



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: February 20, 2007
RE: BP Products, North America, Inc. - Whiting Business Unit / 089-23783-00453
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 approval is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

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

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

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

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

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

Enclosures
FNPER-MOD.dot 03/23/06



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

February 20, 2007

100 North Senate Avenue
Indianapolis, Indiana 46204-2251
(317) 232-8603
(800) 451-6027
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Natalie Grimmer
BP Products North America, Inc. Whiting Business Unit
P.O. Box 710
Whiting, Indiana 46394-0710

Re: 089-23783-00453
Minor Source Modification

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. The Office of Air Quality (OAQ) has reviewed a modification application, submitted by BP on October 17, 2006, relating to: (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.

Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction 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):

Table with 4 columns: Process Heater ID, Heat Input Capacity (MMBtu/hr), Fuel, Control Device. Rows include H-SP-1, H-SP-2, H-LG-1, H-LG-2, and H-LG-3*.

*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.

The following modified emission unit:

- (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.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
 Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.
6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

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

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).

Sincerely,

Original document signed by

Nisha Sizemore, Chief
Permits Branch
Office of Air Quality

ncb

Attachments: Technical Support Document and Minor Source Modification

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



Mitchell E. Daniels, Jr.
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**PART 70 MINOR SOURCE MODIFICATION
OFFICE OF AIR QUALITY
AND HAMMOND DEPARTMENT OF ENVIRONMENTAL
MANAGEMENT**

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

(herein known as the Permittee) is hereby authorized to construct 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.

Source Modification No.: MSM 089-23783-00453	
Issued by: <i>Original document signed by</i> Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: February 20, 2007

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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 (HDEM). The information describing the source contained in conditions A.1 through 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)]

The Permittee owns and operates a stationary refinery and marketing terminal.

Source Address: 2815 Indianapolis Blvd., Whiting, Indiana 46394
 Mailing Address: P.O. Box 710, Whiting, Indiana 46394-0710
 General Source Phone Number: (219) 473-3179
 SIC Code: 2911
 County Location: Lake
 Source Location Status: Nonattainment for the PM_{2.5} and 8-hour ozone standards
 Attainment for all other criteria pollutants
 Source Status: Part 70 Operating Permit Program
 Major Source, under PSD and Emission Offset Rules
 Major Source, under PSD and Major Source under Emission Offset Rules
 Major Source, Section 112 of the Clean Air Act
 1 of 28 Source Categories

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

This modification to a stationary source is approved to construct and operate the following emission units and pollution control devices:

- (a) 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

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-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.

- (b) 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.
- (c) 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.
- (d) 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 modified emission unit:

- (e) 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.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)]
 [326 IAC 2-7-5(15)]

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

- (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.

A.4 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.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:						
(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
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TK-SP-2	Residual Oil and/or Asphalt	2007	14,154,000	141,120,000	< 0.0435	biofilter
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TK-SP-4	Trim Gas Oil	2007	2,268,000	16,800,000	< 0.0435	biofilter
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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.

The following modified emission unit:

- (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.

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

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

D.1.1 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.1.2 NSPS Requirements [40 CFR Part 60, Subpart UU][326 IAC 12]

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

D.1.3 NESHAP Requirements [40 CFR Part 63, Subpart CC][326 IAC 20-16]

Pursuant to 40 CFR 63.640, the Permittee shall comply with the requirements specified in Section E.2 for storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17, and TK-3570.

D.1.4 Equipment Leaks of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) [326 IAC 8-4-8][326 IAC 20-16-1][40 CFR 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.3 and E.4 for valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges and/or other connectors in VOC service.

D.1.5 Natural Gas Usage Limit [326 IAC 2-2][326 IAC 2-3]

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 limit shall ensure compliance with the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset).

D.1.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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.1.7 Opacity Control

In order to comply with Condition D.1.2 (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.1.8 Monitoring for Equipment Leaks of VOC [326 IAC 8-4-8]

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 Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19]

D.1.9 Record Keeping Requirements

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- (a) Pursuant to 40 CFR 60, Subpart UU and to document compliance with Condition D.1.2, the Permittee shall maintain records as specified in Section E.1.
 - (b) Pursuant to 40 CFR 63, Subpart CC and to document compliance with Condition D.1.3, the Permittee shall keep records as specified in Section E.2.
 - (c) Pursuant to 40 CFR 60, Subpart GGG and to document compliance with Condition D.1.4(b), the Permittee shall keep records as specified in Sections E.3 and E.4.
 - (d) Pursuant to 326 IAC 8-4-8 and to document compliance with Condition D.1.4(a), the Permittee shall comply with equipment leak record keeping requirements specified in the LDAR plan.
 - (e) To document compliance with Conditions D.1.5, 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.1.10 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]

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- (a) 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-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.

- (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 exceeds seventy-five hundredths (0.75) psia 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.

D.1.11 Reporting Requirements

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- (a) Pursuant to 40 CFR 60, Subpart UU and to document compliance with Condition D.1.2, the Permittee shall submit to IDEM, OAQ the reports specified in Section E.1.
 - (b) Pursuant to 40 CFR 63, Subpart CC and to document compliance with Condition D.1.3, the Permittee shall submit reports as specified in Section E.2.
 - (c) Pursuant to 40 CFR 60, Subpart GGG and to document compliance with Condition D.1.4(b), the Permittee shall submit to IDEM, OAQ the reports specified in Sections E.3 and E.4.
 - (d) Pursuant to 326 IAC 8-4-8 and to document compliance with Condition D.1.4(a), the Permittee shall submit reports as specified in the LDAR plan.

- (e) A quarterly summary of the information to document compliance with Condition D.1.5 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 60, Subpart UU – Standards of Performance for Asphalt Process and Asphalt Roofing Manufacture

E.1.1 General Provisions Relating to NSPS Subpart UU [326 IAC 12-1][40 CFR Part 60, Subpart UU]

- (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 storage tanks TK-SP-1, TK-SP-2, TK-LG-1 through TK-LG-9, and TK-LG-12 through TK-LG-17.

E.1.2 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 storage tanks TK-SP-1, TK-SP-2, TK-LG-1 through TK-LG-9, and TK-LG-12 through TK-LG-17 immediately upon startup as specified below:

§ 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.1.3 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 notification 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 Cite	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

SECTION E.2 40 CFR Part 63, Subpart CC – National Emission Standards for Hazardous Air Pollutants For Petroleum Refineries

E.2.1 General Provisions Relating to NESHAP Subpart CC [40 CFR Part 63, Subpart CC]
[326 IAC 20-1]

- (a) 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 for storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17, and TK-3570.

E.2.2 NESHAP Subpart CC Requirements [40 CFR Part 63, Subpart CC][326 IAC 20-16]

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 the storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17, and TK-3570, immediately upon startup as specified below:

§ 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.

(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.

(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.

(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.

(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.

§ 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 ± 1 percent of the temperature being monitored expressed in degrees Celsius or ± 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.

ΣEMV_2 = Sum of the emissions, megagrams per year from all Group 2 marine tank vessels, as defined in §63.641.

ΣEWW_{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_{1C} in §63.652(h)(6).

ΣEWW_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.

(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.

§ 63.654 Reporting and recordkeeping requirements.

(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).

(i) *Recordkeeping.*

(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.

Table 1_Hazardous Air Pollutants	
Chemical name	CAS No. 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. b\ Isomer means all structural arrangements for the same number of atoms of each element and does not mean salts, esters, or derivatives.	

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).

Table 6 General Provisions Applicability to Subpart CC \a\		
Reference	Applies to subpart CC	Comment
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	
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. 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.		
\b\ The plan, and any records or reports of startup, shutdown, and malfunction do not apply to Group 2 emission points.		

E.2.3 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 each existing affected source. The storage tanks TK-3573, TK-SP-1 through TK-SP-4, TK-LG-1 through TK-LG-17, and TK-3570 are considered part of an existing affected source.

Requirement (this modification)	Rule Citations	Affected Facilities	Deadline
Notification of Compliance Status	40 CFR 63.640(l)(3) 40 CFR 63.654(f)(1)(i)(A) 40 CFR 63.9(h)	New Group 2 Storage Tanks ⁽¹⁾	Within 150-days of August 18, 1998, or within 150-days of initial startup, whichever is later or 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.3 40 CFR Part 60, Subpart GGG – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries

E.3.1 General Provisions Relating to NSPS Subpart GGG [326 IAC 12][40 CFR Part 60, Subpart A]

- (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 the valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges and/or other connectors in VOC service.

E.3.2 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 valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges and/or other connectors in VOC service as specified below:

§ 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.3.3 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 notification 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 Cite	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
Semiannual Compliance Reports	40 CFR 60.592(e) 40 CFR 60.487(a) 40 CFR 60.487(b)	Initial report shall be submitted 6 months after date of initial startup. Subsequent reports shall be submitted no later than 60 days after the end of each 6-month period following the first report.
Demonstrate Initial Compliance	40 CFR 60.592(a) 40 CFR 60.482-1(a)	Within 180-days of initial startup

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 60.592(a), the Permittee shall comply with the applicable provisions of 40 CFR Part 60, Subpart VV, which are incorporated by reference as 326 IAC 12, for valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, flanges and/or other connectors in VOC service, as specified below:

§ 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).

§ 60.482-5 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.

(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.

§ 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.

§ 60.485 Test methods and procedures.

(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.

(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.

(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.

§ 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.

(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.

(5) A list of identification numbers for equipment in vacuum service.

(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.

(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,

(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.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
and
HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**

**PART 70 SOURCE MODIFICATION
CERTIFICATION**

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 Source Modification No.: MSM 089-23783-00453

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 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 Source Modification No.: MSM 089-23783-00453
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.

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 Minor Source Modification

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
Minor Source Modification No.:	089-23783-00453
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.

County Attainment Status

The source is located in Lake County.

Pollutant	Status*
PM ₁₀	Maintenance Attainment
PM _{2.5}	Nonattainment
SO ₂	Maintenance Attainment
NO ₂	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_x) 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_x 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_x 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_{2.5}. On March 7, 2005 the Indiana Attorney General's Office, on behalf of IDEM, filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of 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 PM₁₀ emissions as a surrogate for PM_{2.5} emissions pursuant to the requirements of Emission Offset, 326 IAC 2-3.
- (c) Lake County has been classified as attainment or unclassifiable for PM₁₀, SO₂, NO₂, 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 ₁₀	>100
SO ₂	>100
VOC	>100
CO	>100
NO _x	>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 PM₁₀ (as surrogate for PM_{2.5}) and NO_x 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 ₁₀	557
SO ₂	3,385
VOC	1,238
CO	2,058
NO _x	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 New Source Construction and Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by BP Products North America, Inc. on October 17, 2006, relating to: (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 following is a list of the new emission units proposed in this modification:

- (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.

The following modified emission unit:

- (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.

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 ₁₀ ⁽¹⁾	9.51	1.69
SO ₂	0.71	0.13
NO _x	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 PM₁₀ emissions as surrogate for PM_{2.5} 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_x 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_x.

After issuance of this Part 70 source modification, this modification will be incorporated into the Part 70 operating permit by Significant Permit Modification (SPM) No. 089-24068-00453. The permit modification is significant, because it 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 since it is considered 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 ₁₀ ⁽¹⁾	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Existing Source (Before Modification)								
Total PTE (Before Modification) (see Table 2 of this TSD)	>100	>100	>100	>100	>100	>100	>25	>10
Newly Constructed or Modified Emission Units (Modification)								
Storage Tanks and Truck/Rail Loading ⁽²⁾	0.04	0.04	0	0	1.20	0.12	0.018	0.013
Hot Oil Heaters ⁽³⁾	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
Entire Source (After Modification)								
Total PTE of Entire Source (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 ⁽¹⁾	NA	40	40	NA	NA	NA
negl. = negligible (1) US EPA has directed states to regulate PM ₁₀ emissions as surrogate for PM _{2.5} emissions (2) Uncontrolled PTE. (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, SO₂, 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 PM₁₀ (surrogate for PM_{2.5}), NO_x, 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 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.

- (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 ⁽¹⁾	Y ⁽²⁾	<100	NA	100	N	N
Each Hot Oil Heater	none	Y ⁽²⁾	<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 ⁽¹⁾	N ⁽²⁾	<100	NA ⁽¹⁾	100	N	N
Each Loading Rack	none	N	<100	NA	100	N	N
Equipment Leaks	none	N ⁽³⁾	<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 any 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_{2.5} and moderate nonattainment for 8-hour ozone.

- (a) This modification to an existing major PSD stationary source is not major, because the PM, SO₂, 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 PM₁₀ (surrogate for PM_{2.5}), NO_x, 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_x 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: PM₁₀ 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: PM₁₀ 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: PM₁₀ 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.

The compliance determination requirements applicable to this modification are as follows:

- (a) 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).

The compliance monitoring requirements applicable to this modification are as follows:

- (a) 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).

The recordkeeping and reporting requirements applicable to this modification are as follows:

- (a) Permittee shall maintain records and submit reports as specified by 40 CFR 60, Subpart UU, 40 CFR 63, Subpart CC, and the LDAR plan.

Conclusion and Recommendation

- (a) The construction of this proposed modification shall be subject to the conditions of the attached proposed Minor Source Modification No. 089-23783-00453. Based on the facts, conditions, and evaluations made, the OAQ staff recommends to the IDEM's Commissioner that the findings for the approval to construct and operate Part 70 Minor Source Modification No. 089-23783-00453 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, and January 19, 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
Minor Source Modification No.: 089-23783-00453
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 (ethylene)	0.39 (hexane)	0.39 (hexane)	0.015 (ethylene)	2.14 (hexane)	2.14 (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	Total HAPs	0.018	0.24	0.26
	Worse Case HAP	0.013 (ethylene)	0.23 (hexane)	0.23 (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**
Minor Source Modification No.: **089-23783-00453**
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 48 ft ht	45.6 ft (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 48 ft ht	45.6 ft (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 48 ft ht	45.6 ft (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 48 ft ht	45.6 ft (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 48 ft ht	45.6 ft (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 48 ft ht	45.6 ft (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 48 ft ht	45.6 ft (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 48 ft ht	45.6 ft (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 48 ft ht	45.6 ft (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 48 ft ht	45.6 ft (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 48 ft ht	45.6 ft (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 48 ft ht	45.6 ft (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 48 ft ht	45.6 ft (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 48 ft ht	45.6 ft (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 48 ft ht	45.6 ft (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 48 ft ht	45.6 ft (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 10 ft ht	9.5 ft (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 24 ft ht	22.8 ft (11.4 ft)	30,140	69.68	2,100,000	2.51	0	0.001	0	
TK-LG-14	Finished Asphalt Polymer	Fixed Cone	26 ft dia 32 ft ht	30.4 ft (15.2 ft)	120,738	20.87	2,520,000	5.04	0	0.003	0	
TK-LG-15	Finished Asphalt Polymer	Fixed Cone	26 ft dia 32 ft ht	30.4 ft (15.2 ft)	120,738	20.87	2,520,000	5.04	0	0.003	0	
TK-LG-16	Finished Asphalt Polymer	Fixed Cone	26 ft dia 32 ft ht	30.4 ft (15.2 ft)	120,738	20.87	2,520,000	5.04	0	0.003	0	
TK-LG-17	Finished Asphalt Polymer	Fixed Cone	26 ft dia 32 ft ht	30.4 ft (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 58 ft ht	55.10 ft (27.55 ft)	2,622,163	7.69	20,160,000	27.36	0	0.014	0	
Total Potential to Emit VOC (tons/yr) =											0.82	0
Total Potential to Emit VOC (lbs/day) =											4.5	0

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*P*M/T

Asphalt Loading Type		
Rail	Truck	
1.45	1.45	Saturation Factor, S =
0.0008	0.0008	Asphalt Vapor Pressure, P = psia
105	105	Asphalt Vapor Molecular Weight, M = lb/lbmol (AP-42 Section 11.1)
350.0	330.0	Asphalt Temperature, T = Fahrenheit
810.0	790.0	Asphalt Temperature, T = R
0.00187	0.00192	Truck Loading Losses, L = lbs VOC/1000 gallons of asphalt
201,940,000	#####	Maximum Annual Throughput = gallons of asphalt/year
0.19	0.19	Loading Losses, L = tons/year VOC
88,670	113,636	Maximum Hourly Throughput = gallons of asphalt/hour
0.17	0.22	Loading Losses, L = lbs/hr VOC
3.99	5.24	Loading Losses, L = lbs/day VOC

Total VOC emissions from withdrawal, standing, and rail/truck loading losses =		1.20	13.72
		(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
Minor Source Modification No.: 089-23783-00453
Reviewer: Nathan C. Bell
Date: January 23, 2006**

	(tons/yr)	(lbs/day)
Total VOC emissions from withdrawal, standing, and rail/truck loading losses =	1.20	13.72

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.

Emission Factor (EF) Equations:	Asphalt Temperature =	350.0	F
Total PM = 0.000332+0.00105(-V)*e ^{-(0.0251)(T+460)-20.43}	Asphalt Volatility Factor, V =	-0.5	
Total Organic PM = 0.00105(-V)*e ^{-(0.0251)(T+460)-20.43}	Total PM/TOC =	3.5E-02	ton/ton of TOC
TOC = 0.0504(-V)*e ^{-(0.0251)(T+460)-20.43}	Total Organic PM/TOC =	2.1E-02	ton/ton of TOC
CO = 0.00488(-V)*e ^{-(0.0251)(T+460)-20.43}	CO/TOC =	0.097	ton/ton of TOC

	(tons/yr)	(lbs/day)
Potential Emissions of Total PM* =	0.043	0.485
Potential Emissions of Total Organic PM* =	0.025	0.286
Potential Emissions of CO* =	0.117	1.329

*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)
Total Potential Emissions of Organic PM HAPs =	0.0029	0.0326
Total Potential Emissions of Volatile HAPs =	0.0153	0.0036
Total Potential Emissions of HAPs =	0.0182	0.0363

**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
Minor Source Modification No.: 089-23783-00453
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
Totals	5		49.50	433.62	0.41	1.65	0.13	10.84	1.19	18.21

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
Totals	4.6E-04	2.6E-04	0.016	0.39	7.4E-04	1.1E-04	2.4E-04	3.0E-04	8.2E-05	4.6E-04

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**

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Address City IN Zip: 2815 Indianapolis Boulevard, Whiting, Indiana 46394
Minor Source Modification No.: 089-23783-00453
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)
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