipment is in light liquid service by showing that all the following conditions apply:

(1) The vapor pressure of one or more of the components is greater than 0.3 kPa at 20 °C (1.2 in. H<sub>2</sub>O at 68 °F). Standard reference texts or ASTM D2879-83, 96, or 97 (incorporated by reference—see §60.17) shall be used to determine the vapor pressures.

(2) The total concentration of the pure components having a vapor pressure greater than 0.3 kPa at 20 °C (1.2 in. H<sub>2</sub>O at 68 °F) is equal to or greater than 20 percent by weight.

(3) The fluid is a liquid at operating conditions.

(f) Samples used in conjunction with paragraphs (d), (e), and (g) of this section shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.

(g) The owner or operator shall determine compliance with the standards of flares as follows:

(1) Method 22 shall be used to determine visible emissions.

(2) A thermocouple or any other equivalent device shall be used to monitor the presence of a pilot flame in the flare.

(3) The maximum permitted velocity for air assisted flares shall be computed using the following equation:

$$V_{\max} = K_1 + K_2 H_T$$

Where:

$V_{\max}$  = Maximum permitted velocity, m/sec (ft/sec)

$H_T$  = Net heating value of the gas being combusted, MJ/scm (Btu/scf).

$K_1$  = 8.706 m/sec (metric units)

= 28.56 ft/sec (English units)

$K_2$  = 0.7084 m<sup>4</sup>/(MJ-sec) (metric units)

= 0.087 ft<sup>4</sup>/(Btu-sec) (English units)

(4) The net heating value ( $H_T$ ) of the gas being combusted in a flare shall be computed using the following equation:

$$H_T = K \sum_{i=1}^n C_i H_i$$

Where:

$K$  = Conversion constant,  $1.740 \times 10^{-7}$  (g-mole)(MJ)/ (ppm-scm-kcal) (metric units)

=  $4.674 \times 10^{-8}$  [(g-mole)(Btu)/(ppm-scf-kcal)] (English units)

$C_i$  = Concentration of sample component “i,” ppm

$H_i$  = net heat of combustion of sample component “i” at 25 °C and 760 mm Hg (77 °F and 14.7 psi), kcal/g-mole

(5) Method 18 and ASTM D2504–67, 77, or 88 (Reapproved 1993) (incorporated by reference—see §60.17) shall be used to determine the concentration of sample component “i.”

(6) ASTM D2382–76 or 88 or D4809–95 (incorporated by reference—see §60.17) shall be used to determine the net heat of combustion of component “i” if published values are not available or cannot be calculated.

(7) Method 2, 2A, 2C, or 2D, as appropriate, shall be used to determine the actual exit velocity of a flare. If needed, the unobstructed (free) cross-sectional area of the flare tip shall be used.

#### **§60.486 Recordkeeping requirements.**

(a)(1) Each owner or operator subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section.

(2) An owner or operator of more than one affected facility subject to the provisions of this subpart may comply with the recordkeeping requirements for these facilities in one recordkeeping system if the system identifies each record by each facility.

(b) When each leak is detected as specified in §§60.482–2, 60.482–3, 60.482–7, 60.482–8, and 60.483–2, the following requirements apply:

(1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

(2) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in §60.482–7(c) and no leak has been detected during those 2 months.

(3) The identification on equipment except on a valve, may be removed after it has been repaired.

(c) When each leak is detected as specified in §§60.482–2, 60.482–3, 60.482–7, 60.482–8, and 60.483–2, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:

(1) The instrument and operator identification numbers and the equipment identification number.

(2) The date the leak was detected and the dates of each attempt to repair the leak.

(3) Repair methods applied in each attempt to repair the leak.

(4) “Above 10,000” if the maximum instrument reading measured by the methods specified in §60.485(a) after each repair attempt is equal to or greater than 10,000 ppm.

(5) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(6) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.

(7) The expected date of successful repair of the leak if a leak is not repaired within 15 days.

(8) Dates of process unit shutdowns that occur while the equipment is unrepaired.

(9) The date of successful repair of the leak.

(d) The following information pertaining to the design requirements for closed vent systems and control devices described in §60.482–10 shall be recorded and kept in a readily accessible location:

(1) Detailed schematics, design specifications, and piping and instrumentation diagrams.

(2) The dates and descriptions of any changes in the design specifications.

(3) A description of the parameter or parameters monitored, as required in §60.482–10(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(4) Periods when the closed vent systems and control devices required in §§60.482–2, 60.482–3, 60.482–4, and 60.482–5 are not operated as designed, including periods when a flare pilot light does not have a flame.

(5) Dates of startups and shutdowns of the closed vent systems and control devices required in §§60.482–2, 60.482–3, 60.482–4, and 60.482–5.

(e) The following information pertaining to all equipment subject to the requirements in §§60.482–1 to 60.482–10 shall be recorded in a log that is kept in a readily accessible location:

(1) A list of identification numbers for equipment subject to the requirements of this subpart.

(2)(i) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of §§60.482–2(e), 60.482–3(i) and 60.482–7(f).

(ii) The designation of equipment as subject to the requirements of §60.482–2(e), §60.482–3(i), or §60.482–7(f) shall be signed by the owner or operator.

(3) A list of equipment identification numbers for pressure relief devices required to comply with §60.482–4.

(4)(i) The dates of each compliance test as required in §§60.482–2(e), 60.482–3(i), 60.482–4, and 60.482–7(f).

- (ii) The background level measured during each compliance test.
- (iii) The maximum instrument reading measured at the equipment during each compliance test.
- (5) A list of identification numbers for equipment in vacuum service.
- (f) The following information pertaining to all valves subject to the requirements of §60.482–7(g) and (h) and to all pumps subject to the requirements of §60.482–2(g) shall be recorded in a log that is kept in a readily accessible location:
  - (1) A list of identification numbers for valves and pumps that are designated as unsafe-to-monitor, an explanation for each valve or pump stating why the valve or pump is unsafe-to-monitor, and the plan for monitoring each valve or pump.
  - (2) A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve.
- (g) The following information shall be recorded for valves complying with §60.483–2:
  - (1) A schedule of monitoring.
  - (2) The percent of valves found leaking during each monitoring period.
- (h) The following information shall be recorded in a log that is kept in a readily accessible location:
  - (1) Design criterion required in §§60.482–2(d)(5) and 60.482–3(e)(2) and explanation of the design criterion; and
  - (2) Any changes to this criterion and the reasons for the changes.
- (j) Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location.
- (k) The provisions of §60.7 (b) and (d) do not apply to affected facilities subject to this subpart.

#### **§60.487 Reporting requirements.**

- (a) Each owner or operator subject to the provisions of this subpart shall submit semiannual reports to the Administrator beginning six months after the initial startup date.
- (b) The initial semiannual report to the Administrator shall include the following information:
  - (1) Process unit identification.
  - (2) Number of valves subject to the requirements of §60.482–7, excluding those valves designated for no detectable emissions under the provisions of §60.482–7(f).
  - (3) Number of pumps subject to the requirements of §60.482–2, excluding those pumps designated for no detectable emissions under the provisions of §60.482–2(e) and those pumps complying with §60.482–2(f).
  - (4) Number of compressors subject to the requirements of §60.482–3, excluding those compressors designated for no detectable emissions under the provisions of §60.482–3(i) and those compressors complying with §60.482–3(h).
- (c) All semiannual reports to the Administrator shall include the following information, summarized from the information in §60.486:
  - (1) Process unit identification.
  - (2) For each month during the semiannual reporting period,

- (i) Number of valves for which leaks were detected as described in §60.482(7)(b) or §60.483–2,
  - (ii) Number of valves for which leaks were not repaired as required in §60.482–7(d)(1),
  - (iii) Number of pumps for which leaks were detected as described in §60.482–2(b) and (d)(6)(i),
  - (iv) Number of pumps for which leaks were not repaired as required in §60.482–2(c)(1) and (d)(6)(ii),
  - (v) Number of compressors for which leaks were detected as described in §60.482–3(f),
  - (vi) Number of compressors for which leaks were not repaired as required in §60.482–3(g)(1), and
  - (vii) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.
- (3) Dates of process unit shutdowns which occurred within the semiannual reporting period.
- (4) Revisions to items reported according to paragraph (b) if changes have occurred since the initial report or subsequent revisions to the initial report.
- (f) The requirements of paragraphs (a) through (c) of this section remain in force until and unless EPA, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected sources within the State will be relieved of the obligation to comply with the requirements of paragraphs (a) through (c) of this section, provided that they comply with the requirements established by the State.

#### **§60.488 Reconstruction.**

For the purposes of this subpart:

- (a) The cost of the following frequently replaced components of the facility shall not be considered in calculating either the “fixed capital cost of the new components” or the “fixed capital costs that would be required to construct a comparable new facility” under §60.15: pump seals, nuts and bolts, rupture disks, and packings.
- (b) Under §60.15, the “fixed capital cost of new components” includes the fixed capital cost of all depreciable components (except components specified in §60.488 (a)) which are or will be replaced pursuant to all continuous programs of component replacement which are commenced within any 2-year period following the applicability date for the appropriate subpart. (See the “Applicability and designation of affected facility” section of the appropriate subpart.) For purposes of this paragraph, “commenced” means that an owner or operator has undertaken a continuous program of component replacement or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of component replacement.

## **SECTION E.13 40 CFR Part 60, Subpart GGG – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries**

### E.13.1 General Provisions Relating to NSPS Subpart GGG [326 IAC 12] [40 CFR Part 60, Subpart A]

Pursuant to 40 CFR Part 60.1(a), the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for each compressor, valve, pump, pressure relief device, sampling connection system, open-ended valve or line, and flange or other connector in VOC service, except when otherwise specified in 40 CFR Part 60, Subpart GGG.

### E.13.2 NSPS Requirements for Subpart GGG [326 IAC 12] [40 CFR Part 60, Subpart GGG]

Pursuant to 40 CFR 60.590, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart GGG, which are incorporated by reference as 326 IAC 12, for the emission units listed in Condition E.13.1, as specified below:

## **Subpart GGG—Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries**

### **§60.590 Applicability and designation of affected facility.**

- (a)(1) The provisions of this subpart apply to affected facilities in petroleum refineries.
- (2) A compressor is an affected facility.
- (3) The group of all the equipment (defined in §60.591) within a process unit is an affected facility.
- (b) Any affected facility under paragraph (a) of this section that commences construction or modification after January 4, 1983, is subject to the requirements of this subpart.
- (c) Addition or replacement of equipment (defined in §60.591) for the purpose of process improvement which is accomplished without a capital expenditure shall not by itself be considered a modification under this subpart.
- (d) Facilities subject to subpart VV or subpart KKK of 40 CFR part 60 are excluded from this subpart.

### **§ 60.591 Definitions.**

As used in this subpart, all terms not defined herein shall have the meaning given them in the act, in subpart A of part 60, or in subpart VV of part 60, and the following terms shall have the specific meanings given them.

*Alaskan North Slope* means the approximately 69,000 square mile area extending from the Brooks Range to the Arctic Ocean.

*Equipment* means each valve, pump, pressure relief device, sampling connection system, open-ended valve or line, and flange or other connector in VOC service. For the purposes of recordkeeping and reporting only, compressors are considered equipment.

*In hydrogen service* means that a compressor contains a process fluid that meets the conditions specified in §60.593(b).

*In light liquid service* means that the piece of equipment contains a liquid that meets the conditions specified in §60.593(c).

*Petroleum* means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.

*Petroleum refinery* means any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through the distillation of petroleum, or through the redistillation, cracking, or reforming of unfinished petroleum derivatives.

*Process unit* means components assembled to produce intermediate or final products from petroleum, unfinished petroleum derivatives, or other intermediates; a process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product.

#### **§60.592 Standards.**

(a) Each owner or operator subject to the provisions of this subpart shall comply with the requirements of §§60.482–1 to 60.482–10 as soon as practicable, but no later than 180 days after initial startup.

(b) An owner or operator may elect to comply with the requirements of §§60.483–1 and 60.483–2.

(c) An owner or operator may apply to the Administrator for a determination of equivalency for any means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to the reduction in emissions of VOC achieved by the controls required in this subpart. In doing so, the owner or operator shall comply with requirements of §60.484.

(d) Each owner or operator subject to the provisions of this subpart shall comply with the provisions of §60.485 except as provided in §60.593.

(e) Each owner or operator subject to the provisions of this subpart shall comply with the provisions of §§60.486 and 60.487.

#### **§60.593 Exceptions.**

(a) Each owner or operator subject to the provisions of this subpart may comply with the following exceptions to the provisions of subpart VV.

(b)(1) Compressors in hydrogen service are exempt from the requirements of §60.592 if an owner or operator demonstrates that a compressor is in hydrogen service.

(2) Each compressor is presumed not be in hydrogen service unless an owner or operator demonstrates that the piece of equipment is in hydrogen service. For a piece of equipment to be considered in hydrogen service, it must be determined that the percent hydrogen content can be reasonably expected always to exceed 50 percent by volume. For purposes of determining the percent hydrogen content in the process fluid that is contained in or contacts a compressor, procedures that conform to the general method described in ASTM E260–73, 91, or 96, E168–67, 77, or 92, or E169–63, 77, or 93 (incorporated by reference as specified in §60.17) shall be used.

(3)(i) An owner or operator may use engineering judgment rather than procedures in paragraph (b)(2) of this section to demonstrate that the percent content exceeds 50 percent by volume, provided the engineering judgment demonstrates that the content clearly exceeds 50 percent by volume. When an owner or operator and the Administrator do not agree on whether a piece of equipment is in hydrogen service, however, the procedures in paragraph (b)(2) shall be used to resolve the disagreement.

(ii) If an owner or operator determines that a piece of equipment is in hydrogen service, the determination can be revised only after following the procedures in paragraph (b)(2).

(c) Any existing reciprocating compressor that becomes an affected facility under provisions of §60.14 or §60.15 is exempt from §60.482 (a), (b), (c), (d), (e), and (h) provided the owner or operator demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of §60.482 (a), (b), (c), (d), (e), and (h).

(d) An owner or operator may use the following provision in addition to §60.485(e): Equipment is in light liquid service if the percent evaporated is greater than 10 percent at 150 °C as determined by ASTM Method D86–78, 82, 90, 95, or 96 (incorporated by reference as specified in §60.18).

(e) Pumps in light liquid service and valves in gas/vapor and light liquid service within a process unit that is located in the Alaskan North Slope are exempt from the requirements of §60.482–2 and §60.482–7.

**E.13.3 Deadlines Relating to the Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries [40 CFR Part 60, Subpart GGG]**

The Permittee shall comply with the following requirements by the dates listed for valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges and/or other connectors in VOC service:

| Requirement  | Rule Citations   | Applicable To   | Deadline  |
|--|--|---|---|
| Notification of the Date Construction (or Reconstruction) is Commenced | 40 CFR 60.7(a)(1)  | Each affected facility  | Within 30 days after commencement of construction   |
| Notification of the Actual Date of Initial Startup                     | 40 CFR 60.7(a)(3)  | Each affected facility  | Within 15 days after date of initial startup  |
| Notification of any Physical or Operational Change                     | 40 CFR 60.7(a)(4)  | Physical or operational changes to existing affected facilities which may increase the emission rate of any pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in §60.14(e). | 60 days or more prior to commencement of change or as soon as practicable   |
| Semiannual Compliance Reports  | 40 CFR 60.592(e)<br>40 CFR 60.487(a)<br>40 CFR 60.487(b) | Each affected facility  | Initial report shall be submitted 6 months after date of initial startup or in the next semi-annual report submitted for the existing equipment at the refinery after startup of the new equipment.<br><br>Subsequent reports shall be submitted no later than 60 days after the end of each 6-month period following the first report or with the semi-annual report submitted for the existing equipment at the refinery. |
| Demonstrate Initial Compliance   | 40 CFR 60.592(a)<br>40 CFR 60.482-1(a)                   | Each affected facility  | Within 180-days of initial startup  |

## **SECTION E.17 40 CFR Part 60, Subpart UU – Standards of Performance for Asphalt Process and Asphalt Roofing Manufacture**

### E.17.1 General Provisions Relating to NSPS Subpart UU [326 IAC 12-1] [40 CFR Part 60, Subpart UU]

Pursuant to 40 CFR Part 60.1(a), the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the asphalt storage tanks 125, 126, 127, 129, 150, 569, 613, TK-SP-1, TK-SP-2, TK-LG-1 through TK-LG-9, and TK-LG-12 through TK-LG-17.

### E.17.2 NSPS Subpart UU Requirements [40 CFR Part 60, Subpart UU] [326 IAC 12]

Pursuant to 40 CFR 60.470, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart UU, which are incorporated by reference as 326 IAC 12, for the asphalt storage tanks identified in Condition E.17.1 as specified below:

## **Subpart UU—Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture**

### **§60.470 Applicability and designation of affected facilities.**

(a) The affected facilities to which this subpart applies are each saturator and each mineral handling and storage facility at asphalt roofing plants; and each asphalt storage tank and each blowing still at asphalt processing plants, petroleum refineries, and asphalt roofing plants.

(b) Any saturator or mineral handling and storage facility under paragraph (a) of this section that commences construction or modification after November 18, 1980, is subject to the requirements of this subpart. Any asphalt storage tank or blowing still that processes and/or stores asphalt used for roofing only or for roofing and other purposes, and that commences construction or modification after November 18, 1980, is subject to the requirements of this subpart.

Any asphalt storage tank or blowing still that processes and/or stores only nonroofing asphalts and that commences construction or modification after May 26, 1981, is subject to the requirements of this subpart.

### **§ 60.471 Definitions.**

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

*Afterburner (A/B)* means an exhaust gas incinerator used to control emissions of particulate matter.

*Asphalt processing* means the storage and blowing of asphalt.

*Asphalt processing plant* means a plant which blows asphalt for use in the manufacture of asphalt products.

*Asphalt roofing plant* means a plant which produces asphalt roofing products (shingles, roll roofing, siding, or saturated felt).

*Asphalt storage tank* means any tank used to store asphalt at asphalt roofing plants, petroleum refineries, and asphalt processing plants. Storage tanks containing cutback asphalts (asphalts diluted with solvents to reduce viscosity for low temperature applications) and emulsified asphalts (asphalts dispersed in water with an emulsifying agent) are not subject to this regulation.

*Blowing still* means the equipment in which air is blown through asphalt flux to change the softening point and penetration rate.

*Catalyst* means a substance which, when added to asphalt flux in a blowing still, alters the penetrating-softening point relationship or increases the rate of oxidation of the flux.

*Coating blow* means the process in which air is blown through hot asphalt flux to produce coating asphalt. The coating blow starts when the air is turned on and stops when the air is turned off.

*Electrostatic precipitator (ESP)* means an air pollution control device in which solid or liquid particulates in a gas stream are charged as they pass through an electric field and precipitated on a collection surface.

*High velocity air filter (HVAF)* means an air pollution control filtration device for the removal of sticky, oily, or liquid aerosol particulate matter from exhaust gas streams.

*Mineral handling and storage facility* means the areas in asphalt roofing plants in which minerals are unloaded from a carrier, the conveyor transfer points between the carrier and the storage silos, and the storage silos.

*Saturator* means the equipment in which asphalt is applied to felt to make asphalt roofing products. The term saturator includes the saturator, wet looper, and coater.

#### **§60.472 Standards for particulate matter.**

(c) Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any asphalt storage tank exhaust gases with opacity greater than 0 percent, except for one consecutive 15-minute period in any 24-hour period when the transfer lines are being blown for clearing. The control device shall not be bypassed during this 15-minute period. If, however, the emissions from any asphalt storage tank(s) are ducted to a control device for a saturator, the combined emissions shall meet the emission limit contained in paragraph (a) of this section during the time the saturator control device is operating. At any other time the asphalt storage tank(s) must meet the opacity limit specified above for storage tanks.

#### **§ 60.473 Monitoring of operations.**

(c) An owner or operator subject to the provisions of this subpart and using a control device not mentioned in paragraphs (a) or (b) of this section shall provide to the Administrator information describing the operation of the control device and the process parameter(s) which would indicate proper operation and maintenance of the device. The Administrator may require continuous monitoring and will determine the process parameters to be monitored.

#### **§ 60.474 Test methods and procedures.**

(c) The owner or operator shall determine compliance with the particulate matter standards in §60.472 as follows:

(5) Method 9 and the procedures in §60.11 shall be used to determine opacity.

E.17.3 Deadlines Relating to the Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture [40 CFR Part 60, Subpart UU]

The Permittee shall comply with the following requirements by the dates listed for storage tanks TK-SP-1, TK-SP-2, TK-LG-1 through TK-LG-9, and TK-LG-12 through TK-LG-17:

| Requirement   | Rule Citations     | Deadline  |
|---|--------------------|---|
| Notification of the Date Construction (or Reconstruction) is Commenced  | 40 CFR 60.7(a)(1)  | Within 30 days after commencement of construction   |
| Notification of the Actual Date of Initial Startup  | 40 CFR 60.7(a)(3)  | Within 15 days after date of initial startup  |
| Notification of any Physical or Operational Change  | 40 CFR 60.7(a)(4)  | 60 days or more prior to commencement of change or as soon as practicable   |
| Notification of the Anticipated Date for Conducting the Initial Opacity Observations Required by 40 CFR 60.11(e)(1) | 40 CFR 60.7(a)(6)  | 30 days or more prior to opacity observations   |
| Conduct Initial Opacity Observations Required by 40 CFR 60.11(e)(1)   | 40 CFR 60.11(e)(1) | 60 days after achieving the maximum production rate at which the affected facility will be operated, but no later than 180 days after initial startup of the facility |

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY**

**PART 70 OPERATING PERMIT  
CERTIFICATION**

Source Name: BP Products North America, Inc., Whiting Business Unit  
Source Address: 2815 Indianapolis Blvd, Whiting, Indiana 46394-0710  
Mailing Address: P.O. Box 710, Whiting, Indiana 46394-0710  
Part 70 Permit No.: T089-6741-00453

**This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.**

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify) \_\_\_\_\_
- Report (specify) \_\_\_\_\_
- Notification (specify) \_\_\_\_\_
- Affidavit (specify) \_\_\_\_\_
- Other (specify) \_\_\_\_\_

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Phone:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
Phone: 317-233-0178  
Fax: 317-233-6865**

**PART 70 OPERATING PERMIT  
EMERGENCY OCCURRENCE REPORT**

Source Name: BP Products North America, Inc., Whiting Business Unit  
Source Address: 2815 Indianapolis Blvd, Whiting, Indiana 46394-0710  
Mailing Address: P.O. Box 710, Whiting, Indiana 46394-0710  
Part 70 Permit No.: T089-6741-00453

**This form consists of 2 pages**

**Page 1 of 2**

- This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
  - The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16

If any of the following are not applicable, mark N/A

|   |
|---|
| Facility/Equipment/Operation:                       |
| Control Equipment:                                  |
| Permit Condition or Operation Limitation in Permit: |
| Description of the Emergency:                       |
| Describe the cause of the Emergency:                |

If any of the following are not applicable, mark N/A

Page 2 of 2

|   |
|---|
| Date/Time Emergency started:  |
| Date/Time Emergency was corrected:  |
| Was the facility being properly operated at the time of the emergency?    Y    N<br>Describe:   |
| Type of Pollutants Emitted: TSP, PM-10, SO <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:   |
| Estimated amount of pollutant(s) emitted during emergency:  |
| Describe the steps taken to mitigate the problem:   |
| Describe the corrective actions/response steps taken:   |
| Describe the measures taken to minimize emissions:  |
| If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value: |

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
Compliance Data Section**

**PART 70 OPERATING PERMIT  
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: BP Products North America, Inc., Whiting Business Unit  
Source Address: 2815 Indianapolis Blvd, Whiting, Indiana 46394-0710  
Mailing Address: P.O. Box 710, Whiting, Indiana 46394-0710  
Part 70 Permit No.: T089-6741-00453

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

Page 1 of 2

|  |                               |
|--|-------------------------------|
| <p>This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken shall be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".</p> |                               |
| <input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.   |                               |
| <input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD   |                               |
| <b>Permit Requirement (specify permit condition #)</b>   |                               |
| <b>Date of Deviation:</b>  | <b>Duration of Deviation:</b> |
| <b>Number of Deviations:</b>   |                               |
| <b>Probable Cause of Deviation:</b>  |                               |
| <b>Response Steps Taken:</b>   |                               |
| <b>Permit Requirement (specify permit condition #)</b>   |                               |
| <b>Date of Deviation:</b>  | <b>Duration of Deviation:</b> |
| <b>Number of Deviations:</b>   |                               |
| <b>Probable Cause of Deviation:</b>  |                               |
| <b>Response Steps Taken:</b>   |                               |

|  |                               |
|--|-------------------------------|
| <b>Permit Requirement (specify permit condition #)</b> |                               |
| <b>Date of Deviation:</b>                              | <b>Duration of Deviation:</b> |
| <b>Number of Deviations:</b>                           |                               |
| <b>Probable Cause of Deviation:</b>                    |                               |
| <b>Response Steps Taken:</b>                           |                               |
| <b>Permit Requirement (specify permit condition #)</b> |                               |
| <b>Date of Deviation:</b>                              | <b>Duration of Deviation:</b> |
| <b>Number of Deviations:</b>                           |                               |
| <b>Probable Cause of Deviation:</b>                    |                               |
| <b>Response Steps Taken:</b>                           |                               |
| <b>Permit Requirement (specify permit condition #)</b> |                               |
| <b>Date of Deviation:</b>                              | <b>Duration of Deviation:</b> |
| <b>Number of Deviations:</b>                           |                               |
| <b>Probable Cause of Deviation:</b>                    |                               |
| <b>Response Steps Taken:</b>                           |                               |

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
Compliance Data Section**

**Part 70 Usage Report  
Submit Report Quarterly**

Source Name: BP Products North America, Inc., Whiting Business Unit  
Source Address: 2815 Indianapolis Boulevard, Whiting, Indiana 46394-0710  
Mailing Address: P.O. Box 710, Whiting, Indiana 46394-0710  
Part 70 Permit No.: T089-6741-00453  
Facility: Pipe line between emission units 501 and 503 and the Whiting Clean Energy Heat Recovery Steam Operator  
Parameter: Steam accepted from Whiting Clean Energy  
Limit: 13,200 tons per day

Month: \_\_\_\_\_ Year: \_\_\_\_\_

| Day |  |  |  | Day                  |  |  |  |
|-----|--|--|--|----------------------|--|--|--|
| 1   |  |  |  | 17                   |  |  |  |
| 2   |  |  |  | 18                   |  |  |  |
| 3   |  |  |  | 19                   |  |  |  |
| 4   |  |  |  | 20                   |  |  |  |
| 5   |  |  |  | 21                   |  |  |  |
| 6   |  |  |  | 22                   |  |  |  |
| 7   |  |  |  | 23                   |  |  |  |
| 8   |  |  |  | 24                   |  |  |  |
| 9   |  |  |  | 25                   |  |  |  |
| 10  |  |  |  | 26                   |  |  |  |
| 11  |  |  |  | 27                   |  |  |  |
| 12  |  |  |  | 28                   |  |  |  |
| 13  |  |  |  | 29                   |  |  |  |
| 14  |  |  |  | 30                   |  |  |  |
| 15  |  |  |  | 31                   |  |  |  |
| 16  |  |  |  | no. of<br>deviations |  |  |  |

- No deviation occurred in this month.
- Deviation/s occurred in this month.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
Compliance Data Section**

**Part 70 Usage Report  
Submit Report Quarterly**

Source Name: BP Products North America, Inc., Whiting Business Unit  
Source Address: 2815 Indianapolis Boulevard, Whiting, Indiana 46394-0710  
Mailing Address: P.O. Box 710, Whiting, Indiana 46394-0710  
Part 70 Permit No.: T089-6741-00453  
Facility: Pipe line between emission units 501 and 503 and the Whiting Clean Energy Heat Recovery Steam Operator  
Parameter: Total steam produced by Units 501 and 503 plus amount of steam accepted from Whiting Clean Energy  
Limit: 34,560 tons per day

Month: \_\_\_\_\_ Year: \_\_\_\_\_

| Day |  |  |  | Day                  |  |  |  |
|-----|--|--|--|----------------------|--|--|--|
| 1   |  |  |  | 17                   |  |  |  |
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| 7   |  |  |  | 23                   |  |  |  |
| 8   |  |  |  | 24                   |  |  |  |
| 9   |  |  |  | 25                   |  |  |  |
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| 11  |  |  |  | 27                   |  |  |  |
| 12  |  |  |  | 28                   |  |  |  |
| 13  |  |  |  | 29                   |  |  |  |
| 14  |  |  |  | 30                   |  |  |  |
| 15  |  |  |  | 31                   |  |  |  |
| 16  |  |  |  | no. of<br>deviations |  |  |  |

- No deviation occurred in this month.
- Deviation/s occurred in this month.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
Compliance Data Section**

**Part 70 Usage Report  
Submit Report Quarterly**

Source Name: BP Products North America, Inc., Whiting Business Unit  
Source Address: 2815 Indianapolis Boulevard, Whiting, Indiana 46394-0710  
Mailing Address: P.O. Box 710, Whiting, Indiana 46394-0710  
Part 70 Permit No.: T089-6741-00453  
Facility: Pipe line between emission units 501 and 503 and the Whiting Clean Energy Heat Recovery Steam Operator  
Parameter: Steam supplied by Whiting Clean Energy to BP  
Limit: 8,400 tons per day

Month: \_\_\_\_\_ Year: \_\_\_\_\_

| Day |  |  |  | Day                  |  |  |  |
|-----|--|--|--|----------------------|--|--|--|
| 1   |  |  |  | 17                   |  |  |  |
| 2   |  |  |  | 18                   |  |  |  |
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| 4   |  |  |  | 20                   |  |  |  |
| 5   |  |  |  | 21                   |  |  |  |
| 6   |  |  |  | 22                   |  |  |  |
| 7   |  |  |  | 23                   |  |  |  |
| 8   |  |  |  | 24                   |  |  |  |
| 9   |  |  |  | 25                   |  |  |  |
| 10  |  |  |  | 26                   |  |  |  |
| 11  |  |  |  | 27                   |  |  |  |
| 12  |  |  |  | 28                   |  |  |  |
| 13  |  |  |  | 29                   |  |  |  |
| 14  |  |  |  | 30                   |  |  |  |
| 15  |  |  |  | 31                   |  |  |  |
| 16  |  |  |  | no. of<br>deviations |  |  |  |

- No deviation occurred in this month.
- Deviation/s occurred in this month.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: BP Products North America, Inc., Whiting Business Unit  
Source Address: 2815 Indianapolis Boulevard, Whiting, Indiana 46394-0710  
Mailing Address: P.O. Box 710, Whiting, Indiana 46394-0710  
Part 70 Permit No.: T089-6741-00453  
Facility: B/S TGU  
Parameter: TRS calculated as SO<sub>2</sub>  
Limit: 232.6 tons per twelve (12) consecutive month period.

QUARTER: \_\_\_\_\_ YEAR: \_\_\_\_\_

| Month   | Column 1   | Column 2           | Column 1 + Column 2 |
|---------|------------|--------------------|---------------------|
|         | This Month | Previous 11 Months | 12 Month Total      |
| Month 1 |            |                    |                     |
| Month 2 |            |                    |                     |
| Month 3 |            |                    |                     |

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: BP Products North America, Inc., Whiting Business Unit  
Source Address: 2815 Indianapolis Boulevard, Whiting, Indiana 46394-0710  
Mailing Address: P.O. Box 710, Whiting, Indiana 46394-0710  
Part 70 Permit No.: T089-6741-00453  
Facility: SBS TGU  
Parameter: SO<sub>2</sub> at 0% excess air  
Limit: 39.4 tons per twelve (12) consecutive month period.

QUARTER: \_\_\_\_\_ YEAR: \_\_\_\_\_

| Month   | Column 1   | Column 2           | Column 1 + Column 2 |
|---------|------------|--------------------|---------------------|
|         | This Month | Previous 11 Months | 12 Month Total      |
| Month 1 |            |                    |                     |
| Month 2 |            |                    |                     |
| Month 3 |            |                    |                     |

- No deviation occurred in this quarter.  
 Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

Source Name: BP Products North America Inc., Whiting Business Unit  
Source Address: 2815 Indianapolis Blvd., Whiting, Indiana 46394  
Mailing Address: P.O. Box 710, Whiting, Indiana 46394-0710  
Part 70 Permit No.: T089-6741-00453  
Facilities: Hot oil heaters H-SP-1, H-SP-2, H-LG-1, H-LG-2, and H-LG-3  
Parameter: Natural Gas Usage  
Limits: The total natural gas usage shall not exceed 255 million cubic feet (MMCF) per twelve (12) consecutive month period.

QUARTER: \_\_\_\_\_ YEAR: \_\_\_\_\_

| Month | Natural Gas Usage (MMCF) | Natural Gas Usage (MMCF) | Natural Gas Usage (MMCF) |
|-------|--------------------------|--------------------------|--------------------------|
|       | This Month               | Previous 11 Months       | 12 Month Total           |
|       |                          |                          |                          |
|       |                          |                          |                          |
|       |                          |                          |                          |

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

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

Technical Support Document (TSD)  
for a Part 70 Significant Permit Modification (SPM)

**Source Description and Location**

|                                      |  |
|--------------------------------------|--|
| Source Name:                         | BP Products North America, Inc., Whiting Business Unit |
| Source Location:                     | 2815 Indianapolis Boulevard, Whiting, Indiana 46394    |
| County:                              | Lake   |
| SIC Code:                            | 2911 (Petroleum Refining)                              |
| Operation Permit No.:                | T089-6741-00453  |
| Operation Permit Issuance Date:      | December 14, 2006                                      |
| Significant Permit Modification No.: | 089-24068-00453  |
| Permit Reviewer:                     | Nathan C. Bell   |

The BP Products North America, Inc. Whiting Refinery is a crude oil refining facility that manufactures gasoline, distillate fuel oils, jet naphtha, asphalt, petroleum coke, as well as additional other petroleum products from crude oil.

**Source Definition**

This stationary source consists of two (2) plants:

- (a) The Whiting Refinery (previously designated 089-00003), located at 2815 Indianapolis Boulevard, Whiting, Indiana 46394; and
- (b) The Marketing Terminal (previously designated 089-00004), located at 2530 Indianapolis Boulevard, Whiting, Indiana 46394.

Since the two (2) plants are located on contiguous or adjacent properties, are under the common control of the same entity, and the Whiting Refinery supports the Marketing Terminal, they are considered one (1) source.

**Existing Approvals**

The source was issued a Part 70 Operating Permit No. T089-6741-00453 on December 14, 2006.

The source has also constructed or has been operating under the following previous approvals, which have not yet been incorporated in the Part 70 Operating Permit No. T089-6741-00453:

- (a) Minor Source Modification No. 089-22548-00453, issued February 28, 2006.
- (b) Minor Source Modification No. 089-23341-00453, issued August 25, 2006.
- (c) Minor Source Modification No. 089-23177-00453, issued November 20, 2006.
- (d) Minor Source Modification No. 089-23783-00453, issued February 20, 2007.

**County Attainment Status**

The source is located in Lake County.

| Pollutant         | Status*                      |
|-------------------|------------------------------|
| PM <sub>10</sub>  | Maintenance Attainment       |
| PM <sub>2.5</sub> | Nonattainment                |
| SO <sub>2</sub>   | Maintenance Attainment       |
| NO <sub>2</sub>   | Attainment or Unclassifiable |
| 8-Hour Ozone      | Moderate Nonattainment       |
| CO                | Maintenance Attainment       |
| Lead              | Attainment or Unclassifiable |

\*Effective on October 25, 2006, 326 IAC 1-4-1 has been revised to revoke the one-hour ozone standard and redesignate Lake County to attainment for the sulfur dioxide standard.

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NO<sub>x</sub>) 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 NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. Lake County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (b) U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Lake County as nonattainment for PM<sub>2.5</sub>. 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 nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's guidance to regulate PM<sub>10</sub> emissions as a surrogate for PM<sub>2.5</sub> emissions pursuant to the requirements of Emission Offset, 326 IAC 2-3.
- (c) Lake County has been classified as attainment or unclassifiable for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>2</sub>, CO, and lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (d) Fugitive Emissions  
 Since this type of operation is in one of the twenty-eight (28) listed source categories under 326 IAC 2-2, the fugitive PM and VOC emissions are counted toward determination of PSD and Emission Offset applicability.

**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        | Potential To Emit (tons/year) |
|------------------|-------------------------------|
| PM               | >100                          |
| PM <sub>10</sub> | >100                          |
| SO <sub>2</sub>  | >100                          |
| VOC              | >100                          |
| CO               | >100                          |
| NO <sub>x</sub>  | >100                          |
| Single HAP       | >10                           |
| TOTAL HAPs       | >25                           |

- (a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because an attainment regulated pollutant is emitted at a rate of 100 tons per year or more, and it is 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 the nonattainment regulated pollutants PM<sub>10</sub> (as surrogate for PM<sub>2.5</sub>) and NO<sub>x</sub> are emitted at a rate of 100 tons per year or more and VOC is emitted at a rate of greater than 100 tons per year.
- (c) This existing source is a major source of HAPs, as defined in 40 CFR 63.41, because HAP emissions are greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).
- (d) These emissions are based upon the 2003 emissions data submitted to IDEM, OAQ by BP Products North America, Inc. and information provided in the application.

**Actual Emissions**

The following table shows the actual emissions from the source, prior to the proposed modification. This information reflects the 2003 OAQ emission data and information provided in the application.

| Pollutant        | Emissions (tons/yr) |
|------------------|---------------------|
| PM               | NR                  |
| PM <sub>10</sub> | 557                 |
| SO <sub>2</sub>  | 3,385               |
| VOC              | 1,238               |
| CO               | 2,058               |
| NO <sub>x</sub>  | 7,636               |
| Worst Single HAP | 0.03* (Lead)        |
| Total HAPs       | >25                 |

NR = data not reported.

\*No data provided for other HAPs. Source stated in their application that they are a major source of HAPs.

**Background and Description of Proposed Modification**

On February 20, 2007, BP Products North America, Inc., was issued a Minor Source Modification No. 089-23783-00453 for: (1) the construction of new storage tanks, new blending systems, and new loading racks at different locations in the refinery; (2) the modification of an existing storage tank to be used to store a different raw material; and (3) the construction of five (5) additional hot oil heaters to heat the new storage tanks and some of the existing tanks. The Indiana Department of Environmental Management (IDEM) is issuing this Significant Modification to Part 70 Operating Permit No. T089-6741-00453 to allow BP Products North America, Inc., to operate the new and modified emission units at their existing source.

The following is a list of the new emission units proposed in Minor Source Modification No. 089-23783-00453:

- (a) The following five (5) natural gas-fired hot oil heaters, each approved for construction in 2007, and each considered an insignificant activity, as defined in 326 IAC 2-7-1(21)(G)(i)(AA)(aa):

| Process Heater ID | Heat Input Capacity (MMBtu/hr) | Fuel        | Control Device |
|-------------------|--------------------------------|-------------|----------------|
| H-SP-1            | 9.9                            | Natural gas | none           |
| H-SP-2            | 9.9                            | Natural gas | none           |
| H-LG-1            | 9.9                            | Natural gas | none           |
| H-LG-2            | 9.9                            | Natural gas | none           |
| H-LG-3*           | 9.9                            | Natural gas | none           |

\*Hot oil heater H-LG-3 will exhaust to a steam generator that will be used to heat rejected loads of asphalt during unloading.

- (b) The following twenty-two (22) heated vertical storage tanks, each approved for construction in 2007, each with a fixed cone roof, and each in heavy liquid service, storing volatile organic liquids that have a vapor pressure less than 0.0435 psia, and exhausting to the atmosphere or to a biofilter system for odor and opacity control:

| Tank ID  | Liquid Stored               | Date Approved for Construction | Tank Storage Capacity (gallons) | Maximum Throughput (gallons/year) | Exhaust ID |
|----------|-----------------------------|--------------------------------|---------------------------------|-----------------------------------|------------|
| TK-3573  | Trim Gas Oil                | 2007                           | 966,000                         | 20,160,000                        | TK-3573    |
| TK-SP-1  | Residual Oil and/or Asphalt | 2007                           | 14,154,000                      | 141,120,000                       | biofilter  |
| TK-SP-2  | Residual Oil and/or Asphalt | 2007                           | 14,154,000                      | 141,120,000                       | biofilter  |
| TK-SP-3  | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | biofilter  |
| TK-SP-4  | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | biofilter  |
| TK-LG-1  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-2  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-3  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-4  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-5  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-6  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-7  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-8  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-9  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-10 | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | biofilter  |
| TK-LG-11 | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | biofilter  |
| TK-LG-12 | Asphalt with Polymer        | 2007                           | 2,100                           | 420,000                           | biofilter  |
| TK-LG-13 | Asphalt-Polymer Blend       | 2007                           | 31,500                          | 2,100,000                         | biofilter  |
| TK-LG-14 | Polymer Finished Asphalt    | 2007                           | 126,000                         | 2,520,000                         | biofilter  |
| TK-LG-15 | Polymer Finished Asphalt    | 2007                           | 126,000                         | 2,520,000                         | biofilter  |
| TK-LG-16 | Polymer Finished Asphalt    | 2007                           | 126,000                         | 2,520,000                         | biofilter  |
| TK-LG-17 | Polymer Finished Asphalt    | 2007                           | 126,000                         | 2,520,000                         | biofilter  |

Under 40 CFR 60, Subpart UU, storage tanks TK-SP-1, TK-SP-2, TK-LG-1 through TK-LG-9, and TK-LG-12 through TK-LG-17 are each considered an affected facility.

Under 40 CFR 63, Subpart CC, storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17 are each considered as Group 2 storage vessels that are part of the existing affected source.

- (c) one (1) truck loading rack, approved for construction in 2007, comprised of six (6) loading bays used for loading liquid asphalt product, with a total maximum loading capacity of 800,000 tons of asphalt product per year, exhausting to the atmosphere or to a biofilter system for odor control.
- (d) one (1) rail car loading rack, approved for construction in 2007, comprised of twenty-eight (28) loading bays used for loading liquid asphalt product, with a total maximum loading capacity of 800,000 tons of asphalt product per year, exhausting to the atmosphere or to a biofilter system for odor control.
- (e) Equipment leaks of VOC and HAP from valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges and/or other connectors.

Under 40 CFR 60, Subpart GGG, valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges and/or other connectors in VOC service, are considered part of the existing affected source.

The following is a list of the modified emission units proposed in Minor Source Modification No. 089-23783-00453:

- (f) The following heated vertical storage tank, with a fixed cone roof, in heavy liquid service, storing volatile organic liquids that have a vapor pressure less than 0.0435 psia, and exhausting to the atmosphere:

| Tank ID | Liquid Stored | Construction Date | Tank Storage Capacity (gallons) | Maximum Throughput (gallons/year) | Exhaust ID |
|---------|---------------|-------------------|---------------------------------|-----------------------------------|------------|
| TK-3570 | Trim Gas Oil  | 1971              | 2,730,000                       | 20,160,000                        | TK-3570    |

Under 40 CFR 63, Subpart CC, storage tank TK-3570 is considered as a Group 2 storage vessel that is part of the existing affected source.

- (g) The following trivial activity, as defined in 326 IAC 2-7-1(40)(J)(ii):
  - (1) one (1) storage tank, for storage of liquid poly phosphoric acid, identified as TK-LG-18, approved for construction in 2007.

**Enforcement Issues**

There are no pending enforcement actions regarding this proposed modification.

**Stack Summary of the Proposed Modification**

| Stack/Vent ID              | Operation  | Height (ft) | Diameter (ft) | Flow Rate (acfm) | Temperature (°F) |
|----------------------------|--|-------------|---------------|------------------|------------------|
| Biofilter (Lake George)    | Biofilter controlling odors and opacity from tanks located in Lake George    | TBD         | TBD           | 1,000            | 350              |
| Biofilter (Stieglitz Park) | Biofilter controlling odors and opacity from tanks located in Stieglitz Park | TBD         | TBD           | 1,000            | 350              |
| TK-3573                    | Trim gas oil storage tank TK-3573 vent                                       | TBD         | TBD           | TBD              | 250              |
| TK-3570                    | Trim gas oil storage tank TK-3570 vent                                       | NR          | NR            | NR               | 250              |

TBD = to be determined; NR = not reported

### Emission Calculations

See Appendix A of this document for detailed emission calculations of the proposed modification.

### 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 potential to emit (PTE) before limits and controls of the proposed modification. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

| Pollutant                       | Potential To Emit (lbs/day) | Potential To Emit (tons/year) |
|---------------------------------|-----------------------------|-------------------------------|
| PM                              | 2.74                        | 0.45                          |
| PM <sub>10</sub> <sup>(1)</sup> | 9.51                        | 1.69                          |
| SO <sub>2</sub>                 | 0.71                        | 0.13                          |
| NO <sub>x</sub>                 | 59.40                       | 10.84                         |
| VOC                             | 20.26                       | 2.40                          |
| CO                              | 101.12                      | 18.33                         |
| Worst Single HAP                | 2.14                        | 0.39                          |
| TOTAL HAPs                      | 2.28                        | 0.43                          |

(1) US EPA has directed states to regulate PM<sub>10</sub> emissions as surrogate for PM<sub>2.5</sub> emissions

This modification is subject to 326 IAC 2-7-10.5(d)(9), because this source is located in Lake County, the potential to emit VOC and NO<sub>x</sub> for the entire source is greater than 25 tons per year, and this modification results in an increase in the potential to emit of greater than 15 pounds per day of VOCs and 25 pounds per day of NO<sub>x</sub>.

The Minor Source Modification No. 089-23783-00453, issued February 20, 2007, is being incorporated into the Part 70 operating permit as a Significant Permit Modification (SPM), pursuant to 326 IAC 2-7-12, because this modification results in significant changes in existing monitoring, reporting, or record keeping requirements in the Part 70 permit (i.e., adding a natural gas limit and quarterly reporting for the new hot oil heaters) and this modification was processed as a Title I modification under the Clean Air Act (i.e., adding NESHAP CC and NSPS GGG requirements for the new storage tanks).

**Permit Level Determination – PSD or Emission Offset**

The table below summarizes the potential to emit, reflecting all limits, of the proposed modification. Any control equipment is considered federally enforceable only after issuance of this Part 70 source 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 of Modification After Issuance (tons/year) |                                 |                 |                 |      |       |            |                  |
|--|--|---------------------------------|-----------------|-----------------|------|-------|------------|------------------|
|  | PM   | PM <sub>10</sub> <sup>(1)</sup> | SO <sub>2</sub> | NO <sub>x</sub> | VOC  | CO    | Total HAPs | Worst Single HAP |
| <b>Existing Source (Before Modification)</b>   |  |                                 |                 |                 |      |       |            |                  |
| Total PTE (Before Modification)<br>(see Table 2 of this TSD)   | >100   | >100                            | >100            | >100            | >100 | >100  | >25        | >10              |
| <b>Newly Constructed or Modified Emission Units (Modification)</b>   |  |                                 |                 |                 |      |       |            |                  |
| Storage Tanks and Truck/Rail Loading <sup>(2)</sup>  | 0.04   | 0.04                            | 0               | 0               | 1.20 | 0.12  | 0.018      | 0.013            |
| Hot Oil Heaters <sup>(3)</sup>   | 0.24   | 0.97                            | 0.08            | 6.38            | 0.70 | 10.71 | 0.24       | 0.23             |
| Total PTE of Modification  | 0.28   | 1.01                            | 0.08            | 6.38            | 1.90 | 10.83 | 0.26       | 0.23             |
| <b>Entire Source (After Modification)</b>  |  |                                 |                 |                 |      |       |            |                  |
| Total PTE of Entire Source<br>(After Modification)   | >100   | >100                            | >100            | >100            | >100 | >100  | >25        | >10              |
|  |  |                                 |                 |                 |      |       |            |                  |
| Significance Level for a Major PSD Modification  | 25   | NA                              | 40              | NA              | NA   | 100   | NA         | NA               |
| Significance Level for a Major Emission Offset Modification  | NA   | 15 <sup>(1)</sup>               | NA              | 40              | 40   | NA    | NA         | NA               |
| negl. = negligible<br>(1) US EPA has directed states to regulate PM <sub>10</sub> emissions as surrogate for PM <sub>2.5</sub> emissions<br>(2) Uncontrolled PTE.<br>(3) The Permittee has requested that, for hot oil heaters H-SP-1, H-SP-2, H-LG-1, H-LG-2, and H-LG-3, the total natural gas usage shall not exceed 255 million cubic feet per twelve (12) consecutive month period in order to establish a federally enforceable limit and to minimize emissions increases (from past contemporaneous changes) in their netting calculations for the proposed BP Products North America Inc., Whiting Business Unit CXHO Project as required per 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset). |  |                                 |                 |                 |      |       |            |                  |

- (a) This modification to an existing major PSD stationary source is not major, because the PM, SO<sub>2</sub>, and CO emission increases of this modification are each less than the respective PSD significance levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
- (b) This modification to an existing major Emission Offset stationary source is not major, because the PM<sub>10</sub> (surrogate for PM<sub>2.5</sub>), NO<sub>x</sub>, and VOC emission increases of this modification are each less than the respective Emission Offset significance levels. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

**Federal Rule Applicability Determination (Modification)**

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

- (a) Each of the natural gas-fired hot oil heaters is not subject to the requirements of 326 IAC 12 or 40 CFR 60, Subpart Dc (60.40c through 60.48c), Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, since they each have a heat input rate less than or equal to 10 million Btu per hour (MMBtu/hr).

- (b) Each of the storage tanks, natural gas-fired hot oil heaters, and liquid asphalt truck and rail car loading racks is not subject to the requirements of 326 IAC 12 or 40 CFR 60, Subpart J (60.100 through 60.109), Standards of Performance for Petroleum Refineries, since they each are not considered a fluid catalytic cracking unit catalyst regenerator, a Claus sulfur recovery plant, or a "fuel gas combustion" device, as defined in 40 CFR 60.101(d) and (g). Each of the hot oil heaters will only operate on pipeline quality natural gas that has not been generated at a refinery.
- (c) The requirement applicability of 326 IAC 12 or 40 CFR 60, Subpart Kb (60.110b through 60.117b), Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 (promulgated on October 15, 2003), to the storage tanks proposed in this modification is as follows:
- (1) The requirements of 40 CFR 60, Subpart Kb are not applicable to storage tank TK-LG-12, since it has a capacity less than seventy-five (75) cubic meters (19,813 gallons).
  - (2) The requirements of 40 CFR 60, Subpart Kb are not applicable to storage tank TK-LG-13, which has a storage capacity greater than or equal to seventy-five (75) cubic meters (19,813 gallons), but less than one hundred fifty-one (151) cubic meters (39,890 gallons), since it will store asphalt-polymer blend, which has a maximum true vapor pressure less than 15.0 kilopascals (kPa) (2.18 pounds per square inch absolute (psia)) at the highest calendar-month average storage temperature.
  - (3) The requirements of 40 CFR 60, Subpart Kb are not applicable to storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-11, TK-LG-14 through TK-LG-17, and TK-3570, which each have a storage capacity greater than or equal to one hundred fifty-one (151) cubic meters (39,890 gallons), since they each store liquids (asphalt, residual oil, trim gas oil, asphalt-polymer blend, or polymer finished asphalt) that have a maximum true vapor pressure less than 3.5 kPa (0.5 psia) at the highest calendar-month average storage temperature.
- (d) The requirement applicability of 326 IAC 12 or 40 CFR 60, Subpart UU, (60.470 through 60.474), NSPS for Asphalt Processing and Asphalt Roofing Manufacture, to the storage tanks proposed in this modification is as follows:
- (1) The requirements of 40 CFR 60, Subpart UU are not applicable to storage tanks TK-3573, TK-SP-3, TK-SP-4, TK-LG-10, TK-LG-11, TK-3570, and TK-LG-18, since they each are not considered a tank used to store asphalt at a petroleum refinery (40 CFR 60.471). Storage tanks TK-3573, TK-SP-3, TK-SP-4, TK-LG-10, TK-LG-11, and TK-3570 are used to store trim gas oil (TGO) and storage tank TK-LG-18 is used to store liquid poly phosphoric acid.
  - (2) Each of the asphalt tanks, asphalt-polymer mix tank, asphalt-polymer blend tank, and polymer finished asphalt tanks (TK-SP-1, TK-SP-2, TK-LG-1 through TK-LG-9, and TK-LG-12 through TK-LG-17) is subject to the requirements of 326 IAC 12 or 40 CFR 60, Subpart UU, since they each are considered a tank used to store asphalt at a petroleum refinery (40 CFR 60.471).

The storage tanks TK-SP-1, TK-SP-2, TK-LG-1 through TK-LG-9, and TK-LG-12 through TK-LG-17 are each considered an affected facility and must comply with the provisions of 40 CFR 60, Subpart UU, immediately upon startup.

Nonapplicable portions of the NSPS will not be included in the permit. Storage tanks TK-SP-1, TK-SP-2, TK-LG-1 through TK-LG-9, and TK-LG-12 through TK-LG-17 are each subject to the following portions of 40 CFR 60, Subpart UU:

- (1) 40 CFR 60.470;
- (2) 40 CFR 60.471;
- (3) 40 CFR 60.472(c);
- (4) 40 CFR 60.473(c); and
- (5) 40 CFR 60.474(c)(5);

The provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated in 326 IAC 12-1, apply to storage tanks TK-SP-1, TK-SP-2, TK-LG-1 through TK-LG-9, and TK-LG-12 through TK-LG-17, each, except when otherwise specified in 40 CFR 60, Subpart UU.

- (e) Each of the liquid asphalt truck and rail car loading racks proposed in this modification is not subject to the requirements of 326 IAC 12 or 40 CFR 60, Subpart XX (60.500 through 60.506), Standards of Performance for Bulk Gasoline Terminals, since they each will not deliver liquid product into gasoline tank trucks. Each of the loading racks proposed in this modification only performs loading of liquid asphalt product, not gasoline.
- (f) Each valve, pump, pressure relief device, sampling connection system, open-ended valve or line, and flange or other connector in VOC service associated with this proposed modification (excluding tank TK-LG-18) are subject to the requirements of 40 CFR 60, Subpart GGG (60.590 through 60.593), Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries (326 IAC 12), since construction of the proposed equipment is considered a modification to an existing affected facility (i.e., process unit). Storage tank TK-LG-18, which will store liquid poly phosphoric acid, is not subject the requirements of 40 CFR 60, Subparts GGG, since it will not contain or contact a process fluid that is at least 10 percent VOC by weight (i.e., is not in VOC service as defined by 40 CFR 60.481).

Each valve, pump, pressure relief device, sampling connection system, open-ended valve or line, and flange or other connector in VOC service are considered part of the existing affected source and shall comply with the following portions of 40 CFR 60, Subpart GGG:

- (1) 40 CFR 60.590;
- (2) 40 CFR 60.591;
- (3) 40 CFR 60.592; and
- (4) 40 CFR 60.593.

The provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated in 326 IAC 12-1, apply to the valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges and/or other connectors in VOC service, except when otherwise specified in 40 CFR 60, Subpart GGG.

Pursuant to 40 CFR 63.592(a), each owner or operator subject to the provisions of 40 CFR 60, Subpart GGG shall comply with the requirements of 40 CFR 60.482-1 to 60.482-10 under 40 CFR 60, Subpart VV, as soon as practicable, but no later than 180 days after initial startup. Pursuant to 40 CFR 60.481 and 40 CFR 60.485(e), the equipment associated with this modification (excluding tank TK-LG-18) will be in heavy liquid service, since they each will store liquids (asphalt, residual oil, trim gas oil, asphalt-polymer blend, or polymer finished asphalt) that do not contain greater than 20 percent by weight pure components having a vapor pressure greater than 0.3 kPa (0.043535 psia) at 20°C (68°F).

Portions of 40 CFR 60, Subpart VV that are not applicable to this modification will not be included in this permit. The portions of 40 CFR 60, Subpart VV that are applicable to this modification include:

- (A) 40 CFR 60.482-1;
- (B) 40 CFR 60.482-5;
- (C) 40 CFR 60.482-6(a), (b), and (d);

- (D) 40 CFR 60.482-8;
  - (E) 40 CFR 60.482-9;
  - (F) 40 CFR 60.485(b), (d), and (f);
  - (G) 40 CFR 60.486(a) through (c), (e)(1), (e)(5), (j), and (k); and
  - (H) 40 CFR 60.487(a), (b)(1), (c)(1), (c)(2)(vii), (c)(3), (c)(4), and (f);
- (g) Each of the storage tanks, natural gas-fired hot oil heaters, and liquid asphalt truck and rail car loading racks is not subject to the requirements of 326 IAC 12 or 40 CFR 60, Subpart QQQ (60.690 through 60.699), Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems, since they each are not considered a wastewater system that receives, treats, or processes oily wastewater from petroleum refinery process units.
- (h) There are no other New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) included for this proposed modification.
- (i) Equipment associated with this proposed modification is not subject to the requirements of 40 CFR 61, Subpart J (61.110 through 61.112), National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene (326 IAC 14-7), since it is not considered equipment that is "in benzene service", as defined by 40 CFR 61.111. The term "in benzene service" means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 10 percent benzene by weight as determined according to the provisions of 40 CFR 61.245(d). The units proposed in this modification store, mix, or convey asphalt, residual oil, trim gas oil, asphalt-polymer blend, polymer finished asphalt, or liquid poly phosphoric acid, which each do not contain 10 percent benzene by weight as determined according to the provisions of 40 CFR 61.245(d).
- (j) Equipment associated with this proposed modification is not subject to the requirements of 40 CFR 61, Subpart V (61.240 through 61.247), National Emission Standard for Equipment Leaks (Fugitive Emission Sources) (326 IAC 14-8), since it is are not considered equipment that is "in volatile hazardous air pollutant (VHAP) service", as defined by 40 CFR 61.241. The term "in VHAP service" means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 10 percent by weight VHAP as determined according to the provisions of 40 CFR 61.245(d). The units proposed in this modification store, mix, or convey asphalt, residual oil, trim gas oil, asphalt-polymer blend, polymer finished asphalt, or liquid poly phosphoric acid, which each do not contain 10 percent by weight VHAP as determined according to the provisions of 40 CFR 61.245(d).
- (k) Each of the storage tanks is not subject to 40 CFR 61, Subpart Y (61.270 through 61.277), National Emission Standard for Benzene Emissions From Benzene Storage Vessels, since they each are not considered storage vessel that is storing benzene. The storage tanks proposed in this modification store, mix, or convey asphalt, residual oil, trim gas oil, asphalt-polymer blend, or polymer finished asphalt.
- (l) Each of the liquid asphalt truck and rail car loading racks is not subject to 40 CFR 61, Subpart BB (61.300 through 61.306), National Emission Standard for Benzene Emissions From Benzene Transfer Operations, since they each are not considered loading racks at which benzene is loaded into tank trucks, railcars, or marine vessels. The loading racks proposed in this modification load only asphalt product.
- (m) Each of the storage tanks, natural gas-fired hot oil heaters, and liquid asphalt truck and rail car loading racks is not subject to 40 CFR 61, Subpart FF (61.340 through 61.359), National Emission Standard for Benzene Emissions From Benzene Transfer Operations, since they each will not treat, store, or dispose of benzene-containing hazardous waste generated by a petroleum refinery. The units proposed in this modification store, mix, or convey asphalt, residual oil, trim gas oil, asphalt-polymer blend, or polymer finished asphalt.

- (n) Each of the storage tanks, natural gas-fired hot oil heaters, and liquid asphalt truck and rail car loading racks is not subject to the following subparts under 40 CFR 63, Subpart R (63.420 through 63.429), National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations (326 IAC 20-10), since they each will not store, mix, or convey gasoline. The units proposed in this modification store, mix, or convey asphalt, residual oil, trim gas oil, asphalt-polymer blend, or polymer finished asphalt.
- (o) Each of the liquid asphalt truck and rail car loading racks is not subject to 40 CFR 63, Subpart Y (63.560 through 63.568), National Emission Standards for Marine Tank Vessel Loading Operations, since they each will not load marine tank vessels. The loading racks proposed in this modification load only truck and rail car tanks.
- (p) The requirement applicability of 40 CFR 63, Subpart CC (63.640 through 63.679), National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries (326 IAC 20-16), to each of the liquid asphalt truck and rail car loading racks, the storage tanks, and equipment leaks proposed in this modification is as follows:
  - (1) Pursuant to 40 CFR 63.640(c)(5), the requirements of 40 CFR 63, Subpart CC are not applicable to each of the liquid asphalt truck and rail car loading racks, since they each load only asphalt product. The requirements of 40 CFR 63, Subpart CC only apply to gasoline loading racks.
  - (2) Pursuant to 40 CFR 63.641, the requirements of 40 CFR 63, Subpart CC are not applicable to equipment leaks associated with this modification, since the equipment will not be "in organic hazardous air pollutant service" as defined by 40 CFR 63.641. The term "in organic hazardous air pollutant service" means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP's as determined according to the provisions of 40 CFR 63.180(d) and Table 1 of 40 CFR 63 Subpart CC. The term "organic hazardous air pollutant" or "organic HAP" under 40 CFR 63 Subpart CC means any of the organic chemicals listed in Table 1 of 40 CFR 63 Subpart CC. The equipment associated with this modification will process asphalt, residual oil, trim gas oil, asphalt-polymer blend, polymer finished asphalt, or liquid poly phosphoric acid and will not contain or contact a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP's as defined in 40 CFR 63 Subpart CC.
  - (3) Pursuant to 40 CFR 63.640(a)(2), storage tank TK-LG-18, which will store liquid poly phosphoric acid, is not subject to 40 CFR 63 Subpart CC, since it will not emit or contact one or more of the organic HAPs listed in Table 1 of 40 CFR 63 Subpart CC (i.e., is not "in organic HAP service").
  - (4) Pursuant to 40 CFR 63.640 and 40 CFR 63.641, the storage tanks proposed in this modification (excluding tank TK-LG-18) are each considered as Group 2 storage vessels that are part of the existing affected source, since they each store liquids (asphalt, residual oil, trim gas oil, asphalt-polymer blend, or polymer finished asphalt) at a stored-liquid maximum true vapor pressure less than 10.4 kilopascals (1.5 psia), a stored-liquid annual average true vapor pressure less than 8.3 kilopascals (1.2 psia), and an annual average HAP liquid concentration less than 4 percent by weight total organic HAP listed in Table 1 of 40 CFR 63 Subpart CC. In addition, storage tanks TK-LG-12 and TK-LG-13 are also considered Group 2 storage vessels since they each have a design capacity less than 177 cubic meters (46,758 gallons).

Group 2 storage vessels are not subject to the requirements of 40 CFR 63.646 or any other emission limitation under 40 CFR 63, Subpart CC. Group 2 storage vessels are only subject to the requirements of 40 CFR 63.642 (General Standards).

The storage tanks (excluding tank TK-LG-18) are considered part of the existing affected source and must comply with the provisions of 40 CFR 63, Subpart CC, immediately upon startup.

Portions of 40 CFR 63, Subpart CC that are not applicable to this modification will not be included in this permit. The portions of 40 CFR 63, Subpart CC that are applicable to this modification include:

- (A) 40 CFR 63.640(a), (c), (d), (e), (g), (h), (l), (n), (p) and (q);
- (B) 40 CFR 63.641;
- (C) 40 CFR 63.642(a), (c) through (g), (i), and (m);
- (D) 40 CFR 63.654(f)(1)(i)(A) and (i)(4);
- (E) 40 CFR 63.655; and
- (F) Appendix to Subpart CC, Tables 1 and 6.

The provisions of 40 CFR 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the storage tanks except when otherwise specified in 40 CFR 63, Subpart CC.

Pursuant to 40 CFR 63.654(f), the Notification of Compliance Status report required for the new Group 2 storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17, and TK-3570 may be submitted in an amendment to an operating permit application and shall include identification of each Group 2 storage vessel subject to 40 CFR 63, Subpart CC. Since the permit application received by the Office of Air Quality (OAQ) on October 17, 2006 contained the identification of each of these Group 2 storage vessels, the Notification of Compliance Status requirements are satisfied for these storage vessels.

- (q) Each of the storage tanks, natural gas-fired hot oil heaters, and liquid asphalt truck and rail car loading racks is not subject to the following subparts under 40 CFR 63, Subpart UUU (63.1560 through 63.1579), National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units (326 IAC 20-50), since they each are not considered catalytic cracking units, catalytic reforming units, or sulfur recovery units. The units proposed in this modification store, mix, or convey asphalt, residual oil, trim gas oil, asphalt-polymer blend, or polymer finished asphalt.
- (r) Each of the storage tanks, natural gas-fired hot oil heaters, and liquid asphalt truck and rail car loading racks is not subject to the following subparts under 40 CFR 63, Subpart EEEE (63.2330 through 63.2406), National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline) (326 IAC 20-83), since they each are not considered activities or equipment used to distribute organic liquids, as defined by 40 CFR 63.2406. Pursuant to 40 CFR 63.2406, organic liquids do not include any non-crude oil liquid with an annual average true vapor pressure less than 0.7 kilopascals (0.1 psia). The asphalt, residual oil, trim gas oil, asphalt-polymer blend, or polymer finished asphalt stored or processed by the units proposed in this modification have an annual average true vapor pressure less than 0.7 kilopascals (0.1 psia).
- (s) Each of the storage tanks, natural gas-fired hot oil heaters, and liquid asphalt truck and rail car loading racks is not subject to the following subparts under 40 CFR 63, Subpart FFFF (63.2430 through 63.2550), National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing (326 IAC 20-84), since they each are not considered a chemical manufacturing process unit (MCPU) that produces the material or family of materials that is described in 40 CFR 63.2435(b)(1)(i), (ii), (iii), (iv), or (v). The units proposed in this modification store, mix, or convey asphalt, residual oil, trim gas oil, asphalt-polymer blend, or polymer finished asphalt under the Standard Industrial Classification (SIC) of 2911 (Petroleum Refining).

- (t) Pursuant to 40 CFR 63.7506(c), each of the natural gas-fired hot oil heaters proposed in this modification are not subject to the requirements of 40 CFR 63, Subpart DDDDD, NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters (63.7480 through 63.7575) or 40 CFR 63, Subpart A, General Provisions, since they each are considered small gaseous fuel subcategory units, as defined by 40 CFR 63.7575, each with a rated capacity of less than or equal to 10 million British thermal units per hour heat input.
- (u) Each of the storage tanks, natural gas-fired hot oil heaters, and liquid asphalt truck and rail car loading racks is not subject to the following subparts under 40 CFR 63, Subpart LLLLL (63.8680 through 63.8689), National Emission Standards for Hazardous Air Pollutants: Asphalt Processing and Asphalt Roofing Manufacturing (326 IAC 20-71), since they each will not manufacture asphalt roofing products or perform the oxidation of asphalt flux through asphalt blowing, as defined by 40 CFR 63.8689. The units proposed in this modification store, mix, or convey asphalt, residual oil, trim gas oil, asphalt-polymer blend, or polymer finished asphalt.
- (v) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20, 40 CFR Part 61, and 40 CFR Part 63) included for this proposed modification.
- (w) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to a pollutant-specific emissions unit at a major source that is required to obtain a part 70 or 71 permit if the unit satisfies all of the following criteria:
  - (1) has a potential to emit before or after controls equal to or greater than the major source threshold for the pollutant involved;
  - (2) is subject to an emission limitation or standard for that pollutant; and
  - (3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following tables are used to identify the applicability of each of the applicability criteria, under 40 CFR 64.1, to each emission unit at this source:

| Emission Unit       | Control Device Used | Emission Limitation or Standard (Y/N) | Uncontrolled PTE (tons/year) | Controlled PTE (tons/year) | Major Source Threshold (tons/year) | CAM Applicable (Y/N) | Large Unit (Y/N) |
|---------------------|---------------------|---------------------------------------|------------------------------|----------------------------|------------------------------------|----------------------|------------------|
| Each Storage Tank   | none <sup>(1)</sup> | Y <sup>(2)</sup>                      | <100                         | NA                         | 100                                | N                    | N                |
| Each Hot Oil Heater | none                | Y <sup>(2)</sup>                      | <100                         | NA                         | 100                                | N                    | N                |

(1) The biofilter systems are used to control odor and opacity from the storage tanks.

(2) Pursuant to 326 IAC 6.8-1-2(a), the particulate matter emissions from each of the storage tanks (excluding tank TK-LG-18), natural gas-fired hot oil heaters, and liquid asphalt truck and rail car loading racks shall each be limited to 0.03 grains per dry standard cubic foot.

| Emission Unit     | Control Device Used | Emission Limitation or Standard (Y/N) | Uncontrolled PTE (tons/year) | Controlled PTE (tons/year) | Major Source Threshold (tons/year) | CAM Applicable (Y/N) | Large Unit (Y/N) |
|-------------------|---------------------|---------------------------------------|------------------------------|----------------------------|------------------------------------|----------------------|------------------|
| Each Storage Tank | none <sup>(1)</sup> | N <sup>(2)</sup>                      | <100                         | NA <sup>(1)</sup>          | 100                                | N                    | N                |
| Each Loading Rack | none                | N                                     | <100                         | NA                         | 100                                | N                    | N                |
| Equipment Leaks   | none                | N <sup>(3)</sup>                      | <100                         | NA                         | 100                                | N                    | N                |

(1) The biofilter systems are used to control odor and opacity from the storage tanks.

(2) Storage tanks TK-3573, TK-3570, TK-SP-1 through TK-SP-4, and TK-LG-1 through TK-LG-17 are subject to the requirements of 40 CFR 63, Subpart CC, which does not include emission limitations for these Group 2 storage tanks.

(3) Equipment leaks are subject to the leak detection requirements of 40 CFR 60, Subpart GGG.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM, are not applicable to any of the new or modified emission units proposed in this modification.

### State Rule Applicability Determination (Modification)

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

#### 326 IAC 2-1.1-4 (Federal Provisions)

Pursuant to 326 IAC 2-1.1-4 (Federal Provisions), in case of a conflict between the state rules and a provision of federal law or regulation, the more stringent requirement applies.

#### 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 2-3 (Emission Offset)

As a refinery, this plant belongs to one of the twenty-eight (28) listed source categories and is a major source under 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset). Lake County has been designated as nonattainment for PM<sub>2.5</sub> and moderate nonattainment for 8-hour ozone.

- (a) This modification to an existing major PSD stationary source is not major, because the PM, SO<sub>2</sub>, and CO emission increases of this modification are each less than the respective PSD significance levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
- (b) This modification to an existing major Emission Offset stationary source is not major, because the PM<sub>10</sub> (surrogate for PM<sub>2.5</sub>), NO<sub>x</sub>, and VOC emission increases of this modification are each less than the respective Emission Offset significance levels. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.
- (c) The Permittee has requested the following limit:  
The total natural gas usage shall not exceed 255 million cubic feet per twelve (12) consecutive month period for hot oil heaters H-SP-1, H-SP-2, H-LG-1, H-LG-2, and H-LG-3. The Permittee has requested this limit in order to establish a federally enforceable limit and to minimize emissions increases in their netting calculations for the proposed BP Products North America Inc., Whiting Business Unit CXHO Project. Compliance with this limit shall provide creditable netting emissions decreases to be used under 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) for the proposed CXHO Project.

#### 326 IAC 5-1 (Opacity Limitations)

This source is located in the portion of Lake County described in 326 IAC 5-1-1(c)(4); therefore, the opacity shall be limited by 326 IAC 5-1-2(2).

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (1) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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

Each of the emission units associated with this proposed modification is not subject to the requirements of 326 IAC 2-4.1, since they each have potential emissions 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.

326 IAC 2-6 (Emission Reporting)

Since this source is required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, is located in Lake County, and has actual emissions of VOCs and NO<sub>x</sub> greater than twenty-five (25) tons per year, this source is subject to 326 IAC 2-6 (Emission Reporting). Part 70 Permit No. T089-6741-00453 includes the emission reporting requirements under 326 IAC 2-6.

326 IAC 6-4 (Fugitive Dust Emissions Limitations)

Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

326 IAC 6.5-1-2 (Particulate Emission Limitations)

The requirements of 326 IAC 6.5-1-2 are not applicable to the emission units proposed in this modification, since this source is located in Lake County, which is subject to the requirements of 326 IAC 6.8.

326 IAC 6.8-10 (Lake County: Fugitive Particulate Matter)

Fugitive particulate matter from the refinery is subject to the requirements of 326 IAC 6.8-10 because it is one of the sources listed in 326 IAC 6.8-10-1(a)(2). However, there are no sources of fugitive particulate emissions associated with this modification. Therefore, the requirements of 326 IAC 6.8-10 are not included for this modification.

326 IAC 8-6 (Volatile Organic Compounds; Organic Solvent Emission Limitations)

Pursuant to 326 IAC 8-6-1, this source is not subject to the requirements of 326 IAC 8-6, since this source is a petroleum refinery located in Lake County, which is subject to 326 IAC 8-4.

**State Rule Applicability – Storage Tanks (Modification)**

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-1(c)(3), each of the storage tanks is not subject to the requirements of 326 IAC 6-3, since this source is located in Lake County, which is subject to the requirements of 326 IAC 6.8.

326 IAC 6.8-1-2 (Particulate Emission Limitations For Lake County)

(a) Each of the storage tanks proposed in this modification (excluding tank TK-LG-18) is subject to the requirements of 326 IAC 6.8-1-2, since this source is located in Lake County and has potential particulate emissions that exceed 100 tons per year, and since each storage tank is not listed in 326 IAC 6.8-2 through 326 IAC 6.8-11.

Pursuant to 326 IAC 6.8-1-2(a), the particulate matter emissions from the storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17, and TK-3570, shall each be limited to 0.03 grains per dry standard cubic foot.

(b) Storage tank TK-LG-18 is subject to the requirements of 326 IAC 6.8-1-2, since there are no particulate emissions associated with storage of liquid poly phosphoric acid.

326 IAC 6.8-2-6 (Lake County: PM<sub>10</sub> Emission Requirements)

BP Products North America Inc. is listed as a Lake County source under 326 IAC 6.8-2-6. However, each of the storage tanks is not subject to the requirements of 326 IAC 6.8-2, since they are each not listed as a facility in 326 IAC 6.8-2-6 or in any other section in 326 IAC 6.8-2.

326 IAC 8-1-6 (VOC rules: General Reduction Requirements for New Facilities)

The requirements of 326 IAC 8-1-6 are not applicable to each of the storage tanks proposed in this modification, since they each do not have the potential to emit greater than twenty-five (25) tons of VOCs per year.

326 IAC 8-4-3 (Volatile Organic Compounds; Petroleum Liquid Storage Facilities)

The requirements of 326 IAC 8-4-3 apply to all petroleum liquid storage vessels with capacities greater than thirty-nine thousand (39,000) gallons containing volatile organic compounds whose true vapor pressure is greater than 10.5 kPa (1.52 psia). The requirements of 326 IAC 8-4-3 are not applicable to each storage vessel proposed in this modification, since:

- (a) Each storage vessel storing asphalt, residual oil, trim gas oil, asphalt-polymer blend, or polymer finished asphalt is not intended to store a petroleum liquid whose vapor pressure is greater than 10.5 kPa (1.52 psia) at the highest calendar-month average storage temperature.
- (b) Each of the storage tanks storing asphalt-polymer blend (TK-LG-12 and TK-LG-13) will not have a storage capacity greater than 39,000 gallons.

326 IAC 8-7 (Volatile Organic Compounds; Specific VOC Reduction Requirements for Lake, Porter, Clark, and Floyd Counties)

Pursuant to 326 IAC 8-7-2(b), each of the storage tanks proposed in this modification is not subject to the emission limit requirements of 326 IAC 8-7-3, since they each are a type of facility listed in 326 IAC 8-7-2(a)(1) through (a)(2) (i.e., they are facilities identified in 326 IAC 8-4 with actual emissions below the applicability level of 326 IAC 8-4).

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

Each of the storage tanks proposed in this modification are subject to the requirements of 326 IAC 8-9, since they each will be installed in Lake County, are not subject to 40 CFR 60, Subpart Kb, and will store a volatile organic liquid (VOL) as defined by 326 IAC 8-9-3(10). The requirement applicability of 326 IAC 8-9 is as follows

- (a) Stationary Vessels with a Capacity of Less Than 39,000 gallons:  
Pursuant to 326 IAC 8-9-1(b), each stationary vessel with a capacity of less than thirty-nine thousand (39,000) gallons is subject to the following reporting and record keeping provisions of 326 IAC 8-9-6(a) and 326 IAC 8-9-6(b) and are exempt from all other provisions of 326 IAC 8-9:

Pursuant to 326 IAC 8-9-6(b), the Permittee shall maintain a record and submit to IDEM, OAQ a report containing the following information for storage tanks TK-LG-12 and TK-LG-13:

- (1) The vessel identification number;
- (2) The vessel dimensions; and
- (3) The vessel capacity.

Pursuant to 326 IAC 8-9-6(a), these records shall be maintained for the life of the vessel.

- (b) Stationary Vessels with a Capacity of Equal to or Greater than 39,000 gallons that Store a Volatile Organic Liquid with a Maximum True Vapor Pressure that is Normally Less than 0.75 psia:  
Pursuant to 326 IAC 8-9-1(c) and 326 IAC 8-9-6(h), each stationary vessel with a capacity equal to or greater than 39,000 gallons that store a VOL with a maximum true vapor pressure that is normally less than 0.75 psia is subject to the provisions of 326 IAC 8-9-6(a), 326 IAC 8-9-6(b), and 326 IAC 8-9-6(h) and are exempt from all other provisions of 326 IAC 8-9:

Pursuant to 326 IAC 8-9-6(b), the Permittee shall maintain a record and submit to IDEM, OAQ a report containing the following information for storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-11, TK-LG-14 through TK-LG-17, and TK-3570:

- (1) The vessel identification number;
- (2) The vessel dimensions; and
- (3) The vessel capacity.

Pursuant to 326 IAC 8-9-6(a), these records shall be maintained for the life of the vessel.

Pursuant to 326 IAC 8-9-6(h), the Permittee shall maintain a record and notify IDEM OAQ within thirty (30) days when the maximum true vapor pressure of the liquid exceeds seventy-five hundredths (0.75) psia.

### **State Rule Applicability – Natural Gas-Fired Hot Oil Heaters (Modification)**

#### **326 IAC 4-2-2 (Incinerators)**

Each of the natural gas-fired hot oil heaters is not an incinerator, as defined by 326 IAC 1-2-34, since they will not burn waste substances. Therefore, each hot oil heater is not subject to the requirements of 326 IAC 4-2-2.

#### **326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)**

Pursuant to 326 IAC 6-2-1(e), each of the natural gas-fired hot oil heaters is not subject to the requirements of 326 IAC 6-2, since this source is located in Lake County, which is subject to the requirements of 326 IAC 6.8.

#### **326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)**

Pursuant to 326 IAC 6-3-1(c)(3) and 326 IAC 6-3-1(b)(1), each of the natural gas-fired hot oil heaters is not subject to the requirements of 326 IAC 6-3, since this source is located in Lake County, which is subject to the requirements of 326 IAC 6.8, and since each natural gas-fired hot oil heater is a source of indirect heating

#### **326 IAC 6.8-1-2 (Particulate Emission Limitations For Lake County)**

Each of the natural gas-fired hot oil heaters is subject to the requirements of 326 IAC 6.8-1-2, since this source is located in Lake County and has potential particulate emissions that exceed 100 tons per year, and since each hot oil heater is not listed in 326 IAC 6.8-2 through 326 IAC 6.8-11.

Pursuant to 326 IAC 6.8-1-2(a), the particulate matter emissions from each of the hot oil heaters (H-SP-1, H-SP-2, H-LG-1, H-LG-2, and H-LG-3) shall each be limited to 0.03 grains per dry standard cubic foot.

#### **326 IAC 6.8-2-6 (Lake County: PM<sub>10</sub> Emission Requirements)**

BP Products North America Inc. is listed as a Lake County source under 326 IAC 6.8-2-6. However, each of the natural gas-fired hot oil heaters is not subject to the requirements of 326 IAC 6.8-2, since they are each not listed as a facility in 326 IAC 6.8-2-6 or in any other section in 326 IAC 6.8-2.

#### **326 IAC 6.8-6-3 (Lake County: Combustion Sources; Natural Gas)**

BP Products North America Inc. is listed as a Lake County source under 326 IAC 6.8-6-3. However, each of the natural gas-fired hot oil heaters is not subject to the requirements of 326 IAC 6.8-6, since they are each not listed as a facility in 326 IAC 6.8-6-3.

326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations)

Each of the natural gas-fired hot oil heaters is not subject to the requirements of 326 IAC 7-1.1-2, since they each have potential and the actual emission of sulfur dioxide of less than twenty-five (25) tons per year and ten (10) pounds per hour respectively.

326 IAC 7-4.1-1 (Lake County Sulfur Dioxide Emission Limitations)

Each of the natural gas-fired hot oil heaters is not subject to the requirements of 326 IAC 7-4.1-1, since this rule applies only to combustion units that are subject to 326 IAC 7-1.1.

326 IAC 7-4.1-3 (BP Products North America, Inc. Sulfur Dioxide Emission Limitations)

BP Products North America Inc. is listed as a Lake County source under 326 IAC 7-4.1-3. However, each of the natural gas-fired hot oil heaters is not subject to the requirements of 326 IAC 7-4.1-3, since they each are not one of the emission units listed in 326 IAC 7-4.1-3.

326 IAC 8-1-6 (VOC rules: General Reduction Requirements for New Facilities)

The requirements of 326 IAC 8-1-6 are not applicable to each of the natural gas-fired hot oil heaters, since they each do not have the potential to emit greater than twenty-five (25) tons of VOCs per year.

326 IAC 8-7 (Volatile Organic Compounds; Specific VOC Reduction Requirements for Lake, Porter, Clark, and Floyd Counties)

Pursuant to 326 IAC 8-7-2(b), each of the natural gas-fired hot oil heaters is not subject to the emission limit requirements of 326 IAC 8-7-3, since they each are a type of facility listed in 326 IAC 8-7-2(a)(1) through (a)(2) (i.e., they are each listed under 326 IAC 8-7-2(a)(2)(A) as fuel combustion facilities, including process heaters and furnaces).

**State Rule Applicability – Liquid Asphalt Loading Racks (Modification)**

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-1(c)(3), each of the liquid asphalt truck and rail car loading racks is not subject to the requirements of 326 IAC 6-3, since this source is located in Lake County, which is subject to the requirements of 326 IAC 6.8.

326 IAC 6.8-1-2 (Particulate Emission Limitations For Lake County)

Each of the liquid asphalt truck and rail car loading racks is subject to the requirements of 326 IAC 6.8-1-2, since this source is located in Lake County and has potential particulate emissions that exceed 100 tons per year, and since each of loading racks is not listed in 326 IAC 6.8-2 through 326 IAC 6.8-11.

Pursuant to 326 IAC 6.8-1-2(a), the particulate matter emissions from each of the liquid asphalt truck and rail car loading racks, shall each be limited to 0.03 grains per dry standard cubic foot.

326 IAC 6.8-2-6 (Lake County: PM<sub>10</sub> Emission Requirements)

BP Products North America Inc. is listed as a Lake County source under 326 IAC 6.8-2-6. However, each of the liquid asphalt truck and rail car loading racks is not subject to the requirements of 326 IAC 6.8-2, since they are each not listed as a facility in 326 IAC 6.8-2-6 or in any other section in 326 IAC 6.8-2.

326 IAC 8-1-6 (VOC rules: General Reduction Requirements for New Facilities)

The requirements of 326 IAC 8-1-6 are not applicable to each of the liquid asphalt truck and rail car loading racks, since they each do not have the potential to emit greater than twenty-five (25) tons of VOCs per year.

326 IAC 8-4-4 (Petroleum Sources: Bulk Gasoline Terminals)

Each of the liquid asphalt truck and rail car loading racks is not subject to 326 IAC 8-4-4, since they each will load liquid asphalt product not gasoline.

326 IAC 8-4-6 (Petroleum Sources: Gasoline Dispensing Facilities)

Each of the liquid asphalt truck and rail car loading racks is not subject to 326 IAC 8-4-6, since they each will load liquid asphalt product not gasoline.

326 IAC 8-7 (Volatile Organic Compounds; Specific VOC Reduction Requirements for Lake, Porter, Clark, and Floyd Counties)

Pursuant to 326 IAC 8-7-2(b), each of the liquid asphalt truck and rail car loading racks is not subject to the emission limit requirements of 326 IAC 8-7-3, since they each are a type of facility listed in 326 IAC 8-7-2(a)(1) through (a)(2) (i.e., they are each facilities identified in 326 IAC 8-4 with actual emissions below the applicability level of 326 IAC 8-4).

**State Rule Applicability – Equipment Leaks from Various System Components (Modification)**

326 IAC 8-4-8 (Leaks from Petroleum Refineries)

Each of the storage tanks and loading racks proposed in this modification will consist of a number of components from which fugitive VOC and HAP emissions may occur through equipment leaks. These components include various pumps, valves, connectors and piping and are subject to the requirements of 326 IAC 8-4-8 because they each will be located at a refinery in Lake County. However, equipment leaks from this type of equipment are also subject to the requirements of 40 CFR 60, Subpart GGG, which requires the source to monitor and control equipment leaks by following a Leak Detection and Repair (LDAR) Plan. Therefore, BP Products North America, Inc. will comply with 326 IAC 8-4-8 by complying with their existing LDAR Plan.

**Stack Testing Requirements**

No stack testing is required for this modification.

**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 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. 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.

(a) The compliance determination requirements applicable to this modification are as follows:

Opacity from storage tanks TK-SP-1, TK-SP-2, TK-LG-1 through TK-LG-9, and TK-LG-12 through TK-LG-17 shall be controlled by the biofilter system at all times that the storage tanks are in operation.

This condition is necessary to ensure compliance with 40 CFR 60, Subpart UU, NSPS for Asphalt Processing and Asphalt Roofing Manufacture (326 IAC 12).

(b) The compliance monitoring requirements applicable to this modification are as follows:

The Permittee shall monitor for leaks of VOC according to the LDAR plan submitted by the Permittee.

These monitoring conditions are necessary to ensure compliance with 326 IAC 8-4-8 (Leaks from Petroleum Refineries) and 40 CFR 63, Subpart CC NESHAP From Petroleum Refineries (326 IAC 20-16).

(c) The recordkeeping and reporting requirements applicable to this modification are as follows:

Permittee shall maintain records and submit reports as specified by 40 CFR 60, Subpart UU, 40 CFR 63, Subpart CC, and the LDAR plan.

**Proposed Changes**

As a result of this permit modification, the permit is revised as follows with deleted language as ~~strikeouts~~ and new language **bolded**:

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

The Permittee owns and operates a stationary refinery and marketing terminal.

~~Responsible Official: \_\_\_\_\_ Whiting Business Unit Leader~~

...

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:

...

(aa) Oil Movements, identified as Unit 640. This facility is used to store, blend, and ship products. Gasoline blending components are custom blended into various grades of gasoline. Additive and other compounds are blended into the products to give them their unique characteristics. Furnace oil and other distillates are also blended using components from process units or storage. Crude oil and feedstocks for process units and products are also stored at this location. Product loading operations include the pipeline and railcar racks. This facility includes the following emission sources and may also include insignificant activities listed in Section A.4 of this permit:

...

(4) Miscellaneous Storage tanks including the following:

| Tank ID | Location     | Description                        | Tank Construction Dates | Tank Capacity | Vapor Pressure of Liquid (psia) |
|---------|--------------|------------------------------------|-------------------------|---------------|---------------------------------|
| D-424   | 4ULTRAFORMER | Methanol Tank                      | --                      | 3,744         | <0.5                            |
| F-011   | 4B TREATER   | Casper Dewaterer                   | 1949                    | 17,624        | <0.5                            |
| TK-0563 | INCINERATOR  | Aux. Fuel Oil                      | 1971                    | 49,378        | <0.5                            |
| TK-3228 | CRUDE STA    | Decanted Oil                       | 1948                    | 596,570       | <0.5                            |
| TK-3234 | CRUDE STA    | Decanted Oil                       | 1940                    | 858,298       | <0.5                            |
| TK-3464 | BERRY LAKE   | Decanted Oil                       | 1957                    | 2,705,472     | <0.5                            |
| TK-3465 | BERRY LAKE   | Plant Fuel                         | 1973                    | 3,413,088     | <0.5                            |
| TK-3468 | BERRY LAKE   | TGO                                | 1958                    | 3,381,840     | <0.5                            |
| TK-3491 | SO. TK FLD.  | Lsho                               | 1992                    | 3,876,768     | <0.5                            |
| TK-3496 | SO. TK FLD.  | Distillate                         | 1992                    | 3,876,768     | <0.5                            |
| TK-3498 | SO. TK FLD.  | Amoco Premier Diesel [Future Lsfo] | 1929                    | 3,373,413     | <0.5                            |

| Tank ID | Location    | Description                        | Tank Construction Dates | Tank Capacity | Vapor Pressure of Liquid (psia) |
|---------|-------------|------------------------------------|-------------------------|---------------|---------------------------------|
| TK-3499 | SO. TK FLD. | Amoco Premier Diesel [Future Lsfo] | 1996                    | 3,870,720     | <0.5                            |
| TK-3500 | SO. TK FLD. | Furnace Oil [Future Hmd]           | 1996                    | 3,870,720     | <0.5                            |
| TK-3505 | SO. ANNEX   | Heater Oil                         | 1949                    | 4,254,768     | <0.5                            |
| TK-3509 | SO. TK FLD. | Furnace Oil                        | 1948                    | 3,381,840     | <0.5                            |
| TK-3546 | SO. TK FLD. | Bronze Dye                         | 1962                    | 16,800        | <0.5                            |
| TK-3547 | SO. TK FLD. | Purple Dye                         | 1962                    | 16,800        | <0.5                            |
| TK-3548 | SO. TK FLD. | Isonox 133                         | 1962                    | 16,800        | <0.5                            |
| TK3567  | --          | --                                 | --                      | 17,000        | <0.5                            |
| TK-3569 | MARINE DOCK | DCO                                | 1981                    | 4,796,064     | <0.5                            |
| TK-3570 | MARINE DOCK | DCO                                | 1971                    | 2,274,048     | <0.5                            |

...

- (ff) One (1) Asphalt Facility used to store, blend and transfer asphalt products. The facility has six blenders used for loading asphalt into railcars and trucks. Process heaters are used to keep certain tanks at the proper temperature for shipping. This facility includes the following emission sources and may also include insignificant activities listed in Section A.4 of this permit:

...

- (3) The following twenty-five (25) asphalt storage tanks used to store volatile organic liquids that have a vapor pressure less than 0.5 psi.

| Identification | Storage Capacity (gallons) | Year Constructed |
|----------------|----------------------------|------------------|
| 78             | 1,814,400                  | 1947             |
| 113            | 810,600                    | 1944             |
| 114            | 810,600                    | 1944             |
| 128            | 3,225,600                  | 1971             |
| 148            | 810,600                    | 1948             |
| 149            | 810,600                    | 1948             |
| 153            | 932,400                    | 1979             |
| 222            | 210,000                    | 1955             |
| 223            | 210,000                    | 1955             |
| 224            | 210,000                    | 1955             |
| 225            | 361,200                    | 1950             |
| 248            | 6,967,800                  | 1973             |
| 249            | 6,967,800                  | 1973             |
| 250            | 6,967,800                  | 1971             |
| 251            | 6,967,800                  | 1971             |
| 252            | 6,967,800                  | 1972             |
| 253            | 6,967,800                  | 1971             |
| 261            | 441,000                    | 1973             |
| 262            | 441,000                    | 1972             |
| 468            | 3,108,000                  | 1956             |
| 570            | 2,100,000                  | 1971             |
| 571            | 5,040,000                  | 1971             |
| 572            | 5,040,000                  | 1971             |
| 609            | 5,649,000                  | 1973             |
| 611            | 8,513,400                  | 1973             |

- (4) The following twenty-two (22) heated vertical storage tanks, each approved for construction in 2007, each with a fixed cone roof, and each in heavy liquid service, storing volatile organic liquids that have a vapor pressure less than 0.0435 psia, and exhausting to the atmosphere or to a biofilter system for odor and opacity control:

| Tank ID  | Liquid Stored               | Date Approved for Construction | Tank Storage Capacity (gallons) | Maximum Throughput (gallons/year) | Exhaust ID |
|----------|-----------------------------|--------------------------------|---------------------------------|-----------------------------------|------------|
| TK-3573  | Trim Gas Oil                | 2007                           | 966,000                         | 20,160,000                        | TK-3573    |
| TK-SP-1  | Residual Oil and/or Asphalt | 2007                           | 14,154,000                      | 141,120,000                       | biofilter  |
| TK-SP-2  | Residual Oil and/or Asphalt | 2007                           | 14,154,000                      | 141,120,000                       | biofilter  |
| TK-SP-3  | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | biofilter  |
| TK-SP-4  | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | biofilter  |
| TK-LG-1  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-2  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-3  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-4  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-5  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-6  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-7  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-8  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-9  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | biofilter  |
| TK-LG-10 | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | biofilter  |
| TK-LG-11 | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | biofilter  |
| TK-LG-12 | Asphalt with Polymer        | 2007                           | 2,100                           | 420,000                           | biofilter  |
| TK-LG-13 | Asphalt-Polymer Blend       | 2007                           | 31,500                          | 2,100,000                         | biofilter  |
| TK-LG-14 | Polymer Finished Asphalt    | 2007                           | 126,000                         | 2,520,000                         | biofilter  |
| TK-LG-15 | Polymer Finished Asphalt    | 2007                           | 126,000                         | 2,520,000                         | biofilter  |
| TK-LG-16 | Polymer Finished Asphalt    | 2007                           | 126,000                         | 2,520,000                         | biofilter  |
| TK-LG-17 | Polymer Finished Asphalt    | 2007                           | 126,000                         | 2,520,000                         | biofilter  |

Under 40 CFR 60, Subpart UU, storage tanks TK-SP-1, TK-SP-2, TK-LG-1 through TK-LG-9, and TK-LG-12 through TK-LG-17 are each considered an affected facility.

Under 40 CFR 63, Subpart CC, storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17 are each considered as Group 2 storage vessels that are part of the existing affected source.

- (5) **The following heated vertical storage tank, with a fixed cone roof, in heavy liquid service, storing volatile organic liquids that have a vapor pressure less than 0.0435 psia, and exhausting to the atmosphere:**

| Tank ID | Liquid Stored | Construction Date | Tank Storage Capacity (gallons) | Maximum Throughput (gallons/year) | Exhaust ID |
|---------|---------------|-------------------|---------------------------------|-----------------------------------|------------|
| TK-3570 | Trim Gas Oil  | 1971              | 2,730,000                       | 20,160,000                        | TK-3570    |

Under 40 CFR 63, Subpart CC, storage tank TK-3570 is considered as a Group 2 storage vessel that is part of the existing affected source.

- (6) one (1) truck loading rack, approved for construction in 2007, comprised of six (6) loading bays used for loading liquid asphalt product, with a total maximum loading capacity of 800,000 tons of asphalt product per year, exhausting to the atmosphere or to a biofilter system for odor control.
- (7) one (1) rail car loading rack, approved for construction in 2007, comprised of twenty-eight (28) loading bays used for loading liquid asphalt product, with a total maximum loading capacity of 800,000 tons of asphalt product per year, exhausting to the atmosphere or to a biofilter system for odor control.
- (8) **Equipment leaks of VOC and HAP from valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges and/or other connectors.**

**Under 40 CFR 60, Subpart GGG, valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges and/or other connectors in VOC service, are considered part of the existing affected source.**

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

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

...

- (h) Combustion activities related to the following [326 IAC 2-7-1(21)(G)(i)]:
- (1) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:
- (i) Natural gas, provided the heat input of the unit is equal to or less than 10 MMBtu/hr.
- (ii) **The following five (5) natural gas-fired hot oil heaters, each approved for construction in 2007, and each considered an insignificant activity, as defined in 326 IAC 2-7-1(21)(G)(i)(AA)(aa):**

| Process Heater ID | Heat Input Capacity (MMBtu/hr) | Fuel        | Control Device |
|-------------------|--------------------------------|-------------|----------------|
| H-SP-1            | 9.9                            | Natural gas | none           |
| H-SP-2            | 9.9                            | Natural gas | none           |
| H-LG-1            | 9.9                            | Natural gas | none           |
| H-LG-2            | 9.9                            | Natural gas | none           |
| H-LG-3*           | 9.9                            | Natural gas | none           |

**\*Hot oil heater H-LG-3 will exhaust to a steam generator that will be used to heat rejected loads of asphalt during unloading.**

- (iii) Propane, liquified petroleum gas, or butane, provided the heat input of the unit is equal to or less than 6 MMBtu/hr.
- (iviii) Fuel oil, provided the heat input of the unit is equal to or less than 2 MMBtu/hr and the fuel contains equal to or less than 0.5% sulfur by weight.

SECTION D.27 FACILITY OPERATION CONDITIONS - Oil Movements

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

(aa) Oil Movements, identified as Unit 640. This facility is used to store, blend, and ship products. Gasoline blending components are custom blended into various grades of gasoline. Additive and other compounds are blended into the products to give them their unique characteristics. Furnace oil and other distillates are also blended using components from process units or storage. Crude oil and feedstocks for process units and products are also stored at this location. Product loading operations include the pipeline and railcar racks. This facility includes the following emission sources and may also include insignificant activities listed in section A.4 of this permit:

(4) Miscellaneous Storage tanks including the following:

| Tank ID | Location     | Description                        | Tank Construction Dates | Tank Capacity | Vapor Pressure of Liquid (psia) |
|---------|--------------|------------------------------------|-------------------------|---------------|---------------------------------|
| D-424   | 4ULTRAFORMER | Methanol Tank                      | --                      | 3,744         | <0.5                            |
| F-011   | 4B TREATER   | Casper Dewaterer                   | 1949                    | 17,624        | <0.5                            |
| TK-0563 | INCINERATOR  | Aux. Fuel Oil                      | 1971                    | 49,378        | <0.5                            |
| TK-3228 | CRUDE STA    | Decanted Oil                       | 1948                    | 596,570       | <0.5                            |
| TK-3234 | CRUDE STA    | Decanted Oil                       | 1940                    | 858,298       | <0.5                            |
| TK-3464 | BERRY LAKE   | Decanted Oil                       | 1957                    | 2,705,472     | <0.5                            |
| TK-3465 | BERRY LAKE   | Plant Fuel                         | 1973                    | 3,413,088     | <0.5                            |
| TK-3468 | BERRY LAKE   | TGO                                | 1958                    | 3,381,840     | <0.5                            |
| TK-3491 | SO. TK FLD.  | Lsho                               | 1992                    | 3,876,768     | <0.5                            |
| TK-3496 | SO. TK FLD.  | Distillate                         | 1992                    | 3,876,768     | <0.5                            |
| TK-3498 | SO. TK FLD.  | Amoco Premier Diesel [Future Lsfo] | 1929                    | 3,373,413     | <0.5                            |
| TK-3499 | SO. TK FLD.  | Amoco Premier Diesel [Future Lsfo] | 1996                    | 3,870,720     | <0.5                            |
| TK-3500 | SO. TK FLD.  | Furnace Oil [Future Hmd]           | 1996                    | 3,870,720     | <0.5                            |
| TK-3505 | SO. ANNEX    | Heater Oil                         | 1949                    | 4,254,768     | <0.5                            |
| TK-3509 | SO. TK FLD.  | Furnace Oil                        | 1948                    | 3,381,840     | <0.5                            |
| TK-3546 | SO. TK FLD.  | Bronze Dye                         | 1962                    | 16,800        | <0.5                            |
| TK-3547 | SO. TK FLD.  | Purple Dye                         | 1962                    | 16,800        | <0.5                            |
| TK-3548 | SO. TK FLD.  | IsoNO <sub>x</sub> 133             | 1962                    | 16,800        | <0.5                            |
| TK3567  | --           | --                                 | --                      | 17,000        | <0.5                            |
| TK-3569 | MARINE DOCK  | DCO                                | 1981                    | 4,796,064     | <0.5                            |
| TK-3570 | MARINE DOCK  | DCO                                | 1974                    | 2,274,048     | <0.5                            |

D.27.3 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]

Pursuant to 326 IAC 8-9, the Permittee shall comply with the following requirements for storage tanks 3529, 3637, 3901, 3902, 3912, 3477, 3482, 3483, 3492, 3510, 3512, 3513, 3532, 3624, 3631, 3633, 3635, 3639, 3641, 3705, 3706, 3709, 3728, 3730, 3905, 3909, 3914, 3511, 3601, 3480, 3486, 3487, 3525, 3526, 3553, 3554, 3605, 3703, 3704, 3533, 3915, 3916, 3917, 3918, 3919, 3920, D-424, F-011, TK-3546, TK-3547, TK-3548, TK-3567, TK-3867, TK-3868, TK-3869, TK-3872, TK-3876, TK-0563, TK-3228, TK-3234, TK-3464, TK-3465, TK-3468, TK-3491, TK-3496, TK-3498, TK-3499, TK-3500, TK-3505, TK-3509, TK-3569, ~~TK-3570~~, TK-3606, TK-3607, TK-3609, TK-3610, TK-3611, TK-3613, TK-3711, TK-3712, TK-3714, TK-3717, TK-3718, TK-3719, TK-3720, TK-3721,

TK-3722, TK-3723, TK-3726, TK-3733, TK-3735, TK-3908, TK-3910, TK-3913, TK-6078, TK-6113, TK-6114, TK-6125, TK-6126, TK-6127, TK-6128, TK-6129, TK-6148, TK-6149, TK-6150, TK-6153, TK-6248, TK-6249, TK-6250, TK-6251, TK-6252, TK-6253, TK-6261, TK-6262, TK-3571, TK-3572, TK-3734, and TK-3906. For Storage tanks 3534, 3602, 3604, 3708, 3727, D-424, F-011, TK-3546, TK-3547, TK-3548, TK-3567, TK-3867, TK-3868, TK-3869, TK-3872, TK-3876, TK-0563, TK-3228, TK-3234, TK-3464, TK-3465, TK-3468, TK-3491, TK-3496, TK-3498, TK-3499, TK-3500, TK-3505, TK-3509, TK-3569, ~~TK-3570~~, TK-3606, TK-3607, TK-3609, TK-3610, TK-3611, TK-3613, TK-3711, TK-3712, TK-3714, TK-3717, TK-3718, TK-3719, TK-3720, TK-3721, TK-3722, TK-3723, TK-3726, TK-3733, TK-3735, TK-3908, TK-3910, TK-3913, TK-6078, TK-6113, TK-6114, TK-6125, TK-6126, TK-6127, TK-6128, TK-6129, TK-6148, TK-6149, TK-6150, TK-6153, TK-6248, TK-6249, TK-6250, TK-6251, TK-6252, TK-6253, TK-6261, TK-6262, TK-3571, TK-3572, TK-3734, and TK-3906, which are used to store liquids with vapor pressures less than 0.5 psia, the Permittee shall comply only with the reporting requirements specified in Condition D.27.9(e). For storage tanks 3633, 3635, 3710, 3571, TK-3572, TK-3734, and TK-3906, which are used to store liquids with vapor pressures between 0.5 and 0.75 psia, the Permittee shall comply only with the requirements specified in Condition D.27.9(e) and (i).

...  
**SECTION D.32 FACILITY OPERATION CONDITIONS - Asphalt Facility**

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

(ff) One (1) Asphalt Facility used to store, blend and transfer asphalt products. The facility has six blenders used for loading asphalt into railcars and trucks. Process heaters are used to keep certain tanks at the proper temperature for shipping. This facility includes the following emission sources and may also include insignificant activities listed in section A.4 of this permit:

...

(3) The following twenty-five (25) asphalt storage tanks used to store volatile organic liquids that have a vapor pressure less than 0.5 psi.

| Identification | Storage Capacity (gallons) | Year Constructed |
|----------------|----------------------------|------------------|
| 78             | 1,814,400                  | 1947             |
| 113            | 810,600                    | 1944             |
| 114            | 810,600                    | 1944             |
| 128            | 3,225,600                  | 1971             |
| 148            | 810,600                    | 1948             |
| 149            | 810,600                    | 1948             |
| 153            | 932,400                    | 1979             |
| 222            | 210,000                    | 1955             |
| 223            | 210,000                    | 1955             |
| 224            | 210,000                    | 1955             |
| 225            | 361,200                    | 1950             |
| 248            | 6,967,800                  | 1973             |
| 249            | 6,967,800                  | 1973             |
| 250            | 6,967,800                  | 1971             |
| 251            | 6,967,800                  | 1971             |
| 252            | 6,967,800                  | 1972             |
| 253            | 6,967,800                  | 1971             |
| 261            | 441,000                    | 1973             |
| 262            | 441,000                    | 1972             |
| 468            | 3,108,000                  | 1956             |
| <del>570</del> | <del>2,100,000</del>       | <del>1971</del>  |
| 571            | 5,040,000                  | 1971             |

|     |           |      |
|-----|-----------|------|
| 572 | 5,040,000 | 1971 |
| 609 | 5,649,000 | 1973 |
| 611 | 8,513,400 | 1973 |

(4) The following twenty-two (22) heated vertical storage tanks, each approved for construction in 2007, each with a fixed cone roof, and each in heavy liquid service, storing volatile organic liquids that have a vapor pressure less than 0.0435 psia, and exhausting to the atmosphere or to a biofilter system for odor and opacity control:

| Tank ID  | Liquid Stored               | Date Approved for Construction | Tank Storage Capacity (gallons) | Maximum Throughput (gallons/year) | Vapor Pressure of Liquid at Storage Temperature (psia) | Exhaust ID |
|----------|-----------------------------|--------------------------------|---------------------------------|-----------------------------------|--|------------|
| TK-3573  | Trim Gas Oil                | 2007                           | 966,000                         | 20,160,000                        | < 0.0435   | TK-3573    |
| TK-SP-1  | Residual Oil and/or Asphalt | 2007                           | 14,154,000                      | 141,120,000                       | < 0.0435   | biofilter  |
| TK-SP-2  | Residual Oil and/or Asphalt | 2007                           | 14,154,000                      | 141,120,000                       | < 0.0435   | biofilter  |
| TK-SP-3  | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | < 0.0435   | biofilter  |
| TK-SP-4  | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | < 0.0435   | biofilter  |
| TK-LG-1  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-2  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-3  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-4  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-5  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-6  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-7  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-8  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-9  | Asphalt                     | 2007                           | 4,746,000                       | 50,400,000                        | < 0.0435   | biofilter  |
| TK-LG-10 | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | < 0.0435   | biofilter  |
| TK-LG-11 | Trim Gas Oil                | 2007                           | 2,268,000                       | 16,800,000                        | < 0.0435   | biofilter  |
| TK-LG-12 | Asphalt with Polymer        | 2007                           | 2,100                           | 420,000                           | < 0.0435   | biofilter  |
| TK-LG-13 | Asphalt-Polymer Blend       | 2007                           | 31,500                          | 2,100,000                         | < 0.0435   | biofilter  |
| TK-LG-14 | Polymer Finished Asphalt    | 2007                           | 126,000                         | 2,520,000                         | < 0.0435   | biofilter  |
| TK-LG-15 | Polymer Finished Asphalt    | 2007                           | 126,000                         | 2,520,000                         | < 0.0435   | biofilter  |
| TK-LG-16 | Polymer Finished Asphalt    | 2007                           | 126,000                         | 2,520,000                         | < 0.0435   | biofilter  |
| TK-LG-17 | Polymer Finished Asphalt    | 2007                           | 126,000                         | 2,520,000                         | < 0.0435   | biofilter  |

Under 40 CFR 60, Subpart UU, storage tanks TK-SP-1, TK-SP-2, TK-LG-1 through TK-LG-9, and TK-LG-12 through TK-LG-17 are each considered an affected facility.

Under 40 CFR 63, Subpart CC, storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17 are each considered as Group 2 storage vessels that are part of the existing affected source.

- (5) The following heated vertical storage tank, with a fixed cone roof, in heavy liquid service, storing volatile organic liquids that have a vapor pressure less than 0.0435 psia, and exhausting to the atmosphere:

| Tank ID | Liquid Stored | Construction Date | Tank Storage Capacity (gallons) | Maximum Throughput (gallons/year) | Vapor Pressure of Liquid at Storage Temperature (psia) | Exhaust ID |
|---------|---------------|-------------------|---------------------------------|-----------------------------------|--|------------|
| TK-3570 | Trim Gas Oil  | 1971              | 2,730,000                       | 20,160,000                        | < 0.0435   | TK-3570    |

Under 40 CFR 63, Subpart CC, storage tank TK-3570 is considered as a Group 2 storage vessel that is part of the existing affected source.

- (6) one (1) truck loading rack, approved for construction in 2007, comprised of six (6) loading bays used for loading liquid asphalt product, with a total maximum loading capacity of 800,000 tons of asphalt product per year, exhausting to the atmosphere or to a biofilter system for odor control.
- (7) one (1) rail car loading rack, approved for construction in 2007, comprised of twenty-eight (28) loading bays used for loading liquid asphalt product, with a total maximum loading capacity of 800,000 tons of asphalt product per year, exhausting to the atmosphere or to a biofilter system for odor control.
- (8) Equipment leaks of VOC and HAP from valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges and/or other connectors.

Under 40 CFR 60, Subpart GGG, valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges and/or other connectors in VOC service, are considered part of the existing affected source.

- (9) The following five (5) natural gas-fired hot oil heaters, each approved for construction in 2007, and each considered an insignificant activity, as defined in 326 IAC 2-7-1(21)(G)(i)(AA)(aa):

| Process Heater ID | Heat Input Capacity (MMBtu/hr) | Fuel        | Control Device |
|-------------------|--------------------------------|-------------|----------------|
| H-SP-1            | 9.9                            | Natural gas | none           |
| H-SP-2            | 9.9                            | Natural gas | none           |
| H-LG-1            | 9.9                            | Natural gas | none           |
| H-LG-2            | 9.9                            | Natural gas | none           |
| H-LG-3*           | 9.9                            | Natural gas | none           |

\*Hot oil heater H-LG-3 will exhaust to a steam generator that will be used to heat rejected loads of asphalt during unloading.

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

...  
**D.32.4 NSPS Requirements [326 IAC 12-1] [40 CFR 60, Subpart UU]**

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Pursuant to the 40 CFR 60.470472(e), the Permittee shall comply with the requirements specified in Section E.17 for asphalt storage tanks 125, 126, 127, 129, 150, 569, and 613, **TK-SP-1, TK-SP-2, TK-LG-1 through TK-LG-9, and TK-LG-12 through TK-LG-17.**

...  
**D.32.6 Particulate Matter [326 IAC 6.8-1-2]**

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Pursuant to 326 IAC 6.8-1-2(a), the particulate matter emissions from the storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17, and TK-3570, the hot oil heaters H-SP-1, H-SP-2, H-LG-1, H-LG-2, and H-LG-3, and the liquid asphalt truck and rail car loading racks shall each be limited to 0.03 grains per dry standard cubic foot.

**D.32.7 NESHAP Requirements [40 CFR Part 63, Subpart CC] [326 IAC 20-16]**

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Pursuant to 40 CFR 63.640, the Permittee shall comply with the requirements specified in Section E.1 for storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17, and TK-3570.

**D.32.8 Equipment Leaks of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) [326 IAC 8-4-8] [40 CFR 60, Subpart GGG]**

- 
- (a) Pursuant to 326 IAC 8-4-8, the Permittee shall control leaks of VOC from pumps, compressors, valves, process drains, and pressure relief devices according to the Leak Detection and Repair (LDAR) Plan submitted by the Permittee. The Permittee shall update the LDAR Plan as necessary and shall submit a copy of the revised LDAR Plan to IDEM OAQ for approval. If IDEM, OAQ determines that the procedures specified in the LDAR Plan will not demonstrate compliance with the fugitive emission limitations, IDEM, OAQ may require the Permittee to revise the plan.
- (b) Pursuant to 40 CFR 60, Subpart GGG, the Permittee shall comply with the requirements specified in Sections E.4 and E.13 for valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges and/or other connectors in VOC service.

**D.32.9 Natural Gas Usage Limit [326 IAC 2-2] [326 IAC 2-3]**

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The total natural gas usage shall not exceed 255 million cubic feet per twelve (12) consecutive month period for hot oil heaters H-SP-1, H-SP-2, H-LG-1, H-LG-2, and H-LG-3. Compliance with this limit shall ensure compliance with the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset).

**D.32.10 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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A Preventive Maintenance Plan (PMP), in accordance with Section B - Preventive Maintenance Plan, of Part 70 Operating Permit No. T089-6741-00453, is required for the biofilter system. The Permittee shall prepare and maintain the PMP for the biofilter system on or before initial startup of the biofilter system.

D.32.116 Operating Requirement

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...  
D.32.127 Operating Requirement

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...  
**D.32.13 Opacity Control**

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In order to comply with Condition D.32.4 (40 CFR Part 60, Subpart UU), opacity from storage tanks TK-SP-1, TK-SP-2, TK-LG-1 through TK-LG-9, and TK-LG-12 through TK-LG-17 shall be controlled by the biofilter system at all times that the storage tanks are in operation.

**D.32.14 Monitoring for Equipment Leaks of VOC [326 IAC 8-4-8]**

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Pursuant to 326 IAC 8-4-8, the Permittee shall monitor for leaks of VOC according to the LDAR plan submitted by the Permittee.

**D.32.158** Volatile Organic Liquid Storage Vessels [326 IAC 8-9]

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- (a) Pursuant to 326 IAC 8-9-6(a) and (b), the Permittee shall maintain the following information for storage tanks 125, 126, 127, 129, 150, 569, 613, 78, 113, 114, 128, 148, 149, 153, 222, 223, 224, 225, 248, 249, 250, 251, 252, 253, 261, 262, 468, ~~570~~, 571, 572, 609, and 611, **TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17, and TK-3570:**
- ...
- (b) Pursuant to 326 IAC 8-9-6(h), the Permittee shall maintain a record and notify IDEM, OAQ within thirty (30) days when the maximum true vapor pressure of the liquid stored in vessels 125, 126, 127, 129, 150, 569, ~~or~~ 613, **TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-11, TK-LG-14 through TK-LG-17, or TK-3570** exceeds **seventy-five hundredths (0.75) psia.**

**D.32.169** Record Keeping Requirements

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- (a) Pursuant to 326 IAC 7-4.1-3(b)(1)(A) and to document compliance with Conditions D.32.2, and D.32.116, the Permittee shall maintain a daily record of the following for the F-1 and F-2 process heaters:
- ...
- (e) **Pursuant to 40 CFR 63, Subpart CC and to document compliance with Condition D.32.7, the Permittee shall keep records as specified in Section E.1.**
- (f) **Pursuant to 40 CFR 60, Subpart GGG and to document compliance with Condition D.32.8(b), the Permittee shall keep records as specified in Sections E.4 and E.13.**
- (g) **Pursuant to 326 IAC 8-4-8 and to document compliance with Condition D.32.8(a), the Permittee shall comply with equipment leak record keeping requirements specified in the LDAR plan.**
- (h) **To document compliance with Condition D.32.9, the Permittee shall record the total natural gas usage for hot oil heaters H-SP-1, H-SP-2, H-LG-1, H-LG-2, and H-LG-3 on a monthly basis;**

**D.32.1740** Reporting Requirements

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- (a) Pursuant to 326 IAC 7-4.1-3(b)(2) and to document compliance with Conditions D.32.2 and D.32.116, the Permittee shall submit a report to IDEM, OAQ department within thirty (30) days after the end of each calendar quarter containing the average daily sulfur dioxide emission rate, for the F-1 Asphalt Heater and F-2 Steiglitz Heater.
- ...
- (d) **Pursuant to 40 CFR 63, Subpart CC and to document compliance with Condition D.32.7, the Permittee shall submit reports as specified in Section E.1.**
- (e) **Pursuant to 40 CFR 60, Subpart GGG and to document compliance with Condition D.32.8(b), the Permittee shall submit to IDEM, OAQ the reports specified in Sections E.4 and E.13.**
- (f) **Pursuant to 326 IAC 8-4-8 and to document compliance with Condition D.32.8(a), the Permittee shall submit reports as specified in the LDAR plan.**
- (g) **A quarterly summary of the information to document compliance with Condition D.32.9 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).**
- ...

SECTION E.1 40 CFR Part 63, Subpart CC – National Emission Standards for Hazardous Air Pollutants  
For Petroleum Refineries

...

E.1.2 NESHAP Subpart CC Requirements [40 CFR Part 63, Subpart CC] [326 IAC 20-16]

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Pursuant to 40 CFR 63.640, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart CC, which are incorporated by reference in 326 IAC 20-16, for all affected storage tanks, process vents, wastewater streams and wastewater treatment operations, equipment leaks, gasoline loading racks, and marine vessel loading operations:

...

§ 63.640 Applicability and designation of affected source.

...

(h) Except as provided in paragraphs (k), (l), or (m) of this section, sources subject to this subpart are required to achieve compliance on or before the dates specified in paragraphs (h)(1) through (h)(4) of this section.

...

**(5) An owner or operator may elect to comply with the provisions of §63.648 (c) through (i) as an alternative to the provisions of §63.648 (a) and (b). In such cases, the owner or operator shall comply no later than the dates specified in paragraphs (h)(5)(i) through (h)(5)(iii) of this section.**

**(i) Phase I (see table 2 of this subpart), beginning on August 18, 1998;**

**(ii) Phase II (see table 2 of this subpart), beginning no later than August 18, 1999; and**

**(iii) Phase III (see table 2 of this subpart), beginning no later than February 18, 2001.**

...

§ 63.641 Definitions.

All terms used in this subpart shall have the meaning given them in the Clean Air Act, subpart A of this part, and in this section. If the same term is defined in subpart A and in this section, it shall have the meaning given in this section for purposes of this subpart.

***Affected source*** means the collection of emission points to which this subpart applies as determined by the criteria in §63.640.

***Aliphatic*** means open-chained structure consisting of paraffin, olefin and acetylene hydrocarbons and derivatives.

***Annual average true vapor pressure*** means the equilibrium partial pressure exerted by the stored liquid at the temperature equal to the annual average of the liquid storage temperature for liquids stored above or below the ambient temperature or at the local annual average temperature reported by the National Weather Service for liquids stored at the ambient temperature, as determined:

**(1) In accordance with methods specified in §63.111 of subpart G of this part;**

**(2) From standard reference texts; or**

**(3) By any other method approved by the Administrator.**

***Boiler*** means any enclosed combustion device that extracts useful energy in the form of steam and is not an incinerator.

***By compound*** means by individual stream components, not by carbon equivalents.

***Car-seal*** means a seal that is placed on a device that is used to change the position of a valve (e.g., from opened to closed) in such a way that the position of the valve cannot be changed without breaking the seal.

***Closed vent system*** means a system that is not open to the atmosphere and is configured of piping, ductwork, connections, and, if necessary, flow inducing devices that transport gas or vapor from an emission point to a control device or back into the process. If gas or vapor from regulated equipment is routed to a process (e.g., to a petroleum refinery fuel gas system), the process shall not be considered a closed vent system and is not subject to closed vent system standards.

***Combustion device*** means an individual unit of equipment such as a flare, incinerator, process heater, or boiler used for the combustion of organic hazardous air pollutant vapors.

***Connector*** means flanged, screwed, or other joined fittings used to connect two pipe lines or a pipe line and a piece of equipment. A common connector is a flange. Joined fittings welded completely around the circumference of the interface are not considered connectors for the purpose of this regulation. For the purpose of reporting and recordkeeping, connector means joined fittings that are accessible.

***Continuous record*** means documentation, either in hard copy or computer readable form, of data values measured at least once every hour and recorded at the frequency specified in §63.654(i).

***Continuous recorder*** means a data recording device recording an instantaneous data value or an average data value at least once every hour.

***Control device*** means any equipment used for recovering, removing, or oxidizing organic hazardous air pollutants. Such equipment includes, but is not limited to, absorbers, carbon adsorbers, condensers, incinerators, flares, boilers, and process heaters. For miscellaneous process vents (as defined in this section), recovery devices (as defined in this section) are not considered control devices.

***Delayed coker vent*** means a vent that is typically intermittent in nature, and usually occurs only during the initiation of the depressuring cycle of the decoking operation when vapor from the coke drums cannot be sent to the fractionator column for product recovery, but instead is routed to the atmosphere through a closed blowdown system or directly to the atmosphere in an open blowdown system. The emissions from the decoking phases of delayed coker operations, which include coke drum deheading, draining, or decoking (coke cutting), are not considered to be delayed coker vents.

***Distillate receiver*** means overhead receivers, overhead accumulators, reflux drums, and condenser(s) including ejector-condenser(s) associated with a distillation unit.

***Distillation unit*** means a device or vessel in which one or more feed streams are separated into two or more exit streams, each exit stream having component concentrations different from those in the feed stream(s). The separation is achieved by the redistribution of the components between the liquid and the vapor phases by vaporization and condensation as they approach equilibrium within the distillation unit. Distillation unit includes the distillate receiver, reboiler, and any associated vacuum pump or steam jet.

***Emission point*** means an individual miscellaneous process vent, storage vessel, wastewater stream, or equipment leak associated with a petroleum refining process unit; an individual storage vessel or equipment leak associated with a bulk gasoline terminal or pipeline breakout station classified under Standard Industrial Classification code 2911; a gasoline loading rack classified under Standard Industrial Classification code 2911; or a marine tank vessel loading operation located at a petroleum refinery.

***Equipment leak*** means emissions of organic hazardous air pollutants from a pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, or instrumentation system "in organic hazardous air pollutant service" as defined in this section. Vents from wastewater collection and conveyance systems (including, but not limited to wastewater drains, sewer vents, and sump drains), tank mixers, and sample valves on storage tanks are not equipment leaks.

***Flame zone*** means the portion of a combustion chamber of a boiler or process heater occupied by the flame envelope created by the primary fuel.

***Flexible operation unit*** means a process unit that manufactures different products periodically by alternating raw materials or operating conditions. These units are also referred to as campaign plants or blocked operations.

***Flow indicator*** means a device that indicates whether gas is flowing, or whether the valve position would allow gas to flow, in a line.

***Fuel gas system*** means the offsite and onsite piping and control system that gathers gaseous streams generated by refinery operations, may blend them with sources of gas, if available, and transports the blended gaseous fuel at suitable pressures for use as fuel in heaters, furnaces, boilers, incinerators, gas turbines, and other combustion devices located within or outside of the refinery. The fuel is piped directly to each individual combustion device, and the system typically operates at pressures over atmospheric. The gaseous streams can contain a mixture of methane, light hydrocarbons, hydrogen and other miscellaneous species.

***Gasoline*** means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater that is used as a fuel for internal combustion engines.

***Gasoline loading rack*** means the loading arms, pumps, meters, shutoff valves, relief valves, and other piping and valves necessary to fill gasoline cargo tanks.

***Group 1 gasoline loading rack*** means any gasoline loading rack classified under Standard Industrial Classification code 2911 that is located within a bulk gasoline terminal that has a gasoline throughput greater than 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput for the terminal as may be limited by compliance with enforceable conditions under Federal, State, or local law and discovered by the Administrator and any other person.

***Group 1 marine tank vessel*** means a vessel at an existing source loaded at any land- or sea-based terminal or structure that loads liquid commodities with vapor pressures greater than or equal to 10.3 kilopascals in bulk onto marine tank vessels, that emits greater than 9.1 megagrams of any individual HAP or 22.7 megagrams of any combination of HAP annually after August 18, 1999, or a vessel at a new source loaded at any land- or sea-based terminal or structure that loads liquid commodities with vapor pressures greater than or equal to 10.3 kilopascals onto marine tank vessels.

***Group 1 miscellaneous process vent*** means a miscellaneous process vent for which the total organic HAP concentration is greater than or equal to 20 parts per million by volume, and the total volatile organic compound emissions are greater than or equal to 33 kilograms per day for existing sources and 6.8 kilograms per day for new sources at the outlet of the final recovery device (if any) and prior to any control device and prior to discharge to the atmosphere.

***Group 1 storage vessel*** means a storage vessel at an existing source that has a design capacity greater than or equal to 177 cubic meters and stored-liquid maximum true vapor pressure greater than or equal to 10.4 kilopascals and stored-liquid annual average true vapor pressure greater than or equal to 8.3 kilopascals and annual average HAP liquid concentration greater than 4 percent by weight total organic HAP; a storage vessel at a new source that has a design storage capacity greater than or equal to 151 cubic meters and stored-liquid maximum true vapor pressure greater than or equal to 3.4 kilopascals and annual average HAP liquid concentration greater than 2 percent by weight total organic HAP; or a storage vessel at a new source that has a design storage capacity greater than or equal to 76 cubic meters and less than 151 cubic meters and stored-liquid maximum true vapor pressure greater than or equal to 77 kilopascals and annual average HAP liquid concentration greater than 2 percent by weight total organic HAP.

**Group 1 wastewater stream** means a wastewater stream at a petroleum refinery with a total annual benzene loading of 10 megagrams per year or greater as calculated according to the procedures in 40 CFR 61.342 of subpart FF of part 61 that has a flow rate of 0.02 liters per minute or greater, a benzene concentration of 10 parts per million by weight or greater, and is not exempt from control requirements under the provisions of 40 CFR part 61, subpart FF.

**Group 2 gasoline loading rack** means a gasoline loading rack classified under Standard Industrial Classification code 2911 that does not meet the definition of a Group 1 gasoline loading rack.

**Group 2 marine tank vessel** means a marine tank vessel that does not meet the definition of a Group 1 marine tank vessel.

**Group 2 miscellaneous process vent** means a miscellaneous process vent that does not meet the definition of a Group 1 miscellaneous process vent.

**Group 2 storage vessel** means a storage vessel that does not meet the definition of a Group 1 storage vessel.

**Group 2 wastewater stream** means a wastewater stream that does not meet the definition of Group 1 wastewater stream.

**Hazardous air pollutant or HAP** means one of the chemicals listed in section 112(b) of the Clean Air Act.

**Incinerator** means an enclosed combustion device that is used for destroying organic compounds. Auxiliary fuel may be used to heat waste gas to combustion temperatures. Any energy recovery section present is not physically formed into one manufactured or assembled unit with the combustion section; rather, the energy recovery section is a separate section following the combustion section and the two are joined by ducts or connections carrying flue gas.

**In heavy liquid service** means that the piece of equipment is not in gas/vapor service or in light liquid service.

**In light liquid service** means that the piece of equipment contains a liquid that meets the conditions specified in §60.593(d) of part 60, subpart GGG.

**In organic hazardous air pollutant service** means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP's as determined according to the provisions of §63.180(d) of subpart H of this part and table 1 of this subpart. The provisions of §63.180(d) of subpart H also specify how to determine that a piece of equipment is not in organic HAP service.

**Leakless valve** means a valve that has no external actuating mechanism.

**Maximum true vapor pressure** means the equilibrium partial pressure exerted by the stored liquid at the temperature equal to the highest calendar-month average of the liquid storage temperature for liquids stored above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for liquids stored at the ambient temperature, as determined:

- (1) In accordance with methods specified in §63.111 of subpart G of this part;
- (2) From standard reference texts; or
- (3) By any other method approved by the Administrator.

**Miscellaneous process vent** means a gas stream containing greater than 20 parts per million by volume organic HAP that is continuously or periodically discharged during normal operation of a petroleum refining process unit meeting the criteria specified in §63.640(a). Miscellaneous process vents include gas streams that are discharged directly to the atmosphere, gas streams that are routed to a control device prior to discharge to the atmosphere, or gas streams that are diverted through a product recovery device prior to control or discharge to the atmosphere. Miscellaneous process vents include vent streams from: caustic wash accumulators, distillation tower condensers/accumulators, flash/knockout drums, reactor vessels, scrubber overheads, stripper overheads, vacuum (steam) ejectors, wash tower overheads, water wash accumulators, blowdown condensers/accumulators, and delayed coker vents. Miscellaneous process vents do not include:

- (1) Gaseous streams routed to a fuel gas system;
- (2) Relief valve discharges;
- (3) Leaks from equipment regulated under §63.648;
- (4) Episodic or nonroutine releases such as those associated with startup, shutdown, malfunction, maintenance, depressuring, and catalyst transfer operations;
- (5) In situ sampling systems (onstream analyzers);
- (6) Catalytic cracking unit catalyst regeneration vents;
- (7) Catalytic reformer regeneration vents;
- (8) Sulfur plant vents;
- (9) Vents from control devices such as scrubbers, boilers, incinerators, and electrostatic precipitators applied to catalytic cracking unit catalyst regeneration vents, catalytic reformer regeneration vents, and sulfur plant vents;
- (10) Vents from any stripping operations applied to comply with the wastewater provisions of this subpart, subpart G of this part, or 40 CFR part 61, subpart FF;
- (11) Coking unit vents associated with coke drum depressuring at or below a coke drum outlet pressure of 15 pounds per square inch gauge, deheading, draining, or decoking (coke cutting) or pressure testing after decoking;
- (12) Vents from storage vessels;
- (13) Emissions from wastewater collection and conveyance systems including, but not limited to, wastewater drains, sewer vents, and sump drains; and
- (14) Hydrogen production plant vents through which carbon dioxide is removed from process streams or through which steam condensate produced or treated within the hydrogen plant is degassed or deaerated.

**Operating permit** means a permit required by 40 CFR parts 70 or 71.

**Organic hazardous air pollutant** or **organic HAP** in this subpart, means any of the organic chemicals listed in table 1 of this subpart.

**Petroleum-based solvents** means mixtures of aliphatic hydrocarbons or mixtures of one and two ring aromatic hydrocarbons.

***Periodically discharged*** means discharges that are intermittent and associated with routine operations. Discharges associated with maintenance activities or process upsets are not considered periodically discharged miscellaneous process vents and are therefore not regulated by the petroleum refinery miscellaneous process vent provisions.

***Petroleum refining process unit*** means a process unit used in an establishment primarily engaged in petroleum refining as defined in the Standard Industrial Classification code for petroleum refining (2911), and used primarily for the following:

(1) Producing transportation fuels (such as gasoline, diesel fuels, and jet fuels), heating fuels (such as kerosene, fuel gas distillate, and fuel oils), or lubricants;

(2) Separating petroleum; or

(3) Separating, cracking, reacting, or reforming intermediate petroleum streams.

(4) Examples of such units include, but are not limited to, petroleum-based solvent units, alkylation units, catalytic hydrotreating, catalytic hydrorefining, catalytic hydrocracking, catalytic reforming, catalytic cracking, crude distillation, lube oil processing, hydrogen production, isomerization, polymerization, thermal processes, and blending, sweetening, and treating processes. Petroleum refining process units also include sulfur plants.

***Plant site*** means all contiguous or adjoining property that is under common control including properties that are separated only by a road or other public right-of-way. Common control includes properties that are owned, leased, or operated by the same entity, parent entity, subsidiary, or any combination thereof.

***Primary fuel*** means the fuel that provides the principal heat input (i.e., more than 50 percent) to the device. To be considered primary, the fuel must be able to sustain operation without the addition of other fuels.

***Process heater*** means an enclosed combustion device that primarily transfers heat liberated by burning fuel directly to process streams or to heat transfer liquids other than water.

***Process unit*** means the equipment assembled and connected by pipes or ducts to process raw and/or intermediate materials and to manufacture an intended product. A process unit includes any associated storage vessels. For the purpose of this subpart, process unit includes, but is not limited to, chemical manufacturing process units and petroleum refining process units.

***Process unit shutdown*** means a work practice or operational procedure that stops production from a process unit or part of a process unit during which it is technically feasible to clear process material from a process unit or part of a process unit consistent with safety constraints and during which repairs can be accomplished. An unscheduled work practice or operational procedure that stops production from a process unit or part of a process unit for less than 24 hours is not considered a process unit shutdown. An unscheduled work practice or operational procedure that would stop production from a process unit or part of a process unit for a shorter period of time than would be required to clear the process unit or part of the process unit of materials and start up the unit, or would result in greater emissions than delay of repair of leaking components until the next scheduled process unit shutdown is not considered a process unit shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping production are not considered process unit shutdowns.

***Recovery device*** means an individual unit of equipment capable of and used for the purpose of recovering chemicals for use, reuse, or sale. Recovery devices include, but are not limited to, absorbers, carbon adsorbers, and condensers.

**Reference control technology for gasoline loading racks** means a vapor collection and processing system used to reduce emissions due to the loading of gasoline cargo tanks to 10 milligrams of total organic compounds per liter of gasoline loaded or less.

**Reference control technology for marine vessels** means a vapor collection system and a control device that reduces captured HAP emissions by 97 percent.

**Reference control technology for miscellaneous process vents** means a combustion device used to reduce organic HAP emissions by 98 percent, or to an outlet concentration of 20 parts per million by volume.

**Reference control technology for storage vessels** means either:

- (1) An internal floating roof meeting the specifications of §63.119(b) of subpart G except for §63.119(b)(5) and (b)(6);
  - (2) An external floating roof meeting the specifications of §63.119(c) of subpart G except for §63.119(c)(2);
  - (3) An external floating roof converted to an internal floating roof meeting the specifications of §63.119(d) of subpart G except for §63.119(d)(2); or
  - (4) A closed-vent system to a control device that reduces organic HAP emissions by 95-percent, or to an outlet concentration of 20 parts per million by volume.
- (5) For purposes of emissions averaging, these four technologies are considered equivalent.

**Reference control technology for wastewater** means the use of:

- (1) Controls specified in §§61.343 through 61.347 of subpart FF of part 61;
- (2) A treatment process that achieves the emission reductions specified in table 7 of this subpart for each individual HAP present in the wastewater stream or is a steam stripper that meets the specifications in §63.138(g) of subpart G of this part; and
- (3) A control device to reduce by 95 percent (or to an outlet concentration of 20 parts per million by volume for combustion devices) the organic HAP emissions in the vapor streams vented from treatment processes (including the steam stripper described in paragraph (2) of this definition) managing wastewater.

**Refinery fuel gas** means a gaseous mixture of methane, light hydrocarbons, hydrogen, and other miscellaneous species (nitrogen, carbon dioxide, hydrogen sulfide, etc.) that is produced in the refining of crude oil and/or petrochemical processes and that is separated for use as a fuel in boilers and process heaters throughout the refinery.

**Relief valve** means a valve used only to release an unplanned, nonroutine discharge. A relief valve discharge can result from an operator error, a malfunction such as a power failure or equipment failure, or other unexpected cause that requires immediate venting of gas from process equipment in order to avoid safety hazards or equipment damage.

**Research and development facility** means laboratory and pilot plant operations whose primary purpose is to conduct research and development into new processes and products, where the operations are under the close supervision of technically trained personnel, and is not engaged in the manufacture of products for commercial sale, except in a de minimis manner.

**Shutdown** means the cessation of a petroleum refining process unit or a unit operation (including, but not limited to, a distillation unit or reactor) within a petroleum refining process unit for purposes including, but not limited to, periodic maintenance, replacement of equipment, or repair.

**Startup** means the setting into operation of a petroleum refining process unit for purposes of production. Startup does not include operation solely for purposes of testing equipment. Startup does not include changes in product for flexible operation units.

**Storage vessel** means a tank or other vessel that is used to store organic liquids. Storage vessel does not include:

- (1) Vessels permanently attached to motor vehicles such as trucks, railcars, barges, or ships;
- (2) Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere;
- (3) Vessels with capacities smaller than 40 cubic meters;
- (4) Bottoms receiver tanks; or
- (5) Wastewater storage tanks. Wastewater storage tanks are covered under the wastewater provisions.

**Temperature monitoring device** means a unit of equipment used to monitor temperature and having an accuracy of  $\pm 1$  percent of the temperature being monitored expressed in degrees Celsius or  $\pm 0.5$  °C, whichever is greater.

**Total annual benzene** means the total amount of benzene in waste streams at a facility on an annual basis as determined in §61.342 of 40 CFR part 61, subpart FF.

**Total organic compounds** or **TOC**, as used in this subpart, means those compounds excluding methane and ethane measured according to the procedures of Method 18 of 40 CFR part 60, appendix A. Method 25A may be used alone or in combination with Method 18 to measure TOC as provided in §63.645 of this subpart.

**Wastewater** means water or wastewater that, during production or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product and is discharged into any individual drain system. Examples are feed tank drawdown; water formed during a chemical reaction or used as a reactant; water used to wash impurities from organic products or reactants; water used to cool or quench organic vapor streams through direct contact; and condensed steam from jet ejector systems pulling vacuum on vessels containing organics.

§ 63.642 General standards.

...

(m) A State may restrict the owner or operator of an existing source to using only the procedures in paragraph (k) of this section to comply with the emission standard in paragraph (g) of this section. Such a restriction would preclude the source from using an emissions averaging compliance approach.

...

§ 63.655 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or Tribal agency.

**(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.**

**(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.**

**(1) Approval of alternatives to the requirements in §§63.640, 63.642(g) through (l), 63.643, and 63.646 through 63.652. Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart. Where these standards reference another subpart and modify the requirements, the requirements shall be modified as described in this subpart. Delegation of the modified requirements will also occur according to the delegation provisions of the referenced subpart.**

**(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart.**

**(3) Approval of major alternatives to monitoring under §63.8(f), as defined in §63.90, and as required in this subpart.**

**(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.**

...

| <b>Reference</b>      | <b>Applies to subpart CC</b> | <b>Comment</b>   |
|-----------------------|------------------------------|--|
| 63.1(a)(1)            | Yes                          |  |
| 63.1(a)(2)            | Yes                          |  |
| 63.1(a)(3)            | Yes                          |  |
| 63.1(a)(4)            | No                           | Subpart CC (this table) specifies applicability of each paragraph in subpart A to subpart CC.  |
| 63.1(a)(5)-63.1(a)(9) | No                           |  |
| 63.1(a)(10)           | No                           | Subpart CC and other cross-referenced subparts specify calendar or operating day.  |
| 63.1(a)(11)           | Yes                          |  |
| 63.1(a)(12)           | Yes                          |  |
| 63.1(a)(13)           | Yes                          |  |
| 63.1(a)(14)           | Yes                          |  |
| 63.1(b)(1)            | No                           | Subpart CC specifies its own applicability.  |
| 63.1(b)(2)            | Yes                          |  |
| 63.1(b)(3)            | No                           |  |
| 63.1(c)(1)            | No                           | Subpart CC explicitly specifies requirements that apply.   |
| 63.1(c)(2)            | No                           | Area sources are not subject to subpart CC.  |
| 63.1(c)(3)            | No                           |  |
| 63.1(c)(4)            | Yes                          |  |
| 63.1(c)(5)            | Yes                          | Except that sources are not required to submit notifications overridden by this table.   |
| 63.1(d)               | No                           |  |
| 63.1(e)               | No                           |  |
| 63.2                  | Yes                          | § 63.641 of subpart CC specifies that if the same term is defined in subparts A and CC, it shall have the meaning given in subpart CC. |
| 63.3                  | No                           | Units of measure are spelled out in subpart CC.  |
| 63.4(a)(1)-63.4(a)(3) | Yes                          |  |

| <b>Table 6_General Provisions Applicability to Subpart CC \a\</b> |                              |  |
|---|------------------------------|--|
| <b>Reference</b>  | <b>Applies to subpart CC</b> | <b>Comment</b>   |
| 63.4(a)(4)  | No                           | Reserved.  |
| 63.4(a)(5)  | Yes                          |  |
| 63.4(b)   | Yes                          |  |
| 63.4(c)   | Yes                          |  |
| 63.5(a)(1)  | Yes                          | Except replace term "source" and "stationary source" in § 63.5(a)(1) of subpart A with "affected source."  |
| 63.5(a)(2)  | Yes                          |  |
| 63.5(b)(1)  | Yes                          |  |
| 63.5(b)(2)  | No                           | Reserved.  |
| 63.5(b)(3)  | Yes                          |  |
| 63.5(b)(4)  | Yes                          | Except the cross- reference to § 63.9(b) is changed to § 63.9(b) (4) and (5). Subpart CC overrides § 63.9 (b)(2) and (b)(3).   |
| 63.5(b)(5)  | Yes                          |  |
| 63.5(b)(6)  | Yes                          |  |
| 63.5(c)   | No                           | Reserved.  |
| 63.5(d)(1)(i)   | Yes                          | Except that the application shall be submitted as soon as practicable before startup but no later than 90 days (rather than 60 days) after the promulgation date of subpart CC if the construction or reconstruction had commenced and initial startup had not occurred before the promulgation of subpart CC. |
| 63.5(d)(1)(ii)  | Yes                          | Except that for affected sources subject to subpart CC, emission estimates specified in § 63.5(d)(1)(ii)(H) are not required.  |
| 63.5(d)(1)(iii)   | No                           | Subpart CC requires submittal of the notification of compliance status report in § 63.654(e).  |
| 63.5(d)(2)  | No                           |  |
| 63.5(d)(3)  | Yes                          | Except § 63.5(d)(3)(ii) does not apply.  |
| 63.5(d)(4)  | Yes                          |  |
| 63.5(e)   | Yes                          |  |
| 63.5(f)(1)  | Yes                          |  |
| 63.5(f)(2)  | Yes                          | Except that the "60 days" in the cross- referenced § 63.5(d)(1) is changed to "90 days," and the cross-reference to (b)(2) does not apply.   |
| 63.6(a)   | Yes                          |  |
| 63.6(b)(1)  | No                           | Subpart CC specifies compliance dates for sources subject to subpart CC.   |
| 63.6(b)(2)  | No                           |  |
| 63.6(b)(3)  | Yes                          |  |
| 63.6(b)(4)  | No                           | May apply when standards are proposed under section 112(f) of the Clean Air Act.   |
| 63.6(b)(5)  | No                           | § 63.654(d) of subpart CC includes notification requirements.  |
| 63.6(b)(6)  | No                           |  |
| 63.6(b)(7)  | No                           |  |
| 63.6(c)(1)  | No                           | § 63.640 of subpart CC specifies the compliance date.  |
| 63.6(c)(2)-63.6(c)(4)   | No                           |  |
| 63.6(c)(5)  | Yes                          |  |
| 63.6(d)   | No                           |  |

| <b>Table 6_General Provisions Applicability to Subpart CC \a\</b> |                              |   |
|---|------------------------------|---|
| <b>Reference</b>  | <b>Applies to subpart CC</b> | <b>Comment</b>  |
| 63.6(e)   | Yes                          | Does not apply to Group 2 emission points. \b\ The startup, shutdown, and malfunction plan specified in § 63.6(e)(3) is not required for wastewater operations that are not subject to subpart G of this part.<br><br>Except that actions taken during a startup, shutdown, or malfunction that are not consistent with the startup, shutdown, and malfunction plan do not need to be reported within 2 and 7 days of commencing and completing the action, respectively, but must be included in the next periodic report. |
| 63.6(f)(1)  | Yes                          |   |
| 63.6(f)(2)(i)   | Yes                          |   |
| 63.6(f)(2)(ii)  | Yes                          | Subpart CC specifies the use of monitoring data in determining compliance with subpart CC.  |
| 63.6(f)(2)(iii) (A), (B), and (C)                                 | Yes                          |   |
| 63.6(f)(2)(iii)(D)  | No                           |   |
| 63.6(f)(2)(iv)  | Yes                          |   |
| 63.6(f)(2)(v)   | Yes                          |   |
| 63.6(f)(3)  | Yes                          |   |
| 63.6(g)   | Yes                          |   |
| 63.6(h) (1) and (2)   | Yes                          |   |
| 63.6(h) (4) and (5)   | No                           | Visible emission requirements and timing in subpart CC.   |
| 63.6(h)(6)  | Yes                          |   |
| 63.6(h) (7) through (9)   | No                           | Subpart CC does not require opacity standards.  |
| 63.6(i)   | Yes                          | Except for § 63.6(i)(15), which is reserved.  |
| 63.6(j)   | Yes                          |   |
| 63.7(a)(1)  | No                           | Subpart CC specifies required testing and compliance demonstration procedures.  |
| 63.7(a)(2)  | No                           | Test results must be submitted in the notification of compliance status report due 150 days after compliance date, as specified in § 63.654(d) of subpart CC.   |
| 63.7(a)(3)  | Yes                          |   |
| 63.7(b)   | No                           |   |
| 63.7(c)   | No                           |   |
| 63.7(d)   | Yes                          |   |
| 63.7(e)(1)  | Yes                          |   |
| 63.7(e)(2)  | Yes                          |   |
| 63.7(e)(3)  | No                           | Subpart CC specifies test methods and procedures.   |
| 63.7(e)(4)  | Yes                          |   |
| 63.7(f)   | No                           | Subpart CC specifies applicable methods and provides alternatives.  |
| 63.7(g)   | No                           | Performance test reporting specified in § 63.654(d).  |
| 63.7(h)(1)  | Yes                          |   |
| 63.7(h)(2)  | Yes                          |   |
| 63.7(h)(3)  | Yes                          | Yes, except site- specific test plans shall not be required, and where § 63.7(g)(3) specifies submittal by the date the site-specific test plan is due, the date shall be 90 days prior to the notification of compliance status report in § 63.654(d).   |
| 63.7(h)(4)  | No                           |   |

| <b>Table 6_General Provisions Applicability to Subpart CC \a\</b> |                              |  |
|---|------------------------------|--|
| <b>Reference</b>  | <b>Applies to subpart CC</b> | <b>Comment</b>   |
| 63.7(h)(5)  | Yes                          |  |
| 63.8(a)   | No                           |  |
| 63.8(b)(1)  | Yes                          |  |
| 63.8(b)(2)  | No                           | Subpart CC specifies locations to conduct monitoring.  |
| 63.8(b)(3)  | Yes                          |  |
| 63.8(c)(1)(i)   | Yes                          |  |
| 63.8(c)(1)(ii)  | No                           | Addressed by periodic reports in § 63.654(e) of subpart CC.  |
| 63.8(c)(1)(iii)   | Yes                          |  |
| 63.8(c)(2)  | Yes                          |  |
| 63.8(c)(3)  | Yes                          | Except that verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system or other written procedures that provide adequate assurance that the equipment would monitor accurately. |
| 63.8(c)(4)  | No                           | Subpart CC specifies monitoring frequency in § 63.641 and § 63.654(g)(3) of subpart CC.  |
| 63.8(c)(5)-63.8(c)(8)   | No                           |  |
| 63.8(d)   | No                           |  |
| 63.8(e)   | No                           |  |
| 63.8(f)(1)  | Yes                          |  |
| 63.8(f)(2)  | Yes                          |  |
| 63.8(f)(3)  | Yes                          |  |
| 63.8(f)(4)(i)   | No                           | Timeframe for submitting request is specified in § 63.654(f)(4) of subpart CC.   |
| 63.8(f)(4)(ii)  | Yes                          |  |
| 63.8(f)(4)(iii)   | No                           |  |
| 63.8(f)(5)(i)   | Yes                          |  |
| 63.8(f)(5)(ii)  | No                           |  |
| 63.8(f)(5)(iii)   | Yes                          |  |
| 63.8(f)(6)  | No                           | Subpart CC does not require continuous emission monitors.  |
| 63.8(g)   | No                           | Subpart CC specifies data reduction procedures in § 63.654(h)(3).  |
| 63.9(a)   | Yes                          | Except that the owner or operator does not need to send a copy of each notification submitted to the Regional Office of the EPA as stated in § 63.9(a)(4)(ii).   |
| 63.9(b)(1)(i)   | No                           | Specified in § 63.654(d)(2) of subpart CC.   |
| 63.9(b)(1)(ii)  | No                           |  |
| 63.9(b)(2)  | No                           | An initial notification report is not required under subpart CC.   |
| 63.9(b)(3)  | No                           |  |
| 63.9(b)(4)  | Yes                          | Except that the notification in § 63.9(b)(4)(i) shall be submitted at the time specified in § 63.654(d)(2) of subpart CC.  |
| 63.9(b)(5)  | Yes                          | Except that the notification in § 63.9(b)(5) shall be submitted at the time specified in § 63.654(d)(2) of subpart CC.   |
| 63.9(c)   | Yes                          |  |
| 63.9(d)   | Yes                          |  |
| 63.9(e)   | No                           |  |
| 63.9(f)   | No                           |  |
| 63.9(g)   | No                           |  |
| 63.9(h)   | No                           | Subpart CC § 63.652(d) specifies notification of compliance status report requirements.  |
| 63.9(i)   | Yes                          |  |
| 63.9(j)   | No                           |  |

| <b>Table 6_General Provisions Applicability to Subpart CC \a\</b>   |                              |   |
|---|------------------------------|---|
| <b>Reference</b>  | <b>Applies to subpart CC</b> | <b>Comment</b>  |
| 63.10(a)  | Yes                          |   |
| 63.10(b)(1)   | No                           | § 63.644(d) of subpart CC specifies record retention requirements.  |
| 63.10(b)(2)(i)  | Yes                          |   |
| 63.10(b)(2)(ii)   | Yes                          |   |
| 63.10(b)(2)(iii)  | No                           |   |
| 63.10(b)(2)(iv)   | Yes                          |   |
| 63.10(b)(2)(v)  | Yes                          |   |
| 63.10(b)(2)(vi)-(ix)  | No                           |   |
| 63.10(b)(2)(x)  | Yes                          |   |
| 63.10(b)(2)(xii)-(xiv)  | No                           |   |
| 63.10(b)(3)   | No                           |   |
| 63.10(c)  | No                           |   |
| 63.10(d)(1)   | No                           |   |
| 63.10(d)(2)   | No                           | § 63.654(d) of subpart CC specifies performance test reporting.   |
| 63.10(d)(3)   | No                           |   |
| 63.10(d)(4)   | Yes                          |   |
| 63.10(d)(5)(i)  | Yes \b\                      | Except that reports required by § 63.10(d)(5)(i) may be submitted at the same time as periodic reports specified in § 63.654(e) of subpart CC.  |
| 63.10(d)(5)(ii)   | Yes                          | Except that actions taken during a startup, shutdown, or malfunction that are not consistent with the startup, shutdown, and malfunction plan do not need to be reported within 2 and 7 days of commencing and completing the action, respectively, but must be included in the next periodic report. |
| 63.10(e)  | No                           |   |
| 63.10(f)  | Yes                          |   |
| 63.11-63.15   | Yes                          |   |
| <p>\a\ Wherever subpart A specifies "postmark" dates, submittals may be sent by methods other than the U.S. Mail (e.g., by fax or courier). Submittals shall be sent by the specified dates, but a postmark is not required.</p> <p>\b\ The plan, and any records or reports of startup, shutdown, and malfunction do not apply to Group 2 emission points.</p> |                              |   |

**E.1.3 Deadlines Relating to National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries [40 CFR Part 63, Subpart CC]**

The Permittee shall comply with the below requirements by the dates listed for storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17, and TK-3570, which are considered part of an existing affected source.

| Requirement  | Rule Citations   | Applicable To                            | Deadline   |
|--|--|--|--|
| Notification of Compliance Status report for emission points that are added or changed | 40 CFR 63.640(l)(3)<br>40 CFR 63.654(f)(1)(i)(A)<br>40 CFR 63.9(h) | New Group 2 Storage Tanks <sup>(1)</sup> | Submitted in the next Notification of Compliance Status for the existing affected source (after startup of the new Group 2 storage tanks)<br><br>or<br><br>Submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination of the three |

**(1) Group 2 storage tanks include storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17, and TK-3570.**

...

**SECTION E.4 40 CFR Part 60, Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry**

...

**E.4.1 NSPS Subpart VV Requirements [40 CFR Part 60, Subpart VV] [326 IAC 12]**

Pursuant to 40 CFR 60.590 and 63.648, the Permittee shall comply with the applicable provisions of 40 CFR Part 60, Subpart VV for all affected pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves and lines, valves, connectors, and closed vent systems as specified below:

Subpart VV—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry

§ 60.482-1 Standards: General.

...

**(c)(1) An owner or operator may request a determination of equivalence of a means of emission limitation to the requirements of §§60.482–2, 60.482–3, 60.482–5, 60.482–6, 60.482–7, 60.482–8, and 60.482–10 as provided in §60.484.**

**(2) If the Administrator makes a determination that a means of emission limitation is at least equivalent to the requirements of §§60.482–2, 60.482–3, 60.482–5, 60.482–6, 60.482–7, 60.482–8, or 60.482–10, an owner or operator shall comply with the requirements of that determination.**

...

§ 60.487 Reporting requirements.

...

**(f) The requirements of paragraphs (a) through (c) of this section remain in force until and unless EPA, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected sources within the State will be relieved of the obligation to comply with the requirements of paragraphs (a) through (c) of this section, provided that they comply with the requirements established by the State.**

...

SECTION E.13 40 CFR Part 60, Subpart GGG – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries

...

E.13.2 NSPS Requirements for Subpart GGG [326 IAC 12] [40 CFR Part 60, Subpart GGG]

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Pursuant to 40 CFR 60.590, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart GGG, which are incorporated by reference as 326 IAC 12, for the emission units listed in Condition E.13.1, as specified below:

Subpart GGG—Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries

...

**§ 60.591 Definitions.**

**As used in this subpart, all terms not defined herein shall have the meaning given them in the act, in subpart A of part 60, or in subpart VV of part 60, and the following terms shall have the specific meanings given them.**

***Alaskan North Slope* means the approximately 69,000 square mile area extending from the Brooks Range to the Arctic Ocean.**

***Equipment* means each valve, pump, pressure relief device, sampling connection system, open-ended valve or line, and flange or other connector in VOC service. For the purposes of recordkeeping and reporting only, compressors are considered equipment.**

***In hydrogen service* means that a compressor contains a process fluid that meets the conditions specified in §60.593(b).**

***In light liquid service* means that the piece of equipment contains a liquid that meets the conditions specified in §60.593(c).**

***Petroleum* means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.**

***Petroleum refinery* means any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through the distillation of petroleum, or through the redistillation, cracking, or reforming of unfinished petroleum derivatives.**

***Process unit* means components assembled to produce intermediate or final products from petroleum, unfinished petroleum derivatives, or other intermediates; a process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product.**

§ 60.593 Exceptions.

...

**(c) Any existing reciprocating compressor that becomes an affected facility under provisions of §60.14 or §60.15 is exempt from §60.482 (a), (b), (c), (d), (e), and (h) provided the owner or operator demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of §60.482 (a), (b), (c), (d), (e), and (h).**

...

**(e) Pumps in light liquid service and valves in gas/vapor and light liquid service within a process unit that is located in the Alaskan North Slope are exempt from the requirements of §60.482–2 and §60.482–7.**

**E.13.3 Deadlines Relating to the Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries [40 CFR Part 60, Subpart GGG]**

The Permittee shall comply with the following requirements by the dates listed for valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges and/or other connectors in VOC service:

| Requirement  | Rule Citations   | Applicable To   | Deadline  |
|--|--|---|---|
| Notification of the Date Construction (or Reconstruction) is Commenced | 40 CFR 60.7(a)(1)  | Each affected facility  | Within 30 days after commencement of construction   |
| Notification of the Actual Date of Initial Startup                     | 40 CFR 60.7(a)(3)  | Each affected facility  | Within 15 days after date of initial startup  |
| Notification of any Physical or Operational Change                     | 40 CFR 60.7(a)(4)  | Physical or operational changes to existing affected facilities which may increase the emission rate of any pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in §60.14(e). | 60 days or more prior to commencement of change or as soon as practicable   |
| Semiannual Compliance Reports  | 40 CFR 60.592(e)<br>40 CFR 60.487(a)<br>40 CFR 60.487(b) | Each affected facility  | Initial report shall be submitted 6 months after date of initial startup or in the next semi-annual report submitted for the existing equipment at the refinery after startup of the new equipment.<br><br>Subsequent reports shall be submitted no later than 60 days after the end of each 6-month period following the first report or with the semi-annual report submitted for the existing equipment at the refinery. |
| Demonstrate Initial Compliance   | 40 CFR 60.592(a)<br>40 CFR 60.482-1(a)                   | Each affected facility  | Within 180-days of initial startup  |

...

SECTION E.17 40 CFR Part 60, Subpart UU – Standards of Performance for Asphalt Process and Asphalt Roofing Manufacture

...

E.17.2 NSPS Subpart UU Requirements [40 CFR Part 60, Subpart ~~GG~~ UU] [326 IAC 12]

---

Pursuant to 40 CFR 60.470, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart UU, which are incorporated by reference as 326 IAC 12, for the asphalt storage tanks identified in Condition E.17.1 as specified below:

Subpart UU—Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture

...

**§ 60.471 Definitions.**

**As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.**

***Afterburner (A/B)* means an exhaust gas incinerator used to control emissions of particulate matter.**

***Asphalt processing* means the storage and blowing of asphalt.**

***Asphalt processing plant* means a plant which blows asphalt for use in the manufacture of asphalt products.**

***Asphalt roofing plant* means a plant which produces asphalt roofing products (shingles, roll roofing, siding, or saturated felt).**

***Asphalt storage tank* means any tank used to store asphalt at asphalt roofing plants, petroleum refineries, and asphalt processing plants. Storage tanks containing cutback asphalts (asphalts diluted with solvents to reduce viscosity for low temperature applications) and emulsified asphalts (asphalts dispersed in water with an emulsifying agent) are not subject to this regulation.**

***Blowing still* means the equipment in which air is blown through asphalt flux to change the softening point and penetration rate.**

***Catalyst* means a substance which, when added to asphalt flux in a blowing still, alters the penetrating-softening point relationship or increases the rate of oxidation of the flux.**

***Coating blow* means the process in which air is blown through hot asphalt flux to produce coating asphalt. The coating blow starts when the air is turned on and stops when the air is turned off.**

***Electrostatic precipitator (ESP)* means an air pollution control device in which solid or liquid particulates in a gas stream are charged as they pass through an electric field and precipitated on a collection surface.**

***High velocity air filter (HVAF)* means an air pollution control filtration device for the removal of sticky, oily, or liquid aerosol particulate matter from exhaust gas streams.**

***Mineral handling and storage facility* means the areas in asphalt roofing plants in which minerals are unloaded from a carrier, the conveyor transfer points between the carrier and the storage silos, and the storage silos.**

***Saturator* means the equipment in which asphalt is applied to felt to make asphalt roofing products. The term saturator includes the saturator, wet looper, and coater.**

...

**§ 60.473 Monitoring of operations.**

(c) An owner or operator subject to the provisions of this subpart and using a control device not mentioned in paragraphs (a) or (b) of this section shall provide to the Administrator information describing the operation of the control device and the process parameter(s) which would indicate proper operation and maintenance of the device. The Administrator may require continuous monitoring and will determine the process parameters to be monitored.

**§ 60.474 Test methods and procedures.**

(c) The owner or operator shall determine compliance with the particulate matter standards in §60.472 as follows:

(5) Method 9 and the procedures in §60.11 shall be used to determine opacity.

**E.17.3 Deadlines Relating to the Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture [40 CFR Part 60, Subpart UU]**

The Permittee shall comply with the following requirements by the dates listed for storage tanks TK-SP-1, TK-SP-2, TK-LG-1 through TK-LG-9, and TK-LG-12 through TK-LG-17:

| Requirement   | Rule Citations     | Deadline  |
|---|--------------------|---|
| Notification of the Date Construction (or Reconstruction) is Commenced  | 40 CFR 60.7(a)(1)  | Within 30 days after commencement of construction   |
| Notification of the Actual Date of Initial Startup  | 40 CFR 60.7(a)(3)  | Within 15 days after date of initial startup  |
| Notification of any Physical or Operational Change  | 40 CFR 60.7(a)(4)  | 60 days or more prior to commencement of change or as soon as practicable   |
| Notification of the Anticipated Date for Conducting the Initial Opacity Observations Required by 40 CFR 60.11(e)(1) | 40 CFR 60.7(a)(6)  | 30 days or more prior to opacity observations   |
| Conduct Initial Opacity Observations Required by 40 CFR 60.11(e)(1)   | 40 CFR 60.11(e)(1) | 60 days after achieving the maximum production rate at which the affected facility will be operated, but no later than 180 days after initial startup of the facility |

...  
 PART 70 OPERATING PERMIT EMERGENCY OCCURRENCE REPORT:  
 Phone: 317-233-56740178  
 Fax: 317-233-59676865

...  
 PART 70 OPERATING PERMIT QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT:  
 ...

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken shall be reported. ~~Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report.~~ **A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.** Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

...

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**Part 70 Quarterly Report**

**Source Name:** BP Products North America Inc., Whiting Business Unit  
**Source Address:** 2815 Indianapolis Blvd., Whiting, Indiana 46394  
**Mailing Address:** P.O. Box 710, Whiting, Indiana 46394-0710  
**Part 70 Permit No.:** T089-6741-00453  
**Facilities:** Hot oil heaters H-SP-1, H-SP-2, H-LG-1, H-LG-2, and H-LG-3  
**Parameter:** Natural Gas Usage  
**Limits:** The total natural gas usage shall not exceed 255 million cubic feet (MMCF) per twelve (12) consecutive month period.

**QUARTER:** \_\_\_\_\_ **YEAR:** \_\_\_\_\_

| Month | Natural Gas Usage (MMCF) | Natural Gas Usage (MMCF) | Natural Gas Usage (MMCF) |
|-------|--------------------------|--------------------------|--------------------------|
|       | This Month               | Previous 11 Months       | 12 Month Total           |
|       |                          |                          |                          |
|       |                          |                          |                          |
|       |                          |                          |                          |

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

**Submitted by:** \_\_\_\_\_

**Title / Position:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Phone:** \_\_\_\_\_

**Attach a signed certification to complete this report.**

### **Conclusion and Recommendation**

- (a) The operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Permit Modification No. 089-24068-00453. Based on the facts, conditions, and evaluations made, the OAQ staff recommends to the IDEM's Commissioner that the findings for the approval to operate Part 70 Significant Permit Modification No. 089-24068-00453 be approved.
- (b) Unless otherwise stated, information used in this review was derived from the application received by the Office of Air Quality (OAQ) on October 17, 2006. Additional information was received on November 13, 2006, November 21, 2006, November 30, 2006, December 5, 2006, January 12, 2007, January 19, 2007, and March 1, 2007.

### **IDEM Contact**

Questions regarding this proposed permit can be directed to Mr. Nathan Bell at the Indiana Department Environmental Management, Office of Air Quality, 100 North Senate Avenue, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-3350 or toll free at 1-800-451-6027 extension 4-3350.

**Appendix A: Emissions Calculations  
Potential to Emit (PTE) Summary**

**Company Name: BP Products North America, Inc., Whiting Business Unit  
Address City IN Zip: 2815 Indianapolis Boulevard, Whiting, Indiana 46394  
Significant Permit Modification No.: 089-24068-00453  
Reviewer: Nathan C. Bell  
Date: January 23, 2006**

| Category                 | Unlimited PTE (tons/year)     |                                      |                  |                  | Unlimited PTE (lbs/day)              |                  |                  |
|--------------------------|-------------------------------|--------------------------------------|------------------|------------------|--------------------------------------|------------------|------------------|
|                          | Emissions Generating Activity |                                      |                  |                  |                                      |                  |                  |
|                          | Pollutant                     | Storage Tanks and Rail/Truck Loading | Hot Oil Heaters  | TOTAL            | Storage Tanks and Rail/Truck Loading | Hot Oil Heaters  | TOTAL            |
| Criteria Pollutants      | PM                            | 0.043                                | 0.41             | 0.45             | 0.485                                | 2.26             | 2.74             |
|                          | PM10                          | 0.043                                | 1.65             | 1.69             | 0.485                                | 9.03             | 9.51             |
|                          | SO2                           |                                      | 0.13             | 0.13             |                                      | 0.71             | 0.71             |
|                          | NOx                           |                                      | 10.84            | 10.84            |                                      | 59.40            | 59.40            |
|                          | VOC                           | 1.20                                 | 1.19             | 2.40             | 13.72                                | 6.53             | 20.26            |
|                          | CO                            | 0.12                                 | 18.21            | 18.33            | 1.33                                 | 99.79            | 101.12           |
| Hazardous Air Pollutants | Total HAPs                    | 0.018                                | 0.41             | 0.43             | 0.036                                | 2.24             | 2.28             |
|                          | Worse Case HAP                | 0.013<br>(ethylene)                  | 0.39<br>(hexane) | 0.39<br>(hexane) | 0.015<br>(ethylene)                  | 2.14<br>(hexane) | 2.14<br>(hexane) |

Total emissions based on rated capacity at 8,760 hours/year.

| Category                 | Limited PTE (tons/year)       |                                      |                         |                         |
|--------------------------|-------------------------------|--------------------------------------|-------------------------|-------------------------|
|                          | Emissions Generating Activity |                                      |                         |                         |
|                          | Pollutant                     | Storage Tanks and Rail/Truck Loading | Hot Oil Heaters         | TOTAL                   |
| Criteria Pollutants      | PM                            | 0.04                                 | 0.24                    | 0.28                    |
|                          | PM10                          | 0.04                                 | 0.97                    | 1.01                    |
|                          | SO2                           |                                      | 0.08                    | 0.08                    |
|                          | NOx                           |                                      | 6.38                    | 6.38                    |
|                          | VOC                           | 1.20                                 | 0.70                    | 1.90                    |
|                          | CO                            | 0.12                                 | 10.71                   | 10.83                   |
| Hazardous Air Pollutants | <b>Total HAPs</b>             | <b>0.018</b>                         | <b>0.24</b>             | <b>0.26</b>             |
|                          | <b>Worse Case HAP</b>         | <b>0.013</b><br>(ethylene)           | <b>0.23</b><br>(hexane) | <b>0.23</b><br>(hexane) |

Total emissions based on rated capacity at 8,760 hours/year.

**Appendix A: Emission Calculations  
Storage Tank and Rail/Truck Loading Losses  
Volatile Organic Compound (VOC)**

Company Name: **BP Products North America, Inc., Whiting Business Unit**  
Address City IN Zip: **2815 Indianapolis Boulevard, Whiting, Indiana 46394**  
Significant Permit Modification No.: **089-24068-00453**  
Reviewer: **Nathan C. Bell**  
Date: **January 23, 2006**

**Volatile Organic Compound (VOC) emissions from withdrawal and standing losses using US EPA TANKS Version 4.09 program**

|  |        |                                       |
|--|--------|---------------------------------------|
| Asphalt Storage Temperature =                        | 350.0  | Fahrenheit                            |
| Asphalt Vapor Pressure at Storage Temperature =      | 0.0008 | psia (data sheets provided by source) |
| Trim Gas Oil Storage Temperature =                   | 250.0  | Fahrenheit                            |
| Trim Gas Oil Vapor Pressure at Storage Temperature = | 0.0003 | psia (data sheets provided by source) |
| Asphalt Vapor Molecular Weight =                     | 105    | lb/lbmol (AP-42 Section 11.1)         |
| Trim Gas Oil Vapor Molecular Weight =                | 190    | lb/lbmol (provided by source)         |

| Storage Tank ID                                | Product Stored              | Roof Type  | Tank Dimensions        | Maximum and (Average) Liquid Height (ft) | Maximum Liquid Volume (gallons) | Turnovers per year | Product Throughput (gallons/yr) | VOC Withdrawal Losses (lbs/yr) | VOC Standing Losses (lbs/yr) | VOC Withdrawal Losses (tons/yr) | VOC Standing Losses (tons/yr) |
|--|-----------------------------|------------|------------------------|--|---------------------------------|--------------------|---------------------------------|--------------------------------|------------------------------|---------------------------------|-------------------------------|
| TK-3573  | Trim Gas Oil                | Fixed Cone | 60 ft dia<br>48 ft ht  | 45.6 ft<br>(22.8 ft)                     | 964,474                         | 20.90              | 20,160,000                      | 27.36                          | 0                            | 0.014                           | 0                             |
| TK-SP-1  | Residual Oil and/or Asphalt | Fixed Cone | 224 ft dia<br>48 ft ht | 45.6 ft<br>(22.8 ft)                     | 13,442,621                      | 10.50              | 141,120,000                     | 282.24                         | 0                            | 0.141                           | 0                             |
| TK-SP-2  | Residual Oil and/or Asphalt | Fixed Cone | 224 ft dia<br>48 ft ht | 45.6 ft<br>(22.8 ft)                     | 13,442,621                      | 10.50              | 141,120,000                     | 282.24                         | 0                            | 0.141                           | 0                             |
| TK-SP-3  | Trim Gas Oil                | Fixed Cone | 90 ft dia<br>48 ft ht  | 45.6 ft<br>(22.8 ft)                     | 2,170,066                       | 7.74               | 16,800,000                      | 22.8                           | 0                            | 0.011                           | 0                             |
| TK-SP-4  | Trim Gas Oil                | Fixed Cone | 90 ft dia<br>48 ft ht  | 45.6 ft<br>(22.8 ft)                     | 2,170,066                       | 7.74               | 16,800,000                      | 22.8                           | 0                            | 0.011                           | 0                             |
| TK-LG-1  | Asphalt                     | Fixed Cone | 130 ft dia<br>48 ft ht | 45.6 ft<br>(22.8 ft)                     | 4,186,084                       | 12.04              | 50,400,000                      | 100.8                          | 0                            | 0.050                           | 0                             |
| TK-LG-2  | Asphalt                     | Fixed Cone | 130 ft dia<br>48 ft ht | 45.6 ft<br>(22.8 ft)                     | 4,186,084                       | 12.04              | 50,400,000                      | 100.8                          | 0                            | 0.050                           | 0                             |
| TK-LG-3  | Asphalt                     | Fixed Cone | 130 ft dia<br>48 ft ht | 45.6 ft<br>(22.8 ft)                     | 4,186,084                       | 12.04              | 50,400,000                      | 100.8                          | 0                            | 0.050                           | 0                             |
| TK-LG-4  | Asphalt                     | Fixed Cone | 130 ft dia<br>48 ft ht | 45.6 ft<br>(22.8 ft)                     | 4,186,084                       | 12.04              | 50,400,000                      | 100.8                          | 0                            | 0.050                           | 0                             |
| TK-LG-5  | Asphalt                     | Fixed Cone | 130 ft dia<br>48 ft ht | 45.6 ft<br>(22.8 ft)                     | 4,186,084                       | 12.04              | 50,400,000                      | 100.8                          | 0                            | 0.050                           | 0                             |
| TK-LG-6  | Asphalt                     | Fixed Cone | 130 ft dia<br>48 ft ht | 45.6 ft<br>(22.8 ft)                     | 4,186,084                       | 12.04              | 50,400,000                      | 100.8                          | 0                            | 0.050                           | 0                             |
| TK-LG-7  | Asphalt                     | Fixed Cone | 130 ft dia<br>48 ft ht | 45.6 ft<br>(22.8 ft)                     | 4,186,084                       | 12.04              | 50,400,000                      | 100.8                          | 0                            | 0.050                           | 0                             |
| TK-LG-8  | Asphalt                     | Fixed Cone | 130 ft dia<br>48 ft ht | 45.6 ft<br>(22.8 ft)                     | 4,186,084                       | 12.04              | 50,400,000                      | 100.8                          | 0                            | 0.050                           | 0                             |
| TK-LG-9  | Asphalt                     | Fixed Cone | 130 ft dia<br>48 ft ht | 45.6 ft<br>(22.8 ft)                     | 4,186,084                       | 12.04              | 50,400,000                      | 100.8                          | 0                            | 0.050                           | 0                             |
| TK-LG-10                                       | Trim Gas Oil                | Fixed Cone | 90 ft dia<br>48 ft ht  | 45.6 ft<br>(22.8 ft)                     | 2,170,066                       | 7.74               | 16,800,000                      | 22.8                           | 0                            | 0.011                           | 0                             |
| TK-LG-11                                       | Trim Gas Oil                | Fixed Cone | 90 ft dia<br>48 ft ht  | 45.6 ft<br>(22.8 ft)                     | 2,170,066                       | 7.74               | 16,800,000                      | 22.8                           | 0                            | 0.011                           | 0                             |
| TK-LG-12                                       | Asphalt with Polymer        | Fixed Cone | 6 ft dia<br>10 ft ht   | 9.5 ft<br>(4.75 ft)                      | 2,009                           | 209.03             | 420,000                         | 0.26                           | 0                            | 0.000                           | 0                             |
| TK-LG-13                                       | Asphalt-Polymer Blend       | Fixed Cone | 15 ft dia<br>24 ft ht  | 22.8 ft<br>(11.4 ft)                     | 30,140                          | 69.68              | 2,100,000                       | 2.51                           | 0                            | 0.001                           | 0                             |
| TK-LG-14                                       | Polymer Finished Asphalt    | Fixed Cone | 26 ft dia<br>32 ft ht  | 30.4 ft<br>(15.2 ft)                     | 120,738                         | 20.87              | 2,520,000                       | 5.04                           | 0                            | 0.003                           | 0                             |
| TK-LG-15                                       | Polymer Finished Asphalt    | Fixed Cone | 26 ft dia<br>32 ft ht  | 30.4 ft<br>(15.2 ft)                     | 120,738                         | 20.87              | 2,520,000                       | 5.04                           | 0                            | 0.003                           | 0                             |
| TK-LG-16                                       | Polymer Finished Asphalt    | Fixed Cone | 26 ft dia<br>32 ft ht  | 30.4 ft<br>(15.2 ft)                     | 120,738                         | 20.87              | 2,520,000                       | 5.04                           | 0                            | 0.003                           | 0                             |
| TK-LG-17                                       | Polymer Finished Asphalt    | Fixed Cone | 26 ft dia<br>32 ft ht  | 30.4 ft<br>(15.2 ft)                     | 120,738                         | 20.87              | 2,520,000                       | 5.04                           | 0                            | 0.003                           | 0                             |
| TK-3570  | Trim Gas Oil                | Fixed Cone | 90 ft dia<br>58 ft ht  | 55.10 ft<br>(27.55 ft)                   | 2,622,163                       | 7.69               | 20,160,000                      | 27.36                          | 0                            | 0.014                           | 0                             |
| <b>Total Potential to Emit VOC (tons/yr) =</b> |                             |            |                        |  |                                 |                    |                                 |                                |                              | <b>0.82</b>                     | <b>0</b>                      |
| <b>Total Potential to Emit VOC (lbs/day) =</b> |                             |            |                        |  |                                 |                    |                                 |                                |                              | <b>4.5</b>                      | <b>0</b>                      |

**VOC emissions from rail/truck loading losses (AP-42 Section 5.2, Equation 1)**

Equation: Loading Losses (lbs VOC/1000 gallons), L = 12.46\*S<sup>0.7</sup>\*P<sup>0.7</sup>\*M/T

| Asphalt Loading Type |             |                                     |
|----------------------|-------------|-------------------------------------|
| Rail                 | Truck       |                                     |
| 1.45                 | 1.45        | Saturation Factor, S =              |
| 0.0008               | 0.0008      | Asphalt Vapor Pressure, P =         |
| 105                  | 105         | Asphalt Vapor Molecular Weight, M = |
| 350.0                | 330.0       | Asphalt Temperature, T =            |
| 810.0                | 790.0       | Asphalt Temperature, T =            |
| 0.00187              | 0.00192     | Truck Loading Losses, L =           |
|                      |             | lbs VOC/1000 gallons of asphalt     |
| 201,940,000          | 201,940,000 | Maximum Annual Throughput =         |
| 0.19                 | 0.19        | Loading Losses, L =                 |
|                      |             | gallons of asphalt/year             |
|                      |             | tons/year VOC                       |
| 88,670               | 113,636     | Maximum Hourly Throughput =         |
| 0.17                 | 0.22        | Loading Losses, L =                 |
| 3.99                 | 5.24        | Loading Losses, L =                 |
|                      |             | gallons of asphalt/hour             |
|                      |             | lbs/hr VOC                          |
|                      |             | lbs/day VOC                         |

|   |  |             |              |
|---|--|-------------|--------------|
| <b>Total VOC emissions from withdrawal, standing, and rail/truck loading losses =</b> |  | <b>1.20</b> | <b>13.72</b> |
|   |  | (tons/yr)   | (lbs/day)    |

ACRONYMS  
VOC = Volatile Organic Compound

**Appendix A: Emission Calculations  
Storage Tank and Rail/Truck Loading Losses  
PM, CO, and Hazardous Air Pollutants (HAPs)**

**Company Name: BP Products North America, Inc., Whiting Business Unit**  
**Address City IN Zip: 2815 Indianapolis Boulevard, Whiting, Indiana 46394**  
**Significant Permit Modification No.: 089-24068-00453**  
**Reviewer: Nathan C. Bell**  
**Date: January 23, 2006**

|   |             |              |
|---|-------------|--------------|
|   | (tons/yr)   | (lbs/day)    |
| <b>Total VOC emissions from withdrawal, standing, and rail/truck loading losses =</b> | <b>1.20</b> | <b>13.72</b> |

**Particulate Matter and Carbon Monoxide**

AP-42 Table 11.1-14 (Hot Mix Asphalt Plants) was used to determine potential emission of total particulate matter (PM) and carbon monoxide (CO), assuming that the types of pollutants emitted from hot asphalt storage tanks and rail/truck loading at this source were similar to the types of pollutants emitted from hot asphalt storage tanks and silo filling at a hot mix asphalt plant. Based on AP-42, the total PM is assumed to be predominantly PM-2.5, since emissions consist of condensed vapors.

|   |                                |         |                |
|---|--------------------------------|---------|----------------|
| <b>Emission Factor (EF) Equations:</b>                              | Asphalt Temperature =          | 350.0   | F              |
| Total PM = 0.000332+0.00105(-V)*e <sup>-(0.0251)(T+460)-20.43</sup> | Asphalt Volatility Factor, V = | -0.5    |                |
| Total Organic PM = 0.00105(-V)*e <sup>-(0.0251)(T+460)-20.43</sup>  | Total PM/TOC =                 | 3.5E-02 | ton/ton of TOC |
| TOC = 0.0504(-V)*e <sup>-(0.0251)(T+460)-20.43</sup>                | Total Organic PM/TOC =         | 2.1E-02 | ton/ton of TOC |
| CO = 0.00488(-V)*e <sup>-(0.0251)(T+460)-20.43</sup>                | CO/TOC =                       | 0.097   | ton/ton of TOC |

|   |              |              |
|---|--------------|--------------|
|   | (tons/yr)    | (lbs/day)    |
| <b>Potential Emissions of Total PM* =</b>         | <b>0.043</b> | <b>0.485</b> |
| <b>Potential Emissions of Total Organic PM* =</b> | <b>0.025</b> | <b>0.286</b> |
| <b>Potential Emissions of CO* =</b>               | <b>0.117</b> | <b>1.329</b> |

\*Assuming TOC = VOCs from withdrawal, standing, and rail/truck loading losses

**Organic Particulate-Based and Organic Volatile-Based Compounds (AP-42 Table 11.1-15 and Table 11.1-16)**

| Pollutant           | CASRN     | Category        | HAP Type | Source     | Pollutant Content (% by weight of Total Organic PM) | Potential Emissions (tons/yr) | Potential Emissions (lbs/day) |
|---------------------|-----------|-----------------|----------|------------|---|-------------------------------|-------------------------------|
| Acenaphthene        | 83-32-9   | PM/HAP          | PAH/POM  | Organic PM | 0.47%   | 1.18E-04                      | 1.34E-03                      |
| Acenaphthylene      | 208-96-8  | PM/HAP          | PAH/POM  | Organic PM | 0.014%  | 3.51E-06                      | 4.00E-05                      |
| Anthracene          | 120-12-7  | PM/HAP          | PAH/POM  | Organic PM | 0.13%   | 3.26E-05                      | 3.72E-04                      |
| Benzo(a)anthracene  | 56-55-3   | PM/HAP          | PAH/POM  | Organic PM | 0.056%  | 1.40E-05                      | 1.60E-04                      |
| Benzo(e)pyrene      | 192-97-2  | PM/HAP          | PAH/POM  | Organic PM | 0.0095%   | 2.38E-06                      | 2.72E-05                      |
| Chrysene            | 218-01-9  | PM/HAP          | PAH/POM  | Organic PM | 0.21%   | 5.26E-05                      | 6.00E-04                      |
| Fluoranthene        | 206-44-0  | PM/HAP          | PAH/POM  | Organic PM | 0.15%   | 3.76E-05                      | 4.29E-04                      |
| Fluorene            | 86-73-7   | PM/HAP          | PAH/POM  | Organic PM | 1.01%   | 2.53E-04                      | 2.89E-03                      |
| 2-Methylnaphthalene | 91-57-6   | PM/HAP          | PAH/POM  | Organic PM | 5.27%   | 1.32E-03                      | 1.51E-02                      |
| Naphthalene         | 91-20-3   | PM/HAP          | PAH/POM  | Organic PM | 1.82%   | 4.56E-04                      | 5.20E-03                      |
| Perylene            | 198-55-0  | PM/HAP          | PAH/POM  | Organic PM | 0.03%   | 7.52E-06                      | 8.58E-05                      |
| Phenanthrene        | 85-01-8   | PM/HAP          | PAH/POM  | Organic PM | 1.80%   | 4.51E-04                      | 5.15E-03                      |
| Pyrene              | 129-00-0  | PM/HAP          | PAH/POM  | Organic PM | 0.44%   | 1.10E-04                      | 1.26E-03                      |
| Methane             | 74-82-8   | non-VOC/non-HAP | ---      | TOC        | 0.26%   | 3.13E-03                      | 7.43E-04                      |
| Acetone             | 67-64-1   | non-VOC/non-HAP | ---      | TOC        | 0.055%  | 6.62E-04                      | 1.57E-04                      |
| Ethylene            | 74-85-1   | non-VOC/non-HAP | ---      | TOC        | 1.10%   | 0.013                         | 0.003                         |
| Benzene             | 71-43-2   | VOC/HAP         | ---      | TOC        | 0.032%  | 3.85E-04                      | 9.15E-05                      |
| Bromomethane        | 74-83-9   | VOC/HAP         | ---      | TOC        | 0.0049%   | 5.90E-05                      | 1.40E-05                      |
| 2-Butanone          | 78-93-3   | VOC/HAP         | ---      | TOC        | 0.039%  | 4.69E-04                      | 1.11E-04                      |
| Carbon Disulfide    | 75-15-0   | VOC/HAP         | ---      | TOC        | 0.016%  | 1.93E-04                      | 4.57E-05                      |
| Chloroethane        | 75-00-3   | VOC/HAP         | ---      | TOC        | 0.004%  | 4.81E-05                      | 1.14E-05                      |
| Chloromethane       | 74-87-3   | VOC/HAP         | ---      | TOC        | 0.023%  | 2.77E-04                      | 6.57E-05                      |
| Ethylbenzene        | 100-41-4  | VOC/HAP         | ---      | TOC        | 0.038%  | 4.57E-04                      | 1.09E-04                      |
| Formaldehyde        | 50-00-0   | VOC/HAP         | ---      | TOC        | 0.69%   | 8.30E-03                      | 1.97E-03                      |
| n-Hexane            | 100-54-3  | VOC/HAP         | ---      | TOC        | 0.10%   | 1.20E-03                      | 2.86E-04                      |
| Isooctane           | 540-84-1  | VOC/HAP         | ---      | TOC        | 0.00031%  | 3.73E-06                      | 8.86E-07                      |
| Methylene Chloride  | 75-09-2   | non-VOC/HAP     | ---      | TOC        | 0.00027%  | 3.25E-06                      | 7.72E-07                      |
| Styrene             | 100-42-5  | VOC/HAP         | ---      | TOC        | 0.0054%   | 6.50E-05                      | 1.54E-05                      |
| Toluene             | 100-88-3  | VOC/HAP         | ---      | TOC        | 0.062%  | 7.46E-04                      | 1.77E-04                      |
| m-/p-Xylene         | 1330-20-7 | VOC/HAP         | ---      | TOC        | 0.20%   | 2.41E-03                      | 5.72E-04                      |
| o-Xylene            | 95-47-6   | VOC/HAP         | ---      | TOC        | 0.057%  | 6.86E-04                      | 1.63E-04                      |

**ACRONYMS**

VOC = Volatile Organic Compound  
 PM = Particulate Matter  
 CO = Carbon Monoxide  
 HAP = Hazardous Air Pollutant  
 PAH = Polycyclic Aromatic Hydrocarbon  
 POM = Polycyclic Organic Matter  
 TOC = Total Organic Compounds

|   |               |               |
|---|---------------|---------------|
|   | (tons/yr)     | (lbs/day)     |
| <b>Total Potential Emissions of Organic PM HAPs =</b> | <b>0.0029</b> | <b>0.0326</b> |
| <b>Total Potential Emissions of Volatile HAPs =</b>   | <b>0.0153</b> | <b>0.0036</b> |
| <b>Total Potential Emissions of HAPs =</b>            | <b>0.0182</b> | <b>0.0363</b> |

**Appendix A: Emissions Calculations  
Hot Oil Heaters  
Natural Gas Combustion Only  
MM BTU/HR <100  
Unlimited Potential to Emit**

**Company Name: BP Products North America, Inc., Whiting Business Unit  
Address City IN Zip: 2815 Indianapolis Boulevard, Whiting, Indiana 46394  
Significant Permit Modification No.: 089-24068-00453  
Reviewer: Nathan C. Bell  
Date: January 23, 2006**

| Emission Unit                       | Number of Units | Unit Heat Input Capacity MMBtu/hr | Combined Total Heat Input Capacity MMBtu/hr | Potential Throughput MMCF/yr | Pollutant   |             |             |              |             |              |
|-------------------------------------|-----------------|-----------------------------------|---|------------------------------|-------------|-------------|-------------|--------------|-------------|--------------|
|                                     |                 |                                   |   |                              | PM*         | PM10*       | SO2         | NOx**        | VOC         | CO           |
| Emission Factor (lb/MMCF)           |                 |                                   |   |                              | 1.9         | 7.6         | 0.6         | 50           | 5.5         | 84.0         |
| Unlimited Potential to Emit tons/yr |                 |                                   |   |                              | PM*         | PM10*       | SO2         | NOx**        | VOC         | CO           |
| Hot Oil Heater H-SP-1               | 1               | 9.90                              | 9.90  | 86.72                        | 0.08        | 0.33        | 0.03        | 2.17         | 0.24        | 3.64         |
| Hot Oil Heater H-SP-2               | 1               | 9.90                              | 9.90  | 86.72                        | 0.08        | 0.33        | 0.03        | 2.17         | 0.24        | 3.64         |
| Hot Oil Heater H-LG-1               | 1               | 9.90                              | 9.90  | 86.72                        | 0.08        | 0.33        | 0.03        | 2.17         | 0.24        | 3.64         |
| Hot Oil Heater H-LG-2               | 1               | 9.90                              | 9.90  | 86.72                        | 0.08        | 0.33        | 0.03        | 2.17         | 0.24        | 3.64         |
| Hot Oil Heater H-LG-3               | 1               | 9.90                              | 9.90  | 86.72                        | 0.08        | 0.33        | 0.03        | 2.17         | 0.24        | 3.64         |
| <b>Totals</b>                       | <b>5</b>        |                                   | <b>49.50</b>                                | <b>433.62</b>                | <b>0.41</b> | <b>1.65</b> | <b>0.13</b> | <b>10.84</b> | <b>1.19</b> | <b>18.21</b> |

| Emission Unit                       | Pollutant      |                |              |             |                |                |                |                |                |                |
|-------------------------------------|----------------|----------------|--------------|-------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                                     | Benzene        | DCB            | Formaldehyde | Hexane      | Toluene        | Pb             | Cd             | Cr             | Mn             | Ni             |
| Emission Factor (lb/MMCF)           |                |                |              |             |                |                |                |                |                |                |
|                                     | 2.1E-03        | 1.2E-03        | 7.5E-02      | 1.8E+00     | 3.4E-03        | 5.0E-04        | 1.1E-03        | 1.4E-03        | 3.8E-04        | 2.1E-03        |
| Unlimited Potential to Emit tons/yr |                |                |              |             |                |                |                |                |                |                |
|                                     | Benzene        | DCB            | Formaldehyde | Hexane      | Toluene        | Pb             | Cd             | Cr             | Mn             | Ni             |
| Hot Oil Heater H-SP-1               | 9.1E-05        | 5.2E-05        | 0.003        | 0.08        | 1.5E-04        | 2.2E-05        | 4.8E-05        | 6.1E-05        | 1.6E-05        | 9.1E-05        |
| Hot Oil Heater H-SP-2               | 9.1E-05        | 5.2E-05        | 0.003        | 0.08        | 1.5E-04        | 2.2E-05        | 4.8E-05        | 6.1E-05        | 1.6E-05        | 9.1E-05        |
| Hot Oil Heater H-LG-1               | 9.1E-05        | 5.2E-05        | 0.003        | 0.08        | 1.5E-04        | 2.2E-05        | 4.8E-05        | 6.1E-05        | 1.6E-05        | 9.1E-05        |
| Hot Oil Heater H-LG-2               | 9.1E-05        | 5.2E-05        | 0.003        | 0.08        | 1.5E-04        | 2.2E-05        | 4.8E-05        | 6.1E-05        | 1.6E-05        | 9.1E-05        |
| Hot Oil Heater H-LG-3               | 9.1E-05        | 5.2E-05        | 0.003        | 0.08        | 1.5E-04        | 2.2E-05        | 4.8E-05        | 6.1E-05        | 1.6E-05        | 9.1E-05        |
| <b>Totals</b>                       | <b>4.6E-04</b> | <b>2.6E-04</b> | <b>0.016</b> | <b>0.39</b> | <b>7.4E-04</b> | <b>1.1E-04</b> | <b>2.4E-04</b> | <b>3.0E-04</b> | <b>8.2E-05</b> | <b>4.6E-04</b> |

**PTE of Total HAPs (tons/yr) = 0.41**

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

The five highest organic and metal HAPs emission factors are provided above. Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Methodology**

Potential Throughput (MMCF) = Combined Total Heat Input Capacity (MMBtu/hr) \* 8,760 hrs/yr \* 1 MMCF/1,000 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) \* Emission Factor (lb/MMCF) / 2,000 lb/ton

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu, MMCF = 1,000,000 Cubic Feet of Gas

**Abbreviations**

PM = Particulate Matter

NOx = Nitrous Oxides

DCB = Dichlorobenzene

Cr = Chromium

PM10 = Particulate Matter (<10 um)

VOC = Volatile Organic Compounds

Pb = Lead

Mn = Manganese

SO2 = Sulfur Dioxide

CO = Carbon Monoxide

Cd = Cadmium

Ni = Nickel

**Appendix A: Emissions Calculations  
Hot Oil Heaters  
Natural Gas Combustion Only  
MM BTU/HR <100  
Limited Potential to Emit**

**Company Name: BP Products North America, Inc., Whiting Business Unit  
Address City IN Zip: 2815 Indianapolis Boulevard, Whiting, Indiana 46394  
Significant Permit Modification No.: 089-24068-00453  
Reviewer: Nathan C. Bell  
Date: January 23, 2006**

| Pollutant                 |                 |                            | PM*                               | PM10* | SO2  | NOx** | VOC  | CO    |
|---------------------------|-----------------|----------------------------|-----------------------------------|-------|------|-------|------|-------|
| Emission Factor (lb/MMCF) |                 |                            | 1.9                               | 7.6   | 0.6  | 50    | 5.5  | 84.0  |
| Emission Unit             | Number of Units | Limited Throughput MMCF/yr | Limited Potential to Emit tons/yr |       |      |       |      |       |
|                           |                 |                            | PM*                               | PM10* | SO2  | NOx** | VOC  | CO    |
| Hot Oil Heaters           | 5               | 255.00                     | 0.24                              | 0.97  | 0.08 | 6.38  | 0.70 | 10.71 |

| Pollutant                 | Benzene                           | DCB     | Formaldehyde | Hexane  | Toluene | Pb      | Cd      | Cr      | Mn      | Ni      |
|---------------------------|-----------------------------------|---------|--------------|---------|---------|---------|---------|---------|---------|---------|
| Emission Factor (lb/MMCF) | 2.1E-03                           | 1.2E-03 | 7.5E-02      | 1.8E+00 | 3.4E-03 | 5.0E-04 | 1.1E-03 | 1.4E-03 | 3.8E-04 | 2.1E-03 |
| Emission Unit             | Limited Potential to Emit tons/yr |         |              |         |         |         |         |         |         |         |
|                           | Benzene                           | DCB     | Formaldehyde | Hexane  | Toluene | Pb      | Cd      | Cr      | Mn      | Ni      |
| Hot Oil Heaters           | 2.7E-04                           | 1.5E-04 | 0.010        | 0.23    | 4.3E-04 | 6.4E-05 | 1.4E-04 | 1.8E-04 | 4.8E-05 | 2.7E-04 |

**Limited PTE of Total HAPs (tons/yr) = 0.24**

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.  
 \*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32  
 The five highest organic and metal HAPs emission factors are provided above. Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Methodology**

Potential Throughput (MMCF) = Combined Total Heat Input Capacity (MMBtu/hr) \* 8,760 hrs/yr \* 1 MMCF/1,000 MMBtu  
 Emission (tons/yr) = Throughput (MMCF/yr) \* Emission Factor (lb/MMCF) / 2,000 lb/ton  
 Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)  
 All emission factors are based on normal firing.  
 MMBtu = 1,000,000 Btu, MMCF = 1,000,000 Cubic Feet of Gas

**Abbreviations**

|                                    |                                  |                       |                |
|------------------------------------|----------------------------------|-----------------------|----------------|
| PM = Particulate Matter            | NOx = Nitrous Oxides             | DCB = Dichlorobenzene | Cr = Chromium  |
| PM10 = Particulate Matter (<10 um) | VOC = Volatile Organic Compounds | Pb = Lead             | Mn = Manganese |
| SO2 = Sulfur Dioxide               | CO = Carbon Monoxide             | Cd = Cadmium          | Ni = Nickel    |