INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Linda Wilson
BP Products North America, Inc. Whiting Business Unit
2815 Indianapolis Blvd
Whiting, Indiana 46394

DATE: March 30, 2007

FROM: Nisha Sizemore, Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
SMSM
089-24258-00453

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Daniel J. Sajkowski
David Wall Trinity Consultants
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 03/23/05

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March 30th, 2007

Ms. Linda Wilson
BP Products North America, Inc., Whiting Business Unit
2815 Indianapolis Blvd.
P.O. Box 710
Whiting, Indiana 46394

Re: Second Minor Source Modification No: 089-24258-00453 to
Part 70 Operating Permit No.: 089-6741-00453

Dear Ms. Wilson:

BP Products North America, Inc., Whiting Business Unit was issued a Part 70 operating permit on December 14, 2006, for a refinery and marketing terminal. An application to modify the source was received on January 27, 2007. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source:

One (1) tank sludge cleaning facility (identified as Tank Cleaning Facility) with a maximum throughput of 300 gallons per minute of storage tank sludge/cutter stock mix per hour, with VOC and HAP emissions voluntarily controlled using either an electric catalytic oxidizer (identified as F-1) or a wet scrubber/carbon canister system (identified as S-1). The facility is approved for construction in 2007, is operated as a batch process, and consists of the following emission units:

(a) Four (4) mix tanks identified as Mix Tank #1, #2, #3, and #4. Each tank has maximum capacity of 21,000 gallons, with emissions voluntarily controlled by either the catalytic oxidizer F-1 or the wet scrubber/carbon canister system S-1.

(b) Two (2) enclosed centrifuges (identified as Centrifuge #1 and #2) with no process vents.

(c) One (1) diesel-fired boiler (identified as C-1), with a maximum heat input capacity of 8.4 MMBtu per hour burning low-sulfur (less than 0.05% sulfur by weight) diesel fuel. Emissions are exhausted at stack C-1-01. There is no control device for this emission unit.

(d) One (1) diesel-fired air compressor (identified as J-2), with a maximum heat input capacity of 0.84 MMBtu per hour. This compressor is a 120 hp reciprocating internal combustion engine. Emissions are exhausted through vent J-2. There is no control device for this emission unit.

(e) Two (2) diesel-fired process pumps (identified as J-1 and J-3), each having a maximum heat input capacity of 0.70 MMBtu per hour. These pumps are 100 hp reciprocating internal combustion engines. Emissions from pumps J-1 and J-3 are exhausted through vents J-1 and J-3, respectively. There are no control devices for this emission unit.

(f) Six (6) portable rectangular storage tanks, including:

(1) Two (2) Reclaimed Oil Tanks identified as ROT-1 and ROT-2. Each tank has a

maximum storage capacity of 21,000 gallons and is used to store reclaimed sludge and cutter stock. Emissions are voluntarily controlled by either the catalytic oxidizer F-1 or the wet scrubber/carbon canister system S-1.

(2) Three (3) Cutter Stock Tanks identified as CST-1, CST-2, and CST-3. Each tank has a maximum storage capacity of 21,000 gallons and is used to store Cutter Stock. Emissions are voluntarily controlled by either the catalytic oxidizer F-1 or the wet scrubber/carbon canister system S-1.

(3) One (1) Concentrate Tank identified as CT-1. This tank has a maximum storage capacity of 21,000 gallons and is used to store cutter stock and tank sludge mix. Emissions are voluntarily controlled by either the catalytic oxidizer F-1 or the wet scrubber/carbon canister system S-1.

(g) One (1) electric catalytic oxidizer, identified as F-1, a maximum gas flow rate of 400 scfm. Emissions are exhausted at stack F-1-01. Under 40 CFR 60, Subpart J, the catalytic oxidizer is considered a fuel gas combustion device.

(h) Equipment leaks of VOC and HAP from pumps, valves, and connectors. Under 40 CFR 63, Subpart CC, equipment leaks from pumps, valves, and connectors associated with the Tank Cleaning Facility are affected facilities in organic hazardous air pollutant service.

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 minor source modification has been issued. Operating conditions shall be incorporated into the Part 70 operating permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12.

Pursuant to Contract No. A305-5-65, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Amanda Baynham, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7910 to speak directly to Ms. Baynham. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, Indianapolis, Indiana, 46204-2251, or call (800) 451-6027 and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Nisha Sizemore

Nisha Sizemore, Chief
Permits Branch
Office of Air Quality

Attachments

ERG/AAB

cc: File - Lake County
Lake County Health Department
Northwest Regional Office
Hammond Department of Environmental Management
Air Compliance Section Inspector – Ramesh Tejuga
Compliance Data Section
Administrative and Development
Technical Support and Modeling
Billing, Licensing, and Training Section - Dan Stamatkin

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MINOR SOURCE MODIFICATION TO A PART 70 OPERATING PERMIT

OFFICE OF AIR QUALITY

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

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

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

2nd Minor Source Modification No.: 089-24258-00453	Affected pages: Section D.41, Section E.1, Section E.2 and Section E.4
Original Signed by: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Effective Date: March 30, 2007 Expiration Date: December 14, 2011

SECTION D.41 FACILITY OPERATION CONDITIONS

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

One (1) tank sludge cleaning facility (identified as Tank Cleaning Facility) with a maximum throughput of 300 gallons per minute of storage tank sludge/cutter stock mix per hour, with VOC and HAP emissions voluntarily controlled using either an electric catalytic oxidizer (identified as F-1) or a wet scrubber/carbon canister system (identified as S-1). The facility is approved for construction in 2007, is operated as a batch process, and consists of the following emission units:

(a) Four (4) mix tanks identified as Mix Tank #1, #2, #3, and #4. Each tank has maximum capacity of 21,000 gallons, with emissions voluntarily controlled by either the catalytic oxidizer F-1 or the wet scrubber/carbon canister system S-1.

(b) Two (2) enclosed centrifuges (identified as Centrifuge #1 and #2) with no process vents.

(c) One (1) diesel-fired boiler (identified as C-1), with a maximum heat input capacity of 8.4 MMBtu per hour burning low-sulfur (less than 0.05% sulfur by weight) diesel fuel. Emissions are exhausted at stack C-1-01. There is no control device for this emission unit.

(d) One (1) diesel-fired air compressor (identified as J-2), with a maximum heat input capacity of 0.84 MMBtu per hour. This compressor is a 120 hp reciprocating internal combustion engine. Emissions are exhausted through vent J-2. There is no control device for this emission unit.

(e) Two (2) diesel-fired process pumps (identified as J-1 and J-3), each having a maximum heat input capacity of 0.70 MMBtu per hour. These pumps are 100 hp reciprocating internal combustion engines. Emissions from pumps J-1 and J-3 are exhausted through vents J-1 and J-3, respectively. There are no control devices for this emission unit.

(f) Six (6) portable rectangular storage tanks, including:

(1) Two (2) Reclaimed Oil Tanks identified as ROT-1 and ROT-2. Each tank has a maximum storage capacity of 21,000 gallons and is used to store reclaimed sludge and cutter stock. Emissions are voluntarily controlled by either the catalytic oxidizer F-1 or the wet scrubber/carbon canister system S-1.

(2) Three (3) Cutter Stock Tanks identified as CST-1, CST-2, and CST-3. Each tank has a maximum storage capacity of 21,000 gallons and is used to store Cutter Stock. Emissions are voluntarily controlled by either the catalytic oxidizer F-1 or the wet scrubber/carbon canister system S-1.

(3) One (1) Concentrate Tank identified as CT-1. This tank has a maximum storage capacity of 21,000 gallons and is used to store cutter stock and tank sludge mix. Emissions are voluntarily controlled by either the catalytic oxidizer F-1 or the wet scrubber/carbon canister system S-1.

(g) One (1) electric catalytic oxidizer, identified as F-1, a maximum gas flow rate of 400 scfm. Emissions are exhausted at stack F-1-01. Under 40 CFR 60, Subpart J, the catalytic oxidizer is considered a fuel gas combustion device.

(h) Equipment leaks of VOC and HAP from pumps, valves, and connectors. Under 40 CFR 63, Subpart CC, equipment leaks from pumps, valves, and connectors associated with the Tank Cleaning Facility are affected facilities in organic hazardous air pollutant service.

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

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

D.41.1 Volatile Organic Compounds (VOC) Limits [326 IAC 2-3][326 IAC 2-2]

The Tank Cleaning Facility shall be limited to less than 4,440 hours of operation per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limitation renders the requirements of 326 IAC 2-2 and 326 IAC 2-3 not applicable to the installation of the Tank Cleaning Facility, which consists of Mix Tanks #1 through #4; Centrifuges #1 and #2; Boiler C-1; Compressor J-2; Processes Pumps J-1 and J-3; and Storage Tanks ROT-1, ROT-2, ROT-3, CST-1, CST-2, and CT-1.

D.41.2 Particulate Matter [326 IAC 6.8-1-2]

(a) Pursuant to 326 IAC 6.8-1-2(b)(2), the particulate matter emissions from the Boiler C-1 shall be limited to 0.15 pounds per million Btu.

(b) Pursuant to 326 IAC 6.8-1-2(a), the particulate matter emissions from the pump engines (J-1 and J-3) and the compressor engine (J-2) shall be each limited to 0.03 grains per dry standard cubic foot.

D.41.3 Storage Tank Requirements [326 IAC 8-9]

Pursuant to 326 IAC 8-9-6 (Volatile Organic Liquid Storage Vessels), the Permittee shall record and submit to IDEM, OAQ a report containing the following information for Reclaimed Oil Tanks ROT-1 and ROT-2; Cutter Stock Tanks CST-1, CST-2, and CST-3; and Concentrate Tank CT-1:

(a) The vessel identification number.

(b) The vessel dimensions.

(c) The vessel capacity.

The Permittee shall keep all records as described in (a) through (c) for the life of the vessel.

D.41.4 Fuel Gas Hydrogen Sulfide (H_2S) [326 IAC 12] [40 CFR 60, Subpart J]

Pursuant to 40 CFR 60, Subpart J, the Permittee shall comply with the requirements specified in Section E.2 for the electric catalytic oxidizer F-1.

D.41.5 Equipment Leaks of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) [326 IAC 8-4-8][326 IAC 20-16-1][40 CFR 63, Subpart CC]

(a) Pursuant to 326 IAC 8-4-8, the Permittee shall control leaks of VOC from pumps, compressors, valves, process drains, and pressure relief devices according to the Leak Detection and Repair (LDAR) Plan submitted by the Permittee. The Permittee shall update the LDAR Plan as necessary and shall submit a copy of the revised LDAR Plan to IDEM OAQ for approval. If IDEM, OAQ determines that the procedures specified in the LDAR Plan will not demonstrate compliance with the fugitive emission limitations, IDEM, OAQ may require the Permittee to revise the plan.

(b) Pursuant to 40 CFR 63, Subpart CC, the Permittee shall comply with the requirements specified in Sections E.1 and E.4 for equipment leaks of HAP from pumps, valves and connectors located at the Tank Cleaning Facility.

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

D.41.6 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.41.7 Record Keeping Requirements

(a) To demonstrate compliance with Condition D.41.1, the Permittee shall maintain records of the number of operating hours for the Tank Cleaning Facility.

(b) Pursuant to 326 IAC 8-4-8 and to document compliance with Condition D.41.4, the Permittee shall comply with equipment leak record keeping requirements specified in the LDAR plan.

(c) Pursuant to 40 CFR 60, Subpart J and to document compliance with Condition D.41.4, the Permittee shall maintain the records specified in Section E.2.

(d) Pursuant to 326 IAC 8-4-8 and to document compliance with Condition D.41.5(a), the Permittee shall comply with equipment leak record keeping requirements specified in the LDAR plan.

(e) Pursuant to 40 CFR 63, Subpart CC and to document compliance with Condition D.41.5(b), the Permittee shall keep records as specified in Section E.1 and E.4.

D.41.8 Reporting Requirements

(a) A quarterly summary of the information to document compliance with Condition D.41.1 shall be submitted to the address 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).

(b) Pursuant to 326 IAC 8-4-8 and to document compliance with Condition D.41.4, the Permittee shall comply with equipment leak reporting requirements specified in the LDAR plan.

(c) Pursuant to 40 CFR 60, Subpart J and to document compliance with Condition D.41.4, the Permittee shall submit to IDEM, OAQ the reports specified in Condition E.2.

(d) Pursuant to 326 IAC 8-4-8 and to document compliance with Condition D.41.5(a), the Permittee shall submit reports as specified in the LDAR plan.

(e) Pursuant to 40 CFR 63, Subpart CC and to document compliance with Condition D.41.5(b), the Permittee shall submit reports as specified in Sections E.1 and E.4.

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

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

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

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

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

§ 63.640 Applicability and designation of affected source.

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

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

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

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

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

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

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

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

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

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

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

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

(1) Stormwater from segregated stormwater sewers;

(2) Spills;

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(3) If a distillation unit is shared among process units so that there is no single predominant use, as described in paragraphs (f)(1) and (f)(2) of this section, and at least one of those process units is a

petroleum refining process unit subject to this subpart, the distillation unit shall be assigned to the petroleum refining process unit that is subject to this subpart. If more than one petroleum refining process unit is subject to this subpart, the owner or operator may assign the distillation unit to any of the petroleum refining process units subject to this rule.

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

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

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

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

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

(3) Units processing natural gas liquids;

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

(5) Shale oil extraction units;

(6) Ethylene processes; and

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

process changes, and changes that are within the equipment configuration and operating conditions documented in the Notification of Compliance Status report required by §63.654(f).

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

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

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

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

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

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

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

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

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

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

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

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

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

(m) If a change that does not meet the criteria in paragraph (l) of this section is made to a petroleum refining process unit subject to this subpart, and the change causes a Group 2 emission point to become a Group 1 emission point (as defined in §63.641), then the owner or operator shall comply with the

requirements of this subpart for existing sources for the Group 1 emission point as expeditiously as practicable, but in no event later than 3 years after the emission point becomes Group 1.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

personnel, the owner or operator shall comply with the requirements in either §63.120(b)(7)(i) or §63.120(b)(7)(ii) of subpart G.

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

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

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

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

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

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

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

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

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

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

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

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

(q) For overlap of subpart CC with local or State regulations, the permitting authority for the affected source may allow consolidation of the monitoring, recordkeeping, and reporting requirements under this subpart with the monitoring, recordkeeping, and reporting requirements under other applicable

requirements in 40 CFR parts 60, 61, or 63, and in any 40 CFR part 52 approved State implementation plan provided the implementation plan allows for approval of alternative monitoring, reporting, or recordkeeping requirements and provided that the permit contains an equivalent degree of compliance and control.

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

§ 63.642 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:

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

where:

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

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

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

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

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

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

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

$(R)\Sigma\ EMV_1$ = 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.

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

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

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

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

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

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

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

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

§ 63.643 Miscellaneous process vent provisions.

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

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

§ 63.644 Monitoring provisions for miscellaneous process vents.

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

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

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

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

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

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

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

§ 63.645 Test methods and procedures for miscellaneous process vents.

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

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

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

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

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

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

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

subpart) that is present, prior to any dilution of the process vent stream, and prior to release to the atmosphere.

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

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

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

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

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

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

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

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

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

where:

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

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

n=Number of components in the sample.

x=Number of samples in the sample run.

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

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

where:

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

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

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

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

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

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

$$E_{TOC}=K_2C_{TOC}MQ_s$$

where:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

§ 63.646 Storage vessel provisions.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(3) Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.

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

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

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

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

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

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

§ 63.647 Wastewater provisions.

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

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

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

§ 63.648 Equipment leak standards.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

§ 63.650 Gasoline loading rack provisions.

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

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

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

§ 63.651 Marine tank vessel loading operation provisions.

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

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

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

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

§ 63.654 Reporting and recordkeeping requirements.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(*3*) If the owner or operator elects to submit the results of a performance test, identification of the storage vessel and control device for which the performance test will be submitted, and identification of the emission point(s) that share the control device with the storage vessel and for which the performance test will be conducted.

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

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

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

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

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

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

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

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

(iii) For miscellaneous process vents controlled by control devices required to be tested under §63.645 of this subpart and §63.116(c) of subpart G of this part, performance test results including the information in

paragraphs (f)(1)(iii)(A) and (B) of this section. Results of a performance test conducted prior to the compliance date of this subpart can be used provided that the test was conducted using the methods specified in §63.645 and that the test conditions are representative of current operating conditions.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(6) Notification of Compliance Status reports required by §63.640(l)(3) and for storage vessels subject to the compliance dates specified in §63.640(h)(4) shall be submitted no later than 60 days after the end of the 6-month period during which the change or addition was made that resulted in the Group 1 emission point or the existing Group 1 storage vessel was brought into compliance, and may be combined with the periodic report. Six-month periods shall be the same 6-month periods specified in paragraph (g) of this section. The Notification of Compliance Status report shall include the information specified in paragraphs (f)(1) through (f)(5) of this section. This information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, as part of the periodic report, or in any combination of these four. If the required information has been submitted before the date 60 days after the end of the 6-month period in which the addition of the Group 1 emission point took place, a separate Notification of Compliance Status report is not required within 60 days after the end of the 6-month period. If an owner or operator submits the information specified in paragraphs (f)(1) through (f)(5) of this section at different times, and/or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the previously submitted information.

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

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

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

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

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

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

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

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

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

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

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

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

(A) The date of the seal gap measurement.

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

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

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

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

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

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

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

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

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

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

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

(B) A description of the planned routine maintenance that was performed for the control device during the previous 6 months. This description shall include the type of maintenance performed and the total number of hours during those 6 months that the control device did not meet the requirements of §63.119 (e)(1) or (e)(2) of subpart G of this part, as applicable, due to planned routine maintenance.

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

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

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

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

(A) An operating day when the daily average value of a monitored parameter, except presence of a flare pilot flame, is outside the range specified in the Notification of Compliance Status report. Monitoring data recorded during periods of monitoring system breakdown, repairs, calibration checks and zero (low-level) and high-level adjustments shall not be used in computing daily average values of monitored parameters.

(B) An operating day when all pilot flames of a flare are absent.

(C) An operating day when monitoring data required to be recorded in paragraphs (i)(3) (i) and (ii) of this section are available for less than 75 percent of the operating hours.

(D) For data compression systems approved under paragraph (h)(5)(iii) of this section, an operating day when the monitor operated for less than 75 percent of the operating hours or a day when less than 18 monitoring values were recorded.

(ii) For miscellaneous process vents, excess emissions shall be reported for the operating parameters specified in table 10 of this subpart unless other site-specific parameter(s) have been approved by the operating permit authority.

(iii) Periods of startup and shutdown that meet the definition of §63.641, and malfunction that meet the definition in §63.2 and periods of performance testing and monitoring system calibration shall not be considered periods of excess emissions. Malfunctions may include process unit, control device, or monitoring system malfunctions.

(7) If a performance test for determination of compliance for a new emission point subject to this subpart or for an emission point that has changed from Group 2 to Group 1 is conducted during the period covered by a Periodic Report, the results of the performance test shall be included in the Periodic Report.

(i) Results of the performance test shall include the percentage of emissions reduction or outlet pollutant concentration reduction (whichever is needed to determine compliance) and the values of the monitored operating parameters.

(ii) The complete test report shall be maintained onsite.

(8) The owner or operator of a source shall submit quarterly reports for all emission points included in an emissions average.

(i) The quarterly reports shall be submitted no later than 60 calendar days after the end of each quarter. The first report shall be submitted with the Notification of Compliance Status report no later than 150 days after the compliance date specified in §63.640.

(ii) The quarterly reports shall include:

(A) The information specified in this paragraph and in paragraphs (g)(2) through (g)(7) of this section for all storage vessels and miscellaneous process vents included in an emissions average;

(B) The information required to be reported by §63.428 (h)(1), (h)(2), and (h)(3) for each gasoline loading rack included in an emissions average, unless this information has already been submitted in a separate report;

(C) The information required to be included in quarterly reports by §§63.567(f) and 63.567(i)(2) of subpart Y of this part for each marine tank vessel loading operation included in an emissions average, unless the information has already been submitted in a separate report;

(D) Any information pertaining to each wastewater stream included in an emissions average that the source is required to report under the Implementation Plan for the source;

(E) The credits and debits calculated each month during the quarter;

(F) A demonstration that debits calculated for the quarter are not more than 1.30 times the credits calculated for the quarter, as required under §§63.652(e)(4);

(G) The values of any inputs to the credit and debit equations in §63.652 (g) and (h) that change from month to month during the quarter or that have changed since the previous quarter; and

(H) Any other information the source is required to report under the Implementation Plan for the source.

(iii) Every fourth quarterly report shall include the following:

(A) A demonstration that annual credits are greater than or equal to annual debits as required by §63.652(e)(3); and

(B) A certification of compliance with all the emissions averaging provisions in §63.652 of this subpart.

(h) Other reports shall be submitted as specified in subpart A of this part and as follows:

(1) Reports of startup, shutdown, and malfunction required by §63.10(d)(5). Records and reports of startup, shutdown, and malfunction are not required if they pertain solely to Group 2 emission points, as defined in §63.641, that are not included in an emissions average. For purposes of this paragraph, startup

and shutdown shall have the meaning defined in §63.641, and malfunction shall have the meaning defined in §63.2; and

(2) For storage vessels, notifications of inspections as specified in paragraphs (h)(2)(i) and (h)(2)(ii) of this section;

(i) In order to afford the Administrator the opportunity to have an observer present, the owner or operator shall notify the Administrator of the refilling of each Group 1 storage vessel that has been emptied and degassed.

(A) Except as provided in paragraphs (h)(2)(i) (B) and (C) of this section, the owner or operator shall notify the Administrator in writing at least 30 calendar days prior to filling or refilling of each storage vessel with organic HAP's to afford the Administrator the opportunity to inspect the storage vessel prior to refilling.

(B) Except as provided in paragraph (h)(2)(i)(C) of this section, if the internal inspection required by §§63.120(a)(2), 63.120(a)(3), or 63.120(b)(10) of subpart G of this part is not planned and the owner or operator could not have known about the inspection 30 calendar days in advance of refilling the vessel with organic HAP's, the owner or operator shall notify the Administrator at least 7 calendar days prior to refilling of the storage vessel. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. This notification, including the written documentation, may also be made in writing and sent so that it is received by the Administrator at least 7 calendar days prior to the refilling.

(C) The State or local permitting authority can waive the notification requirements of paragraphs (h)(2)(i)(A) and/or (h)(2)(i)(B) of this section for all or some storage vessels at petroleum refineries subject to this subpart. The State or local permitting authority may also grant permission to refill storage vessels sooner than 30 days after submitting the notification required by paragraph (h)(2)(i)(A) of this section, or sooner than 7 days after submitting the notification required by paragraph (h)(2)(i)(B) of this section for all storage vessels, or for individual storage vessels on a case-by-case basis.

(ii) In order to afford the Administrator the opportunity to have an observer present, the owner or operator of a storage vessel equipped with an external floating roof shall notify the Administrator of any seal gap measurements. The notification shall be made in writing at least 30 calendar days in advance of any gap measurements required by §63.120 (b)(1) or (b)(2) of subpart G of this part. The State or local permitting authority can waive this notification requirement for all or some storage vessels subject to the rule or can allow less than 30 calendar days' notice.

(3) For owners or operators of sources required to request approval for a nominal control efficiency for use in calculating credits for an emissions average, the information specified in §63.652(h).

(4) The owner or operator who requests approval to monitor a different parameter than those listed in §63.644 for miscellaneous process vents or who is required by §63.653(a)(8) to establish a site-specific monitoring parameter for a point in an emissions average shall submit the information specified in paragraphs (h)(4)(i) through (h)(4)(iii) of this section. For new or reconstructed sources, the information shall be submitted with the application for approval of construction or reconstruction required by §63.5(d) of subpart A and for existing sources, and the information shall be submitted no later than 18 months prior to the compliance date. The information may be submitted in an operating permit application, in an amendment to an operating permit application, or in a separate submittal.

(i) A description of the parameter(s) to be monitored to determine whether excess emissions occur and an explanation of the criteria used to select the parameter(s).

(ii) A description of the methods and procedures that will be used to demonstrate that the parameter can be used to determine excess emissions and the schedule for this demonstration. The owner or operator must certify that they will establish a range for the monitored parameter as part of the Notification of Compliance Status report required in paragraphs (e) and (f) of this section.

(iii) The frequency and content of monitoring, recording, and reporting if: monitoring and recording are not continuous; or if periods of excess emissions, as defined in paragraph (g)(6) of this section, will not be

identified in Periodic Reports required under paragraphs (e) and (g) of this section. The rationale for the proposed monitoring, recording, and reporting system shall be included.

(5) An owner or operator may request approval to use alternatives to the continuous operating parameter monitoring and recordkeeping provisions listed in paragraph (i) of this section.

(i) Requests shall be submitted with the Application for Approval of Construction or Reconstruction for new sources and no later than 18 months prior to the compliance date for existing sources. The information may be submitted in an operating permit application, in an amendment to an operating permit application, or in a separate submittal. Requests shall contain the information specified in paragraphs (h)(5)(iii) through (h)(5)(iv) of this section, as applicable.

(ii) The provisions in §63.8(f)(5)(i) of subpart A of this part shall govern the review and approval of requests.

(iii) An owner or operator may request approval to use an automated data compression recording system that does not record monitored operating parameter values at a set frequency (for example, once every hour) but records all values that meet set criteria for variation from previously recorded values.

(A) The requested system shall be designed to:

(*1*) Measure the operating parameter value at least once every hour.

(*2*) Record at least 24 values each day during periods of operation.

(*3*) Record the date and time when monitors are turned off or on.

(*4*) Recognize unchanging data that may indicate the monitor is not functioning properly, alert the operator, and record the incident.

(*5*) Compute daily average values of the monitored operating parameter based on recorded data.

(B) The request shall contain a description of the monitoring system and data compression recording system including the criteria used to determine which monitored values are recorded and retained, the method for calculating daily averages, and a demonstration that the system meets all criteria of paragraph (h)(5)(iii)(A) of this section.

(iv) An owner or operator may request approval to use other alternative monitoring systems according to the procedures specified in §63.8(f) of subpart A of this part.

(6) The owner or operator shall submit the information specified in paragraphs (h)(6)(i) through (h)(6)(iii) of this section, as applicable. For existing sources, this information shall be submitted in the initial Notification of Compliance Status report. For a new source, the information shall be submitted with the application for approval of construction or reconstruction required by §63.5(d) of subpart A of this part. The information may be submitted in an operating permit application, in an amendment to an operating permit application, or in a separate submittal.

(i) The determination of applicability of this subpart to petroleum refining process units that are designed and operated as flexible operation units.

(ii) The determination of applicability of this subpart to any storage vessel for which use varies from year to year.

(iii) The determination of applicability of this subpart to any distillation unit for which use varies from year to year.

(i) *Recordkeeping.* (1) Each owner or operator subject to the storage vessel provisions in §63.646 shall keep the records specified in §63.123 of subpart G of this part except as specified in paragraphs (i)(1)(i) through (i)(1)(iv) of this section.

(i) Records related to gaskets, slotted membranes, and sleeve seals are not required for storage vessels within existing sources.

(ii) All references to §63.122 in §63.123 of subpart G of this part shall be replaced with §63.654(e),

(iii) All references to §63.150 in §63.123 of subpart G of this part shall be replaced with §63.652.

(iv) If a storage vessel is determined to be Group 2 because the weight percent total organic HAP of the stored liquid is less than or equal to 4 percent for existing sources or 2 percent for new sources, a record of any data, assumptions, and procedures used to make this determination shall be retained.

(2) Each owner or operator required to report the results of performance tests under paragraphs (f) and (g)(7) of this section shall retain a record of all reported results as well as a complete test report, as described in paragraph (f)(2)(ii) of this section for each emission point tested.

(3) Each owner or operator required to continuously monitor operating parameters under §63.644 for miscellaneous process vents or under §§63.652 and 63.653 for emission points in an emissions average shall keep the records specified in paragraphs (i)(3)(i) through (i)(3)(v) of this section unless an alternative recordkeeping system has been requested and approved under paragraph (h) of this section.

(i) The monitoring system shall measure data values at least once every hour.

(ii) The owner or operator shall record either:

(A) Each measured data value; or

(B) Block average values for 1 hour or shorter periods calculated from all measured data values during each period. If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the hourly (or shorter period) block average instead of all measured values.

(iii) Daily average values of each continuously monitored parameter shall be calculated for each operating day and retained for 5 years except as specified in paragraph (i)(3)(iv) of this section.

(A) The daily average shall be calculated as the average of all values for a monitored parameter recorded during the operating day. The average shall cover a 24-hour period if operation is continuous, or the number of hours of operation per day if operation is not continuous.

(B) The operating day shall be the period defined in the Notification of Compliance Status report. It may be from midnight to midnight or another daily period.

(iv) If all recorded values for a monitored parameter during an operating day are within the range established in the Notification of Compliance Status report, the owner or operator may record that all values were within the range and retain this record for 5 years rather than calculating and recording a daily average for that day. For these days, the records required in paragraph (i)(3)(ii) of this section shall also be retained for 5 years.

(v) Monitoring data recorded during periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments shall not be included in any average computed under this subpart. Records shall be kept of the times and durations of all such periods and any other periods during process or control device operation when monitors are not operating.

(4) All other information required to be reported under paragraphs (a) through (h) of this section shall be retained for 5 years.

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 4 Gasoline Distribution Emission Point Recordkeeping and Reporting Requirements a

Reference (section of subpart R of this part)	Description	Comment
63.428(b)	Records of test results for each gasoline cargo tank loaded at the facility.	
63.428(c)	Continuous monitoring data recordkeeping requirements.	
63.428(g)(1)	Semiannual report loading rack information.	Required to be submitted with the periodic report required under 40 CFR part 63 subpart CC.
63.428 (h)(1) through (h)(3)	Excess emissions report loading rack information.	Required to be submitted with the periodic report required under 40

	CFR part 63 subpart CC.

a This table does not include all the requirements delineated under the referenced sections. See referenced sections for specific requirements.

Table 5 Marine Vessel Loading and Unloading Operations Recordkeeping and Reporting Requirements a

Reference (section of subpart Y of this part)	Description	Comment
63.565(a)	Performance test/ site test plan.	The information required under this paragraph is to be submitted with the notification of compliance status report required under 40 CFR part 63, subpart CC.
63.565(b)	Performance test data requirements.	
63.567(a)	General Provisions (subpart A) applicability	
63.567(c)	Vent system valve bypass recordkeeping requirements	
63.567(d)	Continuous equipment monitoring recordkeeping requirements	
63.567(e)	Flare recordkeeping requirements	
63.567(f)	Quarterly report requirements	The information required under this paragraph is to be submitted with the periodic report required under 40 CFR part 63 subpart CC.
63.567(g)	Marine vessel vapor-tightness documentation	
63.567(h)	Documentation file maintenance	
63.567(i)	Emission estimation reporting and recordkeeping procedures	

a This table does not include all the requirements delineated under the referenced sections. See referenced sections for specific requirements.

E.1.3 One Time Deadlines Relating to NESHAP Subpart CC

The Permittee shall comply with the following requirements by the dates listed below for the Tank Cleaning facility in Section D.41:

Requirement	Rule Citation	Affected Facility	Deadline
Initial Semiannual Compliance Report	40 CFR 63.654(g)	Pumps, Valves, and Connectors.	In the next semi-annual report submitted for the existing equipment at the refinery after startup of the new equipment

SECTION E.2 40 CFR Part 60, Subpart J - Standards of Performance for Petroleum Refineries

E.2.1 General Provisions Relating to NSPS Subpart J [326 IAC 12-1] [40 CFR Part 60, Subpart A]

Pursuant to 40 CFR Part 60, 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 affected emission units at this source, except when otherwise specified in 40 CFR Part 60, Subpart J.

E.2.2 NSPS Subpart J Requirements [40 CFR Part 60, Subpart J] [326 IAC 12]

Pursuant to 40 CFR 60.100(a), the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart J, which are incorporated by reference as 326 IAC 12, for the fuel gas combustion devices and Claus sulfur recovery plants, except when otherwise specified in 40 CFR Part 60, Subpart J.

Subpart J—Standards of Performance for Petroleum Refineries

§ 60.100 Applicability, designation of affected facility, and reconstruction.

(a) The provisions of this subpart are applicable to the following affected facilities in petroleum refineries: fluid catalytic cracking unit catalyst regenerators, fuel gas combustion devices, and all Claus sulfur recovery plants except Claus plants of 20 long tons per day (LTD) or less. The Claus sulfur recovery plant need not be physically located within the boundaries of a petroleum refinery to be an affected facility, provided it processes gases produced within a petroleum refinery.

(b) Any fluid catalytic cracking unit catalyst regenerator or fuel gas combustion device under paragraph (a) of this section which commences construction or modification after June 11, 1973, or any Claus sulfur recovery plant under paragraph (a) of this section which commences construction or modification after October 4, 1976, is subject to the requirements of this subpart except as provided under paragraphs (c) and (d) of this section.

(c) Any fluid catalytic cracking unit catalyst regenerator under paragraph (b) of this section which commences construction or modification on or before January 17, 1984, is exempted from §60.104(b).

(d) Any fluid catalytic cracking unit in which a contact material reacts with petroleum derivatives to improve feedstock quality and in which the contact material is regenerated by burning off coke and/or other deposits and that commences construction or modification on or before January 17, 1984, is exempt from this subpart.

(e) For purposes of this subpart, under §60.15, the “fixed capital cost of the new components” includes the fixed capital cost of all depreciable components which are or will be replaced pursuant to all continuous programs of component replacement which are commenced within any 2-year period following January 17, 1984. For purposes of this paragraph, “commenced” means that an owner or operator has undertaken a continuous program of component replacement or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of component replacement.

§ 60.104 Standards for sulfur oxides.

Each owner or operator that is subject to the requirements of this subpart shall comply with the emission limitations set forth in this section on and after the date on which the initial performance test, required by §60.8, is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be operated, or 180 days after initial startup, whichever comes first.

(a) No owner or operator subject to the provisions of this subpart shall:

(1) Burn in any fuel gas combustion device any fuel gas that contains hydrogen sulfide (H_2S) in excess of 230 mg/dscm (0.10 gr/dscf). The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this paragraph.

(2) Discharge or cause the discharge of any gases into the atmosphere from any Claus sulfur recovery plant containing in excess of:

(i) For an oxidation control system or a reduction control system followed by incineration, 250 ppm by volume (dry basis) of sulfur dioxide (SO_2) at zero percent excess air.

(ii) For a reduction control system not followed by incineration, 300 ppm by volume of reduced sulfur compounds and 10 ppm by volume of hydrogen sulfide (H_2S), each calculated as ppm SO_2 by volume (dry basis) at zero percent excess air.

§ 60.105 Monitoring of emissions and operations.

(a) Continuous monitoring systems shall be installed, calibrated, maintained, and operated by the owner or operator subject to the provisions of this subpart as follows:

(4) In place of the SO_2 monitor in paragraph (a)(3) of this section, an instrument for continuously monitoring and recording the concentration (dry basis) of H_2S in fuel gases before being burned in any fuel gas combustion device.

(i) The span value for this instrument is 425 mg/dscm H_2S.

(ii) Fuel gas combustion devices having a common source of fuel gas may be monitored at only one location, if monitoring at this location accurately represents the concentration of H_2S in the fuel gas being burned.

(iii) The performance evaluations for this H_2S monitor under §60.13(c) shall use Performance Specification 7. Method 11, 15, 15A, or 16 shall be used for conducting the relative accuracy evaluations.

(5) For Claus sulfur recovery plants with oxidation control systems or reduction control systems followed by incineration subject to §60.104(a)(2)(i), an instrument for continuously monitoring and recording the concentration (dry basis, zero percent excess air) of SO_2 emissions into the atmosphere. The monitor shall include an oxygen monitor for correcting the data for excess air.

(i) The span values for this monitor are 500 ppm SO_2 and 25 percent O_2.

(ii) The performance evaluations for this SO_2 monitor under §60.13(c) shall use Performance Specification 2. Methods 6 or 6C and 3 or 3A shall be used for conducting the relative accuracy evaluations.

(6) For Claus sulfur recovery plants with reduction control systems not followed by incineration subject to §60.104(a)(2)(ii), an instrument for continuously monitoring and recording the concentration of reduced sulfur and O_2 emissions into the atmosphere. The reduced sulfur emissions shall be calculated as SO_2 (dry basis, zero percent excess air).

(i) The span values for this monitor are 450 ppm reduced sulfur and 25 percent O_2.

(ii) The performance evaluations for this reduced sulfur (and O_2) monitor under §60.13(c) shall use Performance Specification 5 of Appendix B of this Part (and Performance Specification 3 of Appendix B of this Part for the O_2 analyzer). Methods 15 or 15A and Method 3 shall be used for conducting the relative accuracy evaluations. If Method 3 yields O_2 concentrations below 0.25 percent during the performance specification test, the O_2 concentration may be assumed to be zero and the reduced sulfur CEMS need not include an O_2 monitor.

(e) For the purpose of reports under §60.7(c), periods of excess emissions that shall be determined and reported are defined as follows:

Note: All averages, except for opacity, shall be determined as the arithmetic average of the applicable 1-hour averages, e.g., the rolling 3-hour average shall be determined as the arithmetic average of three contiguous 1-hour averages.

(3) *Sulfur dioxide from fuel gas combustion.*

(ii) All rolling 3-hour periods during which the average concentration of H_2S as measured by the H_2S continuous monitoring system under §60.105(a)(4) exceeds 230 mg/dscm (0.10 gr/dscf).

(4) *Sulfur dioxide from Claus sulfur recovery plants.* (i) All 12-hour periods during which the average concentration of SO_2 as measured by the SO_2 continuous monitoring system under §60.105(a)(5) exceeds 250 ppm (dry basis, zero percent excess air); or

(ii) All 12-hour periods during which the average concentration of reduced sulfur (as SO_2) as measured by the reduced sulfur continuous monitoring system under §60.105(a)(6) exceeds 300 ppm; or

§ 60.106 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).

(e)(1) The owner or operator shall determine compliance with the H_2S standard in §60.104(a)(1) as follows: Method 11, 15, 15A, or 16 shall be used to determine the H_2S concentration. The gases entering the sampling train should be at about atmospheric pressure. If the pressure in the refinery fuel gas lines is relatively high, a flow control valve may be used to reduce the pressure. If the line pressure is high enough to operate the sampling train without a vacuum pump, the pump may be eliminated from the sampling train. The sample shall be drawn from a point near the centroid of the fuel gas line.

(i) For Method 11, the sampling time and sample volume shall be at least 10 minutes and 0.010 dscm (0.35 dscf). Two samples of equal sampling times shall be taken at about 1-hour intervals. The arithmetic average of these two samples shall constitute a run. For most fuel gases, sampling times exceeding 20 minutes may result in depletion of the collection solution, although fuel gases containing low concentrations of H_2S may necessitate sampling for longer periods of time.

(ii) For Method 15 or 16, at least three injects over a 1-hour period shall constitute a run.

(iii) For Method 15A, a 1-hour sample shall constitute a run.

(f) The owner or operator shall determine compliance with the SO_2 and the H_2S and reduced sulfur standards in §60.104(a)(2) as follows:

(1) Method 6 shall be used to determine the SO_2 concentration. The concentration in mg/dscm obtained by Method 6 or 6C is multiplied by 0.3754 to obtain the concentration in ppm. The sampling point in the duct shall be the centroid of the cross section if the cross-sectional area is less than 5.00 m^2 (53.8 ft^2) or at a point no closer to the walls than 1.00 m (39.4 in.) if the cross-sectional area is 5.00 m^2 or more and the centroid is more than 1 m from the wall. The sampling time and sample volume shall be at least 10 minutes and 0.010 dscm (0.35 dscf) for each sample. Eight samples of equal sampling times shall be taken at about 30-minute intervals. The arithmetic average of these eight samples shall constitute a run. For Method 6C, a run shall consist of the arithmetic average of four 1-hour samples. Method 4 shall be used to determine the moisture content of the gases. The sampling point for Method 4 shall be adjacent to the sampling point for Method 6 or 6C. The sampling time for each sample shall be equal to the time it takes for two Method 6 samples. The moisture content from this sample shall be used to correct the corresponding Method 6 samples for moisture. For documenting the oxidation efficiency of the control device for reduced sulfur compounds, Method 15 shall be used following the procedures of paragraph (f)(2) of this section.

(2) Method 15 shall be used to determine the reduced sulfur and H_2 S concentrations. Each run shall consist of 16 samples taken over a minimum of 3 hours. The sampling point shall be the same as that described for Method 6 in paragraph (f)(1) of this section. To ensure minimum residence time for the sample inside the sample lines, the sampling rate shall be at least 3.0 lpm (0.10 cfm). The SO_2 equivalent for each run shall be calculated after being corrected for moisture and oxygen as the arithmetic average of the SO_2 equivalent for each sample during the run. Method 4 shall be used to determine the moisture content of the gases as the paragraph (f)(1) of this section. The sampling time for each sample shall be equal to the time it takes for four Method 15 samples.

(3) The oxygen concentration used to correct the emission rate for excess air shall be obtained by the integrated sampling and analysis procedure of Method 3 or 3A. The samples shall be taken simultaneously with the SO_2, reduced sulfur and H_2S, or moisture samples. The SO_2, reduced sulfur, and H_2S samples shall be corrected to zero percent excess air using the equation in paragraph (h)(6) of this section.

(h)(6) For the purpose of adjusting pollutant concentrations to zero percent oxygen, the following equation shall be used:

$C_{adj}=C_{meas}[20.9_c/(20.9-\%O_2)]$

where:

C_{adj}=pollutant concentration adjusted to zero percent oxygen, ppm or g/dscm

C_{meas}=pollutant concentration measured on a dry basis, ppm or g/dscm

20.9_c=20.9 percent oxygen−0.0 percent oxygen (defined oxygen correction basis), percent

20.9=oxygen concentration in air, percent

$\%O_2$=oxygen concentration measured on a dry basis, percent

§ 60.107 Reporting and recordkeeping requirements.

(d) For any periods for which sulfur dioxide or oxides emissions data are not available, the owner or operator of the affected facility shall submit a signed statement indicating if any changes were made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit. Operations of the control system and affected facility during periods of data unavailability are to be compared with operation of the control system and affected facility before and following the period of data unavailability.

(e) The owner or operator of an affected facility shall submit the reports required under this subpart to the Administrator semiannually for each six-month period. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period.

(f) The owner or operator of the affected facility shall submit a signed statement certifying the accuracy and completeness of the information contained in the report.

E.2.3 One Time Deadlines Relating to NSPS Subpart J

The Permittee shall comply with the following requirements by the dates listed below:

Requirement	Rule Citation	Affected Facility	Deadline
Notification of the date of construction commencement	40 CFR 60.7(a)(1)	Catalytic Oxidizer F-1	No later than 30 days after commencement of construction
Complete Performance Tests	40 CFR 60.8	Catalytic Oxidizer F-1	Within 60-days after achieving maximum production rate but not later than 180-days after initial startup
Notification of initial startup	40 CFR 60.7(a)(3)	Catalytic Oxidizer F-1	Within 15 days of startup
Notification of the date of demonstration of continuous monitoring system performance	40 CFR 60.7(a)(5)	Catalytic Oxidizer F-1	30-days prior to demonstration

SECTION E.4 40 CFR Part 60, Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry

E.4.1 NSPS Subpart VV Requirements [40 CFR Part 60, Subpart VV] [326 IAC 12]

Pursuant to 40 CFR 60.590 and 63.648, the Permittee shall comply with the applicable provisions of 40 CFR Part 60, Subpart VV for all affected pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves and lines, valves, connectors, and closed vent systems as specified below:

Subpart VV—Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry

§ 60.482-1 Standards: General.

(a) Each owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of §§60.482–1 through 60.482–10 or §60.480(e) for all equipment within 180 days of initial startup.

(b) Compliance with §§60.482–1 to 60.482–10 will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in §60.485.

(d) Equipment that is in vacuum service is excluded from the requirements of §§60.482–2 to 60.482–10 if it is identified as required in §60.486(e)(5).

§ 60.482-2 Standards: Pumps in light liquid service.

(a)(1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in §60.485(b), except as provided in §60.482–1(c) and paragraphs (d), (e), and (f) of this section.

(2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.

(b)(1) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(2) If there are indications of liquids dripping from the pump seal, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482–9.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (a), *Provided* the following requirements are met:

(1) Each dual mechanical seal system is—

(i) Operated with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or

(ii) Equipment with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of §60.482–10; or

(iii) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(2) The barrier fluid system is in heavy liquid service or is not in VOC service.

(3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4) Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

(5)(i) Each sensor as described in paragraph (d)(3) is checked daily or is equipped with an audible alarm, and

(ii) The owner or operator determines, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(6)(i) If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined in paragraph (d)(5)(ii), a leak is detected.

(ii) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482–9.

(iii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) Any pump that is designated, as described in §60.486(e)(1) and (2), for no detectable emission, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a), (c), and (d) of this section if the pump:

(1) Has no externally actuated shaft penetrating the pump housing,

(2) Is demonstrated to be operating with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in §60.485(c), and

(3) Is tested for compliance with paragraph (e)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

(f) If any pump is equipped with a closed vent system capable of capturing and transporting any leakage from the seal or seals to a process or to a fuel gas system or to a control device that complies with the requirements of §60.482–10, it is exempt from paragraphs (a) through (e) of this section.

(g) Any pump that is designated, as described in §60.486(f)(1), as an unsafe-to-monitor pump is exempt from the monitoring and inspection requirements of paragraphs (a) and (d)(4) through (6) of this section if:

(1) The owner or operator of the pump demonstrates that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a) of this section; and

(2) The owner or operator of the pump has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in paragraph (c) of this section if a leak is detected.

§ 60.482-3 Standards: Compressors.

(a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of VOC to the atmosphere, except as provided in §60.482–1(c) and paragraph (h) and (i) of this section.

(b) Each compressor seal system as required in paragraph (a) shall be:

(1) Operated with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or

(2) Equipped with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed vent system to a control device that complies with the requirements of §60.482–10; or

(3) Equipped with a system that purges the barrier fluid into a process stream with zero VOC emissions to the atmosphere.

(c) The barrier fluid system shall be in heavy liquid service or shall not be in VOC service.

(d) Each barrier fluid system as described in paragraph (a) shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e)(1) Each sensor as required in paragraph (d) shall be checked daily or shall be equipped with an audible alarm.

(2) The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(f) If the sensor indicates failure of the seal system, the barrier system, or both based on the criterion determined under paragraph (e)(2), a leak is detected.

(g)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482–9.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(h) A compressor is exempt from the requirements of paragraphs (a) and (b) of this section, if it is equipped with a closed vent system to capture and transport leakage from the compressor drive shaft back to a process or fuel gas system or to a control device that complies with the requirements of §60.482–10, except as provided in paragraph (i) of this section.

(i) Any compressor that is designated, as described in §60.486(e) (1) and (2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a)–(h) if the compressor:

(1) Is demonstrated to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the methods specified in §60.485(c); and

(2) Is tested for compliance with paragraph (i)(1) of this section initially upon designation, annually, and at other times requested by the Administrator.

(j) Any existing reciprocating compressor in a process unit which becomes an affected facility under provisions of §60.14 or §60.15 is exempt from §60.482(a), (b), (c), (d), (e), and (h), provided the owner or operator demonstrates that recasting the distance piece or replacing the compressor are the only options available to bring the compressor into compliance with the provisions of paragraphs (a) through (e) and (h) of this section.

§ 60.482-4 Standards: Pressure relief devices in gas/vapor service.

(a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in §60.485(c).

(b)(1) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in §60.482–9.

(2) No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in §60.485(c).

(c) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control

device as described in §60.482–10 is exempted from the requirements of paragraphs (a) and (b) of this section.

(d)(1) Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of paragraphs (a) and (b) of this section, provided the owner or operator complies with the requirements in paragraph (d)(2) of this section.

(2) After each pressure release, a new rupture disk shall be installed upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in §60.482–9.

§ 60.482-5 Standards: Sampling connection systems.

(a) Each sampling connection system shall be equipped with a closed-purged, closed-loop, or closed-vent system, except as provided in §60.482–1(c). Gases displaced during filling of the sample container are not required to be collected or captured.

(b) Each closed-purge, closed-loop, or closed-vent system as required in paragraph (a) of this section shall comply with the requirements specified in paragraphs (b)(1) through (4) of this section:

(1) Return the purged process fluid directly to the process line; or

(2) Collect and recycle the purged process fluid to a process; or

(3) Be designed and operated to capture and transport all the purged process fluid to a control device that complies with the requirements of §60.482–10; or

(4) Collect, store, and transport the purged process fluid to any of the following systems or facilities:

(i) A waste management unit as defined in 40 CFR 63.111, if the waste management unit is subject to, and operated in compliance with the provisions of 40 CFR part 63, subpart G, applicable to Group 1 wastewater streams;

(ii) A treatment, storage, or disposal facility subject to regulation under 40 CFR part 262, 264, 265, or 266; or

(iii) A facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the process fluids are not hazardous waste as defined in 40 CFR part 261.

(c) In situ sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (a) and (b) of this section.

§ 60.482-6 Standards: Open-ended valves or lines.

(a)(1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §60.482–1(c).

(2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.

(b) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

(c) When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (a) at all other times.

(d) Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (a), (b) and (c) of this section.

(e) Open-ended valves or lines containing materials which would autocatalytically polymerize or would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraphs (a) through (c) of this section are exempt from the requirements of paragraphs (a) through (c) of this section.

§ 60.482-7 Standards: Valves in gas/vapor service and in light liquid service.

(a) Each valve shall be monitored monthly to detect leaks by the methods specified in §60.485(b) and shall comply with paragraphs (b) through (e), except as provided in paragraphs (f), (g), and (h), §60.483–1, 2, and §60.482–1(c).

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c)(1) Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected.

(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for 2 successive months.

(d)(1) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in §60.482–9.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) First attempts at repair include, but are not limited to, the following best practices where practicable:

(1) Tightening of bonnet bolts;

(2) Replacement of bonnet bolts;

(3) Tightening of packing gland nuts;

(4) Injection of lubricant into lubricated packing.

(f) Any valve that is designated, as described in §60.486(e)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraph (a) if the valve:

(1) Has no external actuating mechanism in contact with the process fluid,

(2) Is operated with emissions less than 500 ppm above background as determined by the method specified in §60.485(c), and

(3) Is tested for compliance with paragraph (f)(2) of this section initially upon designation, annually, and at other times requested by the Administrator.

(g) Any valve that is designated, as described in §60.486(f)(1), as an unsafe-to-monitor valve is exempt from the requirements of paragraph (a) if:

(1) The owner or operator of the valve demonstrates that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a), and

(2) The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

(h) Any valve that is designated, as described in §60.486(f)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph (a) if:

(1) The owner or operator of the valve demonstrates that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.

(2) The process unit within which the valve is located either becomes an affected facility through §60.14 or §60.15 or the owner or operator designates less than 3.0 percent of the total number of valves as difficult-to-monitor, and

(3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

§ 60.482-8 Standards: Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors.

(a) If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors, the owner or operator shall follow either one of the following procedures:

(1) The owner or operator shall monitor the equipment within 5 days by the method specified in §60.485(b) and shall comply with the requirements of paragraphs (b) through (d) of this section.

(2) The owner or operator shall eliminate the visual, audible, olfactory, or other indication of a potential leak.

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c)(1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in §60.482–9.

(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) First attempts at repair include, but are not limited to, the best practices described under §60.482–7(e).

§ 60.482-9 Standards: Delay of repair.

(a) Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown.

(b) Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.

(c) Delay of repair for valves will be allowed if:

(1) The owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and

(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with §60.482–10.

(d) Delay of repair for pumps will be allowed if:

(1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and

(2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

(e) Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

§ 60.482-10 Standards: Closed vent systems and control devices.

(a) Owners or operators of closed vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section.

(c) Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 °C.

(d) Flares used to comply with this subpart shall comply with the requirements of §60.18.

(e) Owners or operators of control devices used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs.

(f) Except as provided in paragraphs (i) through (k) of this section, each closed vent system shall be inspected according to the procedures and schedule specified in paragraphs (f)(1) and (f)(2) of this section.

(1) If the vapor collection system or closed vent system is constructed of hard-piping, the owner or operator shall comply with the requirements specified in paragraphs (f)(1)(i) and (f)(1)(ii) of this section:

(i) Conduct an initial inspection according to the procedures in §60.485(b); and

(ii) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

(g) Leaks, as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections, shall be repaired as soon as practicable except as provided in paragraph (h) of this section.

(1) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(2) Repair shall be completed no later than 15 calendar days after the leak is detected.

(h) Delay of repair of a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next process unit shutdown.

(j) Any parts of the closed vent system that are designated, as described in paragraph (l)(1) of this section, as unsafe to inspect are exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section if they comply with the requirements specified in paragraphs (j)(1) and (j)(2) of this section:

(1) The owner or operator determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraphs (f)(1)(i) or (f)(2) of this section; and

(2) The owner or operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

(k) Any parts of the closed vent system that are designated, as described in paragraph (l)(2) of this section, as difficult to inspect are exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section if they comply with the requirements specified in paragraphs (k)(1) through (k)(3) of this section:

(1) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

(2) The process unit within which the closed vent system is located becomes an affected facility through §§60.14 or 60.15, or the owner or operator designates less than 3.0 percent of the total number of closed vent system equipment as difficult to inspect; and

(3) The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years. A closed vent system is exempt from inspection if it is operated under a vacuum.

(l) The owner or operator shall record the information specified in paragraphs (l)(1) through (l)(5) of this section.

(1) Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.

(2) Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.

(3) For each inspection during which a leak is detected, a record of the information specified in §60.486(c).

(5) For each visual inspection conducted in accordance with paragraph (f)(1)(ii) of this section during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(m) Closed vent systems and control devices used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

§ 60.485 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).

(b) The owner or operator shall determine compliance with the standards in §§60.482, 60.483, and 60.484 as follows:

(1) Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21. The following calibration gases shall be used:

(i) Zero air (less than 10 ppm of hydrocarbon in air); and

(ii) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane.

(c) The owner or operator shall determine compliance with the no detectable emission standards in §§60.482–2(e), 60.482–3(i), 60.482–4, 60.482–7(f), and 60.482–10(e) as follows:

(1) The requirements of paragraph (b) shall apply.

(2) Method 21 shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

(d) The owner or operator shall test each piece of equipment unless he demonstrates that a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10 percent by weight. For purposes of this demonstration, the following methods and procedures shall be used:

(1) Procedures that conform to the general methods in ASTM E260–73, 91, or 96, E168–67, 77, or 92, E169–63, 77, or 93 (incorporated by reference—see §60.17) shall be used to determine the percent VOC content in the process fluid that is contained in or contacts a piece of equipment.

(2) Organic compounds that are considered by the Administrator to have negligible photochemical reactivity may be excluded from the total quantity of organic compounds in determining the VOC content of the process fluid.

(3) Engineering judgment may be used to estimate the VOC content, if a piece of equipment had not been shown previously to be in service. If the Administrator disagrees with the judgment, paragraphs (d) (1) and (2) of this section shall be used to resolve the disagreement.

(e) The owner or operator shall demonstrate that an equipment is in light liquid service by showing that all the following conditions apply:

(1) The vapor pressure of one or more of the components is greater than 0.3 kPa at 20 °C (1.2 in. H_2O at 68 °F). Standard reference texts or ASTM D2879–83, 96, or 97 (incorporated by reference—see §60.17) shall be used to determine the vapor pressures.

(2) The total concentration of the pure components having a vapor pressure greater than 0.3 kPa at 20 °C (1.2 in. H_2O at 68 °F) is equal to or greater than 20 percent by weight.

(3) The fluid is a liquid at operating conditions.

(f) Samples used in conjunction with paragraphs (d), (e), and (g) of this section shall be representative of the process fluid that is contained in or contacts the equipment or the gas being combusted in the flare.

(g) The owner or operator shall determine compliance with the standards of flares as follows:

(1) Method 22 shall be used to determine visible emissions.

(2) A thermocouple or any other equivalent device shall be used to monitor the presence of a pilot flame in the flare.

(3) The maximum permitted velocity for air assisted flares shall be computed using the following equation:

$$V_{max} = K_1 + K_2 H_T$$

Where:

V_{max} = Maximum permitted velocity, m/sec (ft/sec)

H_T = Net heating value of the gas being combusted, MJ/scm (Btu/scf).

K_1 = 8.706 m/sec (metric units)

= 28.56 ft/sec (English units)

K_2 = 0.7084 m^4 /(MJ-sec) (metric units)

= 0.087 ft^4 /(Btu-sec) (English units)

(4) The net heating value (HT) of the gas being combusted in a flare shall be computed using the following equation:

$$H_T = K \sum_{i=1}^{n} C_i H_i$$

Where:

K = Conversion constant, 1.740×10^7 (g-mole)(MJ)/ (ppm-scm-kcal) (metric units)

= 4.674×10^8 [(g-mole)(Btu)/(ppm-scf-kcal)] (English units)

C_i = Concentration of sample component “i,” ppm

H_i = net heat of combustion of sample component "i" at 25 °C and 760 mm Hg (77 °F and 14.7 psi), kcal/g-mole

(5) Method 18 and ASTM D2504–67, 77, or 88 (Reapproved 1993) (incorporated by reference—see §60.17) shall be used to determine the concentration of sample component "i."

(6) ASTM D2382–76 or 88 or D4809–95 (incorporated by reference—see §60.17) shall be used to determine the net heat of combustion of component "i" if published values are not available or cannot be calculated.

(7) Method 2, 2A, 2C, or 2D, as appropriate, shall be used to determine the actual exit velocity of a flare. If needed, the unobstructed (free) cross-sectional area of the flare tip shall be used.

§ 60.486 Recordkeeping requirements.

(a)(1) Each owner or operator subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section.

(2) An owner or operator of more than one affected facility subject to the provisions of this subpart may comply with the recordkeeping requirements for these facilities in one recordkeeping system if the system identifies each record by each facility.

(b) When each leak is detected as specified in §§60.482–2, 60.482–3, 60.482–7, 60.482–8, and 60.483–2, the following requirements apply:

(1) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

(2) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in §60.482–7(c) and no leak has been detected during those 2 months.

(3) The identification on equipment except on a valve, may be removed after it has been repaired.

(c) When each leak is detected as specified in §§60.482–2, 60.482–3, 60.482–7, 60.482–8, and 60.483–2, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:

(1) The instrument and operator identification numbers and the equipment identification number.

(2) The date the leak was detected and the dates of each attempt to repair the leak.

(3) Repair methods applied in each attempt to repair the leak.

(4) "Above 10,000" if the maximum instrument reading measured by the methods specified in §60.485(a) after each repair attempt is equal to or greater than 10,000 ppm.

(5) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(6) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.

(7) The expected date of successful repair of the leak if a leak is not repaired within 15 days.

(8) Dates of process unit shutdowns that occur while the equipment is unrepaired.

(9) The date of successful repair of the leak.

(d) The following information pertaining to the design requirements for closed vent systems and control devices described in §60.482–10 shall be recorded and kept in a readily accessible location:

(1) Detailed schematics, design specifications, and piping and instrumentation diagrams.

(2) The dates and descriptions of any changes in the design specifications.

(3) A description of the parameter or parameters monitored, as required in §60.482–10(e), to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(4) Periods when the closed vent systems and control devices required in §§60.482–2, 60.482–3, 60.482–4, and 60.482–5 are not operated as designed, including periods when a flare pilot light does not have a flame.

(5) Dates of startups and shutdowns of the closed vent systems and control devices required in §§60.482–2, 60.482–3, 60.482–4, and 60.482–5.

(e) The following information pertaining to all equipment subject to the requirements in §§60.482–1 to 60.482–10 shall be recorded in a log that is kept in a readily accessible location:

(1) A list of identification numbers for equipment subject to the requirements of this subpart.

(2)(i) A list of identification numbers for equipment that are designated for no detectable emissions under the provisions of §§60.482–2(e), 60.482–3(i) and 60.482–7(f).

(ii) The designation of equipment as subject to the requirements of §60.482–2(e), §60.482–3(i), or §60.482–7(f) shall be signed by the owner or operator.

(3) A list of equipment identification numbers for pressure relief devices required to comply with §60.482–4.

(4)(i) The dates of each compliance test as required in §§60.482–2(e), 60.482–3(i), 60.482–4, and 60.482–7(f).

(ii) The background level measured during each compliance test.

(iii) The maximum instrument reading measured at the equipment during each compliance test.

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

(f) The following information pertaining to all valves subject to the requirements of §60.482–7(g) and (h) and to all pumps subject to the requirements of §60.482–2(g) shall be recorded in a log that is kept in a readily accessible location:

(1) A list of identification numbers for valves and pumps that are designated as unsafe-to-monitor, an explanation for each valve or pump stating why the valve or pump is unsafe-to-monitor, and the plan for monitoring each valve or pump.

(2) A list of identification numbers for valves that are designated as difficult-to-monitor, an explanation for each valve stating why the valve is difficult-to-monitor, and the schedule for monitoring each valve.

(g) The following information shall be recorded for valves complying with §60.483–2:

(1) A schedule of monitoring.

(2) The percent of valves found leaking during each monitoring period.

(h) The following information shall be recorded in a log that is kept in a readily accessible location:

(1) Design criterion required in §§60.482–2(d)(5) and 60.482–3(e)(2) and explanation of the design criterion; and

(2) Any changes to this criterion and the reasons for the changes.

(j) Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location.

(k) The provisions of §60.7 (b) and (d) do not apply to affected facilities subject to this subpart.

§ 60.487 Reporting requirements.

(a) Each owner or operator subject to the provisions of this subpart shall submit semiannual reports to the Administrator beginning six months after the initial startup date.

(b) The initial semiannual report to the Administrator shall include the following information:

(1) Process unit identification.

(2) Number of valves subject to the requirements of §60.482–7, excluding those valves designated for no detectable emissions under the provisions of §60.482–7(f).

(3) Number of pumps subject to the requirements of §60.482–2, excluding those pumps designated for no detectable emissions under the provisions of §60.482–2(e) and those pumps complying with §60.482–2(f).

(4) Number of compressors subject to the requirements of §60.482–3, excluding those compressors designated for no detectable emissions under the provisions of §60.482–3(i) and those compressors complying with §60.482–3(h).

(c) All semiannual reports to the Administrator shall include the following information, summarized from the information in §60.486:

(1) Process unit identification.

(2) For each month during the semiannual reporting period,

(i) Number of valves for which leaks were detected as described in §60.482(7)(b) or §60.483–2,

(ii) Number of valves for which leaks were not repaired as required in §60.482–7(d)(1),

(iii) Number of pumps for which leaks were detected as described in §60.482–2(b) and (d)(6)(i),

(iv) Number of pumps for which leaks were not repaired as required in §60.482–2(c)(1) and (d)(6)(ii),

(v) Number of compressors for which leaks were detected as described in §60.482–3(f),

(vi) Number of compressors for which leaks were not repaired as required in §60.482–3(g)(1), and

(vii) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.

(3) Dates of process unit shutdowns which occurred within the semiannual reporting period.

(4) Revisions to items reported according to paragraph (b) if changes have occurred since the initial report or subsequent revisions to the initial report.

§ 60.488 Reconstruction.

For the purposes of this subpart:

(a) The cost of the following frequently replaced components of the facility shall not be considered in calculating either the “fixed capital cost of the new components” or the “fixed capital costs that would be required to construct a comparable new facility” under §60.15: pump seals, nuts and bolts, rupture disks, and packings.

(b) Under §60.15, the “fixed capital cost of new components” includes the fixed capital cost of all depreciable components (except components specified in §60.488 (a)) which are or will be replaced pursuant to all continuous programs of component replacement which are commenced within any 2-year period following the applicability date for the appropriate subpart. (See the “Applicability and designation of affected facility” section of the appropriate subpart.) For purposes of this paragraph, “commenced” means

that an owner or operator has undertaken a continuous program of component replacement or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of component replacement.

E.4.2 One Time Deadlines Relating to NSPS Subpart VV

The Permittee shall comply with the following requirements by the dates listed below for the Tank Cleaning Facility listed in Section D.41:

Requirement	Rule Citation	Affected Facility	Deadline
Notification of the date of construction commencement	40 CFR 60.7(a)(1)	Pumps, Valves, and Connectors.	No later than 30 days after commencement of construction
Complete Performance Tests	40 CFR 60.8	Pumps, Valves, and Connectors	Within 60-days after achieving maximum production rate but not later than 180-days after initial startup
Notification of Schedule of Initial Performance Tests	40 CFR 60.487(e)	Pumps, Valves, and Connectors	At least 30-days prior to initial performance tests
Notification of initial startup	40 CFR 60.7(a)(3)	Pumps, Valves, and Connectors	Within 15 days of startup
Demonstrate Initial Compliance	40 CFR 60.482-1(a)	Pumps, Valves, and Connectors	Within 180-days of initial startup
Initial Semiannual Report	40 CFR 60.487(a)	Pumps, Valves, and Connectors	Six months after the initial startup date or in the next semi-annual report submitted for the existing equipment at the refinery after startup of the new equipment

NDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: BP Products North America, Inc. – Whiting Business Unit
Source Address: 2815 Indianapolis Boulevard
Mailing Address: P.O. Box 710, Whiting, Indiana 46394
Part 70 Permit No.: T089-6741-00453
Facility: Tank Cleaning Facility
Parameter: Operating Hours
Limit: Less than 4,440 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality

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

Source Description and Location

Source Name:	BP Products North America, Inc., Whiting Business Unit
Source Location:	2815 Indianapolis Boulevard, Whiting, Indiana 46394-0710
County:	Lake
SIC Code:	2911
Operation Permit No.:	T089-6741-00453
Operation Permit Issuance Date:	December 14, 2006
Minor Source Modification No.:	089-24258-00453
Significant Permit Modification No.:	089-24410-00453
Permit Reviewer:	ERG/AAB

History

On November 20, 2006, IDEM, OAQ issued Minor Source Modification (MSM) 089-23177-00453 to BP Products North America, Inc. (BP) for a new tank cleaning system. In January 2007, BP determined that the tank cleaning equipment included in this MSM will not be adequate for the range of tank cleaning projects to be conducted at the Whiting Refinery. On January 27, 2007, BP submitted an application requesting that MSM 089-23177-00453 be revoked and a new MSM be issued for the tank cleaning facility proposed in their application. Since MSM 089-23177-00453 was issued only a few days prior to the Part 70 permit, this modification has not yet been incorporated into the Part 70 permit. Therefore, IDEM, OAQ will issue a new Minor Source Modification and a Significant Permit Modification for the proposed tank cleaning facility, and will revoke MSM 089-23177-00453 when these approvals have been issued.

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 Part 70 permit T089-6741-00453 on December 14, 2006. The first Minor Source Modification MSM 089-23783-00453 was issued on February 20, 2007.

County Attainment Status

The source is located in Lake County.

Pollutant	Status
PM10	Maintenance Attainment
PM2.5	Nonattainment
SO_2	Maintenance Attainment
NO_2	Attainment
8-hour Ozone	Moderate Nonattainment
CO	Maintenance Attainment
Lead	Attainment

Note: 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 (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Lake County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for nonattainment new source review.

(b) U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Lake County as nonattainment for PM2.5. On March 7, 2005 the Indiana Attorney General's Office, on behalf of IDEM, filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of 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 PM2.5 emissions pursuant to the requirements of Emission Offset, 326 IAC 2-3.

(c) Lake County has been classified as attainment or unclassifiable for PM_{10}, SO_2, NO_2, 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	Emissions (tons/year)
PM	>100
PM10	>100
SO_2	>100
VOC	>100
CO	>100
NO_x	>100

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant is emitted at a rate of 100 tons per year or more, and it is 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 $PM_{2.5}$), VOC and NO_x are emitted at a rate of 100 tons per year or more.

(c) These emissions are based upon the 2003 emissions data submitted to IDEM, OAQ by BP.

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

HAPs	Potential To Emit (tons/year)
Single HAPs	>10
TOTAL HAPs	>25

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).

Actual Emissions

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

Pollutant	Actual Emissions (tons/year)
PM	—
PM10	557
SO_2	3,385
VOC	1,274
CO	2,058
NO_x	7.637
HAP (Lead)	0.03*

"—" no data provided.
***** No data provided for other HAPs. Source stated in their application that they are a major source of HAPs.

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by BP on January 27, 2007, relating to the construction of a tank cleaning facility. The following is a list of the proposed emission units and pollution control devices:

One (1) tank sludge cleaning facility (identified as Tank Cleaning Facility) with a maximum throughput of 300 gallons per minute of storage tank sludge/cutter stock mix per hour, with VOC and HAP emissions voluntarily controlled using either an electric catalytic oxidizer (identified as F-1) or a wet scrubber/carbon canister system (identified as S-1). The facility is approved for construction in 2007, is operated as a batch process, and consists of the following emission units:

(a) Four (4) mix tanks identified as Mix Tank #1, #2, #3, and #4. Each tank has maximum capacity of 21,000 gallons, with emissions voluntarily controlled by either the catalytic oxidizer F-1 or the wet scrubber/carbon canister system S-1.

(b) Two (2) enclosed centrifuges (identified as Centrifuge #1 and #2) with no process vents.

(c) One (1) diesel-fired boiler (identified as C-1), with a maximum heat input capacity of 8.4 MMBtu per hour burning low-sulfur (less than 0.05% sulfur by weight) diesel fuel. Emissions are exhausted at stack C-1-01. There is no control device for this emission unit.

(d) One (1) diesel-fired air compressor (identified as J-2), with a maximum heat input capacity of 0.84 MMBtu per hour. This compressor is a 120 hp reciprocating internal combustion engine. Emissions are exhausted through vent J-2. There is no control device for this emission unit.

(e) Two (2) diesel-fired process pumps (identified as J-1 and J-3), each having a maximum heat input capacity of 0.70 MMBtu per hour. These pumps are 100 hp reciprocating internal combustion engines. Emissions from pumps J-1 and J-3 are exhausted through vents J-1 and J-3, respectively. There are no control devices for this emission unit.

(f) Six (6) portable rectangular storage tanks, including:

(1) Two (2) Reclaimed Oil Tanks identified as ROT-1 and ROT-2. Each tank has a maximum storage capacity of 21,000 gallons and is used to store reclaimed sludge and cutter stock. Emissions are voluntarily controlled by either the catalytic oxidizer F-1 or the wet scrubber/carbon canister system S-1.

(2) Three (3) Cutter Stock Tanks identified as CST-1, CST-2, and CST-3. Each tank has a maximum storage capacity of 21,000 gallons and is used to store Cutter Stock. Emissions are voluntarily controlled by either the catalytic oxidizer F-1 or the wet scrubber/carbon canister system S-1.

(3) One (1) Concentrate Tank identified as CT-1. This tank has a maximum storage capacity of 21,000 gallons and is used to store cutter stock and tank sludge mix. Emissions are voluntarily controlled by either the catalytic oxidizer F-1 or the wet scrubber/carbon canister system S-1.

(g) One (1) electric catalytic oxidizer, identified as F-1, a maximum gas flow rate of 400 scfm. Emissions are exhausted at stack F-1-01. Under 40 CFR 60, Subpart J, the catalytic oxidizer is considered a fuel gas combustion device.

(h) Equipment leaks of VOC and HAP from pumps, valves, and connectors. Under 40 CFR 63, Subpart CC, equipment leaks from pumps, valves, and connectors associated with the Tank Cleaning Facility are affected facilities in organic hazardous air pollutant service.

The Permittee is voluntarily controlling emissions from the tank cleaning facility using the catalytic oxidizer F-1 or the wet scrubber/carbon canister system S-1. These controls devices are not required by any rule or regulation, and the emission estimates for the tank cleaning facility reflect uncontrolled emissions.

Enforcement Issues

There are no pending enforcement actions.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
F-1-01	Electric Catalytic	11	0.5	400	572

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
	Oxidizer/Scrubber System				
C-1-01	Boiler	15.5	1.0	2,100	360

Emission Calculations

See Appendix A of this document for detailed emission calculations.

Permit Level Determination – Part 70

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

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

Pollutant	Potential To Emit (tons/year)
PM	3.63
PM10	3.98
SO_2	4.8
VOC	16.9
CO	10.7
NO_x	48.9

HAPs	Potential To Emit (tons/year)
Single HAP	<10
Total HAPs	<13.3

This source modification is subject to 326 IAC 2-7-10.5(d)(4)(B), because the emissions from this modification will be limited to less than 25 tons per year for NO_x by limiting the annual hours of operation for the Tank Cleaning Facility.

Pursuant to 326 IAC 2-7-12(d), this source modification will be incorporated into the Title V permit through Significant Permit Modification 089-24410-00453 as it involves a case-by-case determination of an emission limit.

Permit Level Determination – PSD or Emission Offset

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

	Potential to Emit of Modification After Issuance (tons/year)							
Process/Emission Unit	**PM**	**PM10**	**SO_2**	**VOC**	**CO**	**NO_X**	**Total HAPs**	**Worst Single HAP**
Existing Source (Before Modification)								
Total PTE (Before Modification)	>100	>100	>100	>100	>100	>100	>25	>10
New Emission Units (Modification)								
Boiler C-1[3]	5.52[2]	0.45	0.97	0.05	0.68	2.72	neg.	neg.
Compressor J-2[3]	0.59	0.59	0.55	0.67	0.68	8.26	neg.	neg.
Pumps J-1 and J-2[3]	0.98	0.98	0.91	1.12	1.78	13.76	neg.	neg.
Storage Tanks, Mix Tanks, Centrifuges and Oxidizer[3]	2.96E-05	1.18E-04	0.44	4.77	2.97	1.56E-03	<4.77	<4.77
Fugitive Emissions[3][4]	0	0	0	0.20	1.31E-03	0	<0.18	<0.18
Total for Modification	1.84	2.02	2.87	6.81	5.43	24.74	<4.95	<4.95
Significance Level for a Major PSD Modification	25	NA	40	NA	100	NA	NA	NA
Significance Level for a Major Emission Offset Modification	NA	15[1]	NA	40	NA	40	NA	NA

(1) U.S. EPA has directed states to regulate PM10 emissions as surrogate for PM2.5.
(2) Boiler C-1 is limited to 0.15 lb/MMBtu by 326 IAC 6.8-1-2, which is equivalent to 5.52 tons per year at 8,760 hours per year. It is equivalent to 2.8 tons per year at 4,440 hours per year. The PTE for the boiler is 0.27 tons for 4,400 hours per year, based on AP42 emission factors.
(3) All of the emission units that make up the Tank Cleaning Facility are limited to less than 4,440 hours of operation per twelve (12) consecutive month period, with compliance determined at the end of each month.
(4) BP's LDAR will be followed to minimize emissions from equipment leaks.

(a) This modification to an existing major PSD stationary source is not major because the emissions increase is less than the PSD significant 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 emissions increase for PM10 (as surrogate for PM2.5), NOx, and VOC are each less than the Emission Offset significant levels. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

Federal Rule Applicability Determination

(a) The electric catalytic incinerator is subject to the New Source Performance Standard 40 CFR 60, Subpart J - Standards of Performance for Petroleum Refineries, which is incorporated by reference as 326 IAC 12. This catalytic incinerator is subject to this NSPS because it will combust off-gas from the tank cleaning operations and will be constructed at a refinery after June 11, 1973. Pursuant to 40 CFR 60.100(a), fuel gas combustion devices located at refineries are subject to the requirements of 40 CFR 60, Subpart J. The catalytic oxidizer meets the definition of a fuel gas combustion device provided in 40 CFR 60.101. Note that the U.S. EPA has previously determined that combustion devices used to control vapors from wastewater treatment and remediation activities meet the definition of a fuel gas combustion device (See U.S. EPA memorandum from Ken Gigliello to Phillip Guillemette (dated December 2, 1999), items (G) and (H) for additional information).

Nonapplicable portions of the NSPS will not be included in the permit. The catalytic oxidizer is subject to the following portions of Subpart J:

(1) 40 CFR 60.100(a) and (b).

(2) 40 CFR 60.101.
(3) 40 CFR 60.104(a)(1).
(4) 40 CFR 60.105(a)(3), (a)(4), and (e)(3).
(5) 40 CFR 60.106(a) and (e).
(6) 40 CFR 60.107(d), (e) and (f).
(7) 40 CFR 60.109.

The provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated in 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR 60, Subpart J.

(b) There are no other New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

(1) Although the storage tanks will be constructed after July 23, 1984, the requirements of 40 CFR 60, Subpart Kb - 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 (326 IAC 12) are not included in this permit for the Mix Tanks and storage tanks ROT-1, ROT-2, CST-1, CST-2, CST-3, and CT-1. The storage tanks have storage capacities that are greater than 75 cubic meters (19,813 gallons) and less than 151 cubic meters (39,890 gallons), but these tanks are used to store liquids that have a maximum true vapor pressure less than 15.0 kPa. The Mix Tanks do not meet the definition of storage vessels provided in 40 CFR 60.111b.

(2) The requirements of 40 CFR 60, Subparts K and Ka (326 IAC 12) are not included in this permit for the Mix Tanks and storage tanks ROT-1, ROT-2, CST-1, CST-2, CST-3, and CT-1, because these tanks will be installed after the applicability dates for these NSPS.

(3) The requirements of 40 CFR 60, Subpart D - Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction Commenced After August 17, 1971 (326 IAC 12) are not included in this permit because the maximum heat input for this boiler is less than the 250 MMBtu/hour applicability threshold for this NSPS.

(4) The requirements of 40 CFR 60, Subpart Da - Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978 (326 IAC 12) are not included in this permit because this boiler is not an electric utility steam generator.

(5) The requirements of 40 CFR 60, Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (326 IAC 12) are not included in this permit because the maximum heat input for this boiler is less than the 100 MMBtu/hour applicability threshold for this NSPS.

(6) The requirements of 40 CFR 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (326 IAC 12) are not included in this permit for Boiler C-1 are not included in this permit because the maximum heat input for this boiler is less than the 10 MMBtu/hour applicability threshold for this NSPS.

(7) The requirements of 40 CFR 60, Subpart J - Standards of Performance for Petroleum Refineries (326 IAC 12) are not included in this permit for Boiler C-1, pump engines J-1 and J-3, and compressor engine J-2. Since these units combust only diesel fuel oil, they do not meet the definition of a ‘fuel-gas combustion device’ as defined in 40 CFR 60.101(d) and (g).

(8) The requirements of 40 CFR 60, Subpart GGG – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries (326 IAC 12) are not included in this permit for the Tank Cleaning Facility. This rule applies to valves, pumps, pressure relief devices, sampling connection systems, open-ended valves or lines, and flanges or other connectors in VOC service. However, the components of the Tank Cleaning Facility (i.e., connectors, pumps, and valves) are subject to the equipment leak requirements of 40 CFR 63, Subpart CC. Pursuant to 40 CFR 63.640(p), equipment leaks that are also subject to the provisions of 40 CFR parts 60 are required to comply only with the provisions specified in 40 CFR 63, Subpart CC.

(9) The requirements of 40 CFR 60, Subpart QQQ – Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Treatment Systems (326 IAC 12) are not included in this permit. Wastewater generated by the Tank Cleaning Facility will be discharged to an existing wastewater treatment system. No new affected facilities (such as drain systems, oil-water separators, or aggregate facilities) are being constructed, modified or reconstructed as part of this modification. Pursuant to 40 CFR 60.690, Subpart QQQ applies only to affected facilities located in petroleum refineries for which construction, modification, or reconstruction is commenced after May 4, 1987.

(10) The requirements of 40 CFR 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Compression Engines are not included in this permit. This NSPS applies to compression ignition engines that are constructed after July 11, 2005. BP plans to rent the internal combustion engines from a supplier. These engines selected were manufactured prior to July 11, 2005.

(c) The pumps (identified as J-1 and J-3) and compressor (identified as J-2) engines are subject to 40 CFR 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (326 IAC 82) because they are located a major source of hazardous air pollutants and meet the definition of a reciprocating internal combustion engine (RICE) in 40 CFR 63.6675. However, this NESHAP applies only to new stationary RICE with a site-rating of more than 500 brake horsepower. Since the pumps and compressor will have a site-rating of less than 500 brake horsepower, there are no applicable requirements under this rule.

(d) Boiler C-1 is subject to 40 CFR 63, Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters because it is a boiler located at a major source of hazardous air pollutants. Although this boiler will be installed at the Whiting plant after January 13, 2002, it does not meet the definition of construction or reconstruction as those terms are defined in 40 CFR 63.2, because the boiler is an existing unit that will be rented by BP and will not require any new components that cost more than 50% of the cost of installing a new boiler. Since the boiler will combust distillate oil (diesel) and will be rated at 8.4 MMBtu per hour, it belongs to the existing small liquid fuel subcategory (see 40 CFR 63.7575). Pursuant to 40 CFR 63.7506(c)(2), existing small liquid fuel units are not subject to the initial notification requirements in §63.9(b) and are not subject to any requirements in 40 CFR 63, Subpart DDDDD (i.e., the emission limits, work practice standards, performance testing, monitoring, SSM plans, site-specific monitoring plans, recordkeeping and reporting requirements) or 40 CFR 63, Subpart A.

(e) The Tank Cleaning Facility is subject to the requirements of 40 CFR 63, Subpart CC because it is located a refinery that is a major source under Section 112 of the Clean Act. The specific emission units subject to this subpart include:

(1) The storage tanks ROT-1, ROT-2, ROT-3, CST-1, CST-2, and CT-1 meet the definition of Group 2 storage vessels provided in 40 CFR 63.641 because they have storage capacities that are less than 177 cubic meters (46,758 gallons).

Although technically subject to 40 CFR 63, Subpart CC, there are no emission limitations applicable to Group 2 storage vessels located at existing refineries. The Mix Tanks do not meet the definition of storage vessels provided in 40 CFR 63.641 because they are not used to store material.

(2) The vents on the mix tanks do not meet the definition of *miscellaneous process vents* provided in 40 CFR 63.641 because they are episodic or non-routine emissions that are associated with a maintenance activity.

(3) Wastewater from the Tank Cleaning Operation meets the definition of a *Group 2 wastewater stream* provided in 40 CFR 63.641 because this facility has an annual wastewater generation of less than 10 Mg/year. Although subject to 40 CFR 63, Subpart CC, Group 2 wastewater streams are not subject to any requirements under the wastewater provisions in 40 CFR 63.647.

(4) Equipment leaks of VOC and HAP from valves, connectors and pumps in light-liquid or gas/vapor service. Since it is possible that the material removed from a storage tank during cleaning could contain greater than 5% HAP by weight, the equipment leak provisions of 40 CFR 63.648 are applicable to the Tank Cleaning Facility.

Portions of the NESHAP 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), (g), (h), (l)(1), (l)(2)(i), (l)(3)(i) through (iii), (l)(4), (p) and (q)
(B) 40 CFR 63.641
(C) 40 CFR 63.642(a), (c) through (g), and (i) through (m)
(D) 40 CFR 63.648(a) through (c), and (e) through (i)
(E) 40 CFR 63.654(d), (e), (f)(1)(i)(A), (g)(7), and (i)(4)
(F) 40 CFR 63.655
(G) Appendix to Subpart CC, Tables 1, 2 and 3.

The provisions of 40 CFR 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63, Subpart CC.

The equipment leak provisions of 40 CFR 63.648 require the Tank Cleaning Facility be operated in compliance with the following portions of 40 CFR 60, Subpart VV:

(A) 40 CFR 60.482-1.
(B) 40 CFR 60.482-2(a) through (g).
(C) 40 CFR 60.482-7.
(D) 40 CFR 60.482-8.
(E) 40 CFR 60.482-9.
(F) 40 CFR 60.485(a) through (f).
(G) 40 CFR 60.486(a) through (c), (e), (f), and (h) through (k).
(H) 40 CFR 60.487(a), (b)(1) through (b)(3), (c)(1), (c)(2)(i) through (c)(2)(iv), (c)(2)(vii), (c)(3), (c)(4), (e), and (f).

(f) The requirements of 40 CFR 61, Subpart FF – National Emission Standard for Benzene Waste Operations (326 IAC 14) are not included in this permit. Waste generated by the Tank Cleaning Facility will be discharged to an existing wastewater treatment system already subject to the requirements of 40 CFR 63, Subpart FF.

(g) The requirements of 40 CFR 61, Subpart J – National Emissions Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene (326 IAC 14) are not included in this

permit for the Tank Cleaning Facility. This facility is subject to the equipment leak requirements of 40 CFR 63, Subpart CC. Pursuant to 40 CFR 63.640(p), equipment leaks that are also subject to the provisions of 40 CFR parts 61 are required to comply only with the provisions specified in 40 CFR 63, Subpart CC.

(h) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:

(1) has a potential to emit before 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 table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each new or modified emission unit involved:

Emission Unit	Control Device Used	Emission Limitation	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Boiler C-1	No	PM*	0.54	-	100	No	No
Process Pumps J-1 and J-3	No	PM*	1.93	-	100	No	No
Compressor J-2	No	PM*	1.16	-	100	No	No
Mix Tanks and Storage Tanks (ROT-1, ROT-2, CST-1, CST-2, CST-3, and CT-1)	Yes	None**	-	-	-	No	-

* - PM emissions are limited by 326 IAC 6.8-1-2.

** - The storage tanks are subject to the Group 2 storage tank requirements of 40 CFR 63, Subpart CC. However, this NESHAP does not include any emission limitations for Group 2 storage tanks.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are not applicable to the storage tanks, internal combustion engines (J-1, J-2, and J-3), boiler C-1, the mix tanks, and centrifuges because none of these units has a potential to emit greater than 100 tons per year before controls.

State Rule Applicability Determination

State Rule Applicability – Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration), 326 IAC 2-3 (Emission Offset), and 326 IAC 2-1.1-5 (Nonattainment Area New Source Review)

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), 326 IAC 2-3 (Emission Offset), and 326 IAC 2-1.1-5 (Nonattainment Area New Source Review). Lake County is currently designated as nonattainment for PM2.5 and the 8-hour ozone standards.

The following table shows the unlimited potential to emit for the proposed modification:

	Unlimited Potential to Emit (tons/year)					
Process/facility	**PM**	**PM-10**	**SO_2**	**VOC**	**CO**	**NO_X**
Boiler C-1	0.54	0.89	1.9	0.09	1.34	5.4
Compressor Engine J-2	1.16	1.16	1.08	1.32	3.51	16.3
Pump Engines J-1 and J-3	1.93	1.93	1.80	2.2	5.85	27.2
Storage Tanks, Mix Tanks, and Centrifuge	0	0	0	9.4	0	0
Fugitive Emissions	0	0	0.0	3.91	0.0	0.0
Total	**3.63**	**3.98**	**4.8**	**16.9**	**10.7**	**48.9**
PSD/Emission Offset/Nonattainment NSR Thresholds	**25**	**15**	**40**	**40**	**100**	**40**

The following table shows the limited PTE for this proposed modification:

	Limited Potential to Emit (tons/year)					
Process/facility	**PM**	**PM-10**	**SO_2**	**VOC**	**CO**	**NO_X**
Boiler C-1	5.52*	0.45	0.97	0.05	0.68	2.72
Compressor Engine J-2	0.59	0.59	0.55	0.67	1.78	8.26
Pump Engines J-1 and J-2	0.98	0.98	0.91	1.12	2.97	13.76
Storage Tanks, Mix Tanks, Centrifuges, and oxidizer	2.96E-05	1.18E-04	0.44	4.77	1.31E-03	1.56E-03
Fugitive Emissions	0	0	0.0	0.20	0.0	0.0
Total	**1.84**	**2.02**	**2.87**	**6.81**	**5.43**	**24.74**
PSD/Emission Offset/Nonattainment NSR Thresholds	**25**	**15**	**40**	**40**	**100**	**40**

*Boiler C-1 is limited to 0.15 lb/MMBtu by 326 IAC 6.8-1-2, which is equivalent to 5.52 tons per year at 8,760 hours per year. It is equivalent to 2.8 tons per year at 4,440 hours per year. The PTE for the boiler is 0.27 tons for 4,400 hours per year, based on AP42 emission factors

The increases in PM, PM10, VOC, SO_2, and CO are less than the PSD and Emission Offset thresholds. The increase in PM10 (used as a surrogate for PM2.5) is less than the 15 ton per year threshold for Nonattainment Area New Source Review. The increase in NOx emissions, however, exceeds the 40 ton per year PSD and Emission Offset threshold. BP has requested limits be included in the permit such that the NOx emissions from the Tank Cleaning Facility will be limited to less than 40 tons per year and thereby making the requirements of 326 IAC 2-2 and 326 IAC 2-3 not applicable.

At BP's request, the following limitation has been included in the permit:

The Tank Cleaning Facility shall be limited to 4,440 hours of operation per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limitation renders the requirements of 326 IAC 2-2 and 326 IAC 2-3 not applicable to the installation of the Tank Cleaning Facility, which consists of Mix Tanks #1 through #4; Centrifuges #1 and #2; Boiler C-1; Compressor J-2; Processes Pumps J-1 and J-3; and Storage Tanks ROT-1, ROT-2, ROT-3, CST-1, CST-2, and CT-1.

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 the permit:

(a) 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.

(b) 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 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark, and Floyd Counties)
Although the tank cleaning facility will be located in Lake County, it is not subject to the requirements of 326 IAC 8-7 because the tank cleaning conducted by this facility will be a batch operation. Pursuant to 326 IAC 8-7-2(a)(3)(H), batch operations are exempt from the requirements of this rule.

326 IAC 8-6 (Organic Solvent Emission Limitations)
The requirements of 326 IAC 8-6 do not apply to the tank cleaning facility because this facility was constructed after January 1, 1980.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)
The new tank cleaning facility is not subject to the requirements of 326 IAC 2-4.1 because these units are regulated by National Emission Standards for Hazardous Air Pollutants issued pursuant to Section 112(d) of the Clean Air Act.

326 IAC 6-4 (Fugitive Dust Emissions)
The Permittee 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 (Fugitive Dust Emissions).

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 in this Minor Source Modification.

State Rule Applicability – Mix Tanks and Centrifuges

326 IAC 8-1-6 (New Facilities: General Reduction Requirements)
Although the Mix Tanks and Centrifuges will be constructed after January 1, 1980, these units are not subject to the provisions of 326 IAC 8-1-6 because the potential VOC emissions are less than 25 tons per year.

326 IAC 6.8-1-2 (Particulate Emissions Limitations)
The Mix Tanks and Centrifuges are not subject to the requirements of 326 IAC 6.8-1-2 because they are not a source of particulate emissions.

326 IAC 6.8-2-6 (Lake County: PM10 Emission Requirements)
The Mix Tanks and Centrifuges are not listed in 326 IAC 6.8-2-6. Therefore, 326 IAC 6.8-2-6 does not apply to these units.

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)
The Mix Tanks are not subject to the requirements of 326 IAC 8-9 because these tanks are process tanks. 326 IAC 8-9 applies only to storage tanks.

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

Although located at a refinery in Lake County, the Mix Tanks are not subject to the requirements of 326 IAC 8-4-3 because they are process tanks with capacities less than 39,000 gallons. 326 IAC 8-4-3 applies only to storage tanks with capacities greater than 39,000 gallons.

State Rule Applicability – Boiler C-1

326 IAC 6.8-1-2 (Particulate Emission Limitations)

Boiler C-1 is subject to the requirements of 326 IAC 6.8-1-2 because this boiler is not listed in 326 IAC 6.8-2 through 326 IAC 6.8-11 and the Whiting refinery has potential particulate emissions that exceed 100 tons per year. The following limit has been included in the permit:

Pursuant to 326 IAC 6.8-1-2(b)(2), the particulate matter emissions from the Boiler C-1 shall be limited to 0.15 pounds per million Btu.

326 IAC 6.8-2-6 (Lake County: PM10 Emission Requirements)

Boiler C-1 is not one of the units listed in 326 IAC 6.8-2-6. Therefore, 326 IAC 6.8-2-6 does not apply to the boiler.

326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations)

Boiler C-1 is not subject to the requirements of 326 IAC 7-1.1-2 because the potential to emit sulfur dioxide is less than 25 tons per year and 10 pounds per hour.

326 IAC 7-4.1-1 (Lake County Sulfur Dioxide Emission Limitations)

Boiler C-1 is not subject to the requirements of 326 IAC 7-4.1-1 because 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)

Boiler C-1 is not one of the emission units listed in 326 IAC 7-4.1-3. Therefore, 326 IAC 7-4.1-3 does not apply to this boiler.

State Rule Applicability – Internal Combustion Engines (Compressor J-2 and Pumps J-1 and J-3)

326 IAC 6.8-2-6 (Lake County: PM10 Emission Requirements)

The pumps (J-1 and J-3) and compressor (J-2) are not listed in 326 IAC 6.8-2-6. Therefore, 326 IAC 6.8-2-6 does not apply to these units.

326 IAC 6.8-1-2 (Particulate Emission Limitations)

The pumps (J-1 and J-2) and compressor (J-2) are subject to the requirements of 326 IAC 6.8-1-2 because these units are not listed in 326 IAC 6.8-2 through 326 IAC 6.8-11 and the Whiting refinery has potential particulate emissions that exceed 100 tons per year. The following limit has been included in the permit:

Pursuant to 326 IAC 6.8-1-2(a), the particulate matter emissions from the pump engines (J-1 and J-3) and the compressor engine (J-2) shall be each limited to 0.03 grains per dry standard cubic foot.

326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations)

The pumps (J-1 and J-3) and compressor (J-2) are not subject to the requirements of 326 IAC 7-1.1-2 because the potential to emit sulfur dioxide from each of these units is less than 25 tons per year and 10 pounds per hour.

326 IAC 7-4.1-1 (Lake County Sulfur Dioxide Emission Limitations)

The pumps (J-1 and J-3) and compressor (J-2) are not subject to the requirements of 326 IAC 7-4.1-1 because 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)

The pumps (J-1 and J-3) and compressor (J-2) are not listed in 326 IAC 7-4.1-3. Therefore, 326 IAC 7-4.1-3 does not apply to these engines.

State Rule Applicability – Storage Tanks ROT-1, ROT-2, CST-1, CST-2, CST-3, and CT-1

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

Storage tanks ROT-1, ROT-2, CST-1, CST-2, CST-3, and CT-1 are subject to the requirements of 326 IAC 8-9 because they will be installed in Lake County and are not subject to 40 CFR 60, Subpart Kb. Pursuant to 326 IAC 8-9-1(b), storage vessels that have storage capacities less than 39,000 gallons are subject only to the reporting and record keeping provisions in 326 IAC 8-9-6(a) and (b), and are exempt from all other provisions of this rule. The following requirements have been included in the permit:

Pursuant to 326 IAC 8-9-6 (Volatile Organic Liquid Storage Vessels), the Permittee shall record and submit to IDEM, OAQ a report containing the following information for Reclaimed Oil Tanks ROT-1 and ROT-2; Cutter Stock Tanks CST-1, CST-2, and CST-3; and Concentrate Tank CT-1:

(a) The vessel identification number.

(b) The vessel dimensions.

(c) The vessel capacity.

The Permittee shall keep all records as described in (a) through (c) for the life of the vessel.

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

Although located at a refinery in Lake County, the mix tanks and storage tanks are not subject to the requirements of 326 IAC 8-4-3 because they have storage capacities less than the 39,000 gallon applicability threshold.

State Rule Applicability – Equipment Leaks from Various System Components

326 IAC 8-4-8 (Leaks from Petroleum Refineries)

The Tank Cleaning Facility 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 the Tank Cleaning Facility 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 63, Subpart CC, which requires the source to monitor and control equipment leaks by following a Leak Detection and Repair (LDAR) Plan. Therefore, BP will comply with 326 IAC 8-4-8 by complying with their existing LDAR Plan.

Stack Testing Requirements

No stack testing is required for the tank cleaning facility because the source will maintain records of the number of hours of operation of the tank cleaning facility in order to demonstrate compliance with the 326 IAC 2-2 and 326 IAC 2-3.

Compliance Determination and Monitoring Requirements

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

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

There are no compliance-determination or monitoring requirements applicable to this modification.

Proposed Changes

IDEM, OAQ has decided to make the following revisions to the Part 70 Operating Permit No. T089-6741-00453, issued December 14, 2006 due to the proposed modification. The following changes have been made to the permit. The permit is revised as follows with deleted language as ~~strikeouts~~ and new language **bolded**. The Table of Contents has been updated as necessary.

SECTION D.41 FACILITY OPERATION CONDITIONS

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

One (1) tank sludge cleaning facility (identified as Tank Cleaning Facility) with a maximum throughput of 300 gallons per minute of storage tank sludge/cutter stock mix per hour, with VOC and HAP emissions voluntarily controlled using either an electric catalytic oxidizer (identified as F-1) or a wet scrubber/carbon canister system (identified as S-1). The facility is approved for construction in 2007, is operated as a batch process, and consists of the following emission units:

(a) Four (4) mix tanks identified as Mix Tank #1, #2, #3, and #4. Each tank has maximum capacity of 21,000 gallons, with emissions voluntarily controlled by either the catalytic oxidizer F-1 or the wet scrubber/carbon canister system S-1.

(b) Two (2) enclosed centrifuges (identified as Centrifuge #1 and #2) with no process vents.

(c) One (1) diesel-fired boiler (identified as C-1), with a maximum heat input capacity of 8.4 MMBtu per hour burning low-sulfur (less than 0.05% sulfur by weight) diesel fuel. Emissions are exhausted at stack C-1-01. There is no control device for this emission unit.

(d) One (1) diesel-fired air compressor (identified as J-2), with a maximum heat input capacity of 0.84 MMBtu per hour. This compressor is a 120 hp reciprocating internal combustion engine. Emissions are exhausted through vent J-2. There is no control device for this emission unit.

(e) Two (2) diesel-fired process pumps (identified as J-1 and J-3), each having a maximum heat input capacity of 0.70 MMBtu per hour. These pumps are 100 hp reciprocating internal combustion engines. Emissions from pumps J-1 and J-3 are exhausted through vents J-1 and J-3, respectively. There are no control devices for this emission unit.

(f) Six (6) portable rectangular storage tanks, including:

(1) Two (2) Reclaimed Oil Tanks identified as ROT-1 and ROT-2. Each tank has a maximum storage capacity of 21,000 gallons and is used to store reclaimed sludge and cutter stock. Emissions are voluntarily controlled by either the catalytic oxidizer F-1 or the wet scrubber/carbon canister system S-1.

(2) Three (3) Cutter Stock Tanks identified as CST-1, CST-2, and CST-3. Each tank

has a maximum storage capacity of 21,000 gallons and is used to store Cutter Stock. Emissions are voluntarily controlled by either the catalytic oxidizer F-1 or the wet scrubber/carbon canister system S-1.

(3) One (1) Concentrate Tank identified as CT-1. This tank has a maximum storage capacity of 21,000 gallons and is used to store cutter stock and tank sludge mix. Emissions are voluntarily controlled by either the catalytic oxidizer F-1 or the wet scrubber/carbon canister system S-1.

(g) One (1) electric catalytic oxidizer, identified as F-1, a maximum gas flow rate of 400 scfm. Emissions are exhausted at stack F-1-01. Under 40 CFR 60, Subpart J, the catalytic oxidizer is considered a fuel gas combustion device.

Equipment leaks of VOC and HAP from pumps, valves, and connectors. Under 40 CFR 63, Subpart CC, equipment leaks from pumps, valves, and connectors associated with the Tank Cleaning Facility are affected facilities in organic hazardous air pollutant service.

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

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

D.41.1 Volatile Organic Compounds (VOC) Limits [326 IAC 2-3][326 IAC 2-2]

The Tank Cleaning Facility shall be limited to less than 4,440 hours of operation per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limitation renders the requirements of 326 IAC 2-2 and 326 IAC 2-3 not applicable to the installation of the Tank Cleaning Facility, which consists of Mix Tanks #1 through #4; Centrifuges #1 and #2; Boiler C-1; Compressor J-2; Processes Pumps J-1 and J-3; and Storage Tanks ROT-1, ROT-2, ROT-3, CST-1, CST-2, and CT-1.

D.41.2 Particulate Matter [326 IAC 6.8-1-2]

(a) Pursuant to 326 IAC 6.8-1-2(b)(2), the particulate matter emissions from the Boiler C-1 shall be limited to 0.15 pounds per million Btu.

(b) Pursuant to 326 IAC 6.8-1-2(a), the particulate matter emissions from the pump engines (J-1 and J-3) and the compressor engine (J-2) shall be each limited to 0.03 grains per dry standard cubic foot.

D.41.3 Storage Tank Requirements [326 IAC 8-9]

Pursuant to 326 IAC 8-9-6 (Volatile Organic Liquid Storage Vessels), the Permittee shall record and submit to IDEM, OAQ a report containing the following information for Reclaimed Oil Tanks ROT-1 and ROT-2; Cutter Stock Tanks CST-1, CST-2, and CST-3; and Concentrate Tank CT-1:

(a) The vessel identification number.

(b) The vessel dimensions.

(c) The vessel capacity.

The Permittee shall keep all records as described in (a) through (c) for the life of the vessel.

D.41.4 Fuel Gas Hydrogen Sulfide (H_2S) [326 IAC 12] [40 CFR 60, Subpart J]

Pursuant to 40 CFR 60, Subpart J, the Permittee shall comply with the requirements specified in Section E.2 for the electric catalytic oxidizer F-1.

D.41.5 Equipment Leaks of Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP) [326 IAC 8-4-8][326 IAC 20-16-1][40 CFR 63, Subpart CC]

(a) Pursuant to 326 IAC 8-4-8, the Permittee shall control leaks of VOC from pumps, compressors, valves, process drains, and pressure relief devices according to the Leak Detection and Repair (LDAR) Plan submitted by the Permittee. The Permittee shall update the LDAR Plan as necessary and shall submit a copy of the revised LDAR Plan to IDEM OAQ for approval. If IDEM, OAQ determines that the procedures specified in the LDAR Plan will not demonstrate compliance with the fugitive emission limitations, IDEM, OAQ may require the Permittee to revise the plan.

(b) Pursuant to 40 CFR 63, Subpart CC, the Permittee shall comply with the requirements specified in Sections E.1 and E.4 for equipment leaks of HAP from pumps, valves and connectors located at the Tank Cleaning Facility.

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

D.41.6 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.41.7 Record Keeping Requirements

(a) To demonstrate compliance with Condition D.41.1, the Permittee shall maintain records of the number of operating hours for the Tank Cleaning Facility.

(b) Pursuant to 326 IAC 8-4-8 and to document compliance with Condition D.41.4, the Permittee shall comply with equipment leak record keeping requirements specified in the LDAR plan.

(c) Pursuant to 40 CFR 60, Subpart J and to document compliance with Condition D.41.4, the Permittee shall maintain the records specified in Section E.2.

(d) Pursuant to 326 IAC 8-4-8 and to document compliance with Condition D.41.5(a), the Permittee shall comply with equipment leak record keeping requirements specified in the LDAR plan.

(e) Pursuant to 40 CFR 63, Subpart CC and to document compliance with Condition D.41.5(b), the Permittee shall keep records as specified in Section E.1 and E.4.

D.41.8 Reporting Requirements

(a) A quarterly summary of the information to document compliance with Condition D.41.1 shall be submitted to the address 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).

(b) Pursuant to 326 IAC 8-4-8 and to document compliance with Condition D.41.4, the Permittee shall comply with equipment leak reporting requirements specified in the LDAR plan.

(c) Pursuant to 40 CFR 60, Subpart J and to document compliance with Condition D.41.4, the Permittee shall submit to IDEM, OAQ the reports specified in Condition E.2.

(d) Pursuant to 326 IAC 8-4-8 and to document compliance with Condition D.41.5(a), the Permittee shall submit reports as specified in the LDAR plan.

(e) Pursuant to 40 CFR 63, Subpart CC and to document compliance with Condition D.41.5(b), the Permittee shall submit reports as specified in Sections E.1 and E.4.

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

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E.1.3 One Time Deadlines Relating to NESHAP Subpart CC

The Permittee shall comply with the following requirements by the dates listed below for the Tank Cleaning facility in Section D.41:

Requirement	Rule Citation	Affected Facility	Deadline
Initial Semiannual Compliance Report	40 CFR 63.654(g)	Pumps, Valves, and Connectors.	In the next semi-annual report submitted for the existing equipment at the refinery after startup of the new equipment

SECTION E.2 40 CFR Part 60, Subpart J – Standards of Performance for Petroleum Refineries

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E.2.3 One Time Deadlines Relating to NSPS Subpart J

The Permittee shall comply with the following requirements by the dates listed below:

Requirement	Rule Citation	Affected Facility	Deadline
Notification of the date of construction commencement	40 CFR 60.7(a)(1)	Catalytic Oxidizer F-1	No later than 30 days after commencement of construction
Complete Performance Tests	40 CFR 60.8	Catalytic Oxidizer F-1	Within 60-days after achieving maximum production rate but not later than 180-days after initial startup
Notification of initial startup	40 CFR 60.7(a)(3)	Catalytic Oxidizer F-1	Within 15 days of startup
Notification of the date of demonstration of continuous monitoring system performance	40 CFR 60.7(a)(5)	Catalytic Oxidizer F-1	30-days prior to demonstration

SECTION E.4 40 CFR Part 60, Subpart VV – New Source Performance Standards for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry

. . .

E.4.2 One Time Deadlines Relating to NSPS Subpart VV

The Permittee shall comply with the following requirements by the dates listed below for the Tank Cleaning Facility listed in Section D.41:

Requirement	Rule Citation	Affected Facility	Deadline
Notification of the date of construction commencement	40 CFR 60.7(a)(1)	Pumps, Valves, and Connectors.	No later than 30 days after commencement of construction
Complete Performance Tests	40 CFR 60.8	Pumps, Valves, and Connectors	Within 60-days after achieving maximum production rate but not later than 180-days after initial startup
Notification of Schedule of Initial Performance Tests	40 CFR 60.487(e)	Pumps, Valves, and Connectors	At least 30-days prior to initial performance tests
Notification of initial startup	40 CFR 60.7(a)(3)	Pumps, Valves, and Connectors	Within 15 days of startup
Demonstrate Initial Compliance	40 CFR 60.482-1(a)	Pumps, Valves, and Connectors	Within 180-days of initial startup
Initial Semiannual Report	40 CFR 60.487(a)	Pumps, Valves, and Connectors	Six months after the initial startup date or in the next semi-annual report submitted for the existing equipment at the refinery after startup of the new equipment

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Quarterly Report

Source Name: BP Products North America, Inc. – Whiting Business Unit
Source Address: 2815 Indianapolis Boulevard
Mailing Address: P.O. Box 710, Whiting, Indiana 46394
Part 70 Permit No.: T089-6741-00453
Facility: Tank Cleaning Facility
Parameter: Operating Hours
Limit: Less than 4,440 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

☐ **No deviation occurred in this quarter.**

☐ **Deviation/s occurred in this quarter.**
Deviation has been reported on:

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

Conclusion and Recommendation

The construction of this proposed modification shall be subject to the conditions of the attached proposed Minor Source Modification No. 089-24258-00453 and the proposed Significant Permit Modification No. 089-24410-00453. The staff recommends to the Commissioner that this Minor Source Modification and Significant Permit Modification be approved.

Appendix A: Emissions Calculations
Boiler C-1

Company Name: **BP Products North America, Inc., Whiting Business Unit**
Address, City IN Zip: **2815 Indianapolis Boulevard, Whiting, Indiana 46394-0710**
Permit Number: **089-24258**
Plt ID: **089-00453**
Reviewer: **ERG/AAB**
Date: **26-Feb-07**

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur
8.4	537.11	0.05

	Pollutant					
	PM*	PM10	SO_2	NOx	VOC	CO
Emission Factor in lb/kgal	2.0	3.3	7.1 *(142.0S)*	20.0	0.34	5.0
Potential Emission in tons/yr	0.54	0.89	1.9	5.37	0.09	1.34
Limited PTE in (tons/yr) (Max. Operating Rate 4440 hrs/yr)	0.27	0.45	0.97	2.72	0.046	0.68

Methodology

1 gallon of No. 2 Fuel Oil has a heating value of 137,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu

Emission factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-03-005-01/02/03) Supplement E 9/98 (see erata file)

*PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal.
Potential to Emit (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal)/2,000 lb/ton

See page 2 for HAPs emission calculations.

Appendix A: Emissions Calculations
Boiler C-1
HAP Emissions

Company Name: **BP Products North America, Inc., Whiting Business Unit**
Address, City IN Zip: **2815 Indianapolis Boulevard, Whiting, Indiana 46394-0710**
Permit Number: **089-24258**
Plt ID: **089-00453**
Reviewer: **ERG/AAB**
Date: **14-Feb-07**

	HAPs - Metals				
	Arsenic	Beryllium	Cadmium	Chromium	Lead
Emission Factor in lb/MMBtu	4.0E-06	3.0E-06	3.0E-06	3.0E-06	9.0E-06
Potential Emission in tons/yr	1.47E-04	1.10E-04	1.10E-04	1.10E-04	3.31E-04

	HAPs - Metals (continued)			
	Mercury	Manganese	Nickel	Selenium
Emission Factor in lb/MMBtu	3.0E-06	6.0E-06	3.0E-06	1.5E-05
Potential Emission in tons/yr	1.10E-04	2.21E-04	1.10E-04	5.52E-04

Total HAPs (tons/yr) = 3.31E-04
Total HAPs in tons/yr for 4440 hours of operation = 1.68E-04

Methodology

No data was available in AP-42 for organic HAPs.
Potential to Emit (tons/year) = Heat Input Capacity (MMBtu/hr)*Emission Factor (lb/mmBtu)*8,760 hrs/yr / 2,000 lb/ton
Emission factors are from AP-42, Table 1.3-10, Supplement E (9/98).

Appendix A: Emission Calculations
Two Diesel-Fired Process Pumps

Company Name: **BP Products North America, Inc., Whiting Business Unit**
Address City IN Zip: **2815 Indianapolis Boulevard, Whiting, Indiana 46394-0710**
Permit Number: **089-24258**
Plt ID: **089-00453**
Reviewer: **ERG/AAB**
Date: **26-Feb-07**

Emissions calculated based on output rating (hp)

Heat Input Capacity Horsepower (hp)	Potential Throughput hp-hr/yr	Limited Throughput hp-hr/yr
200.0	1752000	888000

(Two pumps each rated at 100 hp)

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	2.20E-03	2.20E-03	2.05E-03	3.10E-02	2.51E-03	6.68E-03
Potential Emission in tons/yr	1.93	1.93	1.80	27.2	2.20	5.85
Limited PTE in (tons/yr) (Max. Operating Rate 4440 hrs/yr)	0.98	0.98	0.91	13.76	1.12	2.97

Methodology

Potential Througput (hp-hr/yr) = hp * 8760 hr/yr
Limited Througput (hp-hr/yr) = hp * 4440 hr/yr
Emission factors are from AP42 (Supplement B 10/96), Table 3.3-1
Potential to Emit (tons/yr) = [Throughput (hp-hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)
*PM emission factor is assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Appendix A: Emission Calculations
Diesel-Fired Compressor

Company Name: **BP Products North America, Inc., Whiting Business Unit**
Address City IN Zip: **2815 Indianapolis Boulevard, Whiting, Indiana 46394-0710**
Permit Number: **089-24258**
Plt ID: **089-00453**
Reviewer: **ERG/AAB**
Date: **26-Feb-07**

Emissions calculated based on output rating (hp)

Heat Input Capacity Horsepower (hp)	Potential Throughput hp-hr/yr	Limited Throughput hp-hr/yr
120.0	1051200	532800

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Potential Emission in tons/yr	1.16	1.16	1.08	16.3	1.32	3.51
Limited PTE in (tons/yr) (Max. Operating Rate 4440 hrs/yr)	0.59	0.59	0.55	8.26	0.67	1.78

Methodology

Potential Througput (hp-hr/yr) = hp * 8760 hr/yr
Limited Througput (hp-hr/yr) = hp * 4440 hr/yr
Emission factors are from AP42 (Supplement B 10/96), Table 3.3-1
Potential to Emit (tons/yr) = Throughput (hp-hr/yr) x Emission Factor (lb/hp-hr) / 2,000 lb/ton

*PM emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Appendix A: Emission Calculations
Fugitive Emissions From the
Tank Cleaning Operation

Company Name: **BP Products North America, Inc., Whiting Business Unit**
Address City IN Zip: **2815 Indianapolis Boulevard, Whiting, Indiana 46394-0710**
Permit Number: **089-24258**
Plt ID: **089-00453**
Reviewer: **ERG/AAB**
Date: **26-Feb-07**

Number of valves in liquid service	65
Number of valves in vapor service	5
Number of pump seals	8
Number of connectors in liquid service	174
Number of connectors in vapor service	42
LDAR Effectiveness:*	
Valves in liquid service	96 %
Valves in vapor service	95 %
Pumps	88 %
Connectors	81 %

					Leaking (i.e., greater than or equal to 10,000 ppmv) Emission Factor		Non-Leaking (i.e., less than 10,000 ppmv) Emission Factor		Fugitive Emissions without LDAR Plan		Fugitive Emissions with LDAR Plan		Fugitive Emissions with LDAR Plan and 4440 Hours/yr
Component Type	Total Number	Number in Liquid Service	Number in Vapor Service	Percent Leaking	Light Liquid Service Factor (kg/hr-comp.)	Vapor Service Factor (kg/hr-comp.)	Light Liquid Service Factor (kg/hr-comp.)	Vapor Service Factor (kg/hr-comp.)	VOC (lbs/hr)	VOC (tons/yr)	VOC (lbs/hr)	VOC (tons/yr)	VOC (tons/yr)
Valves	70	65	5	1	0.0852	0.2626	0.0017	0.0006	0.40	1.75	0.02	0.071	0.036
Flanges (Connectors)	216	174	42	1	0.0375	0.0375	0.00006	0.00006	0.21	0.91	0.04	0.17	0.09
Pumps	8	8	0	1	0.437		0.012		0.29	1.26	0.03	0.15	0.08
										3.91	0.09	0.39	**0.20**

Notes:
*- values taken from Table 5-3 of U.S. EPA's "Protocol for Equipment Leak Emission Estimates."
The number of connectors may vary depending on the particular configuration needed and the space available near the tank to be cleaned.
Assumed the following number of connectors will be required in the worst case scenario:
2 per pump, 2 per valve, 2 per leg of gas line (plus inlet to oxidizer), and 1 per 10 feet of piping with 150 feet of vapor piping and 250 feet of liquid piping.
Emission factors are from Table 2-6 of the U.S. EPA's "Protocol for equipment Leak Emission Estimates" (11/95)
A "percent leaking rate" of 1% was assumed, consistent with estimates used in the past based on past screening data. Note
that the "leaking rate" assumed by the screening factors in Table 2-6 of the U.S. EPA's protocol is 10,000 ppm versus the lower leak rates
used under the Refinery MACT.

Example Calculation:
PTE for valves (lbs/hr) = [(# Valves (liquid) * EF for Liquid (kg/hr) * percent leaks) +(# Valves (vapor) * EF (Vapor) * (1-percent leaks))] * 2.2 lb/kg

Appendix A: Emission Calculations
Catalytic Oxidizer Controlling Emissions from
Centrifuge, Mix Tank, and Storage Tanks

Company Name: **BP Products North America, Inc., Whiting Business Unit**
Address City IN Zip: **2815 Indianapolis Boulevard, Whiting, Indiana 46394-0710**
Permit Number: **089-24258**
Plt ID: **089-00453**
Reviewer: **ERG/AAB**
Date: **26-Feb-07**

Process Flow Rate	400	scfm
Total Volume of vapors combusted	5.94E-06	MMscf/hr
Stream H_2S Content	46	ppmv
Oxidizer Efficiency	90	%
Molar Volume	22.41	L/mol
VOC Molar Weight	130	
SO_2 Molar Weight	64.06	
Heating value of refinery gas	1203.33	MMBtu/MMscf
Heating value of natural gas	1020	MMBtu/MMscf
Conversion Factors	28.32	L/cf
	0.0022	lb/g

	NO_x	CO	PM	PM10	VOC*	SO_2
Emission Factors (lb/MMcf)	100	84	1.9	7.6	NA	NA
PTE (lbs/hr)	7.01E-04	5.89E-04	1.33E-05	5.33E-05	2.15	0.20
PTE (tons/yr)	3.07E-03	2.58E-03	5.83E-05	2.33E-04	9.41	0.86
Limited PTE @ 4440 hrs/yr (tons/yr)**	1.56E-03	1.31E-03	2.96E-05	1.18E-04	4.77	0.44
Limited After Control Emissions (tons/yr)	NA	NA	NA	NA	0.48	NA

* - See page 7 of this appendix for VOC PTE estimates.

Methodology:

For NO_x, PM, PM10 and CO calculations:

$$\text{PTE (lbs/hr)} = \frac{5.9\text{E-6 MMscf}}{\text{hr}} \cdot \frac{1203.33\text{MMBtu/MMscf fuel gas}}{1020\text{ MMBtu/MMscf nat. gas}} \cdot \text{EF lbs/MMscf fuel}$$

(Where EF is the emission factor)

For SO_2 calculations:

$$\text{PTE before controls (lbs/hr)} = \frac{400\text{ scfm gas}}{} \cdot \frac{46\text{ scfm } SO_2}{1\text{x}10^6\text{ scf gas}} \cdot \frac{64.06\text{ g/mol}}{22.41\text{ L/mol}} \cdot \frac{28.32\text{ L}}{\text{cf } SO_2} \cdot \frac{0.0022\text{ lb}}{\text{g}} \cdot \frac{60\text{ min}}{\text{hr}}$$

Emission factors for NOx, CO, PM, and PM10 are from AP-42, Section 1.4, tables 1.4-1 and 1.4-2 (7/98)

These calculations assume that the tank cleaning system is operated at its maximum capacity and generates a waste stream with the maximum VOC and H_2S content.

The H_2S content of the waste stream is conservatively assumed to be equivalent to that of refinery fuel gas.

** - The calculations assume a conservative control efficiency of 90% for the oxidizer or scrubber/carbon canister system.

Appendix A: Emission Calculations

VOC Emissions From the Mix Tanks and Storage Tanks

Company Name: BP Products North America, Inc., Whiting Business Unit
Address City IN Zip: 2815 Indianapolis Boulevard, Whiting, Indiana 46394-0710
Permit Number: 089-24258
Plt ID: 089-00453
Reviewer: ERG/AAB
Date: 26-Feb-07

Tanks	Number of Tanks	VOC PTE (tons/year)	VOC (tons/yr) at 4,440 operating hours
Cutter Tanks	3	2.82	1.43
Reclaim Tanks	2	1.88	0.95
Concentrate Tank	1	0.94	0.48
Mix Tanks	4	3.76	1.91
Total		9.41	4.77

For one 21,000 gallons storage tank*:

Working losses (lbs/year) =	1832.44
Breathing losses (lbs/year) =	48.82
Total (lbs/year) =	1881.26

* - Calculated using TANKS 4.09.

Tank Specifications:

Shell length (ft)=	36.0
Diameter (ft) =	10.0
Volume (gal) =	21,000
Turnovers	7508.57
Net Throughput (gal/yr) =	157,680,000
Tank Heated =	Yes
Underground =	No
Shell Color/Condition	White/Good

Appendix A: Emissions Calculations
Summary

Company Name: BP Products North America, Inc., Whiting Business Unit
Address, City IN Zip: 2815 Indianapolis Boulevard, Whiting, Indiana 46394-0710
Permit Number: 089-24258
Plt ID: 089-00453
Reviewer: ERG/AAB
Date: 26-Feb-07

PTE Before Controls and Limitations:

Emission Unit (I.D.)	PM (tons/yr)	PM10 (tons/yr)	SO_2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	Single HAP (tons/yr)	Total HAP (tons/yr)
Boiler (C-1)	0.54	0.89	1.9	5.4	0.09	1.34	negligible	negligible
Compressor (J-2)	1.16	1.16	1.08	16.3	1.32	3.51	negligible	negligible
Pumps (J-1 and J-3)	1.93	1.93	1.80	27.2	2.2	5.85	negligible	negligible
Storage Tanks and Mix Tanks	0	0	0	0	9.4	0	Less than 9.4	Less than 9.4
Equipment Leaks	0	0	0	0	3.91	0	less than 3.91	Less than 3.91
Total	3.63	3.98	4.8	48.9	16.9	10.70	Less than 13.3	Less than 13.3

PTE After Controls and Limits:

Emission Unit (I.D.)	PM (tons/yr)	PM10 (tons/yr)	SO_2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)	Single HAP (tons/yr)	Total HAP (tons/yr)
Boiler (C-1)	0.27	0.45	0.97	2.72	0.05	0.68	negligible	negligible
Compressor (J-2)	0.59	0.59	0.55	8.26	0.67	1.78	negligible	negligible
Pumps (J-1 and J-3)	0.98	0.98	0.91	13.76	1.12	2.97	negligible	negligible
Storage Tanks, Mix Tanks, and Oxidizer	2.96E-05	1.18E-04	0.44	1.56E-03	0.48	1.31E-03	Less than 0.48	Less than 0.48
Equipment Leaks	0	0	0	0	0.20	0	Less than 0.20	Less than 0.20
Total	1.84	2.02	2.87	24.74	2.5	5.43	0.68	Less than 0.68