



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

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

**Michael R. Pence**  
Governor

**Thomas W. Easterly**  
Commissioner

TO: Interested Parties / Applicant

DATE: August 23, 2013

RE: Bristol-Myers Squibb Company / 129-33093-00021

FROM: Matthew Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

## Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures  
FNPER.dot 6/13/13



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Daniel Charles  
Bristol-Myers Squibb Company  
4601 Highway 62 East  
Mt. Vernon, IN 47620

August 23, 2013

Re: 129-33093-00021  
Significant Permit Revision to  
F129-23109-00021

Dear Mr. Charles:

Bristol-Myers Squibb Company was issued a Federally Enforceable State Operating Permit FESOP Renewal No. F129-23109-00021 on October 13, 2006 for a stationary pharmaceutical packaging and research and development source located at 4601 Highway 62 East, Mt. Vernon, Indiana. On April 15, 2013, the Office of Air Quality (OAQ) received an application from the source requesting to install and operate two new tablet coaters at the Bristol-Myers Squibb Company Mt. Vernon plant.

Pursuant to 326 IAC 2-8-11.1(f)(1)(E), this FESOP is being revised through a FESOP Significant Permit Revision because the proposed revision is not an Administrative Amendment or Minor Permit revision and the proposed revision involves the construction of new emission units)and change in operation - where the PTE of any pollutant increases as indicated below with potential to emit greater than or equal to twenty-five (25) tons per year of the following pollutants:

- (i) PM, PM10, or direct PM2.5.

The following are the emissions units:

- (a) One (1) Bohle Tablet Coater #9, identified as S42, approved for construction in 2013 consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1540 lbs of tablets per 36-hour batch, equipped with a packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-41.
- (b) One (1) Bohle Tablet Coater #10, identified as S43, approved for construction in 2013 consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1540 lbs of tablets per 36-hour batch, equipped with a packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-43.

Insignificant activities:

- (a) Pharmaceutical packaging line 3 identified as S-6 (Building 124), with a maximum capacity of 442 lbs/hr and controlled by a dust collector for PM identified as #29687. [326 IAC 6-3-2]
- (b) Pharmaceutical packaging lines 8, 9, 11, 12, and 14 identified as S-6 (Building 124), with a maximum capacity of 3236 lbs/hr. Packaging lines 8, 9, 11, and 14 are controlled by a common dust collector for PM identified as #212021 and line 12 is controlled by a separate dust collector for PM identified as #212022. [326 IAC 6-3-2]
- (c) One (1) Central Vacuum System, located in Building 124, and controlled by fabric filter dust collector #212023 [326 IAC 6-3-2].

- (d) One (1) Granulator and one (1) GEA fluid-bed dryer for aqueous wet granulations located in Building 124, approved for construction in 2013, with a maximum capacity of 290 lbs/hr. Granulator and fluid-bed dryer controlled by a common Flanders pre-filter #185069-001 and Flanders HEPA filter #185069-501A. [326 IAC 6-3-2]
- (e) Tablet core press machine and room exhaust located in Building 123, Room 1142, with a maximum capacity of 844 lbs/hr, approved for construction in 2013 controlled by Camfil-Farr dust collector #188918 and Camfil-Farr HEPA filter #188918-501. [326 IAC 6-3-2]
- (f) Tablet core press machine and room exhaust located in Building 123, Room 1144, with a maximum capacity of 198 lbs/hr, approved for construction in 2013 controlled by Camfil-Farr dust collector #188934 and Camfil-Farr HEPA filter #188934-501. [326 IAC 6-3-2]
- (g) Tablet core press machine and room exhaust located in Building 123, Room 1205, with a maximum capacity of 840 lbs/hr, approved for construction in 2013 controlled by Camfil-Farr dust collector #188951 and Camfil-Farr HEPA filter #188951-501. [326 IAC 6-3-2]
- (h) Bin Charging system located in building 123, with a maximum capacity of 800 lbs/hr, approved for construction in 2013 controlled by Torit fabric filter dust collector #189081 and Flanders HEPA filter #189081-703.
- (i) Tablet coating unit (Thomas Flex 500) located in Building 123, with a maximum capacity (spray rate) of 106 lbs/hr, approved for construction in 2013 controlled by Torit fabric filter dust collector # 191670.
- (j) Tablet printing operations with a maximum capacity of 6 batches of tablets per day approved for construction in 2013, located in buildings 121, 122, 123 and 124.

The following VOC storage containers:

- (a) One (1) 2,600 gallon above ground storage tank containing diesel fuel oil, located in Building 121.
- (b) One (1) 5,200 gallon above ground storage tank containing diesel fuel oil, approved for construction in 2011, located at Building 122, and connected to Building 122 emergency generator S35.

All other conditions of the permit shall remain unchanged and in effect. Attached please find the entire revised permit.

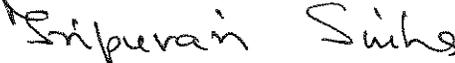
A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.idem.in.gov](http://www.idem.in.gov)

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Diya Bhattacharjee of my staff at 317-234-5372 or 1-800-451-6027, and ask for extension 5372.

Bristol-Myers Squibb Company  
Mt. Vernon, Indiana  
Permit Reviewer: Diya Bhattacharjee

Page 3 of 3  
Administrative Amendment No. 129-33093-00021

Sincerely,

  
Tripuran P. Sinha, Ph. D., Section Chief  
Permits Branch  
Office of Air Quality

Attachments: Updated Permit  
Technical Support Document  
PTE Calculations

TS /DB

cc: File - Posey County  
Posey County Health Department  
U.S. EPA, Region V  
Compliance and Enforcement Branch



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## Significant Permit Revision to a FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) OFFICE OF AIR QUALITY

**Bristol - Myers Squibb Company  
4601 Highway 62 East  
Mt. Vernon, Indiana 47620**

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

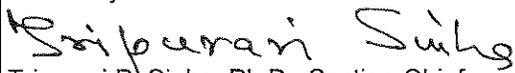
**The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. It shall not be a defense for the Permittee in 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.**

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

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 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: F129-23109-00021	
Original issued by: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: October 13, 2006  Expiration Date: October 13, 2016

First Administrative Amendment No.: F129-23837-00021, issued December 11, 2006  
Second Administrative Amendment No.: F129-25055-00021, issued August 15, 2007  
First Minor Permit Revision No.: F129-25293-00021, issued October 11, 2007  
Third Administrative Amendment No.: 129-25798-00021, issued January 18, 2008  
Fourth Administrative Amendment No.: 129-26840-00021, issued August 27, 2008  
Fifth Administrative Amendment No.: 129-27177-00021, issued December 15, 2008  
Second Minor Permit Revision No.: 129-27491-00021, issued April 2, 2009  
Third Minor Permit Revision No.: 129-28270-00021, issued September 8, 2009  
Sixth Administrative Amendment No.: 129-30022-00021, issued February 10, 2011  
Fourth Minor Permit Revision No.: 129-30306-00021, issued April 14, 2011  
Fifth Minor Permit Revision No.: 129-31353-00021, issued February 28, 2012

Significant Permit Revision No. : 129-33093-00021	
Issued by:  Tripurari P. Sinha, Ph.D, Section Chief Permits Branch Office of Air Quality	Issuance Date: August 23, 2013  Expiration Date: October 13, 2016

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**40 CFR Part 63, Subpart ZZZZ**

## SECTION A SOURCE SUMMARY

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

### A.1 General Information [326 IAC 2-8-3(b)]

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The Permittee owns and operates a stationary pharmaceutical packaging and research and development source.

Source Address:	4601 Highway 62 East, Mt. Vernon, IN 47620
General Source Phone Number:	(812) 429-7906
SIC Code:	2834
County Location:	Posey
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

- (a) Two (2) natural gas fired boilers installed in 1970, identified as Boiler #1 (S1) and Boiler #2 (S2), each with a maximum heat input rate of 30.64 million (MM) British thermal units (Btu) per hour, and exhausting through stacks S-1 and S-2, respectively. Boilers #1 and #2 use No. 2 fuel oil as back-up fuel.
- (b) One (1) natural gas fired boiler installed in 2005, identified as Boiler #3 (S27), with a maximum heat input rate of 60.8 MMBtu per hour, and exhausting through stack S-27. Boiler #3 uses No. 2 fuel oil as back-up fuel.

This is an affected source under 40 CFR 60, Subpart Dc.

- (c) One (1) Bohle Tablet Coater #1, identified as S30, installed in 2006, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 880 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-30.
- (d) One (1) Bohle Tablet Coater #2, identified as S33, installed in 2009, consisting of single pan tablet coating machine and three coating suspension prep tanks, approved for construction in 2009, with a maximum production capacity of 880 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-33.
- (e) One (1) Bohle Tablet Coater #3, identified as S36, approved for construction in 2011, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-36.

- (f) One (1) Bohle Tablet Coater #4, identified as S37, approved for construction in 2011, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-37.
- (g) One (1) Bohle Tablet Coater #5, identified as S38, approved for construction in 2012, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-38.
- (h) One (1) Bohle Tablet Coater #6, identified as S39, approved for construction in 2012, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-39.
- (i) One (1) Bohle Tablet Coater #7, identified as S40, approved for construction in 2012, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-40.
- (j) One (1) Bohle Tablet Coater #8, identified as S41, approved for construction in 2012, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-41.
- (k) One (1) Bohle Tablet Coater #9, identified as S42, approved for construction in 2013 consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1540 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-41.
- (l) One (1) Bohle Tablet Coater #10, identified as S43, approved for construction in 2013 consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1540 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-43.

### A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(l)]

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

- (a) Other categories with emissions below insignificant thresholds (i.e. PM emissions less than 5 tons per year):
  - (1) One (1) Granulator and one (1) Glatt 120 fluid-bed dryer for aqueous wet granulations located in Building 122, Room 1119, installed in 1999, with a maximum capacity of 98 lbs/hr. Granulator controlled by Torit fabric filter/dust collector #29692 and fluid-bed dryer controlled by Torit fabric filter/dust collector #29693. [326 IAC 6-3-2]

- (2) Tablet core press machine located in Building 121, Room 116c, installed in 2001, with a maximum capacity of 80 lbs/hr, controlled by Torit fabric filter/dust collector #29698. [326 IAC 6-3-2]
- (3) Tablet coating unit (1-pan coater) located in Building 121, Room 116c, installed in 2001, with a maximum capacity of 50 lbs/hr, and controlled by Torit fabric filter/dust collector #34323. [326 IAC 6-3-2]
- (4) Dry material weighing, mixing and blending operations located in Building 121, Room 1019, identified as Small Weigh Room, installed in 2004, with a maximum capacity of 1237 lbs/hr, and controlled by Torit fabric/dust collector #29704. [326 IAC 6-3-2]
- (5) Tablet core press machine and room exhaust located in Building 121, Room 1014, installed in 2004, with a maximum capacity of 80 lbs/hr, and controlled by Mac fabric filter/dust collector #29706. [326 IAC 6-3-2]
- (6) Tablet coating unit (1-pan coater) located in Building 121, Room 1023, installed in 2004, with a maximum capacity of 50 lbs/hr, and controlled by Torit fabric filter/dust collector #29705. [326 IAC 6-3-2]
- (7) Pharmaceutical packaging line 3 identified as S-6 (Building 124), installed in 2004, with a maximum capacity of 442 lbs/hr and controlled by a dust collector for PM identified as #212021. [326 IAC 6-3-2]
- (8) Pharmaceutical packaging lines 8, 9, 11, 12, and 14 identified as S-6 (Building 124), installed in 2004, with a maximum capacity of 3236 lbs/hr. Packaging lines 8, 9, 11, and 14 are controlled by a common dust collector for PM identified as #212021 and line 12 is controlled by a separate dust collector for PM identified as #212022. [326 IAC 6-3-2]
- (9) Six (6) warm air tray dryers used to dry water-based granulations, located in Building 124, Room 1130, installed in 2009, with a maximum total capacity of 1,830 pounds per batch [326 IAC 6-3-2];
- (10) One (1) tablet core press machine, located in Building 122, Room 1106, installed in 1998, with maximum capacity of 165 pounds per hour, controlled by common fabric dust collector #260030807 [326 IAC 6-3-2];
- (11) One (1) tablet core press machine, located in Building 122, Room 1109, installed in 1998, with maximum capacity of 330 pounds per hour, controlled by common fabric dust collector #260030807[326 IAC 6-3-2];
- (12) One (1) tablet core press machine, located in Building 122, Room 1113, installed in 1998, with maximum capacity of 165 pounds per hour, controlled by common fabric dust collector #260030807[326 IAC 6-3-2];
- (13) One (1) Powder encapsulator machine, located in Building 122, Room 1123, installed in 2009, with a maximum powder throughput of 110 pounds per hour, and controlled by common fabric filter dust collector #29688 [326 IAC 6-3-2];
- (14) One (1) Powder encapsulator machine, located in Building 122, Room 1124, installed in 2009, with a maximum powder throughput of 185 pounds per hour, and controlled by common fabric filter dust collector #29688 [326 IAC 6-3-2];
- (15) One (1) Mac Central Vacuum System, located in Building 121, and

- controlled by fabric filter dust collector #29706, installed in 2004 [326 IAC 6-3-2];
- (16) One (1) Spencer Central Vacuum System, located in Building 122, and controlled by fabric filter dust collector #29688 and [326 IAC 6-3-2], installed in 1998; and
  - (17) One (1) Central Vacuum System, located in Building 124, and controlled by fabric filter dust collector #212023 [326 IAC 6-3-2], installed in 2008.
  - (18) One (1) Granulator and one (1) GEA fluid-bed dryer for aqueous wet granulations located in Building 124, approved for construction in 2013, with a maximum capacity of 290 lbs/hr. Granulator and fluid-bed dryer controlled by a common Flanders pre-filter #185069-001 and Flanders HEPA filter #185069-501A. [326 IAC 6-3-2]
  - (19) Tablet core press machine and room exhaust located in Building 123, Room 1142, with a maximum capacity of 844 lbs/hr, approved for construction in 2013 controlled by Camfil-Farr dust collector #188918 and Camfil-Farr HEPA filter #188918-501. [326 IAC 6-3-2]
  - (20) Tablet core press machine and room exhaust located in Building 123, Room 1144, with a maximum capacity of 198 lbs/hr, approved for construction in 2013 controlled by Camfil-Farr dust collector #188934 and Camfil-Farr HEPA filter #188934-501. [326 IAC 6-3-2]
  - (21) Tablet core press machine and room exhaust located in Building 123, Room 1205, with a maximum capacity of 840 lbs/hr, approved for construction in 2013 controlled by Camfil-Farr dust collector #188951 and Camfil-Farr HEPA filter #188951-501. [326 IAC 6-3-2]
  - (22) Bin Charging system located in building 123, with a maximum capacity of 800 lbs/hr, approved for construction in 2013 controlled by Torit fabric filter dust collector #189081 and Flanders HEPA filter #189081-703.
  - (23) Tablet coating unit (Thomas Flex 500) located in Building 123, with a maximum capacity (spray rate) of 106 lbs/hr, approved for construction in 2013 controlled by Torit fabric filter dust collector # 191670.
  - (24) Tablet printing operations located in buildings 121 and 123, with a maximum capacity of 6 batches of tablets per day approved for construction in 2013,
- (b) Cold solvent cleaning station (2 square feet) installed in 1970. [326 IAC 8-3-2] [326 IAC 8-3-5]
  - (c) Cold solvent cleaning station (3.75 square feet), installed in 1970. [326 IAC 8-3-2] [326 IAC 8-3-5]
  - (d) Emergency generators as follows:
    - (1) One (1) emergency diesel powered generator located in Building 104, identified as S-3, with heat input capacity of 4.4 MMBtu/hr, and exhausting through stack S-3. This generator was constructed before July 11, 2005 and manufactured before April 1, 2006.

Under 40 CFR Part 63, Subpart ZZZZ, this unit is considered an affected source.

- (2) One (1) emergency diesel powered fire pump located in Building 103, identified as S-7, with heat input capacity of 0.7 MMBtu/hr, and exhausting through stack S-7. This generator was constructed before July 11, 2005 and manufactured before April 1, 2006.

Under 40 CFR Part 63, Subpart ZZZZ, this unit is considered an affected source.

- (3) One (1) 700 kW diesel powered Caterpillar emergency generator located in Building 101, with a heat input capacity of 5.0 MMBtu/hr. This generator was constructed before July 11, 2005 and manufactured before April 1, 2006.

Under 40 CFR Part 63, Subpart ZZZZ, this unit is considered an affected source.

- (4) One (1) 1500kW reciprocating diesel engine-powered emergency generator located in Building 104, identified as S32, approved for construction in 2009, with a maximum capacity of 1500kW, and exhausting to Stack S-32.

Under 40 CFR Part 63, Subpart ZZZZ, this unit is considered an affected source.

Under 40 CFR Part 60, Subpart IIII, this unit is considered an affected source.

- (5) One (1) 350 kW diesel engine-driven emergency generator located in Building 106, identified as S34, approved for construction in 2011, with a maximum capacity of 350 kW and exhausting to Stack S34.

This unit is considered an affected source under 40 CFR Part 60, Subpart IIII and 40 CFR Part 63, Subpart ZZZZ.

- (6) One (1) 3,000 kW diesel engine-driven emergency generator located in Building 122, identified as S35, approved for construction in 2011, with a maximum capacity of 3,000 kW, and exhausting to Stack S-35.

This unit is considered an affected source under 40 CFR Part 60, Subpart IIII and 40 CFR Part 63, Subpart ZZZZ.

- (e) The following VOC storage containers:

- (1) One (1) 20,000 gallon aboveground storage tank containing No. 2 fuel oil, installed in 1997.
- (2) One (1) 1,130 gallon aboveground storage tank containing gasoline, installed in 1980.
- (3) One (1) 1,130 gallon aboveground storage tank containing diesel fuel, installed in 1980.
- (4) One (1) 100 gallon aboveground storage tank containing diesel fuel, installed in 1970.
- (5) One (1) 270 gallon aboveground storage tank containing diesel fuel, installed in 1970.
- (6) One (1) 650 gallon aboveground storage tank containing diesel fuel, installed in 2002.

- (7) One (1) 2,600 gallon above ground storage tank containing diesel fuel oil, located in Building 104, installed in 2009.
- (8) One (1) 775 gallon above ground storage tank containing diesel fuel oil, located at Building 106 and connected to Building 106 emergency generator S34, installed in 2011.
- (9) One (1) 5,200 gallon above ground storage tank containing diesel fuel oil, approved for construction in 2011, located at Building 122, and connected to Building 122 emergency generator S35.
- (f) Light vehicle traffic on paved roads.
- (g) Research and development operations, installed in 1970.
- (h) A laboratory as defined in 326 IAC 2-7-1(21)(D), installed in 1970.
- (i) Paved and unpaved roads and parking lots with public access, installed in 1970.  
[326 IAC 6-4]

A.4 FESOP Applicability [326 IAC 2-8-2]

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This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

## **SECTION B GENERAL CONDITIONS**

### **B.1 Definitions [326 IAC 2-8-1]**

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

### **B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]**

- (a) This permit, F129-23109-00021, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

### **B.3 Term of Conditions [326 IAC 2-1.1-9.5]**

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

### **B.4 Enforceability [326 IAC 2-8-6] [IC 13-17-12]**

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

### **B.5 Severability [326 IAC 2-8-4(4)]**

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

### **B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]**

This permit does not convey any property rights of any sort or any exclusive privilege.

### **B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]**

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

### **B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]**

- (a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:

- (1) it contains a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1), and
  - (2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
  - (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

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

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
  - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
  - (2) The compliance status;
  - (3) Whether compliance was continuous or intermittent;
  - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
  - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

**B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]**

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

The Permittee shall implement the PMPs.

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

**B.12 Emergency Provisions [326 IAC 2-8-12]**

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- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, or Southwest Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or  
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)  
Facsimile Number: 317-233-6865  
Southwest Regional Office phone: (812) 380-2305; fax: (812) 380-2304.

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

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

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
  - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
  - (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or

contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

- (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
  - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
  - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
    - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
    - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

**B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]**

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- (a) All terms and conditions of permits established prior to F129-23109-00021 and issued pursuant to permitting programs approved into the state implementation plan have been either:
  - (1) incorporated as originally stated,
  - (2) revised, or
  - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

**B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]**

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The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

**B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]**

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- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
  - (1) That this permit contains a material mistake.
  - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
  - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

**B.16 Permit Renewal [326 IAC 2-8-3(h)]**

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- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
  - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
  - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) and (c) without a prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b)(1) and (c). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)(1) and (c).

- (b) Emission Trades [326 IAC 2-8-15(b)]  
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(b).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(c)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.19 Source Modification Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit

responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management  
Permit Administration and Support Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ no later than thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

## SECTION C

## SOURCE OPERATION CONDITIONS

Entire Source

### Emission Limitations and Standards [326 IAC 2-8-4(1)]

#### C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

#### C.2 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM) and greenhouse gases (GHGs), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (4) The potential to emit greenhouse gases (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e) per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

#### C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) 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.

**C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]**

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The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

**C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]**

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The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

**C.6 Fugitive Dust Emissions [326 IAC 6-4]**

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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).

**C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]**

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- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
  - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
  - (2) If there is a change in the following:
    - (A) Asbestos removal or demolition start date;
    - (B) Removal or demolition contractor; or
    - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue

MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**  
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

#### **Testing Requirements [326 IAC 2-8-4(3)]**

##### **C.8 Performance Testing [326 IAC 3-6]**

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- (a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

#### **Compliance Requirements [326 IAC 2-1.1-11]**

##### **C.9 Compliance Requirements [326 IAC 2-1.1-11]**

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The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

### **Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]**

#### **C.10 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]**

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Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

#### **C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]**

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- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

### **Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]**

#### **C.12 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]**

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If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

#### **C.13 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]**

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Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

- (a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
  - (1) initial inspection and evaluation;
  - (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or
  - (3) any necessary follow-up actions to return operation to normal or usual manner of operation.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
  - (1) monitoring results;
  - (2) review of operation and maintenance procedures and records; and/or
  - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall record the reasonable response steps taken.

**C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]**

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

**Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]**

**C.15 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]**

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following:

- (AA) All calibration and maintenance records.
- (BB) All original strip chart recordings for continuous monitoring instrumentation.
- (CC) Copies of all reports required by the FESOP permit.

Records of required monitoring information include the following:

- (AA) The date, place, as defined in this permit, and time of sampling or measurements.
- (BB) The dates analyses were performed.
- (CC) The company or entity that performed the analyses.
- (DD) The analytical techniques or methods used.
- (EE) The results of such analyses.
- (FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

- (b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.16 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B - Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.
- (b) The address for report submittal is:  
  
Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

- (d) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.
- (e) If the Permittee is a member of IDEM's Environmental Stewardship Program (ESP), the Permittee may report in the manner below for any reporting requirement except for Paragraph A of this condition:
- (1) Each report shall be submitted semi-annually, covering the period from April 1 to September 30 or October 1 to March 31.
  - (2) Each report, shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
  - (3) Each report shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
  - (4) The Permittee shall use the attached reporting forms or their equivalent.
  - (5) Each report shall be submitted to the address listed in paragraph (b) of this condition.

If the Permittee is removed from or withdraws from the ESP, the Permittee shall begin quarterly reporting according to paragraphs (a) through (e) of this condition and the condition(s) requiring the reporting. If the Permittee is removed from or withdraws from the ESP during the second quarter of a semi-annual period, the Permittee shall submit all reports for the first quarter of the period within thirty (30) days of the removal or withdrawal.

### **Stratospheric Ozone Protection**

#### **C.17 Compliance with 40 CFR 82 and 326 IAC 22-1**

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Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) Two (2) natural gas fired boilers installed in 1970, identified as Boiler #1 (S1) and Boiler #2 (S2), each with a maximum heat input rate of 30.64 million (MM) British thermal units (Btu) per hour, and exhausting through stacks S-1 and S-2, respectively. Boilers #1 and #2 use No. 2 fuel oil as back-up fuel.
- (b) One (1) natural gas fired boiler installed in 2005, identified as Boiler #3 (S27), with a maximum heat input rate of 60.8 MMBtu per hour, and exhausting through stack S-27. Boiler #3 uses No. 2 fuel oil as back-up fuel.

This is an affected source under 40 CFR 60, Subpart Dc.

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

### Emission Limitations and Standards [326 IAC 2-8-4(1)]

#### D.1.1 Particulate [326 IAC 6-2-3]

- (a) Pursuant to 326 IAC 6-2-3 (b) (Particulate Emission Limitations for Sources of Indirect Heating), PM emissions from Boilers #1 (S1) and #2 (S2), which were existing and in operation on or before June 8, 1972, shall be limited to 0.6 pounds of particulate matter per million British thermal units heat input based on the following equation:

$$Pt = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}}$$

where

C = 50 u/m<sup>3</sup>

Pt = emission rate limit (lbs/mmBtu)

Q = total source heat input capacity (mmBtu/hr)

N = number of stacks

a = plume rise factor (0.67)

h = stack height in feet. If a number of stacks of different heights exist, average stack height to represent "N" stacks shall be calculated by weighing each stack height with its particulate matter emission rate as follows:

$$h = \frac{\sum_{i=1}^N H_i \times p_{a_i} \times Q}{N}$$

$$\sum_{i=1} p_{a_i} \times Q$$

where: Pa = the actual controlled emissions rate in lb/mmBtu using the emission factor from AP-42 or stack test data. Stacks constructed after January 1, 1971, shall be credited with GEP stack height only. GEP stack height shall be calculated as specified in 326 IAC 1-7.

- (b) Pursuant to 326 IAC 6-2-4(a) (Particulate Matter Emission Limitations for Sources of Indirect Heating), PM emissions from Boiler 33 (S27) shall be limited to 0.312 pounds of particulate matter per million British thermal units heat input based on the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

where: Pt = pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input  
Q = Total source maximum operating capacity rating in MMBtu/hr heat input.

**D.1.2 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1] [326 IAC 7-2-1]**

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Pursuant to 326 IAC 7-1.1-2(a)(3) (Sulfur dioxide emission limitations) the SO<sub>2</sub> emissions from the Boilers #1 (S1), #2 (S2), and #3 (S27), rated at 30.64, 30.64, and 60.8 MMBtu/hr, respectively, shall not exceed five tenths (0.5) pounds per MMBtu heat input for distillate oil combustion.

**D.1.3 Fuel Usage Limitation [326 IAC 2-8-4]**

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Pursuant to 326 IAC 2-8-4(1), the following limits shall apply:

- (a) The total input of No. 2 fuel oil and No. 2 fuel oil equivalents to the two (2) 30.64 MMBtu/hr boilers #1 (S1) and #2 (S2), and one (1) 60.8 MMBtu/hr boiler #3 (S27), shall be limited to less than 4,230,000 U.S. gallons per twelve (12) consecutive month period with compliance determined at the end of each month. This usage limit is required to limit the potential to emit sulfur dioxide (SO<sub>2</sub>) from the source to less than 100 tons per 12 consecutive month period, with compliance determined at the end of each month.
- (b) Sulfur content of No. 2 distillate fuel oil shall not exceed 0.3% by weight.
- (c) For purposes of determining compliance with paragraph (a) of this condition, the following shall apply:
- Every one (1) million cubic feet of natural gas burned shall be equivalent to 14 gallons of No. 2 distillate fuel oil burned based on SO<sub>2</sub> emissions, such that the total usage of No. 2 distillate fuel oil with a maximum sulfur content of 0.3% and No. 2 oil equivalent input does not exceed the limit specified.

Compliance with this condition makes the requirements of 326 IAC 2-7 (Part 70) not applicable to the source.

**D.1.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]**

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A Preventive Maintenance Plan is required for these facilities and any control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

**Compliance Determination Requirements**

**D.1.5 Sulfur Dioxide Emissions and Sulfur Content**

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- (a) Compliance shall be determined utilizing one of the following options.
- (1) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million Btu heat input by:
- (A) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or

- (B) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
  - (i) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
  - (ii) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (2) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the boilers S-1, S-2, and S-27 using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (1) or (2) above shall not be refuted by evidence of compliance pursuant to the other method.

### **Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]**

#### **D.1.6 Visible Emissions Notations**

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- (a) Visible emission notations of the Boilers #1 (S1), #2 (S2), and #3 (S27) stack exhaust shall be performed once per day during normal daylight operations when exhausting to the atmosphere when combusting fuel oil. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response. Section C- Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

### **Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]**

#### **D.1.7 Record Keeping Requirements**

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- (a) To document the compliance status with Conditions D.1.2 and D.1.3, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO<sub>2</sub> emission limit and fuel oil equivalent usage limit established in Conditions D.1.2 and D.1.3.
  - (1) Calendar dates covered in the compliance determination period;
  - (2) Actual fuel oil usage and fuel oil equivalents for the month and twelve (12) consecutive month period;

- (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period, and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

- (4) Fuel supplier certifications.
- (5) The name of the fuel supplier; and
- (6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.
- (b) To document the compliance status with Condition D.1.6, the Permittee shall maintain daily records of visible emission notations of the boiler #1 (S1), boiler #2 (S2), and boiler #3 (S27) stack exhausts while combusting fuel oil. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).
- (c) To document the compliance status with Condition D.1.11(a), the Permittee shall keep records of the hours of periodic testing of No. 2 fuel oil in Boilers #1 (S1), #2 (S2), and #3 (S27).
- (d) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

#### D.1.8 Reporting Requirements

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If the Permittee is a member of IDEM's Environmental Stewardship Program (ESP) program, the Permittee may, submit reports summarizing the information to document compliance with Condition D.1.3 according to the provisions of paragraph (e) of Section C General Reporting Requirements.

Otherwise, a quarterly summary of the information to document the compliance status with Condition D.1.3 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an authorized individual as defined by 326 IAC 2-1.1-1(1)

#### **New Source Performance Standards (NSPS) Requirements [326 IAC 12-1]**

##### D.1.9 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR Part 60, Subpart A]

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The provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the 60.8 MMBtu per hour heat input boiler #3 (S27) described in this section except when otherwise specified in 40 CFR Part 60, Subpart Dc.

##### D.1.10 Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units [40 CFR Part 60, Subpart Dc]

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Pursuant to 40 CFR Part 60, Subpart Dc, the Permittee shall comply with the provisions of the National Source Performance Standards for Small Industrial-Commercial- Institutional Steam Generating Units, as specified as follows.

#### **§ 60.40c Applicability and delegation of authority.**

- (a) Except as provided in paragraph (d) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced

after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million Btu per hour (Btu/hr)) or less, but greater than or equal to 2.9 MW (10 million Btu/hr).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, § 60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units which meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO<sub>2</sub>) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§ 60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in § 60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under § 60.14.

(g) Any facility covered by an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBB of this part is not covered by this subpart.

### **§ 60.41c Definitions.**

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

*Annual capacity factor* means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

*Coal* means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388-77, 90, 91, 95, or 98a, Standard Specification for Classification of Coals by Rank (IBR--see Sec. 60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

*Coal refuse* means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

*Cogeneration steam generating unit* means a steam generating unit that simultaneously produces both electrical (or mechanical) and thermal energy from the same primary energy source.

*Combined cycle system* means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

*Combustion research* means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (i.e., the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

*Conventional technology* means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology. *Distillate oil* means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396-78, 89, 90, 92, 96, or 98, "Standard Specification for Fuel Oils" (incorporated by reference -- see § 60.17).

*Dry flue gas desulfurization technology* means a sulfur dioxide (SO<sub>2</sub>) control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

*Duct burner* means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

*Emerging technology* means any SO<sub>2</sub> control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under § 60.48c(a)(4).

*Federally enforceable* means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR Parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

*Fluidized bed combustion technology* means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

*Fuel pretreatment* means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

*Heat input* means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

*Heat transfer medium* means any material that is used to transfer heat from one point to another point.

*Maximum design heat input capacity* means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

*Natural gas* means (1) a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane, or (2) liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835-86, 87, 91, or 97, "Standard Specification for Liquefied Petroleum Gases" (incorporated by reference -- see § 60.17).

*Noncontinental area* means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

*Oil* means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

*Potential sulfur dioxide emission rate* means the theoretical SO<sub>2</sub> emissions (nanograms per joule [ng/J], or pounds per million Btu [lb/million Btu] heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

*Process heater* means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

*Residual oil* means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396-78, 89, 90, 92, 96, or 98, "Standard Specification for Fuel Oils" (incorporated by reference -- see § 60.17).

*Steam generating unit* means a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

*Steam generating unit operating day* means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

*Wet flue gas desulfurization technology* means an SO<sub>2</sub> control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

*Wet scrubber system* means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of particulate matter (PM) or SO<sub>2</sub>.

*Wood* means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

#### **§ 60.42c Standard for sulfur dioxide.**

(d) On and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO<sub>2</sub> in excess of 215 ng/J (0.50 lb/million Btu) heat input; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

(f) Reduction in the potential SO<sub>2</sub> emission rate through fuel pretreatment is not credited toward the percent reduction requirement under paragraph (b)(2) of this section unless:

(1) Fuel pretreatment results in a 50 percent (0.50) or greater reduction in the potential SO<sub>2</sub> emission rate; and

(2) Emissions from the pretreated fuel (without either combustion or post-combustion SO<sub>2</sub> control) are equal to or less than the emission limits specified under paragraph (b)(2) of this section.

(g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.

(h) For affected facilities listed under paragraphs (h)(1), (2), or (3) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under § 60.48c(f)(1), (2), or (3), as applicable.

(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 million Btu/hr).

(i) The SO<sub>2</sub> emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(j) Only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from wood or other fuels or heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

#### **§ 60.43c Standard for particulate matter.**

(c) On and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 million Btu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.

#### **§ 60.44c Compliance and performance test methods and procedures for sulfur dioxide.**

(a) Except as provided in paragraphs (g) and (h) of this section and in § 60.8(b), performance tests required under § 60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. Section 60.8(f) does not apply to this section. The 30-day notice required in § 60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under § 60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under § 60.46c(d)(2).

(h) For affected facilities subject to § 60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO<sub>2</sub> standards based on fuel supplier certification, the performance test shall consist of the certification, the certification from the fuel supplier, as described under § 60.48c(f)(1), (2), or (3), as applicable.

#### **§ 60.45c Compliance and performance test methods and procedures for particulate matter.**

(c) Units that burn only oil containing no more than 0.5 weight percent sulfur or liquid or gaseous fuels with potential sulfur dioxide emission rates of 230 ng/J (0.54 lb/MMBtu) heat input or less are not required to conduct emissions monitoring if they maintain fuel supplier certifications of the sulfur content of the fuels burned.

#### **§ 60.46c Emission monitoring for sulfur dioxide**

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to § 60.42c(h)(1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO<sub>2</sub> standards based on fuel supplier certification, as described under § 60.48c(f) (1), (2), or (3), as applicable.

**§ 60.47c Emission monitoring for particulate matter.**

(c) Units that burn only oil that contains no more than 0.5 weight percent sulfur or liquid or gaseous fuels with potential sulfur dioxide emission rates of 230 ng/J (0.54 lb/MMBtu) heat input or less are not required to conduct PM emissions monitoring if they maintain fuel supplier certifications of the sulfur content of the fuels burned.

**§ 60.48c Reporting and recordkeeping requirements.**

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup, as provided by § 60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any Federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under § 60.42c, or § 60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling SO<sub>2</sub> emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of § 60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(d) The owner or operator of each affected facility subject to the SO<sub>2</sub> emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.42c shall submit reports to the Administrator.

(e) The owner or operator of each affected facility subject to the SO<sub>2</sub> emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.43c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average SO<sub>2</sub> emission rate (ng/J or lb/million Btu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent of potential SO<sub>2</sub> emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), or (3) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

- (i) The name of the oil supplier; and
- (ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in § 60.41c.

(2) For residual oil:

- (i) The name of the oil supplier;
- (ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;
- (iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and
- (iv) The method used to determine the sulfur content of the oil.

(g) The owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each day. The owner or operator of an affected facility that only burns very low sulfur fuel oil or other liquid or gaseous fuels with potential sulfur dioxide emissions rate of 140 ng/J (0.32 lb/MMBtu) heat input or less shall record and maintain records of the fuels combusted during each calendar month.

(h) The owner or operator of each affected facility subject to a Federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under § 60.42c or § 60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30<sup>th</sup> day following the end of each reporting period.

### **National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 20-1]**

#### **D.1.11 NESHAP for Area Sources: Industrial, Commercial, and Institutional Boilers [40 CFR Part 63, Subpart JJJJJJ]**

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In order to render the requirements of 40 CFR 63, Subpart JJJJJJ not applicable and to ensure the three (3) boilers, identified as Boiler #1 (S1), #2 (S2), and #3 (S27) are gas-fired boilers, as defined in 40 CFR 63.11237, the Permittee shall comply with following:

- (a) The three (3) existing boilers, identified as Boiler #1 (S1), #2 (S2), and #3 (S27) shall only combust No. 2 fuel oil during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year for each boiler.
- (b) For the purposes of this condition and pursuant to 40 CFR 63.11237, a period of natural gas curtailment or supply interruption means a period of time during which the supply of natural gas to an affected facility is halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established

for curtailment purposes does not constitute a reason that is under the control of a facility for the purposes of this definition. An increase in the cost or unit price of natural gas does not constitute a period of natural gas curtailment or supply interruption.

Compliance with these limits shall render the requirements of 40 CFR 63, Subpart JJJJJJ (National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources) not applicable.

## SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (c) One (1) Bohle Tablet Coater #1, identified as S30, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 880 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-30.
- (d) One (1) Bohle Tablet Coater #2, identified as S33, consisting of single pan tablet coating machine and three coating suspension prep tanks, approved for construction in 2009, with a maximum production capacity of 880 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-33.
- (e) One (1) Bohle Tablet Coater #3, identified as S36, approved for construction in 2011, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-36.
- (f) One (1) Bohle Tablet Coater #4, identified as S37, approved for construction in 2011, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-37.
- (g) One (1) Bohle Tablet Coater #5, identified as S38, approved for construction in 2012, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-38.
- (h) One (1) Bohle Tablet Coater #6, identified as S39, approved for construction in 2012, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-39.
- (i) One (1) Bohle Tablet Coater #7, identified as S40, approved for construction in 2012, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-40.
- (j) One (1) Bohle Tablet Coater #8, identified as S41, approved for construction in 2012, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-41.
- (k) One (1) Bohle Tablet Coater #9, identified as S42, approved for construction in 2013 consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1540 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-41.
- (l) One (1) Bohle Tablet Coater #10, identified as S43, approved for construction in 2013 consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1540 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-43.

(The information describing the process contained in this emissions unit description box is descriptive

information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-8-4(1)]**

**D.2.1 Particulate [326 IAC 6-3-2]**

- (a) Pursuant to 326 IAC 6-3-2(e)(2) (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the Bohle Tablet Coaters S36, S37, S38, S39, S40, S41, S42 and S43 shall each be limited to 0.551 lbs/hr when operating at a process weight rate of equal to or less than 100 lb/hr.

**Compliance Determination Requirements**

**D.2.2 Particulate Matter (PM) [326 IAC 2-8-5(a)(4)]**

In order to comply with Condition D.2.1, the fluidized packed-bed scrubbers for PM control shall be in operation at all times when the eight (8) Bohle Tablet Coaters, identified as S36, S37, S38, S39, S40, S41, S42, and S43 are in operation. The fluidized packed-bed scrubbers shall be operated in accordance with good engineering practice and in such manner to comply with Condition D.2.1.

**Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]**

**D.2.3 Scrubber Detection**

In the event that a scrubber malfunction has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

### SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

#### Emissions Unit Description:

##### Insignificant Activities:

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

- (a) Other categories with emissions below insignificant thresholds (i.e. PM emissions less than 5 tons per year):
  - (1) One (1) Granulator and one (1) Glatt 120 fluid-bed dryer for aqueous wet granulations located in Building 122, Room 1119, with a maximum capacity of 98 lbs/hr. Granulator controlled by Torit fabric filter/dust collector #29692 and fluid-bed dryer controlled by Torit fabric filter/dust collector #29693. [326 IAC 6-3-2]
  - (2) Tablet core press machine located in Building 121, Room 116c, with a maximum capacity of 80 lbs/hr, controlled by Torit fabric filter/dust collector #29698. [326 IAC 6-3-2]
  - (3) Tablet coating unit (1-pan coater) located in Building 121, Room 116c, with a maximum capacity of 50 lbs/hr, and controlled by Torit fabric filter/dust collector #34323. [326 IAC 6-3-2]
  - (4) Dry material weighing, mixing and blending operations located in Building 121, Room 1019, identified as Small Weigh Room, with a maximum capacity of 1237 lbs/hr, and controlled by Torit fabric/dust collector #29704. [326 IAC 6-3-2]
  - (5) Tablet core press machine and room exhaust located in Building 121, Room 1014, with a maximum capacity of 80 lbs/hr, and controlled by Mac fabric filter/dust collector #29706. [326 IAC 6-3-2]
  - (6) Tablet coating unit (1-pan coater) located in Building 121, Room 1023, with a maximum capacity of 50 lbs/hr, and controlled by Torit fabric filter/dust collector #29705. [326 IAC 6-3-2]
  - (7) Pharmaceutical packaging line 3 identified as S-6 (Building 124), with a maximum capacity of 442 lbs/hr and controlled by a dust collector for PM identified as #212021. [326 IAC 6-3-2]
  - (8) Pharmaceutical packaging lines 8, 9, 11, 12, and 14 identified as S-6 (Building 124), with a maximum capacity of 3236 lbs/hr. Packaging lines 8, 9, 11, and 14 are controlled by a common dust collector for PM identified as #212021 and line 12 is controlled by a separate dust collector for PM identified as #212022. [326 IAC 6-3-2]
  - (9) Six (6) warm air tray dryers used to dry water-based granulations, located in Building 124, Room 1130, with a maximum total capacity of 1,830 pounds per batch [326 IAC 6-3-2];
  - (10) One (1) tablet core press machine, located in Building 122, Room 1106, with maximum capacity of 165 pounds per hour, controlled by common fabric dust collector #260030807 [326 IAC 6-3-2];
  - (11) One (1) tablet core press machine, located in Building 122, Room 1109, with maximum capacity of 330 pounds per hour, controlled by common fabric

- dust collector #260030807[326 IAC 6-3-2];
- (12) One (1) tablet core press machine, located in Building 122, Room 1113, with maximum capacity of 165 pounds per hour, controlled by common fabric dust collector #260030807[326 IAC 6-3-2];
  - (13) One (1) Powder encapsulator machine, located in Building 122, Room 1123, with a maximum powder throughput of 110 pounds per hour, and controlled by common fabric filter dust collector #29688 [326 IAC 6-3-2];
  - (14) One (1) Powder encapsulator machine, located in Building 122, Room 1124, with a maximum powder throughput of 185 pounds per hour, and controlled by common fabric filter dust collector #29688 [326 IAC 6-3-2];
  - (15) One (1) Mac Central Vacuum System, located in Building 121, and controlled by fabric filter dust collector #29706[326 IAC 6-3-2];
  - (16) One (1) Spencer Central Vacuum System, located in Building 122, and controlled by fabric filter dust collector #29688 and [326 IAC 6-3-2]; and
  - (17) One (1) Central Vacuum System, located in Building 124, and controlled by fabric filter dust collector #2524446-1 [326 IAC 6-3-2].
  - (18) One (1) Granulator and one (1) GEA fluid-bed dryer for aqueous wet granulations located in Building 124, approved for construction in 2013, with a maximum capacity of 290 lbs/hr. Granulator and fluid-bed dryer controlled by a common Flanders pre-filter #185069-001 and Flanders HEPA filter #185069-501A. [326 IAC 6-3-2]
  - (19) Tablet core press machine and room exhaust located in Building 123, Room 1142, with a maximum capacity of 844 lbs/hr, approved for construction in 2013 controlled by Camfil-Farr dust collector #188918 and Camfil-Farr HEPA filter #188918-501. [326 IAC 6-3-2]
  - (20) Tablet core press machine and room exhaust located in Building 123, Room 1144, with a maximum capacity of 198 lbs/hr, approved for construction in 2013 controlled by Camfil-Farr dust collector #188934 and Camfil-Farr HEPA filter #188934-501. [326 IAC 6-3-2]
  - (21) Tablet core press machine and room exhaust located in Building 123, Room 1205, with a maximum capacity of 840 lbs/hr, approved for construction in 2013 controlled by Camfil-Farr dust collector #188951 and Camfil-Farr HEPA filter #188951-501. [326 IAC 6-3-2]
  - (22) Bin Charging system located in building 123, with a maximum capacity of 800 lbs/hr, approved for construction in 2013 controlled by Torit fabric filter dust collector #189081 and Flanders HEPA filter #189081-703.
  - (23) Tablet coating unit (Thomas Flex 500) located in Building 123, with a maximum capacity (spray rate) of 106 lbs/hr, approved for construction in 2013 controlled by Torit fabric filter dust collector # 191670.
  - (24) Tablet printing operations located in buildings 121 and 123, with a maximum capacity of 6 batches of tablets per day approved for construction in 2013,
- (b) Cold solvent cleaning station (2 square feet). [326 IAC 8-3-2] [326 IAC 8-3-5]

(c) Cold solvent cleaning station (3.75 square feet). [326 IAC 8-3-2] [326 IAC 8-3-5]

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

**Emission Limitations and Standards [326 IAC 2-8-4(1)]**

**D.3.1 Particulate [326 IAC 6-3-2]**

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the following Emission units shall be limited as follows:

Emission Unit	Process Weight Rate (lb/hr)	Process Weight Rate (tons/hr)	Allowable PM Emissions (326 IAC 6-3-2) (lb/hr)
Pharmaceutical Packaging Lines (Building 122)	442	0.221	1.49
Pharmaceutical Packaging Lines (Building 124)	3236	1.62	4.55
Small Weigh Room	1237	0.62	2.97
Granulator (Building 124 )	290	0.15	0.32
GEA fluid bed dryer (Building 124 )	290	0.15	0.32
Tablet Core Press (Building 123, Room 1142)	844	0.42	2.29
Tablet Core Press (Building 123, Room 1144)	198	0.099	0.87
Tablet Core Press (Building 121, Room 1205)	840	0.42	2.29
Tablet coater (Thomas Flex) (Building 123)	106	0.05	0.55
Bin charging system	800	0.4	2.22

The pounds per hour limitations were calculated using the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$  where E = rate of emission in pounds per hour;  
 and P = process weight rate in tons per hour.

**D.3.2 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [326 IAC 6-3-2(e)]**

Pursuant to 326 IAC 6-3-2(e), the allowable particulate emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

These include the Granulator, Glatt 120 fluid bed dryer, Tablet Coater (Building 121, Room 116c), Tablet Coater (1023), Tablet Core Press (Building 121, Room 116c), Tablet Core Press (Building 121, Room 1014), six (6) warm air tray dryers, one (1) tablet core press machine, located in Building 122, Room 1106, one (1) tablet core press machine, located in Building 122, Room 1109, one (1) tablet core press machine, located in Building 122, Room 1113, one (1) Powder

encapsulator machine, located in Building 122, Room 1123, one (1) Powder encapsulator machine, located in Building 122, Room 1124, one (1) Mac Central Vacuum System, located in Building 121, one (1) Spencer Central Vacuum System, located in Building 122, and one (1) Central Vacuum System, located in Building 124.

#### D.3.3 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for Immersion Cleaning Operation constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

#### D.3.4 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
  - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38<sup>o</sup>C) (one hundred degrees Fahrenheit (100<sup>o</sup>F));
  - (B) The solvent is agitated; or
  - (C) The solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38<sup>o</sup>C) (one hundred degrees Fahrenheit (100<sup>o</sup>F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
- (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
- (5) Equip the degreaser with one (1) of the following control devices if the solvent

volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):

- (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
  - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
  - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

## SECTION E.1

## FACILITY OPERATION CONDITIONS

### Emissions Unit Description:

#### Insignificant Activities:

(d) Emergency generators as follows:

- (4) One (1) 1500kW reciprocating diesel engine-powered emergency generator located in Building 104, identified as S32, approved for construction in 2009, with a maximum capacity of 1500kW, and exhausting to Stack S-32.
- (5) One (1) 350 kW diesel engine-driven emergency generator located in Building 106, identified as S34, approved for construction in 2011, with a maximum capacity of 350 kW and exhausting to Stack S34.
- (6) One (1) 3,000 kW diesel engine-driven emergency generator located in Building 122, identified as S35, approved for construction in 2011, with a maximum capacity of 3,000 kW, and exhausting to Stack S-35.

Under 40 CFR Part 60, Subpart IIII, these units are considered affected sources.

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

### New Source Performance Standards (NSPS) Requirements [326 IAC 12-1]

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

The provisions of 40 CFR Part 60, Subpart A-General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the emergency generators described in this section except when otherwise specified in 40 CFR Part 60, Subpart IIII.

#### E.1.2 Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [40 CFR Part 60, Subpart IIII]

Pursuant to 40 CFR Part 60, Subpart IIII, the Permittee shall comply with the provisions of the New Source Performance standards for Stationary Compression Ignition Internal Combustion Engines, as specified in the following (included as Attachment A of this permit):

- (1) 40 CFR 60.4200(a)(2)(i) and (c)
- (2) 40 CFR 60.4205
- (3) 40 CFR 60.4206
- (4) 40 CFR 60.4207(a), (b), and (c)
- (5) 40 CFR 60.4208
- (6) 40 CFR 60.4209(a)
- (7) 40 CFR 60.4211
- (8) 40 CFR 60.4214(b)
- (9) 40 CFR 60.4218
- (10) 40 CFR 60.4219
- (11) Tables 1 and 8

## SECTION E.2

## FACILITY OPERATION CONDITIONS

### Emissions Unit Description:

#### Insignificant Activities:

(d) Emergency generators as follows:

- (1) One (1) emergency diesel powered generator located in Building 104, identified as S-3, with heat input capacity of 4.4 MMBtu/hr, and exhausting to stack S-3. This generator was constructed before July 11, 2005 and manufactured before April 1, 2006.
- (2) One (1) emergency diesel powered fire pump located in Building 103, identified as S-7, with a heat input capacity of 0.7 MMBtu/hr, and exhausting to stack S-7. This generator was constructed before July 11, 2005 and manufactured before April 1, 2006.
- (3) One (1) 700 kW diesel powered Caterpillar emergency generator located in Building 101, with a heat input capacity of 5.0 MMBtu/hr. This generator was constructed before July 11, 2005 and manufactured before April 1, 2006.
- (4) One (1) 1500kW reciprocating diesel engine-powered emergency generator located in Building 104, identified as S32, approved for construction in 2009, with a maximum capacity of 1500kW, and exhausting to Stack S-32.
- (5) One (1) 350 kW diesel engine-driven emergency generator located in Building 106, identified as S34, approved for construction in 2011, with a maximum capacity of 350 kW and exhausting to Stack S34.
- (6) One (1) 3,000 kW diesel engine-driven emergency generator located in Building 122, identified as S35, approved for construction in 2011, with a maximum capacity of 3,000 kW, and exhausting to Stack S-35.

Under 40 CFR Part 63, Subpart ZZZZ, these units are considered affected sources.

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

### National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines [326 IAC 20-1][40 CFR 63]

#### E.2.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines [326 IAC 20-1] [40 CFR Part 63]

The provisions of 40 CFR Part 63, Subpart A-General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to the emergency generators described in this section except when otherwise specified in 40 CFR Part 63, Subpart ZZZZ.

#### E.2.2 NESHAP for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ]

- (a) The diesel fired emergency generators, identified as S32, S34, and S35 are subject to the requirements of the 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary reciprocating internal combustion engine (RICE), which are incorporated by reference as 326 IAC 20-82, except as

otherwise specified in 40 CFR Part 63, Subpart ZZZZ (included as Attachment B of this permit):

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585
- (3) 40 CFR 63.6590(a)(2)(iii) and (c)(1)
- (4) 40 CFR 63.6595(a)(7)
- (5) 40 CFR 63.6665
- (6) 40 CFR 63.6670
- (7) 40 CFR 63.6675

- (b) The diesel fired emergency generators, identified as S-3, S-7, and 700 kW diesel powered Caterpillar are subject to the requirements of the 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary reciprocating internal combustion engine (RICE), which are incorporated by reference as 326 IAC 20-82, except as otherwise specified in 40 CFR Part 63, Subpart ZZZZ (included as Attachment B of this permit):

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585
- (3) 40 CFR 63.6590(a)(1)(iii)
- (4) 40 CFR 63.6595(a)(1), (b), and (c)
- (5) 40 CFR 63.6603
- (6) 40 CFR 63.6605
- (7) 40 CFR 63.6625(e)(3), (f), (h), and (i)
- (8) 40 CFR 63.6635
- (9) 40 CFR 63.6640
- (10) 40 CFR 63.6645(a)(5)
- (11) 40 CFR 63.6650
- (12) 40 CFR 63.6655
- (13) 40 CFR 63.6660
- (14) 40 CFR 63.6665
- (15) 40 CFR 63.6670
- (16) 40 CFR 63.6675
- (17) Table 2d (item 4)
- (18) Table 6 (item 9)
- (19) Table 8

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

### FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Bristol - Myers Squibb Company  
Source Address: 4601 Highway 62 East, Mt. Vernon, IN 47620  
FESOP No.: 129-23109-00021

**This certification shall be included when submitting monitoring, testing reports/results  
or other documents as required by this permit.**

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify) \_\_\_\_\_
- Report (specify) \_\_\_\_\_
- Notification (specify) \_\_\_\_\_
- Affidavit (specify) \_\_\_\_\_
- Other (specify) \_\_\_\_\_

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
Phone: 317-233-0178  
Fax: 317-233-6865**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
EMERGENCY OCCURRENCE REPORT**

Source Name: Bristol - Myers Squibb Company  
Source Address: 4601 Highway 62 East, Mt. Vernon, IN 47620  
FESOP No.: 129-23109-00021

**This form consists of 2 pages**

**Page 1 of 2**

<input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12) <ul style="list-style-type: none"><li>• The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance and Enforcement Branch); and</li><li>• The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16</li></ul>
--

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency?    Y    N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE AND ENFORCEMENT BRANCH**

**FESOP Report**

Source Name: Bristol - Myers Squibb Company  
 Source Address: 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
 FESOP No.: 129-23109-00021  
 Facility: Two (2) 30.64 MMBtu per hour boilers #1 (S1) and #2 (S-2), and one (1) 60.8 MMBtu per hour boiler #3 (S27)  
 Parameter: No. 2 fuel oil and No. 2 fuel oil equivalent usage limit to limit SO<sub>2</sub> emissions  
 Limit: Total input of No. 2 distillate fuel oil and No. 2 distillate fuel oil equivalents to boilers #1 (S1), #2 (S2), and #3 (S27) shall be limited to 4,230,000 U.S. gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. This is equivalent to SO<sub>2</sub> emissions of 90.10 tons per year from boilers #1 (S1), #2 (S2), and #3 (S27) and less than 100 tons per year from the entire source.

YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	No. 2 Distillate Fuel Oil and Equivalent Usage This Month	No. 2 Distillate Fuel Oil and Equivalent Usage Previous 11 Months	12 Month Total No. 2 Distillate Fuel Oil and Equivalent Usage
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: \_\_\_\_\_

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Bristol - Myers Squibb Company  
Source Address: 4601 Highway 62 East, Mt. Vernon, IN 47620  
FESOP No.: 129-23109-00021

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

Page 1 of 2

<p>This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B - Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C - General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".</p>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

Submitted by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

## **ATTACHMENT A**

### **New Source Performance Standards (NSPS)**

#### **Stationary Compression Ignition Internal Combustion Engines (40 CFR Part 60, Subpart III)**

**For**

**Bristol-Myers Squibb Company  
4601 Highway 62 East  
Mount Vernon, Indiana 47620**

**Source:** 71 FR 39172, July 11, 2006, unless otherwise noted.

#### **What This Subpart Covers**

##### **§ 60.4200 Am I subject to this subpart?**

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (3) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

(i) 2007 or later, for engines that are not fire pump engines,

(ii) The model year listed in table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005 where the stationary CI ICE are:

(i) Manufactured after April 1, 2006 and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of stationary CI ICE that modify or reconstruct their stationary CI ICE after July 11, 2005.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

(d) Stationary CI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR part 89, subpart J and 40 CFR part 94, subpart J, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

## Emission Standards for Manufacturers

### § 60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 through 2010 model year non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(c) Stationary CI internal combustion engine manufacturers must certify their 2011 model year and later non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same maximum engine power.

(d) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power.

### § 60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

(1) For engines with a maximum engine power less than 37 KW (50 HP):

(i) The certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants for model year 2007 engines, and

(ii) The certification emission standards for new nonroad CI engines in 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, 40 CFR 1039.115, and table 2 to this subpart, for 2008 model year and later engines.

(2) For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section.

(1) For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(2) For 2011 model year and later, the certification emission standards for new nonroad CI engines for engines of the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants.

(c) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power.

(d) Beginning with the model years in table 3 to this subpart, stationary CI internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.

### **§ 60.4203 How long must my engines meet the emission standards if I am a stationary CI internal combustion engine manufacturer?**

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in §§60.4201 and 60.4202 during the useful life of the engines.

### **Emission Standards for Owners and Operators**

#### **§ 60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?**

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in §60.4201 for their 2007 model year and later stationary CI ICE, as applicable.

(c) Owners and operators of non-emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in paragraphs (c)(1) and (2) of this section.

(1) Reduce nitrogen oxides (NO<sub>x</sub>) emissions by 90 percent or more, or limit the emissions of NO<sub>x</sub> in the stationary CI internal combustion engine exhaust to 1.6 grams per KW-hour (g/KW-hr) (1.2 grams per HP-hour (g/HP-hr)).

(2) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

#### **§ 60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?**

(a) Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

(d) Owners and operators of emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in paragraphs (d)(1) and (2) of this section.

(1) Reduce NO<sub>x</sub> emissions by 90 percent or more, or limit the emissions of NO<sub>x</sub> in the stationary CI internal combustion engine exhaust to 1.6 grams per KW-hour (1.2 grams per HP-hour).

(2) Reduce PM emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

### **§ 60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?**

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.

### **Fuel Requirements for Owners and Operators**

### **§ 60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?**

(a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.

(c) Owners and operators of pre-2011 model year stationary CI ICE subject to this subpart may petition the Administrator for approval to use remaining non-compliant fuel that does not meet the fuel requirements of paragraphs (a) and (b) of this section beyond the dates required for the purpose of using up existing fuel inventories. If approved, the petition will be valid for a period of up to 6 months. If additional time is needed, the owner or operator is required to submit a new petition to the Administrator.

(d) Owners and operators of pre-2011 model year stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the Federal Aid Highway System may petition the Administrator for approval to use any fuels mixed with used lubricating oil that do not meet the fuel requirements of paragraphs (a) and (b) of this section. Owners and operators must demonstrate in their petition to the Administrator that there is no other place to use the lubricating oil. If approved, the petition will be valid for a period of up to 6 months. If additional time is needed, the owner or operator is required to submit a new petition to the Administrator.

(e) Stationary CI ICE that have a national security exemption under §60.4200(d) are also exempt from the fuel requirements in this section.

### **Other Requirements for Owners and Operators**

### **§ 60.4208 What is the deadline for importing or installing stationary CI ICE produced in the previous model year?**

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.

(b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

(c) After December 31, 2014, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 19 KW (25 HP) and less than 56 KW (75 HP) that do not meet the applicable requirements for 2013 model year non-emergency engines.

(d) After December 31, 2013, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 56 KW (75 HP) and less than 130 KW (175 HP) that do not meet the applicable requirements for 2012 model year non-emergency engines.

(e) After December 31, 2012, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 130 KW (175 HP), including those above 560 KW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engines.

(f) After December 31, 2016, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 560 KW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines.

(g) In addition to the requirements specified in §§60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (f) of this section after the dates specified in paragraphs (a) through (f) of this section.

(h) The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

#### **§ 60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?**

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211.

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine, you must install a non-resettable hour meter prior to startup of the engine.

(b) If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

#### **Compliance Requirements**

#### **§ 60.4210 What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?**

(a) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of less than 10 liters per cylinder to the emission standards specified in §60.4201(a) through (c) and §60.4202(a), (b) and (d) using the certification procedures required in 40 CFR part 89, subpart B, or 40 CFR part 1039, subpart C, as applicable, and must test their engines as specified in those parts. For the purposes of this subpart, engines certified to the standards in table 1 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89. For the purposes of this subpart, engines certified to the standards in table 4 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89, except that engines with NFPA nameplate power of less than 37 KW (50 HP) certified to model year 2011 or later standards shall be subject to the same requirements as engines certified to the standards in 40 CFR part 1039.

(b) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the emission standards specified in §60.4201(d) and §60.4202(c) using the certification procedures required in 40 CFR part 94 subpart C, and must test their engines as specified in 40 CFR part 94.

(c) Stationary CI internal combustion engine manufacturers must meet the requirements of 40 CFR 1039.120, 40 CFR 1039.125, 40 CFR 1039.130, 40 CFR 1039.135, and 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1039. Stationary CI internal combustion engine manufacturers must meet the corresponding provisions of 40 CFR part 89 or 40 CFR part 94 for engines that would be covered by that part if they were nonroad (including marine) engines. Labels on such engines must refer to stationary engines, rather than or in addition to nonroad or marine engines, as appropriate. Stationary CI internal combustion engine manufacturers must label their engines according to paragraphs (c)(1) through (3) of this section.

(1) Stationary CI internal combustion engines manufactured from January 1, 2006 to March 31, 2006 (January 1, 2006 to June 30, 2006 for fire pump engines), other than those that are part of certified engine families under the nonroad CI engine regulations, must be labeled according to 40 CFR 1039.20.

(2) Stationary CI internal combustion engines manufactured from April 1, 2006 to December 31, 2006 (or, for fire pump engines, July 1, 2006 to December 31 of the year preceding the year listed in table 3 to this subpart) must be labeled according to paragraphs (c)(2)(i) through (iii) of this section:

(i) Stationary CI internal combustion engines that are part of certified engine families under the nonroad regulations must meet the labeling requirements for nonroad CI engines, but do not have to meet the labeling requirements in 40 CFR 1039.20.

(ii) Stationary CI internal combustion engines that meet Tier 1 requirements (or requirements for fire pumps) under this subpart, but do not meet the requirements applicable to nonroad CI engines must be labeled according to 40 CFR 1039.20. The engine manufacturer may add language to the label clarifying that the engine meets Tier 1 requirements (or requirements for fire pumps) of this subpart.

(iii) Stationary CI internal combustion engines manufactured after April 1, 2006 that do not meet Tier 1 requirements of this subpart, or fire pumps engines manufactured after July 1, 2006 that do not meet the requirements for fire pumps under this subpart, may not be used in the U.S. If any such engines are manufactured in the U.S. after April 1, 2006 (July 1, 2006 for fire pump engines), they must be exported or must be brought into compliance with the appropriate standards prior to initial operation. The export provisions of 40 CFR 1068.230 would apply to engines for export and the manufacturers must label such engines according to 40 CFR 1068.230.

(3) Stationary CI internal combustion engines manufactured after January 1, 2007 (for fire pump engines, after January 1 of the year listed in table 3 to this subpart, as applicable) must be labeled according to paragraphs (c)(3)(i) through (iii) of this section.

(i) Stationary CI internal combustion engines that meet the requirements of this subpart and the corresponding requirements for nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in part 89, 94 or 1039, as appropriate.

(ii) Stationary CI internal combustion engines that meet the requirements of this subpart, but are not certified to the standards applicable to nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in part 89, 94 or 1039, as appropriate, but the words "stationary" must be included instead of "nonroad" or "marine" on the label. In addition, such engines must be labeled according to 40 CFR 1039.20.

(iii) Stationary CI internal combustion engines that do not meet the requirements of this subpart must be labeled according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230.

(d) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under parts 89, 94, or 1039 for that model year may certify any such family that contains both nonroad (including marine) and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts.

(e) Manufacturers of engine families discussed in paragraph (d) of this section may meet the labeling requirements referred to in paragraph (c) of this section for stationary CI ICE by either adding a separate label containing the information required in paragraph (c) of this section or by adding the words "and stationary" after the word "nonroad" or "marine," as appropriate, to the label.

(f) Starting with the model years shown in table 5 to this subpart, stationary CI internal combustion engine manufacturers must add a permanent label stating that the engine is for stationary emergency use only to each new emergency stationary CI internal combustion engine greater than or equal to 19 KW (25 HP) that meets all the emission standards for emergency engines in §60.4202 but does not meet all the emission standards for non-emergency engines in §60.4201. The label must be added according to the labeling requirements specified in 40 CFR 1039.135(b). Engine manufacturers must specify in the owner's manual that operation of emergency engines is limited to emergency operations and required maintenance and testing.

(g) Manufacturers of fire pump engines may use the test cycle in table 6 to this subpart for testing fire pump engines and may test at the NFPA certified nameplate HP, provided that the engine is labeled as "Fire Pump Applications Only".

(h) Engine manufacturers, including importers, may introduce into commerce uncertified engines or engines certified to earlier standards that were manufactured before the new or changed standards took effect until inventories are depleted, as long as such engines are part of normal inventory. For example, if the engine manufacturers' normal industry practice is to keep on hand a one-month supply of engines based on its projected sales, and a new tier of standards starts to apply for the 2009 model year, the engine manufacturer may manufacture engines based on the normal inventory requirements late in the 2008 model year, and sell those engines for installation. The engine manufacturer may not circumvent the provisions of §§60.4201 or 60.4202 by stockpiling engines that are built before new or changed standards take effect. Stockpiling of such engines beyond normal industry practice is a violation of this subpart.

(i) The replacement engine provisions of 40 CFR 89.1003(b)(7), 40 CFR 94.1103(b)(3), 40 CFR 94.1103(b)(4) and 40 CFR 1068.240 are applicable to stationary CI engines replacing existing equipment that is less than 15 years old.

### **§ 60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?**

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. You must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in §§60.4204(a) or 60.4205(a), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) through (5) of this section.

(1) Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

(5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in §60.4212, as applicable.

(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's specifications.

(d) If you are an owner or operator and must comply with the emission standards specified in §60.4204(c) or §60.4205(d), you must demonstrate compliance according to the requirements specified in paragraphs (d)(1) through (3) of this section.

(1) Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in §60.4213.

(2) Establishing operating parameters to be monitored continuously to ensure the stationary internal combustion engine continues to meet the emission standards. The owner or operator must petition the Administrator for approval of operating parameters to be monitored continuously. The petition must include the information described in paragraphs (d)(2)(i) through (v) of this section.

(i) Identification of the specific parameters you propose to monitor continuously;

(ii) A discussion of the relationship between these parameters and NO<sub>x</sub> and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit NO<sub>x</sub> and PM emissions;

(iii) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(iv) A discussion identifying the methods and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(v) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(3) For non-emergency engines with a displacement of greater than or equal to 30 liters per cylinder, conducting annual performance tests to demonstrate continuous compliance with the emission standards as specified in §60.4213.

(e) Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. For owners and operators of emergency engines meeting standards under §60.4205 but not §60.4204, any operation other than emergency operation, and maintenance and testing as permitted in this section, is prohibited.

## Testing Requirements for Owners and Operators

### **§ 60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?**

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (d) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

$$\text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \quad (\text{Eq. 1})$$

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in §60.4213 of this subpart, as appropriate.

(d) Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in §60.4204(a), §60.4205(a), or §60.4205(c), determined from the equation in paragraph (c) of this section.

Where:

STD = The standard specified for that pollutant in §60.4204(a), §60.4205(a), or §60.4205(c).

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.

### **§ 60.4213 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?**

Owners and operators of stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must conduct performance tests according to paragraphs (a) through (d) of this section.

(a) Each performance test must be conducted according to the requirements in §60.8 and under the specific conditions that this subpart specifies in table 7. The test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c).

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must last at least 1 hour.

(d) To determine compliance with the percent reduction requirement, you must follow the requirements as specified in paragraphs (d)(1) through (3) of this section.

(1) You must use Equation 2 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (\text{Eq. 2})$$

Where:

$C_i$  = concentration of  $\text{NO}_x$  or PM at the control device inlet,

$C_o$  = concentration of  $\text{NO}_x$  or PM at the control device outlet, and

R = percent reduction of  $\text{NO}_x$  or PM emissions.

(2) You must normalize the  $\text{NO}_x$  or PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen ( $\text{O}_2$ ) using Equation 3 of this section, or an equivalent percent carbon dioxide ( $\text{CO}_2$ ) using the procedures described in paragraph (d)(3) of this section.

$$C_{\text{adj}} = C_d \frac{5.9}{20.9 - \% \text{O}_2} \quad (\text{Eq. 3})$$

Where:

$C_{\text{adj}}$  = Calculated  $\text{NO}_x$  or PM concentration adjusted to 15 percent  $\text{O}_2$ .

$C_d$  = Measured concentration of  $\text{NO}_x$  or PM, uncorrected.

5.9 = 20.9 percent  $\text{O}_2$  - 15 percent  $\text{O}_2$ , the defined  $\text{O}_2$  correction value, percent.

$\% \text{O}_2$  = Measured  $\text{O}_2$  concentration, dry basis, percent.

(3) If pollutant concentrations are to be corrected to 15 percent  $\text{O}_2$  and  $\text{CO}_2$  concentration is measured in lieu of  $\text{O}_2$  concentration measurement, a  $\text{CO}_2$  correction factor is needed. Calculate the  $\text{CO}_2$  correction factor as described in paragraphs (d)(3)(i) through (iii) of this section.

(i) Calculate the fuel-specific  $F_o$  value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209_{\text{H}}}{F_c} \quad (\text{Eq. 4})$$

Where:

$F_o$  = Fuel factor based on the ratio of  $O_2$  volume to the ultimate  $CO_2$  volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is  $O_2$ , percent/100.

$F_d$  = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19,  $dsf^3 / J$  ( $dscf/10^6$  Btu).

$F_c$  = Ratio of the volume of  $CO_2$  produced to the gross calorific value of the fuel from Method 19,  $dsf^3 / J$  ( $dscf/10^6$  Btu).

(ii) Calculate the  $CO_2$  correction factor for correcting measurement data to 15 percent  $O_2$ , as follows:

$$X_{CO_2} = \frac{5.9}{F_o} \quad (\text{Eq. 5})$$

Where:

$X_{CO_2}$  =  $CO_2$  correction factor, percent.

5.9 = 20.9 percent  $O_2$  - 15 percent  $O_2$ , the defined  $O_2$  correction value, percent.

(iii) Calculate the  $NO_x$  and PM gas concentrations adjusted to 15 percent  $O_2$  using  $CO_2$  as follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \quad (\text{Eq. 6})$$

Where:

$C_{adj}$  = Calculated  $NO_x$  or PM concentration adjusted to 15 percent  $O_2$ .

$C_d$  = Measured concentration of  $NO_x$  or PM, uncorrected.

$\%CO_2$  = Measured  $CO_2$  concentration, dry basis, percent.

(e) To determine compliance with the  $NO_x$  mass per unit output emission limitation, convert the concentration of  $NO_x$  in the engine exhaust using Equation 7 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{KW\text{-hour}} \quad (\text{Eq. 7})$$

Where:

ER = Emission rate in grams per KW-hour.

$C_d$  = Measured  $NO_x$  concentration in ppm.

$1.912 \times 10^{-3}$  = Conversion constant for ppm  $NO_x$  to grams per standard cubic meter at 25 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Brake work of the engine, in KW-hour.

(f) To determine compliance with the PM mass per unit output emission limitation, convert the concentration of PM in the engine exhaust using Equation 8 of this section:

$$ER = \frac{C_{adj} \times Q \times T}{KW\text{-hour}} \quad (\text{Eq. 8})$$

Where:

ER = Emission rate in grams per KW-hour.

$C_{adj}$  = Calculated PM concentration in grams per standard cubic meter.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Energy output of the engine, in KW.

### **Notification, Reports, and Records for Owners and Operators**

#### **§ 60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?**

(a) Owners and operators of non-emergency stationary CI ICE that are greater than 2,237 KW (3,000 HP), or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 130 KW (175 HP) and not certified, must meet the requirements of paragraphs (a)(1) and (2) of this section.

(1) Submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (a)(1)(i) through (v) of this section.

(i) Name and address of the owner or operator;

(ii) The address of the affected source;

(iii) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(iv) Emission control equipment; and

(v) Fuel used.

(2) Keep records of the information in paragraphs (a)(2)(i) through (iv) of this section.

(i) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(ii) Maintenance conducted on the engine.

(iii) If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

(iv) If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

(c) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

### **Special Requirements**

#### **§ 60.4215 What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?**

(a) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in §60.4205. Non-emergency stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder, must meet the applicable emission standards in §60.4204(c).

(b) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are not required to meet the fuel requirements in §60.4207.

#### **§ 60.4216 What requirements must I meet for engines used in Alaska?**

(a) Prior to December 1, 2010, owners and operators of stationary CI engines located in areas of Alaska not accessible by the Federal Aid Highway System should refer to 40 CFR part 69 to determine the diesel fuel requirements applicable to such engines.

(b) The Governor of Alaska may submit for EPA approval, by no later than January 11, 2008, an alternative plan for implementing the requirements of 40 CFR part 60, subpart IIII, for public-sector electrical utilities located in rural areas of Alaska not accessible by the Federal Aid Highway System. This alternative plan must be based on the requirements of section 111 of the Clean Air Act including any increased risks to human health and the environment and must also be based on the unique circumstances related to remote power generation, climatic conditions, and serious economic impacts resulting from implementation of 40 CFR part 60, subpart IIII. If EPA approves by rulemaking process an alternative plan, the provisions as approved by EPA under that plan shall apply to the diesel engines used in new stationary internal combustion engines subject to this paragraph.

#### **§ 60.4217 What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?**

(a) Owners and operators of stationary CI ICE that do not use diesel fuel, or who have been given authority by the Administrator under §60.4207(d) of this subpart to use fuels that do not meet the fuel requirements of paragraphs (a) and (b) of §60.4207, may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in §60.4202 or §60.4203 using such fuels.

(b) [Reserved]

## General Provisions

### § 60.4218 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.

Definitions

### § 60.4219 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the CAA and in subpart A of this part.

*Combustion turbine* means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

*Compression ignition* means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

*Diesel fuel* means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is number 2 distillate oil.

*Diesel particulate filter* means an emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.

*Emergency stationary internal combustion engine* means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc. Stationary CI ICE used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines.

*Engine manufacturer* means the manufacturer of the engine. See the definition of "manufacturer" in this section.

*Fire pump engine* means an emergency stationary internal combustion engine certified to NFPA requirements that is used to provide power to pump water for fire suppression or protection.

*Manufacturer* has the meaning given in section 216(1) of the Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for sale or resale.

*Maximum engine power* means maximum engine power as defined in 40 CFR 1039.801.

*Model year* means either:

(1) The calendar year in which the engine was originally produced, or

(2) The annual new model production period of the engine manufacturer if it is different than the calendar year. This must include January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year. For an engine that is

converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was originally produced.

*Other internal combustion engine* means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

*Reciprocating internal combustion engine* means any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work.

*Rotary internal combustion engine* means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

*Spark ignition* means relating to a gasoline, natural gas, or liquefied petroleum gas fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

*Stationary internal combustion engine* means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

*Subpart* means 40 CFR part 60, subpart IIII.

*Useful life* means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for useful life for stationary CI ICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101(g). The values for useful life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9(a).

**Table 1 to Subpart IIII of Part 60—Emission Standards for Stationary Pre-2007 Model Year Engines With a Displacement of <10 Liters per Cylinder and 2007–2010 Model Year Engines >2,237 KW (3,000 HP) and With a Displacement of <10 Liters per Cylinder**

[As stated in §§60.4201(b), 60.4202(b), 60.4204(a), and 60.4205(a), you must comply with the following emission standards]

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007–2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)				
	NMHC + NO <sub>x</sub>	HC	NO <sub>x</sub>	CO	PM
KW<8 (HP<11)	10.5 (7.8)			8.0 (6.0)	1.0 (0.75)
8≤KW<19 (11≤HP<25)	9.5 (7.1)			6.6 (4.9)	0.80 (0.60)
19≤KW<37 (25≤HP<50)	9.5 (7.1)			5.5 (4.1)	0.80 (0.60)
37≤KW<56 (50≤HP<75)			9.2 (6.9)		

56≤KW<75 (75≤HP<100)			9.2 (6.9)		
75≤KW<130 (100≤HP<175)			9.2 (6.9)		
130≤KW<225 (175≤HP<300)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
225≤KW<450 (300≤HP<600)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
450≤KW≤560 (600≤HP≤750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
KW>560 (HP>750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

**Table 2 to Subpart IIII of Part 60—Emission Standards for 2008 Model Year and Later Emergency Stationary CI ICE <37 KW (50 HP) With a Displacement of <10 Liters per Cylinder**

[As stated in §60.4202(a)(1), you must comply with the following emission standards]

Engine power	Emission standards for 2008 model year and later emergency stationary CI ICE <37 KW (50 HP) with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)			
	Model year(s)	NO <sub>x</sub> + NMHC	CO	PM
KW<8 (HP<11)	2008+	7.5 (5.6)	8.0 (6.0)	0.40 (0.30)
8≤KW<19 (11≤HP<25)	2008+	7.5 (5.6)	6.6 (4.9)	0.40 (0.30)
19≤KW<37 (25≤HP<50)	2008+	7.5 (5.6)	5.5 (4.1)	0.30 (0.22)

**Table 3 to Subpart IIII of Part 60—Certification Requirements for Stationary Fire Pump Engines**

[As stated in §60.4202(d), you must certify new stationary fire pump engines beginning with the following model years:]

Engine power	Starting model year engine manufacturers must certify new stationary fire pump engines according to §60.4202(d)
KW<75 (HP<100)	2011
75≤KW<130 (100≤HP<175)	2010
130≤KW≤560 (175≤HP≤750)	2009
KW>560 (HP>750)	2008

**Table 4 to Subpart IIII of Part 60—Emission Standards for Stationary Fire Pump Engines**

[As stated in §§60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

Maximum engine power	Model year(s)	NMHC + NO <sub>x</sub>	CO	PM
KW<8 (HP<11)	2010 and earlier	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
	2011+	7.5 (5.6)		0.40 (0.30)
8≤KW<19 (11≤HP<25)	2010 and earlier	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
	2011+	7.5 (5.6)		0.40 (0.30)
19≤KW<37 (25≤HP<50)	2010 and earlier	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)
	2011+	7.5 (5.6)		0.30 (0.22)
37≤KW<56 (50≤HP<75)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+ <sup>1</sup>	4.7 (3.5)		0.40 (0.30)
56≤KW<75 (75≤HP<100)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+ <sup>1</sup>	4.7 (3.5)		0.40 (0.30)
75≤KW<130 (100≤HP<175)	2009 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2010+ <sup>2</sup>	4.0 (3.0)		0.30 (0.22)
130≤KW<225 (175≤HP<300)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+ <sup>3</sup>	4.0 (3.0)		0.20 (0.15)
225≤KW<450 (300≤HP<600)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+ <sup>3</sup>	4.0 (3.0)		0.20 (0.15)
450≤KW≤560 (600≤HP≤750)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+	4.0 (3.0)		0.20 (0.15)
KW>560 (HP>750)	2007 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2008+	6.4 (4.8)		0.20 (0.15)

<sup>1</sup>For model years 2011–2013, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines.

<sup>2</sup>For model years 2010–2012, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.

<sup>3</sup>In model years 2009–2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.

**Table 5 to Subpart IIII of Part 60—Labeling and Recordkeeping Requirements for New Stationary Emergency Engines**

[You must comply with the labeling requirements in §60.4210(f) and the recordkeeping requirements in §60.4214(b) for new emergency stationary CI ICE beginning in the following model years:]

Engine power	Starting model year
19≤KW<56 (25≤HP<75)	2013
56≤KW<130 (75≤HP<175)	2012
KW≥130 (HP≥175)	2011

**Table 6 to Subpart IIII of Part 60—Optional 3-Mode Test Cycle for Stationary Fire Pump Engines**

[As stated in §60.4210(g), manufacturers of fire pump engines may use the following test cycle for testing fire pump engines:]

Mode No.	Engine speed <sup>1</sup>	Torque (percent) <sup>2</sup>	Weighting factors
1	Rated	100	0.30
2	Rated	75	0.50
3	Rated	50	0.20

<sup>1</sup>Engine speed: ±2 percent of point.

<sup>2</sup>Torque: NFPA certified nameplate HP for 100 percent point. All points should be ±2 percent of engine percent load value.

**Table 7 to Subpart IIII of Part 60—Requirements for Performance Tests for Stationary CI ICE With a Displacement of ≥30 Liters per Cylinder**

[As stated in §60.4213, you must comply with the following requirements for performance tests for stationary CI ICE with a displacement of ≥30 liters per cylinder:]

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary CI internal combustion engine with a displacement of ≥30 liters per cylinder	a. Reduce NO <sub>x</sub> emissions by 90 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O <sub>2</sub> at the inlet and outlet of the control device;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O <sub>2</sub> concentration must be made at the same time as the measurements

				for NO <sub>x</sub> concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and,	(3) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurements for NO <sub>x</sub> concentration.
		iv. Measure NO <sub>x</sub> at the inlet and outlet of the control device	(4) Method 7E of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	(d) NO <sub>x</sub> concentration must be at 15 percent O <sub>2</sub> , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	b. Limit the concentration of NO <sub>x</sub> in the stationary CI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O <sub>2</sub> concentration of the stationary internal combustion engine exhaust at the sampling port location; and,	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O <sub>2</sub> concentration must be made at the same time as the measurement for NO <sub>x</sub> concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and,	(3) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurement for NO <sub>x</sub> concentration.
		iv. Measure NO <sub>x</sub> at the exhaust of the stationary internal combustion engine	(4) Method 7E of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	(d) NO <sub>x</sub> concentration must be at 15 percent O <sub>2</sub> , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	c. Reduce PM emissions by 60 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O <sub>2</sub> at the inlet and outlet of the control device;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O <sub>2</sub> concentration must be made at the same time as the measurements for PM concentration.

		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(3) Method 4 of 40 CFR part 60, appendix A	(c) Measurements to determine and moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the inlet and outlet of the control device	(4) Method 5 of 40 CFR part 60, appendix A	(d) PM concentration must be at 15 percent O <sub>2</sub> , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	d. Limit the concentration of PM in the stationary CI internal combustion engine exhaust	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O <sub>2</sub> concentration of the stationary internal combustion engine exhaust at the sampling port location; and	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O <sub>2</sub> concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(3) Method 4 of 40 CFR part 60, appendix A	(c) Measurements to determine moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the exhaust of the stationary internal combustion engine	(4) Method 5 of 40 CFR part 60, appendix A	(d) PM concentration must be at 15 percent O <sub>2</sub> , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

**Table 8 to Subpart III of Part 60—Applicability of General Provisions to Subpart III**

[As stated in §60.4218, you must comply with the following applicable General Provisions:]

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4219.

§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4214(a).
§60.8	Performance tests	Yes	Except that §60.8 only applies to stationary CI ICE with a displacement of ( $\geq$ 30 liters per cylinder and engines that are not certified.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	No	Requirements are specified in subpart III.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	Yes	Except that §60.13 only applies to stationary CI ICE with a displacement of ( $\geq$ 30 liters per cylinder.
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

**Significant Permit Revision to a  
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)**

**Bristol-Myers Squibb Company,  
4601 Highway 62 East,  
Mt. Vernon, Indiana 47620**

**Attachment B**

**Title 40: Protection of Environment**

**[PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR  
POLLUTANTS FOR SOURCE CATEGORIES](#)**

**40 CFR 63, Subpart ZZZZ—National Emission Standards for  
Hazardous Air Pollutants for Stationary Reciprocating Internal  
Combustion Engines:**

**F129-33093-00021**

## ***What This Subpart Covers***

### **§ 63.6580 *What is the purpose of subpart ZZZZ?***

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

### **§ 63.6585 *Am I subject to this subpart?***

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

(f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in § 63.6675, which includes operating according to the provisions specified in § 63.6640(f).

(1) Existing residential emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in § 63.6640(f)(4)(ii).

(2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in § 63.6640(f)(4)(ii).

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in § 63.6640(f)(4)(ii).

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008; 78 FR 6700, Jan. 30, 2013]

## **§ 63.6590 What parts of my plant does this subpart cover?**

This subpart applies to each affected source.

(a) *Affected source.* An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) *Existing stationary RICE.*

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) *New stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) *Reconstructed stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in § 63.2 and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in § 63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in § 63.2 and reconstruction is commenced on or after June 12, 2006.

(b) *Stationary RICE subject to limited requirements.* (1) An affected source which meets either of the criteria in paragraphs (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of § 63.6645(f).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii).

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of § 63.6645(f) and the requirements of §§ 63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii).

(iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source;

(2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;

(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010; 78 FR 6700, Jan. 30, 2013]

### **§ 63.6595 When do I have to comply with this subpart?**

(a) *Affected sources.* (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations, operating limitations and other requirements no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in § 63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 78 FR 6701, Jan. 30, 2013]

## ***Emission and Operating Limitations***

### ***§ 63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?***

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE; an existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

**§ 63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?**

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

**§ 63.6602 What emission limitations and other requirements must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?**

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations and other requirements in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart.

[78 FR 6701, Jan. 30, 2013]

**§ 63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?**

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 2b to this subpart that apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meets either paragraph (b)(1) or (2) of this section, you do

not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. Existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meet either paragraph (b)(1) or (2) of this section must meet the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart.

(1) The area source is located in an area of Alaska that is not accessible by the Federal Aid Highway System (FAHS).

(2) The stationary RICE is located at an area source that meets paragraphs (b)(2)(i), (ii), and (iii) of this section.

(i) The only connection to the FAHS is through the Alaska Marine Highway System (AMHS), or the stationary RICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary RICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the area source is less than 12 megawatts, or the stationary RICE is used exclusively for backup power for renewable energy.

(c) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located on an offshore vessel that is an area source of HAP and is a nonroad vehicle that is an Outer Continental Shelf (OCS) source as defined in 40 CFR 55.2, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. You must meet all of the following management practices:

(1) Change oil every 1,000 hours of operation or annually, whichever comes first. Sources have the option to utilize an oil analysis program as described in § 63.6625(i) in order to extend the specified oil change requirement.

(2) Inspect and clean air filters every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(3) Inspect fuel filters and belts, if installed, every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(4) Inspect all flexible hoses every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.

(d) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and that is subject to an enforceable state or local standard that requires the engine to be replaced no later than June 1, 2018, you may until January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018, choose to comply with the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart instead of the applicable emission limitations in Table 2d, operating limitations in Table 2b, and crankcase ventilation system requirements in § 63.6625(g). You must comply with the emission limitations in Table 2d and operating limitations in Table 2b that apply for non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018. You must also comply with the crankcase ventilation system requirements in

§ 63.6625(g) by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018.

(e) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 3 (Tier 2 for engines above 560 kilowatt (kW)) emission standards in Table 1 of 40 CFR 89.112, you may comply with the requirements under this part by meeting the requirements for Tier 3 engines (Tier 2 for engines above 560 kW) in 40 CFR part 60 subpart IIII instead of the emission limitations and other requirements that would otherwise apply under this part for existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions.

(f) An existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP must meet the definition of remote stationary RICE in § 63.6675 on the initial compliance date for the engine, October 19, 2013, in order to be considered a remote stationary RICE under this subpart. Owners and operators of existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that meet the definition of remote stationary RICE in § 63.6675 of this subpart as of October 19, 2013 must evaluate the status of their stationary RICE every 12 months. Owners and operators must keep records of the initial and annual evaluation of the status of the engine. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE in § 63.6675 of this subpart, the owner or operator must comply with all of the requirements for existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that are not remote stationary RICE within 1 year of the evaluation.

[75 FR 9675, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6701, Jan. 30, 2013]

### **§ 63.6604 *What fuel requirements must I meet if I own or operate a stationary CI RICE?***

(a) If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel.

(b) Beginning January 1, 2015, if you own or operate an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in § 63.6640(f)(4)(ii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(c) Beginning January 1, 2015, if you own or operate a new emergency CI stationary RICE with a site rating of more than 500 brake HP and a displacement of less than 30 liters per cylinder located at a major source of HAP that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(d) Existing CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, at area sources in areas of Alaska that meet either § 63.6603(b)(1) or § 63.6603(b)(2), or are on offshore vessels that meet § 63.6603(c) are exempt from the requirements of this section.

[78 FR 6702, Jan. 30, 2013]

## ***General Compliance Requirements***

### ***§ 63.6605 What are my general requirements for complying with this subpart?***

(a) You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[75 FR 9675, Mar. 3, 2010, as amended at 78 FR 6702, Jan. 30, 2013]

## ***Testing and Initial Compliance Requirements***

### ***§ 63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?***

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in § 63.6595 and according to the provisions in § 63.7(a)(2).

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (d)(1) through (5) of this section.

- (1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.
- (2) The test must not be older than 2 years.
- (3) The test must be reviewed and accepted by the Administrator.
- (4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.
- (5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3605, Jan. 18, 2008]

**§ 63.6611 *By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?***

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in § 63.6595 and according to the provisions specified in Table 4 to this subpart, as appropriate.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 51589, Aug. 20, 2010]

**§ 63.6612 *By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?***

If you own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions you are subject to the requirements of this section.

- (a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in § 63.6595 and according to the provisions in § 63.7(a)(2).
- (b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.
  - (1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

- (2) The test must not be older than 2 years.
- (3) The test must be reviewed and accepted by the Administrator.
- (4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[75 FR 9676, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010]

### **§ 63.6615 *When must I conduct subsequent performance tests?***

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

### **§ 63.6620 *What performance tests and other procedures must I use?***

- (a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.
- (b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in paragraphs (b)(1) through (4) of this section.
  - (1) Non-emergency 4SRB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.
  - (2) New non-emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP located at a major source of HAP emissions.
  - (3) New non-emergency 2SLB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.
  - (4) New non-emergency CI stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.
- (c) [Reserved]
- (d) You must conduct three separate test runs for each performance test required in this section, as specified in § 63.7(e)(3). Each test run must last at least 1 hour, unless otherwise specified in this subpart.
- (e)(1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (\text{Eq. 1})$$

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Where:

$C_i$  = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

$C_o$  = concentration of CO, THC, or formaldehyde at the control device outlet, and

R = percent reduction of CO, THC, or formaldehyde emissions.

(2) You must normalize the CO, THC, or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide ( $CO_2$ ). If pollutant concentrations are to be corrected to 15 percent oxygen and  $CO_2$  concentration is measured in lieu of oxygen concentration measurement, a  $CO_2$  correction factor is needed. Calculate the  $CO_2$  correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

(i) Calculate the fuel-specific  $F_o$  value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209 F_d}{F_c} \quad (\text{Eq. 2})$$

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Where:

$F_o$  = Fuel factor based on the ratio of oxygen volume to the ultimate  $CO_2$  volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

$F_d$  = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19,  $dm^3 / J$  (dscf/ $10^6$  Btu).

$F_c$  = Ratio of the volume of  $CO_2$  produced to the gross calorific value of the fuel from Method 19,  $dm^3 / J$  (dscf/ $10^6$  Btu)

(ii) Calculate the  $CO_2$  correction factor for correcting measurement data to 15 percent  $O_2$ , as follows:

$$X_{CO_2} = \frac{5.9}{F_o} \quad (\text{Eq. 3})$$

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Where:

$X_{CO_2}$  =  $CO_2$  correction factor, percent.

5.9 = 20.9 percent  $O_2$  — 15 percent  $O_2$ , the defined  $O_2$  correction value, percent.

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent  $O_2$  using  $CO_2$  as follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \quad (\text{Eq. 4})$$

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Where:

$C_{adj}$  = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent  $O_2$

$C_d$  = Measured concentration of CO, THC, or formaldehyde, uncorrected.

$X_{CO_2}$  =  $CO_2$  correction factor, percent.

$\%CO_2$  = Measured  $CO_2$  concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally ( e.g., operator adjustment, automatic controller adjustment, etc.) or unintentionally ( e.g., wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010; 78 FR 6702, Jan. 30, 2013]

### **§ 63.6625 *What are my monitoring, installation, collection, operation, and maintenance requirements?***

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either O<sub>2</sub> or CO<sub>2</sub> according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in § 63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in § 63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in § 63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO<sub>2</sub> concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in § 63.8(d). As specified in § 63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface ( e.g., thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in § 63.8(c)(1)(ii) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in § 63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also § 63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;

- (2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;
  - (3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;
  - (4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;
  - (5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;
  - (6) An existing non-emergency, non-black start stationary RICE located at an area source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.
  - (7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;
  - (8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;
  - (9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and
  - (10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.
- (f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.
- (g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either § 63.6603(b)(1) or § 63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet § 63.6603(c) do not have to meet the requirements of this paragraph (g).
- (1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or
  - (2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.
- (h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6703, Jan. 30, 2013]

### ***§ 63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?***

(a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in § 63.6645.

(d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements

in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.

(e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

- (1) The compliance demonstration must consist of at least three test runs.
- (2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.
- (3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.
- (4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.
- (5) You must measure O<sub>2</sub> using one of the O<sub>2</sub> measurement methods specified in Table 4 of this subpart. Measurements to determine O<sub>2</sub> concentration must be made at the same time as the measurements for CO or THC concentration.
- (6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O<sub>2</sub> emissions simultaneously at the inlet and outlet of the control device.

[69 FR 33506, June 15, 2004, as amended at 78 FR 6704, Jan. 30, 2013]

## ***Continuous Compliance Requirements***

### ***§ 63.6635 How do I monitor and collect data to demonstrate continuous compliance?***

- (a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.
- (b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.
- (c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

### **§ 63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?**

(a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in § 63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least one test run.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O<sub>2</sub> using one of the O<sub>2</sub> measurement methods specified in Table 4 of this subpart. Measurements to determine O<sub>2</sub> concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O<sub>2</sub> emissions simultaneously at the inlet and outlet of the control device.

(7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period)

are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see § 63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are

counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6704, Jan. 30, 2013]

## ***Notifications, Reports, and Records***

### ***§ 63.6645 What notifications must I submit and when?***

(a) You must submit all of the notifications in §§ 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

- (2) An existing stationary RICE located at an area source of HAP emissions.
- (3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.
- (4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.
- (5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.
- (b) As specified in § 63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.
- (c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.
- (d) As specified in § 63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.
- (e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.
- (f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with § 63.6590(b), your notification should include the information in § 63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).
- (g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in § 63.7(b)(1).
- (h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii).
- (1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.
- (2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to § 63.10(d)(2).

(i) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and subject to an enforceable state or local standard requiring engine replacement and you intend to meet management practices rather than emission limits, as specified in § 63.6603(d), you must submit a notification by March 3, 2013, stating that you intend to use the provision in § 63.6603(d) and identifying the state or local regulation that the engine is subject to.

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6705, Jan. 30, 2013]

## **§ 63.6650 *What reports must I submit and when?***

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in § 63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in § 63.6595.

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in § 63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in § 63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in § 63.6640(f)(4)(ii), you must submit an annual report according to the requirements in paragraphs (h)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

- (ii) Date of the report and beginning and ending dates of the reporting period.
  - (iii) Engine site rating and model year.
  - (iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
  - (v) Hours operated for the purposes specified in § 63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in § 63.6640(f)(2)(ii) and (iii).
  - (vi) Number of hours the engine is contractually obligated to be available for the purposes specified in § 63.6640(f)(2)(ii) and (iii).
  - (vii) Hours spent for operation for the purpose specified in § 63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in § 63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.
  - (viii) If there were no deviations from the fuel requirements in § 63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.
  - (ix) If there were deviations from the fuel requirements in § 63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.
- (2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.
- (3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) ( [www.epa.gov/cdx](http://www.epa.gov/cdx) ). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in § 63.13.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010; 78 FR 6705, Jan. 30, 2013]

### **§ 63.6655 *What records must I keep?***

- (a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.
- (1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in § 63.10(b)(2)(xiv).
  - (2) Records of the occurrence and duration of each malfunction of operation ( *i.e.*, process equipment) or the air pollution control and monitoring equipment.
  - (3) Records of performance tests and performance evaluations as required in § 63.10(b)(2)(viii).
  - (4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in § 63.10(b)(2)(vi) through (xi).

(2) Previous ( *i.e.*, superseded) versions of the performance evaluation plan as required in § 63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in § 63.8(f)(6)(i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) through (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in § 63.6640(f)(2)(ii) or (iii) or § 63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

(1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

## **§ 63.6660 *In what form and how long must I keep my records?***

(a) Your records must be in a form suitable and readily available for expeditious review according to § 63.10(b)(1).

(b) As specified in § 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1).

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

## ***Other Requirements and Information***

### **§ 63.6665 *What parts of the General Provisions apply to me?***

Table 8 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

### **§ 63.6670 *Who implements and enforces this subpart?***

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in § 63.6600 under § 63.6(g).

- (2) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.
- (3) Approval of major alternatives to monitoring under § 63.8(f) and as defined in § 63.90.
- (4) Approval of major alternatives to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.
- (5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in § 63.6610(b).

### **§ 63.6675 What definitions apply to this subpart?**

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

*Alaska Railbelt Grid* means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

*Area source* means any stationary source of HAP that is not a major source as defined in part 63.

*Associated equipment* as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

*Backup power for renewable energy* means an engine that provides backup power to a facility that generates electricity from renewable energy resources, as that term is defined in Alaska Statute 42.45.045(l)(5) (incorporated by reference, see § 63.14).

*Black start engine* means an engine whose only purpose is to start up a combustion turbine.

*CAA* means the Clean Air Act (42 U.S.C. 7401 *et seq.*, as amended by Public Law 101-549, 104 Stat. 2399).

*Commercial emergency stationary RICE* means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

*Compression ignition* means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

*Custody transfer* means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

*Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or
- (3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless of whether or not such failure is permitted by this subpart.
- (4) Fails to satisfy the general duty to minimize emissions established by § 63.6(e)(1)(i).

*Diesel engine* means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

*Diesel fuel* means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties ( e.g. biodiesel) that is suitable for use in compression ignition engines.

*Digester gas* means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO<sub>2</sub> .

*Dual-fuel engine* means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

*Emergency stationary RICE* means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must comply with the requirements specified in § 63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in § 63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

- (1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.
- (2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in § 63.6640(f).
- (3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in § 63.6640(f)(2)(ii) or (iii) and § 63.6640(f)(4)(i) or (ii).

*Engine startup* means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

*Four-stroke engine* means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

*Gaseous fuel* means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

*Gasoline* means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

*Glycol dehydration unit* means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes "rich" glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The "lean" glycol is then recycled.

*Hazardous air pollutants (HAP)* means any air pollutants listed in or pursuant to section 112(b) of the CAA.

*Institutional emergency stationary RICE* means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

*ISO standard day conditions* means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

*Landfill gas* means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO<sub>2</sub>.

*Lean burn engine* means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

*Limited use stationary RICE* means any stationary RICE that operates less than 100 hours per year.

*Liquefied petroleum gas* means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

*Liquid fuel* means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

*Major Source*, as used in this subpart, shall have the same meaning as in § 63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in § 63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in § 63.1271 of subpart HHH of this part, shall not be aggregated.

*Malfunction* means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

*Natural gas* means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

*Non-selective catalytic reduction (NSCR)* means an add-on catalytic nitrogen oxides (NO<sub>x</sub>) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO<sub>x</sub>, CO, and volatile organic compounds (VOC) into CO<sub>2</sub>, nitrogen, and water.

*Oil and gas production facility* as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (i.e., remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

*Oxidation catalyst* means an add-on catalytic control device that controls CO and VOC by oxidation.

*Peaking unit or engine* means any standby engine intended for use during periods of high demand that are not emergencies.

*Percent load* means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

*Potential to emit* means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in § 63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to § 63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to § 63.1270(a)(2).

*Production field facility* means those oil and gas production facilities located prior to the point of custody transfer.

*Production well* means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

*Propane* means a colorless gas derived from petroleum and natural gas, with the molecular structure C<sub>3</sub>H<sub>8</sub>.

*Remote stationary RICE* means stationary RICE meeting any of the following criteria:

(1) Stationary RICE located in an offshore area that is beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

(2) Stationary RICE located on a pipeline segment that meets both of the criteria in paragraphs (2)(i) and (ii) of this definition.

(i) A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(ii) The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.

(iii) For purposes of this paragraph (2), the term pipeline segment means all parts of those physical facilities through which gas moves in transportation, including but not limited to pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies. Stationary RICE located within 50 yards (46 meters) of the pipeline segment providing power for equipment on a pipeline segment are part of the pipeline segment. Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

(3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

*Residential emergency stationary RICE* means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

*Responsible official* means responsible official as defined in 40 CFR 70.2.

*Rich burn engine* means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO<sub>x</sub> (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's

recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

*Site-rated HP* means the maximum manufacturer's design capacity at engine site conditions.

*Spark ignition* means relating to either: A gasoline-fueled engine; or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

*Stationary reciprocating internal combustion engine (RICE)* means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

*Stationary RICE test cell/stand* means an engine test cell/stand, as defined in subpart P of this part, that tests stationary RICE.

*Stoichiometric* means the theoretical air-to-fuel ratio required for complete combustion.

*Storage vessel with the potential for flash emissions* means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

*Subpart* means 40 CFR part 63, subpart ZZZZ.

*Surface site* means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

*Two-stroke engine* means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011; 78 FR 6706, Jan. 30, 2013]

### **Table 1 a to Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE > 500 HP Located at a Major Source of HAP Emissions**

As stated in §§ 63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each	You must meet the following emission	During periods of startup you must . . .
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. . .	<b>limitation, except during periods of startup</b> . . .	
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. <sup>1</sup>
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O <sub>2</sub>	

<sup>1</sup>Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010, as amended at 75 FR 51592, Aug. 20, 2010]

**Table 1 b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions**

As stated in §§ 63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

**TABLE 1B TO SUBPART ZZZZ OF PART 63—OPERATING LIMITATIONS FOR EXISTING, NEW, AND RECONSTRUCTED SI 4SRB STATIONARY RICE >500 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS**

<b>For each . . .</b>	<b>You must meet the following operating limitation, except during periods of startup . . .</b>
1. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O <sub>2</sub> and using NSCR;	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F. <sup>1</sup>
2. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or	Comply with any operating limitations approved by the Administrator.
existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP	

emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O <sub>2</sub> and not using NSCR.	
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<sup>1</sup> Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6706, Jan. 30, 2013]

**Table 2 a to Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions**

As stated in §§ 63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O <sub>2</sub> . If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O <sub>2</sub> until June 15, 2007	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. <sup>1</sup>
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O <sub>2</sub>	
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O <sub>2</sub>	

<sup>1</sup> Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9680, Mar. 3, 2010]

**Table 2 b to Subpart ZZZZ of Part 63—Operating Limitations for New**

**and Reconstructed 2SLB and CI Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing CI Stationary RICE >500 HP**

As stated in §§ 63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; and existing CI stationary RICE >500 HP:

**TABLE 2B TO SUBPART ZZZZ OF PART 63—OPERATING LIMITATIONS FOR NEW AND RECONSTRUCTED 2SLB AND CI STATIONARY RICE >500 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS, NEW AND RECONSTRUCTED 4SLB STATIONARY RICE ≥250 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS, EXISTING CI STATIONARY RICE >500 HP**

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and using an oxidation catalyst; and New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst.	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F. <sup>1</sup>
2. Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and
	b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F. <sup>1</sup>
3. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and not using an oxidation catalyst; and	Comply with any operating limitations approved by the Administrator.
New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying	

with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; and	
existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst.	

<sup>1</sup> Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6707, Jan. 30, 2013]

**Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions**

As stated in §§ 63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions:

**TABLE 2C TO SUBPART ZZZZ OF PART 63—REQUIREMENTS FOR EXISTING COMPRESSION IGNITION STATIONARY RICE LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS AND EXISTING SPARK IGNITION STATIONARY RICE ≤500 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS**

<b>For each . . .</b>	<b>You must meet the following requirement, except during periods of startup . . .</b>	<b>During periods of startup you must . . .</b>
1. Emergency stationary CI RICE and black start stationary CI RICE <sup>1</sup>	a. Change oil and filter every 500 hours of operation or annually, whichever comes first. <sup>2</sup> b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. <sup>3</sup>	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. <sup>3</sup>
2. Non-Emergency, non-black start stationary CI RICE <100 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first. <sup>2</sup> b. Inspect air cleaner every 1,000 hours of operation or	

	<p>annually, whichever comes first, and replace as necessary;</p> <p>c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.<sup>3</sup></p>	
<p>3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP</p>	<p>Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O<sub>2</sub>.</p>	
<p>4. Non-Emergency, non-black start CI stationary RICE 300&gt;HP≤500.” is corrected to read “4. Non-Emergency, non-black start CI stationary RICE 300&lt;HP≤500.</p>	<p>a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O<sub>2</sub>; or</p> <p>b. Reduce CO emissions by 70 percent or more.</p>	
<p>5. Non-Emergency, non-black start stationary CI RICE &gt;500 HP</p>	<p>a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O<sub>2</sub>; or</p> <p>b. Reduce CO emissions by 70 percent or more.</p>	
<p>6. Emergency stationary SI RICE and black start stationary SI RICE.<sup>1</sup></p>	<p>a. Change oil and filter every 500 hours of operation or annually, whichever comes first,<sup>2</sup></p> <p>b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;</p> <p>c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.<sup>3</sup></p>	
<p>7. Non-Emergency, non-black start stationary SI RICE &lt;100 HP that are not 2SLB stationary RICE</p>	<p>a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first,<sup>2</sup></p> <p>b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary;</p>	
	<p>c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and</p>	

	replace as necessary. <sup>3</sup>	
8. Non-Emergency, non-black start 2SLB stationary SI RICE <100 HP	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first, <sup>2</sup> b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary. <sup>3</sup>	
9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent O <sub>2</sub> .	
10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O <sub>2</sub> .	
11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O <sub>2</sub> .	
12. Non-emergency, non-black start stationary RICE 100≤HP≤500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O <sub>2</sub> .	

<sup>1</sup> If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

<sup>2</sup> Sources have the option to utilize an oil analysis program as described in § 63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2c of this subpart.

<sup>3</sup> Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[78 FR 6708, Jan. 30, 2013, as amended at 78 FR 14457, Mar. 6, 2013]

## **Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions**

As stated in §§ 63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

**TABLE 2D TO SUBPART ZZZZ OF PART 63—REQUIREMENTS FOR EXISTING STATIONARY RICE LOCATED AT AREA SOURCES OF HAP EMISSIONS**

<b>For each . . .</b>	<b>You must meet the following requirement, except during periods of startup . . .</b>	<b>During periods of startup you must . . .</b>
1. Non-Emergency, non-black start CI stationary RICE ≤300 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first; <sup>1</sup> b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
2. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O <sub>2</sub> ; or	
	b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O <sub>2</sub> ; or	
	b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE. <sup>2</sup>	a. Change oil and filter every 500 hours of	

	operation or annually, whichever comes first; <sup>1</sup>	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year. <sup>2</sup>	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; <sup>1</sup> b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
6. Non-emergency, non-black start 2SLB stationary RICE	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first; <sup>1</sup>	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; <sup>1</sup>	

	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
8. Non-emergency, non-black start 4SLB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first; <sup>1</sup>	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
9. Non-emergency, non-black start 4SLB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install an oxidation catalyst to reduce HAP emissions from the stationary RICE.	
10. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; <sup>1</sup>	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
11. Non-emergency, non-black start 4SRB	a. Change oil and filter	

remote stationary RICE >500 HP	every 2,160 hours of operation or annually, whichever comes first; <sup>1</sup>	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
12. Non-emergency, non-black start 4SRB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install NSCR to reduce HAP emissions from the stationary RICE.	
13. Non-emergency, non-black start stationary RICE which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; <sup>1</sup> b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

<sup>1</sup> Sources have the option to utilize an oil analysis program as described in § 63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of this subpart.

<sup>2</sup> If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

## Subsequent Performance Tests

As stated in §§ 63.6615 and 63.6620, you must comply with the following subsequent performance test requirements:

**TABLE 3 TO SUBPART ZZZZ OF PART 63—SUBSEQUENT PERFORMANCE TESTS**

For each . . .	Complying with the requirement to . . .	You must . . .
1. New or reconstructed 2SLB stationary RICE >500 HP located at major sources; new or reconstructed 4SLB stationary RICE ≥250 HP located at major sources; and new or reconstructed CI stationary RICE >500 HP located at major sources	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually. <sup>1</sup>
2. 4SRB stationary RICE ≥5,000 HP located at major sources	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually. <sup>1</sup>
3. Stationary RICE >500 HP located at major sources and new or reconstructed 4SLB stationary RICE 250≤HP≤500 located at major sources	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually. <sup>1</sup>
4. Existing non-emergency, non-black start CI stationary RICE >500 HP that are not limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE >500 HP that are limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 5 years, whichever comes first.

<sup>1</sup> After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[78 FR 6711, Jan. 30, 2013]

## Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

As stated in §§ 63.6610, 63.6611, 63.6612, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE:

**TABLE 4 TO SUBPART ZZZZ OF PART 63. REQUIREMENTS FOR PERFORMANCE TESTS**

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .

1. 2SLB, 4SLB, and CI stationary RICE	a. reduce CO emissions	i. Measure the O <sub>2</sub> at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005). <sup>a,c</sup>	(a) Measurements to determine O <sub>2</sub> must be made at the same time as the measurements for CO concentration.
		ii. Measure the CO at the inlet and the outlet of the control device	(1) ASTM D6522-00 (Reapproved 2005) <sup>a,b,c</sup> or Method 10 of 40 CFR part 60, appendix A	(a) The CO concentration must be at 15 percent O <sub>2</sub> , dry basis.
2. 4SRB stationary RICE	a. reduce formaldehyde emissions	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i)	(a) sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O <sub>2</sub> at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005). <sup>a</sup>	(a) measurements to determine O <sub>2</sub> concentration must be made at the same time as the measurements for formaldehyde or THC concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03. <sup>a</sup>	(a) measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or THC concentration.
		iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formaldehyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03, <sup>a</sup> provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) formaldehyde concentration must be at 15 percent O <sub>2</sub> , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. If demonstrating compliance with the THC percent reduction requirement, measure THC at the inlet and the outlet of the control device	(1) Method 25A, reported as propane, of 40 CFR part 60, appendix A	(a) THC concentration must be at 15 percent O <sub>2</sub> , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
3. Stationary RICE	a. limit the concentration of formaldehyde or CO in the stationary RICE	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i)	(a) if using a control device, the sampling site must be located at the outlet of the control device.

	exhaust			
		ii. Determine the O <sub>2</sub> concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005). <sup>a</sup>	(a) measurements to determine O <sub>2</sub> concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03. <sup>a</sup>	(a) measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03, <sup>a</sup> provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O <sub>2</sub> , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. measure CO at the exhaust of the stationary RICE.	(1) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522-00 (2005), <sup>a</sup> Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03. <sup>a</sup>	(a) CO concentration must be at 15 percent O <sub>2</sub> , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

<sup>a</sup> Incorporated by reference, see 40 CFR 63.14. You may also obtain copies from University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

<sup>b</sup> You may also use Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03.

<sup>c</sup> ASTM-D6522-00 (2005) may be used to test both CI and SI stationary RICE.

[78 FR 6711, Jan. 30, 2013]

**Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations, Operating Limitations, and Other Requirements**

As stated in §§ 63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

**TABLE 5 TO SUBPART ZZZZ OF PART 63—INITIAL COMPLIANCE WITH EMISSION LIMITATIONS, OPERATING LIMITATIONS, AND OTHER REQUIREMENTS**

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and not using oxidation catalyst	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and

		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O <sub>2</sub> or CO <sub>2</sub> at both the inlet and outlet of the oxidation catalyst according to the requirements in § 63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average reduction of CO calculated using § 63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O <sub>2</sub> or CO <sub>2</sub> at the outlet of the oxidation catalyst according to the requirements in § 63.6625(a); and
		ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average concentration of CO calculated using § 63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.
7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction, or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and

		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
9. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O <sub>2</sub> , dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O <sub>2</sub> , dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
11. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-	a. Reduce CO emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance

<p>emergency stationary CI RICE  <math>300 &lt; \text{HP} \leq 500</math> located at an area source of HAP</p>		<p>test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.</p>
<p>12. Existing non-emergency stationary RICE <math>100 \leq \text{HP} \leq 500</math> located at a major source of HAP, and existing non-emergency stationary CI RICE <math>300 &lt; \text{HP} \leq 500</math> located at an area source of HAP</p>	<p>a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust</p>	<p>i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O<sub>2</sub>, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.</p>
<p>13. Existing non-emergency 4SLB stationary RICE <math>&gt;500</math> HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year</p>	<p>a. Install an oxidation catalyst</p>	<p>i. You have conducted an initial compliance demonstration as specified in § 63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O<sub>2</sub>;</p>
		<p>ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F.</p>
<p>14. Existing non-emergency 4SRB stationary RICE <math>&gt;500</math> HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year</p>	<p>a. Install NSCR</p>	<p>i. You have conducted an initial compliance demonstration as specified in § 63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O<sub>2</sub>, or the average reduction of emissions of THC is 30 percent or more;</p>
		<p>ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250 °F.</p>

[78 FR 6712, Jan. 30, 2013]

**Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements**

As stated in § 63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

**TABLE 6 TO SUBPART ZZZZ OF PART 63—CONTINUOUS COMPLIANCE WITH EMISSION LIMITATIONS, AND OTHER REQUIREMENTS**

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved <sup>a</sup> ; and ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved <sup>a</sup> ; and ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, new or reconstructed non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS	i. Collecting the monitoring data according to § 63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to § 63.6620; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and
		iii. Conducting an annual RATA of your

		CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.
4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. Non-emergency 4SRB stationary RICE with a brake HP ≥5,000 located at a major source of HAP	a. Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved, or to demonstrate that the average reduction of emissions of THC determined from the performance test is equal to or greater than 30 percent. <sup>a</sup>
7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit <sup>a</sup> ; and ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and

		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit <sup>a</sup> ; and ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency stationary SI RICE located at an area source of HAP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate 24 hours or less per calendar year, and existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are remote stationary RICE	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

<p>10. Existing stationary CI RICE &gt;500 HP that are not limited use stationary RICE</p>	<p>a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and using oxidation catalyst</p>	<p>i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and</p>
		<p>ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and</p>
		<p>iii. Reducing these data to 4-hour rolling averages; and</p>
		<p>iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and</p>
		<p>v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.</p>
<p>11. Existing stationary CI RICE &gt;500 HP that are not limited use stationary RICE</p>	<p>a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and not using oxidation catalyst</p>	<p>i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and</p>
		<p>ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and</p>
		<p>iii. Reducing these data to 4-hour rolling averages; and</p>
		<p>iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.</p>
<p>12. Existing limited use CI stationary RICE &gt;500 HP</p>	<p>a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using an oxidation catalyst</p>	<p>i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain</p>

		at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
13. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and not using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
14. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. Conducting annual compliance demonstrations as specified in § 63.6640(c) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O <sub>2</sub> ; and either ii. Collecting the catalyst inlet temperature data according to § 63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than 450 °F and less than or equal to 1350 °F for the

		catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 °F.
15. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. Conducting annual compliance demonstrations as specified in § 63.6640(c) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O <sub>2</sub> , or the average reduction of emissions of THC is 30 percent or more; and either ii. Collecting the catalyst inlet temperature data according to § 63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than or equal to 750 °F and less than or equal to 1250 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1250 °F.

<sup>a</sup> After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[78 FR 6715, Jan. 30, 2013]

**Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports**

As stated in § 63.6650, you must comply with the following requirements for reports:

**TABLE 7 TO SUBPART ZZZZ OF PART 63—REQUIREMENTS FOR REPORTS**

<b>For each . . .</b>	<b>You must submit a . . .</b>	<b>The report must contain . . .</b>	<b>You must submit the report . . .</b>
1. Existing non-emergency, non-black start stationary RICE 100≤HP≤500 located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP; existing	Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control,	i. Semiannually according to the requirements in § 63.6650(b)(1)-(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and ii. Annually according to

<p>non-emergency, non-black start stationary CI RICE &gt;300 HP located at an area source of HAP; new or reconstructed non-emergency stationary RICE &gt;500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP</p>		<p>as specified in § 63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or</p>	<p>the requirements in § 63.6650(b)(6)-(9) for engines that are limited use stationary RICE subject to numerical emission limitations.</p>
		<p>b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in § 63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), the information in § 63.6650(e); or</p>	<p>i. Semiannually according to the requirements in § 63.6650(b).</p>
		<p>c. If you had a malfunction during the reporting period, the information in § 63.6650(c)(4).</p>	<p>i. Semiannually according to the requirements in § 63.6650(b).</p>
<p>2. New or reconstructed non-emergency stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis</p>	<p>Report</p>	<p>a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and</p>	<p>i. Annually, according to the requirements in § 63.6650.</p>
		<p>b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and</p>	<p>i. See item 2.a.i.</p>
		<p>c. Any problems or errors suspected with the meters.</p>	<p>i. See item 2.a.i.</p>
<p>3. Existing non-emergency, non-black start 4SLB and 4SRB stationary RICE &gt;500 HP located at an area source of HAP that are not remote stationary RICE and that operate more than 24 hours per calendar year</p>	<p>Compliance report</p>	<p>a. The results of the annual compliance demonstration, if conducted during the reporting period.</p>	<p>i. Semiannually according to the requirements in § 63.6650(b)(1)-(5).</p>
<p>4. Emergency stationary RICE that operate or are contractually obligated to be available for more than 15 hours per year for the purposes specified in</p>	<p>Report</p>	<p>a. The information in § 63.6650(h)(1)</p>	<p>i. annually according to the requirements in § 63.6650(h)(2)-(3).</p>

§ 63.6640(f)(2)(ii) and (iii) or that operate for the purposes specified in § 63.6640(f)(4)( ii)			
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[78 FR 6719, Jan. 30, 2013]

**Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ.**

As stated in § 63.6665, you must comply with the following applicable general provisions.

<b>General provisions citation</b>	<b>Subject of citation</b>	<b>Applies to subpart</b>	<b>Explanation</b>
§ 63.1	General applicability of the General Provisions	Yes.	
§ 63.2	Definitions	Yes	Additional terms defined in § 63.6675.
§ 63.3	Units and abbreviations	Yes.	
§ 63.4	Prohibited activities and circumvention	Yes.	
§ 63.5	Construction and reconstruction	Yes.	
§ 63.6(a)	Applicability	Yes.	
§ 63.6(b)(1)-(4)	Compliance dates for new and reconstructed sources	Yes.	
§ 63.6(b)(5)	Notification	Yes.	
§ 63.6(b)(6)	[Reserved]		
§ 63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes.	
§ 63.6(c)(1)-(2)	Compliance dates for existing sources	Yes.	
§ 63.6(c)(3)-(4)	[Reserved]		
§ 63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes.	
§ 63.6(d)	[Reserved]		
§ 63.6(e)	Operation and maintenance	No.	
§ 63.6(f)(1)	Applicability of standards	No.	
§ 63.6(f)(2)	Methods for determining compliance	Yes.	

§ 63.6(f)(3)	Finding of compliance	Yes.	
§ 63.6(g)(1)-(3)	Use of alternate standard	Yes.	
§ 63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§ 63.6(i)	Compliance extension procedures and criteria	Yes.	
§ 63.6(j)	Presidential compliance exemption	Yes.	
§ 63.7(a)(1)-(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§ 63.6610, 63.6611, and 63.6612.
§ 63.7(a)(3)	CAA section 114 authority	Yes.	
§ 63.7(b)(1)	Notification of performance test	Yes	Except that § 63.7(b)(1) only applies as specified in § 63.6645.
§ 63.7(b)(2)	Notification of rescheduling	Yes	Except that § 63.7(b)(2) only applies as specified in § 63.6645.
§ 63.7(c)	Quality assurance/test plan	Yes	Except that § 63.7(c) only applies as specified in § 63.6645.
§ 63.7(d)	Testing facilities	Yes.	
§ 63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at § 63.6620.
§ 63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at § 63.6620.
§ 63.7(e)(3)	Test run duration	Yes.	
§ 63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§ 63.7(f)	Alternative test method provisions	Yes.	
§ 63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§ 63.7(h)	Waiver of tests	Yes.	
§ 63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at § 63.6625.
§ 63.8(a)(2)	Performance specifications	Yes.	
§ 63.8(a)(3)	[Reserved]		
§ 63.8(a)(4)	Monitoring for control devices	No.	

§ 63.8(b)(1)	Monitoring	Yes.	
§ 63.8(b)(2)-(3)	Multiple effluents and multiple monitoring systems	Yes.	
§ 63.8(c)(1)	Monitoring system operation and maintenance	Yes.	
§ 63.8(c)(1)(i)	Routine and predictable SSM	No	
§ 63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§ 63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	No	
§ 63.8(c)(2)-(3)	Monitoring system installation	Yes.	
§ 63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§ 63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§ 63.8(c)(6)-(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§ 63.8(d)	CMS quality control	Yes.	
§ 63.8(e)	CMS performance evaluation	Yes	Except for § 63.8(e)(5)(ii), which applies to COMS.
		Except that § 63.8(e) only applies as specified in § 63.6645.	
§ 63.8(f)(1)-(5)	Alternative monitoring method	Yes	Except that § 63.8(f)(4) only applies as specified in § 63.6645.
§ 63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that § 63.8(f)(6) only applies as specified in § 63.6645.
§ 63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§ 63.6635 and 63.6640.
§ 63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§ 63.9(b)(1)-(5)	Initial notifications	Yes	Except that § 63.9(b)(3) is reserved.
		Except that § 63.9(b) only applies as	

		specified in § 63.6645.	
§ 63.9(c)	Request for compliance extension	Yes	Except that § 63.9(c) only applies as specified in § 63.6645.
§ 63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that § 63.9(d) only applies as specified in § 63.6645.
§ 63.9(e)	Notification of performance test	Yes	Except that § 63.9(e) only applies as specified in § 63.6645.
§ 63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.9(g)(1)	Notification of performance evaluation	Yes	Except that § 63.9(g) only applies as specified in § 63.6645.
§ 63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that § 63.9(g) only applies as specified in § 63.6645.	
§ 63.9(h)(1)-(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. § 63.9(h)(4) is reserved.
			Except that § 63.9(h) only applies as specified in § 63.6645.
§ 63.9(i)	Adjustment of submittal deadlines	Yes.	
§ 63.9(j)	Change in previous information	Yes.	
§ 63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§ 63.10(b)(1)	Record retention	Yes	Except that the most recent 2 years of data do not have to be retained on site.
§ 63.10(b)(2)(i)-(v)	Records related to SSM	No.	
§ 63.10(b)(2)(vi)-(xi)	Records	Yes.	
§ 63.10(b)(2)(xii)	Record when under waiver	Yes.	
§ 63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.

§ 63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§ 63.10(b)(3)	Records of applicability determination	Yes.	
§ 63.10(c)	Additional records for sources using CEMS	Yes	Except that § 63.10(c)(2)-(4) and (9) are reserved.
§ 63.10(d)(1)	General reporting requirements	Yes.	
§ 63.10(d)(2)	Report of performance test results	Yes.	
§ 63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.10(d)(4)	Progress reports	Yes.	
§ 63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§ 63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§ 63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§ 63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that § 63.10(e)(3)(i) (C) is reserved.
§ 63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§ 63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§ 63.11	Flares	No.	
§ 63.12	State authority and delegations	Yes.	
§ 63.13	Addresses	Yes.	
§ 63.14	Incorporation by reference	Yes.	
§ 63.15	Availability of information	Yes.	

[75 FR 9688, Mar. 3, 2010, as amended at 78 FR 6720, Jan. 30, 2013]

## **Appendix A—Protocol for Using an Electrochemical Analyzer to Determine Oxygen and Carbon Monoxide Concentrations From Certain Engines**

### 1.0 SCOPE AND APPLICATION. WHAT IS THIS PROTOCOL?

This protocol is a procedure for using portable electrochemical (EC) cells for measuring carbon monoxide (CO) and oxygen (O<sub>2</sub>) concentrations in controlled and uncontrolled emissions from existing stationary 4-stroke lean burn and 4-stroke rich burn reciprocating internal combustion engines as specified in the applicable rule.

## 1.1 Analytes. What does this protocol determine?

This protocol measures the engine exhaust gas concentrations of carbon monoxide (CO) and oxygen (O<sub>2</sub>).

Analyte	CAS No.	Sensitivity
Carbon monoxide (CO)	630-08-0	Minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.
Oxygen (O <sub>2</sub> )	7782-44-7	

## 1.2 Applicability. When is this protocol acceptable?

This protocol is applicable to 40 CFR part 63, subpart ZZZZ. Because of inherent cross sensitivities of EC cells, you must not apply this protocol to other emissions sources without specific instruction to that effect.

## 1.3 Data Quality Objectives. How good must my collected data be?

Refer to Section 13 to verify and document acceptable analyzer performance.

## 1.4 Range. What is the targeted analytical range for this protocol?

The measurement system and EC cell design(s) conforming to this protocol will determine the analytical range for each gas component. The nominal ranges are defined by choosing up-scale calibration gas concentrations near the maximum anticipated flue gas concentrations for CO and O<sub>2</sub>, or no more than twice the permitted CO level.

## 1.5 Sensitivity. What minimum detectable limit will this protocol yield for a particular gas component?

The minimum detectable limit depends on the nominal range and resolution of the specific EC cell used, and the signal to noise ratio of the measurement system. The minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.

## 2.0 SUMMARY OF PROTOCOL

In this protocol, a gas sample is extracted from an engine exhaust system and then conveyed to a portable EC analyzer for measurement of CO and O<sub>2</sub> gas concentrations. This method provides measurement system performance specifications and sampling protocols to ensure reliable data. You may use additions to, or modifications of vendor supplied measurement systems (e.g., heated or unheated sample lines, thermocouples, flow meters, selective gas scrubbers, etc.) to meet the design specifications of this protocol. Do not make changes to the measurement system from the as-verified configuration (Section 3.12).

## 3.0 DEFINITIONS

**3.1 Measurement System.** The total equipment required for the measurement of CO and O<sub>2</sub> concentrations. The measurement system consists of the following major subsystems:

**3.1.1 Data Recorder.** A strip chart recorder, computer or digital recorder for logging measurement data from the analyzer output. You may record measurement data from the digital data display manually or electronically.

**3.1.2 Electrochemical (EC) Cell.** A device, similar to a fuel cell, used to sense the presence of a specific analyte and generate an electrical current output proportional to the analyte concentration.

**3.1.3 Interference Gas Scrubber.** A device used to remove or neutralize chemical compounds that may interfere with the selective operation of an EC cell.

**3.1.4 Moisture Removal System.** Any device used to reduce the concentration of moisture in the sample stream so as to protect the EC cells from the damaging effects of condensation and to minimize errors in measurements caused by the scrubbing of soluble gases.

**3.1.5 Sample Interface.** The portion of the system used for one or more of the following: sample acquisition; sample transport; sample conditioning or protection of the EC cell from any degrading effects of the engine exhaust effluent; removal of particulate matter and condensed moisture.

**3.2 Nominal Range.** The range of analyte concentrations over which each EC cell is operated (normally 25 percent to 150 percent of up-scale calibration gas value). Several nominal ranges can be used for any given cell so long as the calibration and repeatability checks for that range remain within specifications.

**3.3 Calibration Gas.** A vendor certified concentration of a specific analyte in an appropriate balance gas.

**3.4 Zero Calibration Error.** The analyte concentration output exhibited by the EC cell in response to zero-level calibration gas.

**3.5 Up-Scale Calibration Error.** The mean of the difference between the analyte concentration exhibited by the EC cell and the certified concentration of the up-scale calibration gas.

**3.6 Interference Check.** A procedure for quantifying analytical interference from components in the engine exhaust gas other than the targeted analytes.

**3.7 Repeatability Check.** A protocol for demonstrating that an EC cell operated over a given nominal analyte concentration range provides a stable and consistent response and is not significantly affected by repeated exposure to that gas.

**3.8 Sample Flow Rate.** The flow rate of the gas sample as it passes through the EC cell. In some situations, EC cells can experience drift with changes in flow rate. The flow rate must be monitored and documented during all phases of a sampling run.

**3.9 Sampling Run.** A timed three-phase event whereby an EC cell's response rises and plateaus in a sample conditioning phase, remains relatively constant during a measurement data phase, then declines during a refresh phase. The sample conditioning phase exposes the EC cell to the gas sample for a length of time sufficient to reach a constant response. The measurement data phase is the time interval during which gas sample measurements can be made that meet the acceptance criteria of this protocol. The refresh phase then purges the EC cells with CO-free air. The refresh phase replenishes requisite O<sub>2</sub> and moisture in the electrolyte reserve and provides a mechanism to de-gas or desorb any interference gas scrubbers or filters so as to enable a stable CO EC cell response. There are four primary types of sampling runs: pre- sampling calibrations; stack gas sampling; post-sampling calibration checks; and

measurement system repeatability checks. Stack gas sampling runs can be chained together for extended evaluations, providing all other procedural specifications are met.

*3.10 Sampling Day.* A time not to exceed twelve hours from the time of the pre-sampling calibration to the post-sampling calibration check. During this time, stack gas sampling runs can be repeated without repeated recalibrations, providing all other sampling specifications have been met.

*3.11 Pre-Sampling Calibration/Post-Sampling Calibration Check.* The protocols executed at the beginning and end of each sampling day to bracket measurement readings with controlled performance checks.

*3.12 Performance-Established Configuration.* The EC cell and sampling system configuration that existed at the time that it initially met the performance requirements of this protocol.

#### 4.0 INTERFERENCES.

When present in sufficient concentrations, NO and NO<sub>2</sub> are two gas species that have been reported to interfere with CO concentration measurements. In the likelihood of this occurrence, it is the protocol user's responsibility to employ and properly maintain an appropriate CO EC cell filter or scrubber for removal of these gases, as described in Section 6.2.12.

#### 5.0 SAFETY. [RESERVED]

#### 6.0 EQUIPMENT AND SUPPLIES.

### 6.1 What equipment do I need for the measurement system?

The system must maintain the gas sample at conditions that will prevent moisture condensation in the sample transport lines, both before and as the sample gas contacts the EC cells. The essential components of the measurement system are described below.

### 6.2 Measurement System Components.

*6.2.1 Sample Probe.* A single extraction-point probe constructed of glass, stainless steel or other non-reactive material, and of length sufficient to reach any designated sampling point. The sample probe must be designed to prevent plugging due to condensation or particulate matter.

*6.2.2 Sample Line.* Non-reactive tubing to transport the effluent from the sample probe to the EC cell.

*6.2.3 Calibration Assembly (optional).* A three-way valve assembly or equivalent to introduce calibration gases at ambient pressure at the exit end of the sample probe during calibration checks. The assembly must be designed such that only stack gas or calibration gas flows in the sample line and all gases flow through any gas path filters.

*6.2.4 Particulate Filter (optional).* Filters before the inlet of the EC cell to prevent accumulation of particulate material in the measurement system and extend the useful life of the components. All filters must be fabricated of materials that are non-reactive to the gas mixtures being sampled.

*6.2.5 Sample Pump.* A leak-free pump to provide undiluted sample gas to the system at a flow rate sufficient to minimize the response time of the measurement system. If located upstream of the EC cells, the pump must be constructed of a material that is non-reactive to the gas mixtures being sampled.

**6.2.8 Sample Flow Rate Monitoring.** An adjustable rotameter or equivalent device used to adjust and maintain the sample flow rate through the analyzer as prescribed.

**6.2.9 Sample Gas Manifold (optional).** A manifold to divert a portion of the sample gas stream to the analyzer and the remainder to a by-pass discharge vent. The sample gas manifold may also include provisions for introducing calibration gases directly to the analyzer. The manifold must be constructed of a material that is non-reactive to the gas mixtures being sampled.

**6.2.10 EC cell.** A device containing one or more EC cells to determine the CO and O<sub>2</sub> concentrations in the sample gas stream. The EC cell(s) must meet the applicable performance specifications of Section 13 of this protocol.

**6.2.11 Data Recorder.** A strip chart recorder, computer or digital recorder to make a record of analyzer output data. The data recorder resolution (i.e., readability) must be no greater than 1 ppm for CO; 0.1 percent for O<sub>2</sub>; and one degree (either °C or °F) for temperature. Alternatively, you may use a digital or analog meter having the same resolution to observe and manually record the analyzer responses.

**6.2.12 Interference Gas Filter or Scrubber.** A device to remove interfering compounds upstream of the CO EC cell. Specific interference gas filters or scrubbers used in the performance-established configuration of the analyzer must continue to be used. Such a filter or scrubber must have a means to determine when the removal agent is exhausted. Periodically replace or replenish it in accordance with the manufacturer's recommendations.

## 7.0 REAGENTS AND STANDARDS. WHAT CALIBRATION GASES ARE NEEDED?

**7.1 Calibration Gases.** CO calibration gases for the EC cell must be CO in nitrogen or CO in a mixture of nitrogen and O<sub>2</sub>. Use CO calibration gases with labeled concentration values certified by the manufacturer to be within ± 5 percent of the label value. Dry ambient air (20.9 percent O<sub>2</sub>) is acceptable for calibration of the O<sub>2</sub> cell. If needed, any lower percentage O<sub>2</sub> calibration gas must be a mixture of O<sub>2</sub> in nitrogen.

**7.1.1 Up-Scale CO Calibration Gas Concentration.** Choose one or more up-scale gas concentrations such that the average of the stack gas measurements for each stack gas sampling run are between 25 and 150 percent of those concentrations. Alternatively, choose an up-scale gas that does not exceed twice the concentration of the applicable outlet standard. If a measured gas value exceeds 150 percent of the up-scale CO calibration gas value at any time during the stack gas sampling run, the run must be discarded and repeated.

**7.1.2 Up-Scale O<sub>2</sub> Calibration Gas Concentration.**

Select an O<sub>2</sub> gas concentration such that the difference between the gas concentration and the average stack gas measurement or reading for each sample run is less than 15 percent O<sub>2</sub>. When the average exhaust gas O<sub>2</sub> readings are above 6 percent, you may use dry ambient air (20.9 percent O<sub>2</sub>) for the up-scale O<sub>2</sub> calibration gas.

**7.1.3 Zero Gas.** Use an inert gas that contains less than 0.25 percent of the up-scale CO calibration gas concentration. You may use dry air that is free from ambient CO and other combustion gas products (e.g., CO<sub>2</sub>).

## 8.0 SAMPLE COLLECTION AND ANALYSIS

**8.1 Selection of Sampling Sites.**

**8.1.1 Control Device Inlet.** Select a sampling site sufficiently downstream of the engine so that the combustion gases should be well mixed. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

**8.1.2 Exhaust Gas Outlet.** Select a sampling site located at least two stack diameters downstream of any disturbance (e.g., turbocharger exhaust, crossover junction or recirculation take-off) and at least one-half stack diameter upstream of the gas discharge to the atmosphere. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

**8.2 Stack Gas Collection and Analysis.** Prior to the first stack gas sampling run, conduct that the pre-sampling calibration in accordance with Section 10.1. Use Figure 1 to record all data. Zero the analyzer with zero gas. Confirm and record that the scrubber media color is correct and not exhausted. Then position the probe at the sampling point and begin the sampling run at the same flow rate used during the up-scale calibration. Record the start time. Record all EC cell output responses and the flow rate during the "sample conditioning phase" once per minute until constant readings are obtained. Then begin the "measurement data phase" and record readings every 15 seconds for at least two minutes (or eight readings), or as otherwise required to achieve two continuous minutes of data that meet the specification given in Section 13.1. Finally, perform the "refresh phase" by introducing dry air, free from CO and other combustion gases, until several minute-to-minute readings of consistent value have been obtained. For each run use the "measurement data phase" readings to calculate the average stack gas CO and O<sub>2</sub> concentrations.

**8.3 EC Cell Rate.** Maintain the EC cell sample flow rate so that it does not vary by more than  $\pm 10$  percent throughout the pre-sampling calibration, stack gas sampling and post-sampling calibration check. Alternatively, the EC cell sample flow rate can be maintained within a tolerance range that does not affect the gas concentration readings by more than  $\pm 3$  percent, as instructed by the EC cell manufacturer.

## 9.0 QUALITY CONTROL (RESERVED)

## 10.0 CALIBRATION AND STANDARDIZATION

**10.1 Pre-Sampling Calibration.** Conduct the following protocol once for each nominal range to be used on each EC cell before performing a stack gas sampling run on each field sampling day. Repeat the calibration if you replace an EC cell before completing all of the sampling runs. There is no prescribed order for calibration of the EC cells; however, each cell must complete the measurement data phase during calibration. Assemble the measurement system by following the manufacturer's recommended protocols including for preparing and preconditioning the EC cell. Assure the measurement system has no leaks and verify the gas scrubbing agent is not depleted. Use Figure 1 to record all data.

**10.1.1 Zero Calibration.** For both the O<sub>2</sub> and CO cells, introduce zero gas to the measurement system (e.g., at the calibration assembly) and record the concentration reading every minute until readings are constant for at least two consecutive minutes. Include the time and sample flow rate. Repeat the steps in this section at least once to verify the zero calibration for each component gas.

**10.1.2 Zero Calibration Tolerance.** For each zero gas introduction, the zero level output must be less than or equal to  $\pm 3$  percent of the up-scale gas value or  $\pm 1$  ppm, whichever is less restrictive, for the CO channel and less than or equal to  $\pm 0.3$  percent O<sub>2</sub> for the O<sub>2</sub> channel.

**10.1.3 Up-Scale Calibration.** Individually introduce each calibration gas to the measurement system (e.g., at the calibration assembly) and record the start time. Record all EC cell output responses and the flow rate during this "sample conditioning phase" once per minute until readings are constant for at least two minutes. Then begin the "measurement data phase" and record readings every 15 seconds for a total of two minutes, or as otherwise required. Finally, perform the "refresh phase" by introducing dry air, free from CO and other combustion gases, until readings are constant for at least two consecutive minutes.

Then repeat the steps in this section at least once to verify the calibration for each component gas. Introduce all gases to flow through the entire sample handling system (i.e., at the exit end of the sampling probe or the calibration assembly).

*10.1.4 Up-Scale Calibration Error.* The mean of the difference of the “measurement data phase” readings from the reported standard gas value must be less than or equal to  $\pm 5$  percent or  $\pm 1$  ppm for CO or  $\pm 0.5$  percent O<sub>2</sub>, whichever is less restrictive, respectively. The maximum allowable deviation from the mean measured value of any single “measurement data phase” reading must be less than or equal to  $\pm 2$  percent or  $\pm 1$  ppm for CO or  $\pm 0.5$  percent O<sub>2</sub>, whichever is less restrictive, respectively.

*10.2 Post-Sampling Calibration Check.* Conduct a stack gas post-sampling calibration check after the stack gas sampling run or set of runs and within 12 hours of the initial calibration. Conduct up-scale and zero calibration checks using the protocol in Section 10.1. Make no changes to the sampling system or EC cell calibration until all post-sampling calibration checks have been recorded. If either the zero or up-scale calibration error exceeds the respective specification in Sections 10.1.2 and 10.1.4 then all measurement data collected since the previous successful calibrations are invalid and re-calibration and re-sampling are required. If the sampling system is disassembled or the EC cell calibration is adjusted, repeat the calibration check before conducting the next analyzer sampling run.

## 11.0 ANALYTICAL PROCEDURE

The analytical procedure is fully discussed in Section 8.

## 12.0 CALCULATIONS AND DATA ANALYSIS

Determine the CO and O<sub>2</sub> concentrations for each stack gas sampling run by calculating the mean gas concentrations of the data recorded during the “measurement data phase”.

## 13.0 PROTOCOL PERFORMANCE

Use the following protocols to verify consistent analyzer performance during each field sampling day.

*13.1 Measurement Data Phase Performance Check.* Calculate the mean of the readings from the “measurement data phase”. The maximum allowable deviation from the mean for each of the individual readings is  $\pm 2$  percent, or  $\pm 1$  ppm, whichever is less restrictive. Record the mean value and maximum deviation for each gas monitored. Data must conform to Section 10.1.4. The EC cell flow rate must conform to the specification in Section 8.3.

*Example: A measurement data phase is invalid if the maximum deviation of any single reading comprising that mean is greater than  $\pm 2$  percent or  $\pm 1$  ppm (the default criteria). For example, if the mean = 30 ppm, single readings of below 29 ppm and above 31 ppm are disallowed).*

*13.2 Interference Check.* Before the initial use of the EC cell and interference gas scrubber in the field, and semi-annually thereafter, challenge the interference gas scrubber with NO and NO<sub>2</sub> gas standards that are generally recognized as representative of diesel-fueled engine NO and NO<sub>2</sub> emission values. Record the responses displayed by the CO EC cell and other pertinent data on Figure 1 or a similar form.

*13.2.1 Interference Response.* The combined NO and NO<sub>2</sub> interference response should be less than or equal to  $\pm 5$  percent of the up-scale CO calibration gas concentration.

*13.3 Repeatability Check.* Conduct the following check once for each nominal range that is to be used on the CO EC cell within 5 days prior to each field sampling program. If a field sampling program lasts longer than 5 days, repeat this check every 5 days. Immediately repeat the check if the EC cell is replaced or if



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

Addendum to the Technical Support Document (ATSD) for a  
Significant Permit Revision of a **FEDERALLY ENFORCEABLE STATE  
OPERATING PERMIT (FESOP)**

**Source Background and Description**

<b>Source Name:</b>	Bristol-Myers Squibb Company
<b>Source Location:</b>	4601 Highway 62 East, Mt. Vernon, IN 47620
<b>County:</b>	Posey
<b>SIC Code:</b>	2834
<b>Significant Permit Revision No.:</b>	F129-33093-00021
<b>Permit Reviewer:</b>	Diya Bhattacharjee

On July 17, 2013, the Office of Air Quality (OAQ) had a notice published in Mount Vernon Democrat, Mt. Vernon, Indiana, stating that Bristol- Myers Squibb Company had applied for a Significant Permit Revision to add new emission units, replacing models of existing units, and removing existing units. The notice also stated that the OAQ proposed to issue a Significant Permit Revision for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

**Comments and Responses**

On August 1, 2013, Bristol Myers-Squib Company submitted comments to IDEM, OAQ on the draft Significant Permit Revision.

The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but the Permit will have the updated changes. The comments and revised permit language are provided below with deleted language as ~~strikeouts~~ and new language **bolded**.

**Comment 1:**

The source seeks operational flexibility with the fluidized packed-bed scrubbers for PM control without affecting our ability to comply with the PM emission limit.

**Response to Comment 1:**

IDEM agrees with the recommended changes. The permit has been revised as follows:

**Compliance Determination Requirements**

**D.2.2 Particulate Matter (PM) [326 IAC 2-8-5(a)(4)]**

In order to comply with Condition D.2.1, the fluidized packed-bed scrubbers for PM control shall be in operation at all times when the eight (8) Bohle Tablet Coaters , identified as S36, S37, S38, S39, S40, S41, S42, and S43 are in operation. **The fluidized packed-bed scrubbers shall be operated in accordance with good engineering practice and in such manner to comply with Condition D.2.1.**

### Additional Changes

IDEM, OAQ has decided to make additional revisions to the permit as described below, with deleted language as ~~strikeouts~~ and new language **bolded**.

- (a) A.3 ~~Insignificant Activities [326 IAC 2-7-1(21)]~~**[326 IAC 2-8-3(c)(3)(I)]**  
...  
(24) Tablet printing operations located in buildings 121 and ~~124~~ **123**, with a maximum capacity of 6 batches of tablets per day approved for construction in 2013,  
...

### IDEM Contact

- (a) Questions regarding this proposed Significant Permit Revision can be directed to Diya Bhattacharjee at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317)234-5372 or toll free at 1-800-451-6027 extension 5372.
- (b) A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.idem.in.gov](http://www.idem.in.gov)

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

Technical Support Document (TSD) for a Significant Permit Revision to a  
Federally Enforceable State Operating Permit (FESOP)

**Source Description and Location**

<b>Source Name:</b>	Bristol-Myers Squibb Company
<b>Source Location:</b>	4601 Highway 62 East, Mt. Vernon, IN 47620
<b>County:</b>	Posey
<b>SIC Code:</b>	2834
<b>Permit No.:</b>	129-33093-00021
<b>Permit Reviewer:</b>	Diya Bhattacharjee

On April 15, 2013, the Office of Air Quality (OAQ) received an application from Bristol-Myers Squibb Company related to a modification to an existing stationary pharmaceutical packaging and research and development source.

**Source Definition**

Bristol-Myers Squibb Company located at State Route 62 East, Mt. Vernon, IN (Plant ID: 129-00021) sold its two warehouses located at 6400 William Keck Bypass, Mt. Vernon, IN to Exel, Inc. (Plant ID: 129-00056), which will operate them as commercial warehouses. Bristol-Myers Squibb will be one of Exel's customers. IDEM, OAQ has examined whether the Bristol-Myers Squibb plant and the Exel warehousing plant would be part of the same major source. The term "major source" is defined at 326 IAC 2-7-1(22).

In order for these plants to be considered one major source, they must meet all three of the following criteria:

- (1) the plants must be under common ownership or common control;
- (2) the plants must have the same two-digit Standard Industrial Classification (SIC) Code or one must serve as a support facility for the other(s); and,
- (3) the plants must be located on contiguous or adjacent properties.

The plants have separate owners, with no common owner, so no common ownership exists.

IDEM's Nonrule Policy Document Air-005 sets out two independent tests to determine if common control exists. The first test, the auxiliary activity test, determines whether one source performs an auxiliary activity which directly serves the purpose of a primary activity and whether the owner or operator of the primary activity has a major role in the day-to-day operations of the auxiliary activity. An auxiliary activity directly serves the purpose of a primary activity by supplying a necessary raw material to the primary activity or performing an integral part of the production process for the primary activity.

Day-to-day control of the auxiliary activity by the primary activity is evidenced by several factors. The following is an illustrative list:

- is a majority of the output of the auxiliary activity provided to the primary activity?
- can the auxiliary activity contract to provide its products/services to a third-party without the consent of the primary activity?
- can the primary activity assume control of the auxiliary activity under certain

circumstances?

- is the auxiliary activity required to complete periodic reports to the primary activity?

If one or a combination of these questions is answered affirmatively, common control may exist.

Exel will provide warehousing, which is an activity that directly serves Bristol-Myers Squibb's primary activity of manufacturing pharmaceuticals. Exel will use 150,000 square feet, approximately 30% of the overall warehouse space, for storing Bristol-Myers Squibb's products. Approximately 70% of the space will be used to warehouse items for other customers. Exel can provide warehousing services to third parties without Bristol-Myers Squibb's consent. Bristol-Myers Squibb cannot assume control of Exel under any circumstances. Exel will not be required to submit periodic reports to Bristol-Myers Squibb. Bristol-Myers Squibb will have up to three of its employees located at Exel during the first year of warehousing to assist in the transition and to consult with and train Exel employees on pharmaceutical handling procedures and processes. These Bristol-Myers Squibb employees will have no control over Exel's day-to-day operations. No Bristol-Myers Squibb employees will be located on Exel's property after the first year. Since there is no evidence of day-to-day control, the first common control test is not met.

The second common control test in the nonrule policy is the "but/for" test. This test focuses on whether the auxiliary activity would exist absent the needs of the primary activity. If all or a majority of the output of the auxiliary activity is consumed by the primary activity the "but/for" test is satisfied. About 30% of Exel's warehousing services will be dedicated to Bristol-Myers Squibb. If either operation were to close the other would be able to continue operating. Therefore, the second common control test is also not met. Since neither control test is met, there is no common control and the first part of the major source definition is not met.

The SIC Code Manual of 1987 sets out how to determine the proper SIC Code for each type of business. More information about SIC Codes is available at [http://www.osha.gov/pls/imis/sic\\_manual.html](http://www.osha.gov/pls/imis/sic_manual.html) on the internet. The Bristol-Myers Squibb plant has a two-digit SIC Code of 28 for the Major Group of Chemicals and Allied Products. The Exel warehouses have a two-digit SIC Code 42 for the Major Group of Motor Freight Transportation and Warehousing. Therefore, the two plants do not have the same two-digit SIC code.

A plant is a support facility to another plant if it dedicates 50% or more of its output to the other plant. The Exel plant will be dedicating only about 30% of its warehousing output to the Bristol-Myers Squibb plant. Therefore, there is no support facility relationship between the plants. Since the plants have different two-digit SIC Codes and there is no support facility relationship, they do not meet the second part of the major source definition.

The two plants will be located on contiguous properties that share a common border, meeting the third part of the definition. Since the plants do not meet all three parts of the major source definition, IDEM, OAQ has determined that Bristol-Myers Squibb and Exel are not part of the same major source.

Therefore, based on this evaluation these plants will not be considered one (1) source, as defined by 326 IAC 2-7-1(22). This determination was initially made under MSOP No. 129-30651-00056, issued on November 14, 2011.

#### Existing Approvals

The source was issued FESOP Renewal No.: F129-23109-00021 on October 13, 2006. The source has since received the following approvals:

- (a) First Administrative Amendment No.: 129-23837-00021, issued on December 11, 2006;
- (b) Second Administrative Amendment No.: 129-25055-00021, issued on August 15, 2007;
- (c) First Minor Permit Revision No.: 129-25293-00021, issued on October 11, 2007;
- (d) Third Administrative Amendment No.: 129-25798-00021, issued on January 18, 2008;
- (e) Fourth Administrative Amendment No.: 129-26840-00021, issued on August 27, 2008;

- (f) Fifth Administrative Amendment No.: 129-27177-00021, issued on December 15, 2008;
- (g) Second Minor Permit Revision No.: 129-27491-00021, issued on April 2, 2009;
- (h) Third Minor Permit Revision No.: 129-28270-00021, issued on September 8, 2009;
- (i) Sixth Administrative Amendment No.: 129-30022-00021, issued on February 10, 2011;
- (j) Fourth Minor Permit Revision No.: 129-30306-00021, issued on April 14, 2011; and
- (k) Fifth Minor Permit Revision No. : 129-31353-00021, issued on February 28, 2012.

**County Attainment Status**

The source is located in Posey County.

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. <sup>1</sup>
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Not designated.
<sup>1</sup> Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM <sub>2.5</sub> .	

- (a) **Ozone Standards**  
 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 ozone. Posey County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM<sub>2.5</sub>**  
 Posey County has been classified as attainment for PM<sub>2.5</sub>. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM<sub>2.5</sub> emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct PM<sub>2.5</sub> significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct PM<sub>2.5</sub> and SO<sub>2</sub> and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.
- (c) **Other Criteria Pollutants**  
 Posey County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

**Fugitive Emissions**

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

**Status of the Existing Source**

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

This PTE table is from the TSD or Appendix A of 129-31353-00021, issued on April 14, 2011

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)									
	PM	PM10	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs as CO <sub>2</sub> e**	Total HAPs	Worst Single HAP
Worst Case Fuel Combustion Boilers S1, S2, & S27**	7.64	8.78	5.92	162.70	76.39	2.94	44.92	86,230.3	1.01	0.96, Hexane
Tablet Coating Line #1	2.09	2.09	2.09	0	0	0	0	0	0.87	0.87, HCl
Tablet Coating Line #2	2.09	2.09	2.09	0	0	0	0	0	0.87	0.87, HCl
Tablet Coating Line #3	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
Tablet Coating Line #4	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
Tablet Coating Line #5	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
Tablet Coating Line #6	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
Tablet Coating Line #7	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
Tablet Coating Line #8	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
Emergency Generators Diesel Combustion	0.56	0.46	0.46	0.84	27.47	1.17	7.27	2,421.4	0.02	0.01, Benzene
Insignificant Activities*	22.79	22.79	22.79	0	0	0.5	0	0	0	0
<b>Total PTE of Entire Source</b>	<b>62.59</b>	<b>63.63</b>	<b>60.77</b>	<b>163.54</b>	<b>103.86</b>	<b>4.144</b>	<b>52.19</b>	<b>88651.7</b>	<b>6.31</b>	<b>0.96, Hexane</b>
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	250	250	250	250	250	250	250	100,000	NA	NA
negl. = negligible These emissions are based upon 129-31353-00021 **The 100,000 CO <sub>2</sub> e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.										

- (a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

- (b) This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because the unlimited potential to emit HAPs are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

<b>Description of Proposed Revision</b>
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The Office of Air Quality (OAQ) has reviewed an application, submitted by Bristol Myers Squibb Company on April 15, 2013, relating to the construction of new emission units, change of models of existing emission units, changing the capacity of existing units, and addition of new insignificant activities.

The following is a list of the new and modified emission units and pollution control devices:

The following are the emissions units:

- (a) One (1) Bohle Tablet Coater #9, identified as S42, approved for construction in 2013 consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1540 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-41.
- (b) One (1) Bohle Tablet Coater #10, identified as S43, approved for construction in 2013 consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1540 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-43.

Insignificant activities:

- (a) Pharmaceutical packaging line 3 identified as S-6 (Building 124), with a maximum capacity of 442 lbs/hr and controlled by a dust collector for PM identified as #29687. [326 IAC 6-3-2]
- (b) Pharmaceutical packaging lines 8, 9, 11, 12, and 14 identified as S-6 (Building 124), with a maximum capacity of 3236 lbs/hr. Packaging lines 8, 9, 11, and 14 are controlled by a common dust collector for PM identified as #212021 and line 12 is controlled by a separate dust collector for PM identified as #212022. [326 IAC 6-3-2]
- (c) One (1) Central Vacuum System, located in Building 124, and controlled by fabric filter dust collector #212023 [326 IAC 6-3-2].
- (d) One (1) Granulator and one (1) GEA fluid-bed dryer for aqueous wet granulations located in Building 124, approved for construction in 2013, with a maximum capacity of 290 lbs/hr. Granulator and fluid-bed dryer controlled by a common Flanders pre-filter #185069-001 and Flanders HEPA filter #185069-501A. [326 IAC 6-3-2]
- (e) Tablet core press machine and room exhaust located in Building 123, Room 1142, with a maximum capacity of 844 lbs/hr, approved for construction in 2013 controlled by Camfil-Farr dust collector #188918 and Camfil-Farr HEPA filter #188918-501. [326 IAC 6-3-2]
- (f) Tablet core press machine and room exhaust located in Building 123, Room 1144, with a maximum capacity of 198 lbs/hr, approved for construction in 2013 controlled by Camfil-Farr dust collector #188934 and Camfil-Farr HEPA filter #188934-501. [326 IAC 6-3-2]
- (g) Tablet core press machine and room exhaust located in Building 123, Room 1205, with a maximum capacity of 840 lbs/hr, approved for construction in 2013

controlled by Camfil-Farr dust collector #188951 and Camfil-Farr HEPA filter #188951-501. [326 IAC 6-3-2]

- (h) Bin Charging system located in building 123, with a maximum capacity of 800 lbs/hr, approved for construction in 2013 controlled by Torit fabric filter dust collector #189081 and Flanders HEPA filter #189081-703.
- (i) Tablet coating unit (Thomas Flex 500) located in Building 123, with a maximum capacity (spray rate) of 106 lbs/hr, approved for construction in 2013 controlled by Torit fabric filter dust collector # 191670.
- (j) Tablet printing operations with a maximum capacity of 6 batches of tablets per day approved for construction in 2013, located in buildings 121, 122, 123 and 124.

The following VOC storage containers:

- (a) One (1) 2,600 gallon above ground storage tank containing diesel fuel oil, located in Building 121.
- (b) One (1) 5,200 gallon above ground storage tank containing diesel fuel oil, approved for construction in 2011, located at Building 122, and connected to Building 122 emergency generator S35.

**Enforcement Issues**

There are no pending enforcement actions related to this revision.

**Emission Calculations**

See Appendix A of this TSD for detailed emission calculations.

**Permit Level Determination – FESOP Revision**

The following table is used to determine the appropriate permit level under 326 IAC 2-8.11.1. This table reflects the PTE before controls of the proposed revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	PTE of Proposed Revision (tons/year)									
	PM	PM10	PM2.5	SO <sub>2</sub>	NOx	VOC	CO	GHGs as CO <sub>2</sub> e	Total HAPs	Worst Single HAP
Tablet Coating Line #9	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
Tablet Coating Line #10	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
Insignificant Activities	67.61	67.61	67.61	0	0	0	0	0	0	0.59, HCl
<b>Total PTE of Proposed Revision</b>	<b>76.75</b>	<b>76.75</b>	<b>76.75</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.77</b>	<b>1.77 HCl</b>
negl. = negligible										

Pursuant to 326 IAC 2-8-11.1(f)(1)(E), this FESOP is being revised through a FESOP Significant Permit Revision because the proposed revision is not an Administrative Amendment or Minor Permit revision and the proposed revision involves the construction of new emission units)and change in operation - where the

PTE of any pollutant increases as indicated below with potential to emit greater than or equal to twenty-five (25) tons per year of the following pollutants:

- (i) PM, PM10, or direct PM2.5.

**PTE of the Entire Source After Issuance of the FESOP Revision**

The table below summarizes the potential to emit of the entire source (reflecting adjustment of existing limits), with updated emissions shown as **bold** values and previous emissions shown as ~~strikethrough~~ values.

Process/ Emission Unit	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)									
	PM	PM10*	PM2.5*	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs as CO <sub>2</sub> e**	Total HAPs	Worst Single HAP
Worst Case Fuel Combustion Boilers S1, S2, & S27**	4.23	4.86	3.28	90.10	42.30	0.72	10.58	64,314.8	1.01	0.96, Hexane
Tablet Coating Line #1	2.09	2.09	2.09	0	0	0	0	0	0.87	0.87, HCl
Tablet Coating Line #2	2.09	2.09	2.09	0	0	0	0	0	0.87	0.87, HCl
Tablet Coating Line #3	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
Tablet Coating Line #4	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
Tablet Coating Line #5	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
Tablet Coating Line #6	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
Tablet Coating Line #7	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
Tablet Coating Line #8	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
<b>Tablet Coating Line #9</b>	<b>4.57</b>	<b>4.57</b>	<b>4.57</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.59</b>	<b>0.59, HCl</b>
<b>Tablet Coating Line #10</b>	<b>4.57</b>	<b>4.57</b>	<b>4.57</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.59</b>	<b>0.59, HCl</b>
Emergency Generators Diesel Combustion	0.56	0.46	0.46	0.84	27.47	1.17	7.27	2,421.4	0.02	0.01, Benzene
<b>Insignificant Activities*</b>	<b>0.68</b>	<b>0.68</b>	<b>0.68</b>	<b>0</b>	<b>0</b>	<b>5.774</b>	<b>0</b>	<b>0</b>	<b>0.59</b>	<b>0.59, HCl</b>
Total PTE of Entire Source	47.71	48.24	46.66	90.94	69.77	1.92	17.84	66,736.2	7.50	6.47, HCl
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	250	250	250	250	250	250	250	100,000	NA	NA

negl. = negligible

\*Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a "regulated air pollutant".

\*\*The 100,000 CO<sub>2</sub>e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this FESOP permit revision, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. (Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted)

Process/ Emission Unit	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)									
	PM	PM10*	PM2.5*	SO <sub>2</sub>	NOx	VOC	CO	GHGs as CO <sub>2</sub> e**	Total HAPs	Worst Single HAP
Worst Case Fuel Combustion Boilers S1, S2, & S27**	4.23	4.86	3.28	90.10	42.30	0.72	10.58	64,314.8	1.01	0.96, Hexane
Tablet Coating Line #1	2.09	2.09	2.09	0	0	0	0	0	0.87	0.87, HCl
Tablet Coating Line #2	2.09	2.09	2.09	0	0	0	0	0	0.87	0.87, HCl
Tablet Coating Line #3	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
Tablet Coating Line #4	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
Tablet Coating Line #5	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
Tablet Coating Line #6	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
Tablet Coating Line #7	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
Tablet Coating Line #8	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
Tablet Coating Line #9	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
Tablet Coating Line #10	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59, HCl
Emergency Generators Diesel Combustion	0.56	0.46	0.46	0.84	27.47	1.17	7.27	2,421.4	0.02	0.01, Benzene
Insignificant Activities*	0.68	0.68	0.68	0	0	5.774	0	0	0.59	0.59, HCl
Total PTE of Entire Source	47.71	48.24	46.66	90.94	69.77	1.92	17.84	66,736.2	7.50	6.47, HCl
Title V Major Source Thresholds**	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds**	250	250	250	250	250	250	250	100,000	NA	NA

negl. = negligible  
 \*Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a "regulated air pollutant".  
 \*\*The 100,000 CO<sub>2</sub>e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

(a) FESOP Status

This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP).

- (b) PSD Minor Source  
This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

### **Federal Rule Applicability Determination**

#### New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels, 40 CFR 60, Subpart Kb (326 IAC 12), are not applicable to the above ground storage tanks containing diesel fuel oil, located in buildings 121 and 122 because although it was constructed after the rule applicability date of July 23, 1984, they have a maximum capacity of less than 75 m<sup>3</sup> (19,813 gallons) each, and the liquid stored in it has a maximum true vapor pressure of less than fifteen kiloPascals (15.0 kPa).
- (b) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this proposed revision.

#### National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (a) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Chemical Manufacturing Area Sources, 40 CFR 63.11494, Subpart VVVVVV, are not included in the permit for the new tablet coating lines (S42 and S43), because the feedstock does not contain any of the HAPs listed in Table 1 to this subpart. In addition, no HAPs as listed in Table 1 to this subpart are generated or produced in the new tablet coating lines (S42 and S43) and present in the process fluids at concentrations greater than 0.1 percent for carcinogens, as defined by the Occupational Safety and Health Administration at 29 CFR 1910.1200(d)(4), and greater than 1.0 percent for noncarcinogens.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

#### Compliance Assurance Monitoring (CAM)

- (a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

### **State Rule Applicability Determination**

The following state rules are applicable to the proposed revision:

- (a) 326 IAC 2-8-4 (FESOP)  
This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP). See PTE of the Entire Source After Issuance of the FESOP Revision Section above.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))  
This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326

IAC 2-2, the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the FESOP Revision Section above.

- (c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))  
The proposed revision is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the new and modified units is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.
- (d) 326 IAC 2-6 (Emission Reporting)  
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (e) 326 IAC 5-1 (Opacity Limitations)  
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
  - (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
  - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

#### Bohle Tablet Coaters

- (a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)  
Pursuant to 326 IAC 6-3-2(e)(2), the particulate matter (PM) from each Bohle tablet coater (S42 and S43) shall not exceed 0.551 pounds per hour when operating at a process weight rate less than 100 pounds per hour.  
  
The packed-bed scrubbers shall be in operation at all times the Bohle tablet coaters (S42 and S43) are in operation, in order to comply with this limit.
- (b) There are no 326 IAC 8 Rules that are applicable to the tablet coating lines (S42 and S43) because they do not have the potential to emit VOC.

#### Storage Tank

- (a) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)  
The diesel fuel storage tanks are not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions for each of the tanks is less than twenty-five (25) tons per year.
- (b) 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)  
The diesel fuel storage tanks are not subject to the requirements of 326 IAC 8-4-3 because they are not petroleum liquid storage vessels with a capacity greater than thirty-nine thousand (39,000) gallons, each.
- (c) 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)  
The diesel fuel storage tanks are not subject to the requirements of 326 IAC 8-9, because this source is not located in Clark, Floyd, Lake, or Porter Counties.

### Insignificant Activities

326 IAC 6-3-2 (Particulate Emission Limitations For Processes with Process Weight Rates Less than One Hundred (100) pounds per hour)

The particulate matter (PM) emissions from the following processes shall be limited by the following equation:

One (1) Granulator and one (1) GEA fluid-bed dryer for aqueous wet granulations located in Building 124, Tablet core press machine and room exhaust located in Building 123, Room 1142, Tablet core press machine and room exhaust located in Building 123, Room 1144, Tablet core press machine and room exhaust located in Building 123, Room 1205, Bin Charging system located in building 123, Tablet coating unit (Thomas Flex 500) located in Building 123, Tablet printing operations, located in buildings 121, 122, 123 and 124.

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \text{ where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

### **Compliance Determination, Monitoring and Testing Requirements**

The existing compliance requirements will not change as a result of this revision. The source shall continue to comply with the applicable requirements and permit conditions as contained in FESOP Renewal No: 129-23109-00021, issued on October 13, 2006.

### **Proposed Changes**

- (a) The following changes listed below are due to the proposed revision. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

...

**Significant Permit Revision to a  
NEW SOURCE REVIEW AND FEDERALLY ENFORCEABLE STATE  
OPERATING PERMIT (FESOP)  
OFFICE OF AIR QUALITY**

Bristol - Myers Squibb Company  
~~State Route 62 East~~ **4601 Highway 62 East**  
Mt. Vernon, Indiana 47620

...

#### A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary pharmaceutical packaging and research and development source.

Source Address: ~~State Route 62 East~~, **4601 Highway 62 East** Mt. Vernon, IN 47620

...

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

The following is a list of the new and modified emission units and pollution control devices:

- ...
- (c) One (1) Bohle Tablet Coater #1, identified as S30, **installed in 2006**, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 880 lbs of tablets per 36-hour batch, equipped with a **fluidized** packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-30.
  - (d) One (1) Bohle Tablet Coater #2, identified as S33, **installed in 2009**, consisting of single pan tablet coating machine and three coating suspension prep tanks, approved for construction in 2009, with a maximum production capacity of 880 lbs of tablets per 36-hour batch, equipped with a **fluidized** packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-33.
  - (e) One (1) Bohle Tablet Coater #3, identified as S36, approved for construction in 2011, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a **fluidized** packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-36.
  - (f) One (1) Bohle Tablet Coater #4, identified as S37, approved for construction in 2011, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a **fluidized** packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-37.
  - (g) One (1) Bohle Tablet Coater #5, identified as S38, approved for construction in 2012, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a **fluidized** packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-38.
  - (h) One (1) Bohle Tablet Coater #6, identified as S39, approved for construction in 2012, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a **fluidized** packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-39.
  - (i) One (1) Bohle Tablet Coater #7, identified as S40, approved for construction in 2012, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a **fluidized** packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-40.
  - (j) One (1) Bohle Tablet Coater #8, identified as S41, approved for construction in 2012, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a **fluidized** packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-41.

...  
A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

---

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

- (a) Other categories with emissions below insignificant thresholds (i.e. PM emissions less than 5 tons per year):
- (1) One (1) Granulator and one (1) Glatt 120 fluid-bed dryer for aqueous wet granulations located in Building 122, Room 1119, **installed in 1999**, with a maximum capacity of 98 lbs/hr. Granulator controlled by Torit fabric filter/dust collector #29692 and fluid-bed dryer controlled by Torit fabric filter/dust collector #29693. [326 IAC 6-3-2]
  - (2) Tablet core press machine located in Building 121, Room 116c, **installed in 2001**, with a maximum capacity of 80 lbs/hr, controlled by Torit fabric filter/dust collector #29698. [326 IAC 6-3-2]
  - (3) Tablet coating unit (1-pan coater) located in Building 121, Room 116c, **installed in 2001**, with a maximum capacity of 50 lbs/hr, and controlled by Torit fabric filter/dust collector #34323. [326 IAC 6-3-2]
  - (4) Dry material weighing, mixing and blending operations located in Building 121, Room 1019, identified as Small Weigh Room, **installed in 2004**, with a maximum capacity of 1237 lbs/hr, and controlled by Torit fabric/dust collector #29704. [326 IAC 6-3-2]
  - (5) Tablet core press machine and room exhaust located in Building 121, Room 1014, **installed in 2004**, with a maximum capacity of 80 lbs/hr, and controlled by Mac fabric filter/dust collector #29706. [326 IAC 6-3-2]
  - (6) Tablet coating unit (1-pan coater) located in Building 121, Room 1023, **installed in 2004**, with a maximum capacity of 50 lbs/hr, and controlled by Torit fabric filter/dust collector #29705. [326 IAC 6-3-2]
  - (7) Pharmaceutical packaging line 3 identified as S-6 (Building ~~422-124~~), **installed in 2004**, with a maximum capacity of 442 lbs/hr and controlled by a dust collector for PM identified as ~~#29687~~ **#212021**. [326 IAC 6-3-2]
  - (8) Pharmaceutical packaging lines 8, 9, 11, 12, and 14 identified as S-6 (Building 124), **installed in 2004**, with a maximum capacity of 3236 lbs/hr. Packaging lines 8, 9, 11, and 14 are controlled by a common dust collector for PM identified as ~~#29703~~ **#212021** and line 12 is controlled by a separate dust collector for PM identified as ~~#116720~~ **#212022**. [326 IAC 6-3-2]
  - (9) Six (6) warm air tray dryers used to dry water-based granulations, located in Building 124, Room 1130, **installed in 2009**, with a maximum total capacity of 1,830 pounds per batch [326 IAC 6-3-2];
  - (10) One (1) tablet core press machine, located in Building 122, Room 1106, **installed in 1998**, with maximum capacity of 165 pounds per hour, controlled by common fabric dust collector #260030807 [326 IAC 6-3-2];
  - (11) One (1) tablet core press machine, located in Building 122, Room 1109, **installed**

- in 1998**, with maximum capacity of 330 pounds per hour, controlled by common fabric dust collector #260030807[326 IAC 6-3-2];
- (12) One (1) tablet core press machine, located in Building 122, Room 1113, **installed in 1998**, with maximum capacity of 165 pounds per hour, controlled by common fabric dust collector #260030807[326 IAC 6-3-2];
- (13) One (1) Powder encapsulator machine, located in Building 122, Room 1123, **installed in 2009**, with a maximum powder throughput of 110 pounds per hour, and controlled by common fabric filter dust collector #29688 [326 IAC 6-3-2];
- (14) One (1) Powder encapsulator machine, located in Building 122, Room 1124, **installed in 2009**, with a maximum powder throughput of 185 pounds per hour, and controlled by common fabric filter dust collector #29688 [326 IAC 6-3-2];
- (15) One (1) Mac Central Vacuum System, located in Building 121, and controlled by fabric filter dust collector #29706, **installed in 2004** [326 IAC 6-3-2];
- (16) One (1) Spencer Central Vacuum System, located in Building 122, and controlled by fabric filter dust collector #29688 and [326 IAC 6-3-2], **installed in 1998**; and
- (17) One (1) Central Vacuum System, located in Building 124, and controlled by fabric filter dust collector #2524446-4 #**212023** [326 IAC 6-3-2], **installed in 2008**.
- (18) **One (1) Granulator and one (1) GEA fluid-bed dryer for aqueous wet granulations located in Building 124, approved for construction in 2013, with a maximum capacity of 290 lbs/hr. Granulator and fluid-bed dryer controlled by a common Flanders pre-filter #185069-001 and Flanders HEPA filter #185069-501A. [326 IAC 6-3-2]**
- (19) **Tablet core press machine and room exhaust located in Building 123, Room 1142, with a maximum capacity of 844 lbs/hr, approved for construction in 2013 controlled by Camfil-Farr dust collector #188918 and Camfil-Farr HEPA filter #188918-501. [326 IAC 6-3-2]**
- (20) **Tablet core press machine and room exhaust located in Building 123, Room 1144, with a maximum capacity of 198 lbs/hr, approved for construction in 2013 controlled by Camfil-Farr dust collector #188934 and Camfil-Farr HEPA filter #188934-501. [326 IAC 6-3-2]**
- (21) **Tablet core press machine and room exhaust located in Building 123, Room 1205, with a maximum capacity of 840 lbs/hr, approved for construction in 2013 controlled by Camfil-Farr dust collector #188951 and Camfil-Farr HEPA filter #188951-501. [326 IAC 6-3-2]**
- (22) **Bin Charging system located in building 123, with a maximum capacity of 800 lbs/hr, approved for construction in 2013 controlled by Torit fabric filter dust collector #189081 and Flanders HEPA filter #189081-703.**
- (23) **Tablet coating unit (Thomas Flex 500) located in Building 123, with a maximum capacity (spray rate) of 106 lbs/hr, approved for construction in 2013 controlled by Torit fabric filter dust collector # 191670.**
- (24) **Tablet printing operations with a maximum capacity of 6 batches of tablets**

**per day approved for construction in 2013, located in buildings 121 and 123.**

- (b) Cold solvent cleaning station (2 square feet), **installed in 1970**. [326 IAC 8-3-2] [326 IAC 8-3-5]
- (c) Cold solvent cleaning station (3.75 square feet), **installed in 1970**. [326 IAC 8-3-2] [326 IAC 8-3-5]
- (d) Emergency generators as follows:
- ...
- (2) One (1) emergency diesel powered ~~generator~~ **fire pump** located in Building 103, identified as S-7, with heat input capacity of 0.7 MMBtu/hr, and exhausting through stack S-7. This generator was constructed before July 11, 2005 and manufactured before April 1, 2006.
- Under 40 CFR Part 63, Subpart ZZZZ, this unit is considered an affected source.
- ...
- (4) One (1) 1500kW reciprocating diesel engine-powered emergency generator located in Building ~~424~~ **104**, identified as S32, approved for construction in 2009, with a maximum capacity of 1500kW, and exhausting to Stack S-32.
- Under 40 CFR Part 63, Subpart ZZZZ, this unit is considered an affected source.
- Under 40 CFR Part 60, Subpart IIII, this unit is considered an affected source.
- ...
- (e) The following VOC storage containers:
- (1) One (1) 20,000 gallon aboveground storage tank containing No. 2 fuel oil, **installed in 1997**.
- (2) One (1) 1,130 gallon aboveground storage tank containing gasoline, **installed in 1980**.
- (3) One (1) 1,130 gallon aboveground storage tank containing diesel fuel, **installed in 1980**.
- (4) One (1) 100 gallon aboveground storage tank containing diesel fuel, **installed in 1970**.
- (5) One (1) 270 gallon aboveground storage tank containing diesel fuel, **installed in 1970**.
- (6) One (1) 650 gallon aboveground storage tank containing diesel fuel **installed in 2002**.
- ~~(7) One (1) 500 gallon aboveground storage tank containing diesel fuel.~~
- (87) One (1) 2,600 gallon above ground storage tank containing diesel fuel oil, located in Building ~~424~~ **104**, **installed in 2009**.
- (98) One (1) 775 gallon above ground storage tank containing diesel fuel oil, located at Building 106 and connected to Building 106 emergency generator

**S34, installed in 2011.**

(409) One (1) 5,200 gallon above ground storage tank containing diesel fuel oil, approved for construction in 2011, located at Building 122, and connected to Building 122 emergency generator S35.

(f) Light vehicle traffic on paved roads.

(g) Research and development operations, **installed in 1970.**

(h) A laboratory as defined in 326 IAC 2-7-1(21)(D), **installed in 1970.**

(i) Paved and unpaved roads and parking lots with public access, **installed in 1970.**  
[326 IAC 6-4]

...

**(k) One (1) Bohle Tablet Coater #9, identified as S42, approved for construction in 2013 consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1540 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-41.**

**(l) One (1) Bohle Tablet Coater #10, identified as S43, approved for construction in 2013 consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1540 lbs of tablets per 36-hour batch, equipped with a fluidized packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-43.**

**A.54 FESOP Applicability [326 IAC 2-8-2]**

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This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

**D.1.6 Visible Emissions Notations**

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(a) Visible emission notations of the Boilers #1 (S1), #2 (S2), and #3 (S27) stack exhaust shall be performed once per day during normal daylight operations ~~when exhausting to the atmosphere when combusting fuel oil.~~ A trained employee shall record whether emissions are normal or abnormal.

...

**D.1.7 Record Keeping Requirements**

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(a) To document the compliance status with Condition D.1.2 and D.1.3, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO<sub>2</sub> emission limit and fuel oil equivalent usage limit established in Condition D.1.2 and D.1.3

...

(3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period, ~~the natural gas fired boiler certification does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1); and~~

...

- (b) To document the compliance status with Condition D.1.6, the Permittee shall maintain daily records of the visible emission notations of the boiler #1 (S1), boiler #2 (S2), and boiler #3 (S27) stack exhaust while combusting fuel oil. **The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).**

...

D.1.11 NESHAP for Area Sources: Industrial, Commercial, and Institutional Boilers [40 CFR Part 63, Subpart JJJJJJ]

In order to render the requirements of 40 CFR 63, Subpart JJJJJJ not applicable and to ensure the three (3) boilers, identified as Boiler #1 (S1), #2 (S2), and #3 (S27) are gas-fired boilers, as defined in 40 CFR 63.11237, the Permittee shall comply with following:

- (a) The three (3) existing boilers, identified as Boiler #1 (S1), #2 (S2), and #3 (S27) shall only combust No. 2 fuel oil during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year **for each boiler.**

...

**SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS**

**Emissions Unit Description:**

- (c) One (1) Bohle Tablet Coater #1, identified as S30, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 880 lbs of tablets per 36-hour batch, equipped with a **fluidized** packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-30.
- (d) One (1) Bohle Tablet Coater #2, identified as S33, consisting of single pan tablet coating machine and three coating suspension prep tanks, approved for construction in 2009, with a maximum production capacity of 880 lbs of tablets per 36-hour batch, equipped with a packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-33.
- (e) One (1) Bohle Tablet Coater #3, identified as S36, approved for construction in 2011, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a **fluidized** packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-36.
- (f) One (1) Bohle Tablet Coater #4, identified as S37, approved for construction in 2011, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a **fluidized** packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-37.
- (g) One (1) Bohle Tablet Coater #5, identified as S38, approved for construction in 2012, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a **fluidized** packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-38.
- (h) One (1) Bohle Tablet Coater #6, identified as S39, approved for construction in 2012, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a **fluidized** packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-39.
- (i) One (1) Bohle Tablet Coater #7, identified as S40, approved for construction in 2012, consisting

of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a **fluidized** packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-40.

(j) One (1) Bohle Tablet Coater #8, identified as S41, approved for construction in 2012, consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1,540 lbs of tablets per 36-hour batch, equipped with a **fluidized** packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-41.

(k) One (1) Bohle Tablet Coater #9, identified as S42, approved for construction in 2013 consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1540 lbs of tablets per 36-hour batch, equipped with a **fluidized** packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-41.

(l) One (1) Bohle Tablet Coater #10, identified as S43, approved for construction in 2013 consisting of single pan tablet coating machine and three coating suspension prep tanks, with a maximum production capacity of 1540 lbs of tablets per 36-hour batch, equipped with a **fluidized** packed-bed scrubber for HCl fume and particulate control, and exhausting through stack S-43.

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

...

### Emission Limitations and Standards [326 IAC 2-8-4(1)]

#### D.2.1 Particulate [326 IAC 6-3-2]

- ~~(a) Pursuant to 326 IAC 6-3-1(b)(14), the Bohle Tablet Coaters S30 and S33 are exempt from the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) because the potential particulate emissions are less than 0.551 pounds per hour, each, when operating at the maximum process weight rate.~~
- ~~(b)~~ (a) Pursuant to 326 IAC 6-3-2(e)(2) (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the Bohle Tablet Coaters S36, S37, S38, S39, S40, S41, S42 and S43 shall each be limited to 0.551 lbs/hr when operating at a process weight rate of equal to or less than 100 lb/hr.

### Compliance Determination Requirements

#### D.2.2 Particulate Matter (PM) [326 IAC 2-8-5(a)(4)]

In order to comply with Condition D.2.1, the packed-bed scrubbers for PM control shall be in operation at all times when the **ten (10)** Bohle Tablet Coaters, identified as S30, S33, S36, S37, S38, S39, S40, and S41, **S42 and S43** are in operation.

...

### SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

#### Emissions Unit Description:

##### Insignificant Activities:

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

- (a) **Other categories with emissions below insignificant thresholds (i.e. PM emissions less**

than 5 tons per year):

...

- (8) Pharmaceutical packaging lines 8, 9, 11, 12, and 14 identified as S-6 (Building 124), with a maximum capacity of 3236 lbs/hr. Packaging lines 8, 9, 11, and 14 are controlled by a common dust collector for PM identified as #~~29703~~ **212021** and line 12 is controlled by a separate dust collector for PM identified as #~~416720~~ **212022**. [326 IAC 6-3-2]

...

- (18) **One (1) Granulator and one (1) GEA fluid-bed dryer for aqueous wet granulations located in Building 124, approved for construction in 2013, with a maximum capacity of 290 lbs/hr. Granulator and fluid-bed dryer controlled by a common Flanders pre-filter #185069-001 and Flanders HEPA filter #185069-501A. [326 IAC 6-3-2]**
- (19) **Tablet core press machine and room exhaust located in Building 123, Room 1142, with a maximum capacity of 844 lbs/hr, approved for construction in 2013 controlled by Camfil-Farr dust collector #188918 and Camfil-Farr HEPA filter #188918-501. [326 IAC 6-3-2]**
- (20) **Tablet core press machine and room exhaust located in Building 123, Room 1144, with a maximum capacity of 198 lbs/hr, approved for construction in 2013 controlled by Camfil-Farr dust collector #188934 and Camfil-Farr HEPA filter #188934-501. [326 IAC 6-3-2]**
- (21) **Tablet core press machine and room exhaust located in Building 123, Room 1205, with a maximum capacity of 840 lbs/hr, approved for construction in 2013 controlled by Camfil-Farr dust collector #188951 and Camfil-Farr HEPA filter #188951-501. [326 IAC 6-3-2]**
- (22) **Bin Charging system located in building 123, with a maximum capacity of 800 lbs/hr, approved for construction in 2013 controlled by Torit fabric filter dust collector #189081 and Flanders HEPA filter #189081-703.**
- (23) **Tablet coating unit (Thomas Flex 500) located in Building 123, with a maximum capacity (spray rate) of 106 lbs/hr, approved for construction in 2013 controlled by Torit fabric filter dust collector # 191670.**
- (24) **Tablet printing operations located in buildings 121 and 123, with a maximum capacity of 6 batches of tablets per day approved for construction in 2013,**

...

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

**Emission Limitations and Standards [326 IAC 2-8-4(1)]**

Emission Limitations and Standards [326 IAC 2-8-4(1)]

**D.3.1 Particulate [326 IAC 6-3-2]**

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the following Emission units shall be limited as follows:

Emission Unit	Process Weight Rate (lb/hr)	Process Weight Rate (tons/hr)	Allowable PM Emissions (326 IAC 6-3-2) (lb/hr)
Pharmaceutical Packaging Lines (Building 122)	442	<b>0.221</b>	1.49
Pharmaceutical Packaging Lines (Building 124)	3236	<b>1.62</b>	4.55
Small Weigh Room	1237	<b>0.62</b>	2.97
<b>Granulator (Building 124 )</b>	<b>290</b>	<b>0.15</b>	<b>0.32</b>
<b>GEA fluid bed dryer (Building 124 )</b>	<b>290</b>	<b>0.15</b>	<b>0.32</b>
<b>Tablet Core Press (Building 123, Room 1142)</b>	<b>844</b>	<b>0.42</b>	<b>2.29</b>
<b>Tablet Core Press (Building 123, Room 1144)</b>	<b>198</b>	<b>0.099</b>	<b>0.87</b>
<b>Tablet Core Press (Building 121, Room 1205)</b>	<b>840</b>	<b>0.42</b>	<b>2.29</b>
<b>Tablet coater (Thomas Flex) (Building 123)</b>	<b>106</b>	<b>0.05</b>	<b>0.55</b>

The pounds per hour limitations were calculated using the following equation:

Interpolation and extrapolation of the data for the process weight rate **up to** 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour;  
 and P = process weight rate in tons per hour.

...  
**SECTION E.1 FACILITY OPERATION CONDITIONS**

Emissions Unit Description:

Insignificant Activities:

(d) Emergency generators as follows:

- (4) One (1) 1500kW reciprocating diesel engine-powered emergency generator located in Building ~~424~~ **104**, identified as S32, approved for construction in 2009, with a maximum capacity of 1500kW, and exhausting to Stack S-32.
- (5) One (1) 350 kW diesel engine-driven emergency generator located in Building 106, identified as S34, approved for construction in 2011, with a maximum capacity of 350 kW and exhausting to Stack S34.
- (6) One (1) 3,000 kW diesel engine-driven emergency generator located in Building 122, identified as S35, approved for construction in 2011, with a maximum capacity of 3,000 kW, and exhausting to Stack S-35.

Under 40 CFR Part 60, Subpart IIII, these units are considered affected sources.

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

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

The provisions of 40 CFR Part 60, Subpart A-General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the emergency generators described in this section except when otherwise specified in 40 CFR Part 60, Subpart IIII.

...

**SECTION E.2 FACILITY OPERATION CONDITIONS**

**Emissions Unit Description:**

Insignificant Activities:

(d) Emergency generators as follows:

- (1) One (1) emergency diesel powered generators located in Building 104, identified as S-3, with heat input capacity of 4.4 MMBtu/hr, and exhausting to stack S-3. This generator was constructed before July 11, 2005 and manufactured before April 1, 2006.
- (2) One (1) emergency diesel powered generator ~~generator~~ **fire pump** located in Building 103, identified as S-7, with a heat input capacity of 0.7 MMBtu/hr, and exhausting to stack S-7. This generator was constructed before July 11, 2005 and manufactured before April 1, 2006.
- ...
- (4) One (1) 1500kW reciprocating diesel engine-powered emergency generator located in Building ~~424~~ **104**, identified as S32, approved for construction in 2009, with a maximum capacity of 1500kW, and exhausting to Stack S-32.

Under 40 CFR Part 63, Subpart ZZZZ, these units are considered affected sources.

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

...

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

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
CERTIFICATION**

Source Name: Bristol - Myers Squibb Company  
Source Address: ~~State Route 62 East~~, **4601 Highway 62 East**, Mt. Vernon, IN 47620  
FESOP No.: 129-23109-00021

...

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**

**OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH  
100 North Senate Avenue**

MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
Phone: 317-233-0178  
Fax: 317-233-6865

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
EMERGENCY OCCURRENCE REPORT

Source Name: Bristol - Myers Squibb Company  
Source Address: ~~State Route 62 East~~, **4601 Highway 62 East**, Mt. Vernon, IN 47620  
FESOP No.: 129-23109-00021

...

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Report

Source Name: Bristol - Myers Squibb Company  
Source Address: ~~State Route 62 East~~, **4601 Highway 62 East**, Mt. Vernon, IN 47620  
FESOP No.: 129-23109-00021

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**Conclusion and Recommendation**

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on April 15, 2013.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP Significant Permit Revision No. 129-33093-00021. The staff recommends to the Commissioner that this FESOP Significant Permit Revision be approved.

**IDEM Contact**

- (a) Questions regarding this proposed permit can be directed to Diya Bhattacharjee at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317)234-5372 or toll free at 1-800-451-6027 extension 5372.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.in.gov/idem](http://www.in.gov/idem)

**Appendix A: Emission Calculations  
Potential to Emit of Proposed Revision**

Company Name: Bristol-Myers Squibb Company  
Address City IN Zip: 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
Permit Number: 129-33093-00021  
Permit Reviewer: Diya Bhattacharjee

Unlimited Potential to Emit of Proposed Revision (tons/year)										
Process	PM	PM10	PM2.5	SO2	NOx	VOC	CO	GHGs as CO2e	Total HAPs	Single HAP
Tablet Coating Line #9	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59 HCl
Tablet Coating Line #10	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59 HCl
Insignificant Activities	44.83	44.83	44.83	0	0	0	0	0	0.59	0.59 HCl
<b>Total</b>	<b>53.96</b>	<b>53.96</b>	<b>53.96</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.77</b>	<b>1.77 HCl</b>

Particulate Matter Emissions from mixing, weighing, pressing, and coating facilities

Unit ID	Type of Process	Max. Process Weight Rate lb/hr	Emission Factor lb PM / 2000 lb solids	Source of Emission Factor *	Control Efficiency(%)	Potential Uncontrolled (lbs/hr)	Potential Uncontrolled (tons/yr)	Potential Controlled (tons/yr)
Aqueous wet Granulations (Building 124 )	Granulator	290.00	2.10	Emission factor developed from stack testing study conducted at Mead Johnson - Evansville (March 1993)	0.99	0.30	1.33	0.0133
Aqueous wet Granulations (Building 124)	GEA fluid bed dryer	290.00	10.00	Worse case engineering estimate - amount lost to product recovery bag filter from materials	0.99	1.45	6.35	0.0635
Tablet Core Press (Building 123, Room r142)	Tablet Core Press	844.00	7.80	Emission factor developed from stack testing study conducted at Mead Johnson - Evansville (March 1993)	0.99	3.29	14.42	0.1442
Tablet Core Press (Building 123, Room r144)	Tablet Core Press	198.00	7.80	Emission factor developed from stack testing study conducted at Mead Johnson - Evansville (March 1993)	0.99	0.77	3.38	0.0338
Tablet Core Press (Building 121, Room r205)	Tablet Core Press	840.00	7.80	Emission factor developed from stack testing study conducted at Mead Johnson - Evansville (March 1993)	0.99	3.28	14.35	0.1435
Tablet Coater (Building 123, Room 1023)	Single pan coater	106.00	20.00	Emission factor based on 20 pct. solids coating and 95 pct. transfer efficiency onto tablets.	0.99	1.06	4.64	0.0464
Bin Charging System (Building 123)	Dry Material Transfer Operations	800	0.2	Engineering Estimate. Total enclosure, dust generation is negligible	0.99	0.08	0.3504	0.0035
<b>Total</b>						<b>10.23</b>	<b>44.83</b>	<b>0.45</b>

**Methodology**

Throughput (lb/hr) \* EF (lb PM / 1000 lb solids) \* 8760 hr/yr \* ton/2000 lb = throughput (ton/yr)  
\* Emission factors are provided by the source; PM, PM10, PM2.5 presumed same.

**Appendix A: Emission Calculations  
Potential to Emit of Proposed Revision**

**Company Name:** Bristol-Myers Squibb Company  
**Address City IN Zip:** 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
**Permit Number:** 129-33093-00021  
**Permit Reviewer:** Diya Bhattacharjee

**Tablet Coating Process (S-42)**

Tablet Coating Process comprised of three coating suspension prep tanks (coating solids, water, hydrochloric acid mixed into solution) and a single pan tablet coating machine (coating suspension sprayed onto uncoated tablets). Exhausts from prep tanks and pan coater are combined in a vent header with a local exhaust over HCl storage drums, and vented to a packed-bed scrubber for HCl fume and particulate control.

**Production and Emission Related Information and Data**

Parameter	Value	Units	Basis
Batch Spraying Time	1198	minutes	Process operation design specifications
Maximum dust loading to scrubber	7.88	g/min	Engineering design estimate - worse case rate
Maximum HCl loading to scrubber	1.02	g/min	Engineering design estimate - worse case rate
Scrubber PM Control Efficiency	99	%	Nominal equipment performance assumed (Manufacturer's guaranteed control efficiency is 99.97%)
Scrubber HCl Control Efficiency	98	%	Nominal equipment performance assumed (Manufacturer's guaranteed control efficiency is 99.0%)

**Potential Emission Calculations Based on Worst Case Engineering Design Estimates:**Uncontrolled particulate:

$$= 7.88 \text{ grams/minute} \times 60 \text{ minutes/hour} / 453.6 \text{ grams/pound}$$

$$\text{Uncontrolled PM} = 1.04 \text{ lb/hr}$$

$$= 25.02 \text{ lb/day}$$

$$= \mathbf{4.57 \text{ ton/yr}}$$

Controlled particulate:

$$= 1.04 \text{ lbs uncontrolled PM/hr} \times (1 - 0.99)$$

$$\text{Controlled PM} = 0.010 \text{ lb/hr}$$

$$= 0.25 \text{ lb/day}$$

$$= \mathbf{0.046 \text{ ton/yr}}$$

Uncontrolled HCl:

$$= 1.02 \text{ grams/minute} \times 60 \text{ minutes/hour} / 453.6 \text{ grams/pound}$$

$$\text{Uncontrolled HCl} = 0.13 \text{ lb/hr}$$

$$= 3.24 \text{ lb/day}$$

$$= \mathbf{0.59 \text{ ton/yr}}$$

Controlled HCl:

$$= 0.13 \text{ lbs uncontrolled HCl/hr} \times (1 - 0.98)$$

$$\text{Controlled HCl} = 0.003 \text{ lb/hr}$$

$$= 0.065 \text{ lb/day}$$

$$= \mathbf{0.012 \text{ ton/yr}}$$

**Tablet Coating Process (S-43)**

Tablet Coating Process comprised of three coating suspension prep tanks (coating solids, water, hydrochloric acid mixed into solution)

**Production and Emission Related Information and Data**

Parameter	Value	Units	Basis
Batch Spraying Time	1198	minutes	Process operation design specifications
Maximum dust loading to scrubber	7.88	g/min	Engineering design estimate - worse case rate
Maximum HCl loading to scrubber	1.02	g/min	Engineering design estimate - worse case rate
Scrubber PM Control Efficiency	99	%	Nominal equipment performance assumed (Manufacturer's guaranteed control efficiency is 99.97%)
Scrubber HCl Control Efficiency	98	%	Nominal equipment performance assumed (Manufacturer's guaranteed control efficiency is 99.0%)

**Potential Emission Calculations Based on Worst Case Engineering Design Estimates:**Uncontrolled particulate:

$$= 7.88 \text{ grams/minute} \times 60 \text{ minutes/hour} / 453.6 \text{ grams/pound}$$

$$\text{Uncontrolled PM} = 1.04 \text{ lb/hr}$$

$$= 25.02 \text{ lb/day}$$

$$= \mathbf{4.57 \text{ ton/yr}}$$

Controlled particulate:

$$= 1.04 \text{ lbs uncontrolled PM/hr} \times (1 - 0.99)$$

$$\text{Controlled PM} = 0.010 \text{ lb/hr}$$

$$= 0.25 \text{ lb/day}$$

$$= \mathbf{0.046 \text{ ton/yr}}$$

Uncontrolled HCl:

$$= 1.02 \text{ grams/minute} \times 60 \text{ minutes/hour} / 453.6 \text{ grams/pound}$$

$$\text{Uncontrolled HCl} = 0.13 \text{ lb/hr}$$

$$= 3.24 \text{ lb/day}$$

$$= \mathbf{0.59 \text{ ton/yr}}$$

Controlled HCl:

$$= 0.13 \text{ lbs uncontrolled HCl/hr} \times (1 - 0.98)$$

$$\text{Controlled HCl} = 0.003 \text{ lb/hr}$$

$$= 0.065 \text{ lb/day}$$

$$= \mathbf{0.012 \text{ ton/yr}}$$

**Tablet Printing Operations**Tablet Printing Ink

$$= 4 \text{ printers} \times 1.5 \text{ batches of tablets printed per day per printer} \times 7 \text{ days/wk} \times 52 \text{ weeks/yr} \times 3 \text{ kg ink per batch (of tablets printed)}$$

$$= 6,552 \text{ kg/yr ink}$$

$$= 6,552 \text{ kg/yr ink} \times 63 \text{ wt. pct. VOC} \times 2.2 \text{ lbs/kg}$$

$$= 9,080 \text{ lbs/yr VOC from inks}$$

$$= 2,270 \text{ lbs/yr VOC from ink per printer}$$

IPA Usage

$$= 4 \text{ printers} \times 1.5 \text{ batches of tablets printed per day per printer} \times 7 \text{ days/wk} \times 52 \text{ weeks/yr} \times 0.5 \text{ kg IPA used per batch}$$

$$= 1,092 \text{ kg/yr IPA}$$

$$= 1,092 \text{ kg/yr IPA} \times 100 \text{ wt. pct. VOC} \times 2.2 \text{ lbs/kg}$$

$$= 2,400 \text{ lbs/yr VOC from IPA}$$

$$= 600 \text{ lbs/yr VOC from IPA per printer}$$

Total VOC

$$= 9,080 \text{ lbs/yr from inks} + 2,400 \text{ lbs/yr from IPA}$$

$$= 11,480 \text{ lbs/yr VOC}$$

$$= 5.74 \text{ tons/yr VOC}$$

$$= 1.44 \text{ tons/yr VOC per printer}$$

Total VOC (from 4 printers)

$$1.44 \text{ tons/yr VOC per printer} \times 4$$

$$= 5.76 \text{ tons/yr VOC}$$

**Appendix A: Emission Calculations  
Summary of Emissions**

Company Name: Bristol-Myers Squibb Company  
Address City IN Zip: 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
Permit Number: 129-33093-00021  
Permit Reviewer: Diya Bhattacharjee

Unlimited Potential to Emit (tons/year)										
Process	PM	PM10	PM2.5	SO2	NOx	VOC	CO	GHGs as CO2e	Total HAPs	Worst case HAP
Worst Case Fuel Combustion Boilers S1, S2, & S27**	7.64	8.78	5.92	162.70	76.39	2.94	44.92	86,230.3	1.01	0.96 Hexane
Tablet Coating Line #1	2.09	2.09	2.09	0	0	0	0	0	0.87	0.87 HCl
Tablet Coating Line #2	2.09	2.09	2.09	0	0	0	0	0	0.87	0.87 HCl
Tablet Coating Line #3	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59 HCl
Tablet Coating Line #4	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59 HCl
Tablet Coating Line #5	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59 HCl
Tablet Coating Line #6	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59 HCl
Tablet Coating Line #7	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59 HCl
Tablet Coating Line #8	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59 HCl
Tablet Coating Line #9	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59 HCl
Tablet Coating Line #10	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59 HCl
Emergency Generators Diesel Combustion	0.56	0.46	0.46	0.84	27.47	1.17	7.27	2,421.4	0.02	0.01 Benzene
Insignificant Activities*	67.61	67.61	67.61	0	0	5.774	0	0	0.59	0.59 HCl
<b>Total</b>	<b>116.50</b>	<b>117.54</b>	<b>114.68</b>	<b>163.55</b>	<b>103.86</b>	<b>9.89</b>	<b>52.18</b>	<b>88,651.7</b>	<b>8.09</b>	<b>6.47 HCl</b>

Limited Potential to Emit (tons/year)										
Process	PM	PM10	PM2.5	SO2	NOx	VOC	CO	GHGs as CO2e	Total HAPs	Worst case HAP
Worst Case Fuel Combustion Boilers S1, S2, & S27**	4.23	4.86	3.28	90.10	42.30	0.72	10.58	64,314.8	1.01	0.96 Hexane
Tablet Coating Line #1	2.09	2.09	2.09	0	0	0	0	0	0.87	0.87 HCl
Tablet Coating Line #2	2.09	2.09	2.09	0	0	0	0	0	0.87	0.87 HCl
Tablet Coating Line #3	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59 HCl
Tablet Coating Line #4	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59 HCl
Tablet Coating Line #5	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59 HCl
Tablet Coating Line #6	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59 HCl
Tablet Coating Line #7	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59 HCl
Tablet Coating Line #8	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59 HCl
Tablet Coating Line #9	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59 HCl
Tablet Coating Line #10	4.57	4.57	4.57	0	0	0	0	0	0.59	0.59 HCl
Emergency Generators Diesel Combustion	0.56	0.46	0.46	0.84	27.47	1.17	7.27	2,421.4	0.02	0.01 Benzene
Insignificant Activities*	0.68	0.68	0.68	0	0	5.774	0	0	0.59	0.59 HCl
<b>Total</b>	<b>46.17</b>	<b>46.71</b>	<b>45.12</b>	<b>90.94</b>	<b>69.77</b>	<b>7.66</b>	<b>17.84</b>	<b>66,736.2</b>	<b>8.09</b>	<b>6.47 HCl</b>

Total emissions based on rated capacity at 8,760 hours/year, except emergency generators, which were based on 500 hours/year.

\* Insignificant activities include the cold cleaner stations and pharmaceutical weighing, mixing, coating and packaging lines.

\*\*Boilers 1 and 2 use natural gas as the primary fuel and # 2 fuel oil as back up fuel. The total represents the worst case emissions for each pollutant.

Controlled Potential to Emit (tons/year)										
Process	PM	PM10	PM2.5	SO2	NOx	VOC	CO	GHGs as CO2e	Total HAPs	Worst case HAP
Worst Case Fuel Combustion Boilers S1, S2, & S27**	2.27	0.23	2.27	90.10	42.30	0.72	10.58	64,314.8	1.01	0.96 Hexane
Tablet Coating Line #1	0.02	0.02	0.02	0	0	0	0	0	0.02	0.02 HCl
Tablet Coating Line #2	0.02	0.02	0.02	0	0	0	0	0	0.02	0.02 HCl
Tablet Coating Line #3	0.05	0.05	0.05	0	0	0	0	0	0.01	0.01 HCl
Tablet Coating Line #4	0.05	0.05	0.05	0	0	0	0	0	0.01	0.01 HCl
Tablet Coating Line #5	0.05	0.05	0.05	0	0	0	0	0	0.01	0.01 HCl
Tablet Coating Line #6	0.05	0.05	0.05	0	0	0	0	0	0.01	0.01 HCl
Tablet Coating Line #7	0.05	0.05	0.05	0	0	0	0	0	0.01	0.01 HCl
Tablet Coating Line #8	0.05	0.05	0.05	0	0	0	0	0	0.01	0.01 HCl
Tablet Coating Line #9	0.05	0.05	0.05	0	0	0	0	0	0.01	0.01 HCl
Tablet Coating Line #10	0.05	0.05	0.05	0	0	0	0	0	0.01	0.01 HCl
Emergency Generators Diesel Combustion	0.56	0.46	0.46	0.84	27.47	1.17	7.27	2,421.4	0.02	0.01 Benzene
Insignificant Activities*	0.68	0.68	0.68	0	0	5.774	0	0	0.59	0.59 HCl
<b>Total</b>	<b>3.91</b>	<b>1.77</b>	<b>3.80</b>	<b>90.94</b>	<b>69.77</b>	<b>7.66</b>	<b>17.84</b>	<b>66,736.2</b>	<b>1.75</b>	<b>0.13 HCl</b>

**Appendix A: Emission Calculations**  
**No. 2 Fuel Oil Combustion Only**  
**MM BTU/HR <100**  
**Boilers**

Company Name: Bristol-Myers Squibb Company  
Address City IN Zip: 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
Permit Number: 129-33093-00021  
Permit Reviewer: Diya Bhattacharjee

**1. Process Description**

Emission Unit ID	Heat Input Capacity (MMBtu/hr)	Oil Sulfur Content (%)
S1	30.64	0.3
S2	30.64	
S27	60.8	
<b>Total</b>	<b>122.08</b>	

**2. Combustion Emissions - Criteria Pollutants**

Fuel Type	Fuel Heat Value (MMBtu/kgal)	Emission Factor (lb/kgal)						
		PM	PM10	direct PM2.5	SO <sub>2</sub> (142S)	NOx	VOC	CO
No. 2 Distillate Oil	140	2.00	2.30	1.55	42.6	20.0	0.34	5.00

Emission factors from AP 42, Chapter 1.3, Tables 1.3-1, 1.3-2, 1.3-3, 1.3-6, 1.3-10, and 1.3-11. (9/98)

Emission Unit ID	Potential Throughput (kgal/yr)	Potential to Emit (ton/yr)						
		PM	PM10	direct PM2.5	SO <sub>2</sub>	NOx	VOC	CO
S1	1,917	1.92	2.20	1.49	40.8	19.17	0.33	4.79
S2	1,917	1.92	2.20	1.49	40.8	19.17	0.33	4.79
S27	3,804	3.80	4.37	2.95	81.0	38.04	0.65	9.51
<b>Total</b>	<b>7,639</b>	<b>7.64</b>	<b>8.78</b>	<b>5.92</b>	<b>162.7</b>	<b>76.4</b>	<b>1.30</b>	<b>19.1</b>

Emission Unit ID	Limited Throughput (kgal/yr)	Limited Potential to Emit (ton/yr)						
		PM	PM10	direct PM2.5	SO <sub>2</sub>	NOx	VOC	CO
Boilers S1, S2, & S27	4,230	4.23	4.86	3.28	90.10	42.30	0.72	10.58
<b>Total</b>	<b>4,230</b>	<b>4.23</b>	<b>4.86</b>	<b>3.28</b>	<b>90.10</b>	<b>42.30</b>	<b>0.72</b>	<b>10.58</b>

**Methodology**

Potential Throughput (kgal/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hr/yr x 1/Fuel Heat Value (MMBtu/kgal)

Potential to Emit (ton/yr) = Throughput (kgal/yr) x Emission Factor (lb/kgal) x 1 ton/2,000 lb

**Appendix A: Emission Calculations**  
**No. 2 Fuel Oil Combustion Only**  
**MM BTU/HR <100**  
**Boilers**

Company Name: Bristol-Myers Squibb Company  
Address City IN Zip: 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
Permit Number: 129-33093-00021  
Permit Reviewer: Diya Bhattacharjee

**3. Combustion Emissions - HAP Pollutants**

Fuel Type	Emission Factor (lbs/mmBtu)								
	Arsenic	Beryllium	Cadmium	Chromium	Lead	Mercury	Manganese	Nickel	Selenium
No. 2 Distillate Oil	4.0E-06	3.0E-06	3.0E-06	3.0E-06	9.0E-06	3.0E-06	6.0E-06	3.0E-06	1.5E-05

Emission factors from AP 42, Chapter 1.3, Tables 1.3-9 and 1.3-11. (9/98)

Emission Unit ID	Potential To Emit (tons/yr)								
	Arsenic	Beryllium	Cadmium	Chromium	Lead	Mercury	Manganese	Nickel	Selenium
S1	5.37E-04	4.03E-04	4.03E-04	4.03E-04	1.21E-03	4.03E-04	8.05E-04	4.03E-04	2.01E-03
S2	5.37E-04	4.03E-04	4.03E-04	4.03E-04	1.21E-03	4.03E-04	8.05E-04	4.03E-04	2.01E-03
S27	1.07E-03	7.99E-04	7.99E-04	7.99E-04	2.40E-03	7.99E-04	1.60E-03	7.99E-04	3.99E-03
<b>Total</b>	<b>2.14E-03</b>	<b>1.60E-03</b>	<b>1.60E-03</b>	<b>1.60E-03</b>	<b>4.81E-03</b>	<b>1.60E-03</b>	<b>3.21E-03</b>	<b>1.60E-03</b>	<b>8.02E-03</b>
<b>Total HAPs</b>									<b>0.03</b>

Emission Unit ID	Limited Potential To Emit (tons/yr)								
	Arsenic	Beryllium	Cadmium	Chromium	Lead	Mercury	Manganese	Nickel	Selenium
Boilers S1, S2, & S27	1.14E-03	8.52E-04	8.52E-04	8.52E-04	2.55E-03	8.52E-04	1.70E-03	8.52E-04	4.26E-03
<b>Total HAPs</b>									<b>0.01</b>

**Methodology**

Potential To Emit (tons/year) = Throughput (kgal/yr) x Emission Factor (lbs/kgal) x 1 ton/2,000 lbs

**4. Combustion Emissions - Greenhouse Gas Emissions**

CO2	Emission Factor (lb/kgal)	
	CH4	N2O
22,501.41	0.91	0.18

Emission Unit ID	Potential to Emit (ton/yr)			
	CO2	CH4	N2O	CO2e
S1	21,569.72	0.87	0.17	21,642.34
S2	21,569.72	0.87	0.17	21,642.34
S27	42,801.54	1.74	0.35	42,945.64
<b>Total</b>	<b>85,940.99</b>	<b>3.49</b>	<b>0.70</b>	<b>86,230.32</b>

Emission Unit ID	Limited Potential to Emit (ton/yr)			
	CO2	CH4	N2O	CO2e
Boilers S1, S2, & S27	47,590.48	1.93	0.39	47,750.70

**Methodology**

Emission Factors and High Heat Value from 40 CFR 98 Subpart C Tables C-1 and C-2.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Unit of Measure Conversions from Table A-2 of 40 CFR Part 98 Subpart A.

Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

**Appendix A: Emission Calculations  
Natural Gas Combustion Only  
MM BTU/HR <100  
Boilers**

Company Name: Bristol-Myers Squibb Company  
Address City IN Zip: 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
Permit Number: 129-33093-00021  
Permit Reviewer: Diya Bhattacharjee

**1. Process Description**

Emission Unit ID	Heat Input Capacity (MMBtu/hr)
S1	30.64
S2	30.64
S27	60.8
<b>Total</b>	<b>122.1</b>

**2. Combustion Emissions - Criteria Pollutants**

NOx Burner Type	Fuel Heat Value (MMBtu/MMCF)	Emission Factor (lbs/MMCF)						
		PM*	PM10*	direct PM2.5	SO <sub>2</sub>	NOx**	VOC	CO
Ordinary Burners	1,000	1.9	7.6	7.6	0.6	100	5.5	84.0

\* PM emission factor is for filterable PM only. PM10 emission factor is for condensable PM10 and filterable PM combined.

\*\* Emission factors for NOx: Uncontrolled = 100 lbs/MMCF, Low NOx Burners = 50 lbs/MMCF

Emission factors are from AP 42, Chapter 1.4, Tables 1.4-1, and 1.4-2, SCC 1-01-006-02, 1-02-006-02, 1-03-006-02, 1-03-006-03. (7/98)

Emission Unit ID	Potential Throughput (MMCF/yr)	Potential To Emit (tons/yr)						
		PM	PM10	direct PM2.5	SO <sub>2</sub>	NOx	VOC	CO
S1	268.4064	0.25	1.02	1.02	0.08	13.42	0.74	11.27
S2	268.4064	0.25	1.02	1.02	0.08	13.42	0.74	11.27
S27	532.608	0.51	2.02	2.02	0.16	26.63	1.46	22.37
<b>Total</b>	<b>1,069.42</b>	<b>1.02</b>	<b>4.06</b>	<b>4.06</b>	<b>0.32</b>	<b>53.47</b>	<b>2.94</b>	<b>44.92</b>

**Methodology**

Maximum Potential Throughput (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 (hrs/yr) x 1 MMCF/1,000 MMBtu

Potential To Emit (tons/year) = Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1 ton/2,000 lbs

**Appendix A: Emission Calculations**  
**Natural Gas Combustion Only**  
**MM BTU/HR <100**  
**Boilers**

Company Name: Bristol-Myers Squibb Company  
Address City IN Zip: 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
Permit Number: 129-33093-00021  
Permit Reviewer: Diya Bhattacharjee

**3. Combustion Emissions - HAP Pollutants**

Emission Factor (lbs/MMCF)									
Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Cadmium	Chromium	Manganese	Mercury	Nickel
2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	1.1E-03	1.4E-03	3.8E-04	2.6E-04	2.1E-03

Potential To Emit (tons/yr) - Scenario #1										
Emission Unit ID	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Cadmium	Chromium	Manganese	Mercury	Nickel
S1	2.82E-04	1.61E-04	1.01E-02	2.42E-01	4.56E-04	1.48E-04	1.88E-04	5.10E-05	3.49E-05	2.82E-04
S2	2.82E-04	1.61E-04	1.01E-02	2.42E-01	4.56E-04	1.48E-04	1.88E-04	5.10E-05	3.49E-05	2.82E-04
S27	5.59E-04	3.20E-04	2.00E-02	4.79E-01	9.05E-04	2.93E-04	3.73E-04	1.01E-04	6.92E-05	5.59E-04
<b>Total</b>	<b>1.12E-03</b>	<b>6.42E-04</b>	<b>4.01E-02</b>	<b>9.62E-01</b>	<b>1.82E-03</b>	<b>5.88E-04</b>	<b>7.49E-04</b>	<b>2.03E-04</b>	<b>1.39E-04</b>	<b>1.12E-03</b>
									<b>Total HAP</b>	<b>1.01</b>

HAP emission factors are from AP 42, Chapter 1.4, Tables 1.4-3 and 1.4-4. (7/98)

**Methodology**

Potential To Emit (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lbs/MMCF) x 1 ton/2,000 lbs

**4. Combustion Emissions - Greenhouse Gas Emissions**

Emission Factor (lbs/MMCF)		
CO2	CH4	N2O
120,161.84	2.27	0.23

Potential To Emit (tons/yr) - Scenario #1				
Emission Unit ID	CO2	CH4	N2O	CO2e
S1	16,126.10	0.30	0.03	16,141.82
S2	16,126.10	0.30	0.03	16,141.82
S27	31,999.58	0.60	0.06	32,030.96
<b>Total</b>	<b>64,251.79</b>	<b>1.21</b>	<b>0.12</b>	<b>64,314.80</b>

**Methodology**

Emission Factors and High Heat Value from 40 CFR 98 Subpart C Tables C-1 and C-2.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Unit of Measure Conversions from Table A-2 of 40 CFR Part 98 Subpart A.

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

**Appendix A: Emission Calculations  
Fuel Equivalency**

**Company Name:** Bristol-Myers Squibb Company  
**Address City IN Zip:** 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
**Permit Number:** 129-33093-00021  
**Permit Reviewer:** Diya Bhattacharjee

Fuel equivalence limit for natural gas based on SO2 emissions from #2 distillate fuel oil:

$$\frac{0.32 \text{ n.g. potential emissions (ton/yr)}}{1069.42 \text{ n.g. potential usage (MMCF/yr)}} \div \frac{162.70 \text{ #2 fuel oil potential emissions (ton/yr)}}{7.64E+03 \text{ #2 fuel oil potential usage (kgal/yr)}}$$

$$= \frac{14.08 \text{ MMCF n.g. burned}}{\text{No. 2 distillate fuel oil (kgals)}}$$

**326 IAC 7 Compliance Calculations:**

The following calculations determine the maximum sulfur content of distillate fuel oil (No. 2 Oil) allowable by 326 IAC 7:

$$0.5 \text{ lb/MMBtu} \times 140,000 \text{ Btu/gal} = 70 \text{ lb/1000gal}$$

$$70 \text{ lb/1000gal} / 144 \text{ lb/1000 gal} = 0.5 \%$$

Sulfur content must be less than or equal to 0.5% to comply with 326 IAC 7.

**Appendix A: Emission Calculations  
Bohle Tablet Coater #1**

**Company Name:** Bristol-Myers Squibb Company  
**Address City IN Zip:** 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
**Permit Number:** 129-33093-00021  
**Permit Reviewer:** Diya Bhattacharjee

**Tablet Coating Process (S-30) - Building 121**

Tablet Coating Process comprised of three coating suspension prep tanks (coating solids, water, hydrochloric acid mixed into solution) and a single pan tablet coating machine (coating suspension sprayed onto uncoated tablets). Exhausts from prep tanks and pan coater are combined in a vent header with a local exhaust over HCl storage drums, and vented to a packed-bed scrubber for HCl fume and particulate control.

**Production and Emission Related Information and Data**

Parameter	Value	Units	Basis
Batch Spraying Time	1403	minutes	Process operation design specifications
Maximum dust loading to scrubber	3.6	g/min	Engineering design estimate - worse case rate
Maximum HCl loading to scrubber	1.5	g/min	Engineering design estimate - worse case rate
Scrubber PM Control Efficiency	99	%	Nominal equipment performance assumed (Manufacturer's guaranteed control efficiency is 99.97%)
Scrubber HCl Control Efficiency	98	%	Nominal equipment performance assumed (Manufacturer's guaranteed control efficiency is 99.0%)

**Potential Emission Calculations Based on Worst Case Engineering Design Estimates:**

*Uncontrolled particulate:*

$$= 3.60 \text{ grams/minute} \times 60 \text{ minutes/hour} / 453.6 \text{ grams/pound}$$

Uncontrolled PM =	0.48	lb/hr
	11.43	lb/day
	<b>2.09</b>	<b>ton/yr</b>

*Controlled particulate:*

$$= 0.48 \text{ lbs uncontrolled PM/hr} \times (1 - 0.99)$$

Controlled PM =	0.005	lb/hr
	0.11	lb/day
	<b>0.021</b>	<b>ton/yr</b>

*Uncontrolled HCl:*

$$= 1.5 \text{ grams/minute} \times 60 \text{ minutes/hour} / 453.6 \text{ grams/pound}$$

Uncontrolled HCl =	0.20	lb/hr
	4.76	lb/day
	<b>0.87</b>	<b>ton/yr</b>

*Controlled HCl:*

$$= 0.20 \text{ lbs uncontrolled HCl/hr} \times (1 - 0.98)$$

Controlled HCl =	0.004	lb/hr
	0.095	lb/day
	<b>0.017</b>	<b>ton/yr</b>

**Appendix A: Emission Calculations  
Bohle Tablet Coater #2**

**Company Name:** Bristol-Myers Squibb Company  
**Address City IN Zip:** 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
**Permit Number:** 129-33093-00021  
**Permit Reviewer:** Diya Bhattacharjee

**Tablet Coating Process (S-33)**

Tablet Coating Process comprised of three coating suspension prep tanks (coating solids, water, hydrochloric acid mixed into solution) and a single pan tablet coating machine (coating suspension sprayed onto uncoated tablets). Exhausts from prep tanks and pan coater are combined in a vent header with a local exhaust over HCl storage drums, and vented to a packed-bed scrubber for HCl fume and particulate control.

**Production and Emission Related Information and Data**

Parameter	Value	Units	Basis
Batch Spraying Time	1403	minutes	Process operation design specifications
Maximum dust loading to scrubber	3.6	g/min	Engineering design estimate - worse case rate
Maximum HCl loading to scrubber	1.5	g/min	Engineering design estimate - worse case rate
Scrubber PM Control Efficiency	99	%	Nominal equipment performance assumed (Manufacturer's guaranteed control efficiency is 99.97%)
Scrubber HCl Control Efficiency	98	%	Nominal equipment performance assumed (Manufacturer's guaranteed control efficiency is 99.0%)

**Potential Emission Calculations Based on Worst Case Engineering Design Estimates:**

*Uncontrolled particulate:*

$$= 3.60 \text{ grams/minute} \times 60 \text{ minutes/hour} / 453.6 \text{ grams/pound}$$

Uncontrolled PM =	0.48	lb/hr
	11.43	lb/day
	<b>2.09</b>	<b>ton/yr</b>

*Controlled particulate:*

$$= 0.48 \text{ lbs uncontrolled PM/hr} \times (1 - 0.99)$$

Controlled PM =	0.005	lb/hr
	0.11	lb/day
	<b>0.021</b>	<b>ton/yr</b>

*Uncontrolled HCl:*

$$= 1.5 \text{ grams/minute} \times 60 \text{ minutes/hour} / 453.6 \text{ grams/pound}$$

Uncontrolled HCl =	0.20	lb/hr
	4.76	lb/day
	<b>0.87</b>	<b>ton/yr</b>

*Controlled HCl:*

$$= 0.20 \text{ lbs uncontrolled HCl/hr} \times (1 - 0.98)$$

Controlled HCl =	0.004	lb/hr
	0.095	lb/day
	<b>0.017</b>	<b>ton/yr</b>

**Appendix A: Emission Calculations  
Bohle Tablet Coater #3**

**Company Name: Bristol-Myers Squibb Company  
Address City IN Zip: 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
Permit Number: 129-33093-00021  
Permit Reviewer: Diya Bhattacharjee**

**Tablet Coating Process (S-36) - Building 122**

Tablet Coating Process comprised of three coating suspension prep tanks (coating solids, water, hydrochloric acid mixed into solution) and a single pan tablet coating machine (coating suspension sprayed onto uncoated tablets). Exhausts from prep tanks and pan coater are combined in a vent header with a local exhaust over HCl storage drums, and vented to a packed-bed scrubber for HCl fume and particulate control.

**Production and Emission Related Information and Data**

Parameter	Value	Units	Basis
Batch Spraying Time	1198	minutes	Process operation design specifications
Maximum dust loading to scrubber	7.88	g/min	Engineering design estimate - worse case rate
Maximum HCl loading to scrubber	1.02	g/min	Engineering design estimate - worse case rate
Scrubber PM Control Efficiency	99	%	Nominal equipment performance assumed (Manufacturer's guaranteed control efficiency is 99.97%)
Scrubber HCl Control Efficiency	98	%	Nominal equipment performance assumed (Manufacturer's guaranteed control efficiency is 99.0%)

**Potential Emission Calculations Based on Worst Case Engineering Design Estimates:**

*Uncontrolled particulate:*

$$= 7.88 \text{ grams/minute} \times 60 \text{ minutes/hour} / 453.6 \text{ grams/pound}$$

Uncontrolled PM =	1.04	lb/hr
	25.02	lb/day
	<b>4.57</b>	<b>ton/yr</b>

*Controlled particulate:*

$$= 1.04 \text{ lbs uncontrolled PM/hr} \times (1 - 0.99)$$

Controlled PM =	0.010	lb/hr
	0.25	lb/day
	<b>0.046</b>	<b>ton/yr</b>

*Uncontrolled HCl:*

$$= 1.02 \text{ grams/minute} \times 60 \text{ minutes/hour} / 453.6 \text{ grams/pound}$$

Uncontrolled HCl =	0.13	lb/hr
	3.24	lb/day
	<b>0.59</b>	<b>ton/yr</b>

*Controlled HCl:*

$$= 0.13 \text{ lbs uncontrolled HCl/hr} \times (1 - 0.98)$$

Controlled HCl =	0.003	lb/hr
	0.065	lb/day
	<b>0.012</b>	<b>ton/yr</b>

**Appendix A: Emission Calculations  
Bohle Tablet Coater #4**

**Company Name:** Bristol-Myers Squibb Company  
**Address City IN Zip:** 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
**Permit Number:** 129-33093-00021  
**Permit Reviewer:** Diya Bhattacharjee

**Tablet Coating Process (S-37) - Building 122**

Tablet Coating Process comprised of three coating suspension prep tanks (coating solids, water, hydrochloric acid mixed into solution) and a single pan tablet coating machine (coating suspension sprayed onto uncoated tablets). Exhausts from prep tanks and pan coater are combined in a vent header with a local exhaust over HCl storage drums, and vented to a packed-bed scrubber for HCl fume and particulate control.

**Production and Emission Related Information and Data**

Parameter	Value	Units	Basis
Batch Spraying Time	1198	minutes	Process operation design specifications
Maximum dust loading to scrubber	7.88	g/min	Engineering design estimate - worse case rate
Maximum HCl loading to scrubber	1.02	g/min	Engineering design estimate - worse case rate
Scrubber PM Control Efficiency	99	%	Nominal equipment performance assumed (Manufacturer's guaranteed control efficiency is 99.97%)
Scrubber HCl Control Efficiency	98	%	Nominal equipment performance assumed (Manufacturer's guaranteed control efficiency is 99.0%)

**Potential Emission Calculations Based on Worst Case Engineering Design Estimates:**

*Uncontrolled particulate:*

$$= 7.88 \text{ grams/minute} \times 60 \text{ minutes/hour} / 453.6 \text{ grams/pound}$$

Uncontrolled PM =	1.04	lb/hr
	25.02	lb/day
	<b>4.57</b>	<b>ton/yr</b>

*Controlled particulate:*

$$= 1.04 \text{ lbs uncontrolled PM/hr} \times (1 - 0.99)$$

Controlled PM =	0.010	lb/hr
	0.25	lb/day
	<b>0.046</b>	<b>ton/yr</b>

*Uncontrolled HCl:*

$$= 1.02 \text{ grams/minute} \times 60 \text{ minutes/hour} / 453.6 \text{ grams/pound}$$

Uncontrolled HCl =	0.13	lb/hr
	3.24	lb/day
	<b>0.59</b>	<b>ton/yr</b>

*Controlled HCl:*

$$= 0.13 \text{ lbs uncontrolled HCl/hr} \times (1 - 0.98)$$

Controlled HCl =	0.003	lb/hr
	0.000	lb/day
	<b>0.012</b>	<b>ton/yr</b>

**Appendix A: Emission Calculations  
Bohle Tablet Coater #5**

**Company Name:** Bristol-Myers Squibb Company  
**Address City IN Zip:** 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
**Permit Number:** 129-33093-00021  
**Permit Reviewer:** Diya Bhattacharjee

**Tablet Coating Process (S-38) - Building 122**

Tablet Coating Process comprised of three coating suspension prep tanks (coating solids, water, hydrochloric acid mixed into solution) and a single pan tablet coating machine (coating suspension sprayed onto uncoated tablets). Exhausts from prep tanks and pan coater are combined in a vent header with a local exhaust over HCl storage drums, and vented to a packed-bed scrubber for HCl fume and particulate control.

**Production and Emission Related Information and Data**

Parameter	Value	Units	Basis
Batch Spraying Time	1198	minutes	Process operation design specifications
Maximum dust loading to scrubber	7.88	g/min	Engineering design estimate - worse case rate
Maximum HCl loading to scrubber	1.02	g/min	Engineering design estimate - worse case rate
Scrubber PM Control Efficiency	99	%	Nominal equipment performance assumed (Manufacturer's guaranteed control efficiency is 99.97%)
Scrubber HCl Control Efficiency	98	%	Nominal equipment performance assumed (Manufacturer's guaranteed control efficiency is 99.0%)

**Potential Emission Calculations Based on Worst Case Engineering Design Estimates:**

*Uncontrolled particulate:*

$$= 7.88 \text{ grams/minute} \times 60 \text{ minutes/hour} / 453.6 \text{ grams/pound}$$

Uncontrolled PM =	1.04	lb/hr
	25.02	lb/day
	<b>4.57</b>	<b>ton/yr</b>

*Controlled particulate:*

$$= 1.04 \text{ lbs uncontrolled PM/hr} \times (1 - 0.99)$$

Controlled PM =	0.010	lb/hr
	0.25	lb/day
	<b>0.046</b>	<b>ton/yr</b>

*Uncontrolled HCl:*

$$= 1.02 \text{ grams/minute} \times 60 \text{ minutes/hour} / 453.6 \text{ grams/pound}$$

Uncontrolled HCl =	0.13	lb/hr
	3.24	lb/day
	<b>0.59</b>	<b>ton/yr</b>

*Controlled HCl:*

$$= 0.13 \text{ lbs uncontrolled HCl/hr} \times (1 - 0.98)$$

Controlled HCl =	0.003	lb/hr
	0.065	lb/day
	<b>0.012</b>	<b>ton/yr</b>

**Appendix A: Emission Calculations  
Bohle Tablet Coater #6**

**Company Name: Bristol-Myers Squibb Company  
Address City IN Zip: 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
Permit Number: 129-33093-00021  
Permit Reviewer: Diya Bhattacharjee**

**Tablet Coating Process (S-39) - Building 122**

Tablet Coating Process comprised of three coating suspension prep tanks (coating solids, water, hydrochloric acid mixed into solution) and a single pan tablet coating machine (coating suspension sprayed onto uncoated tablets). Exhausts from prep tanks and pan coater are combined in a vent header with a local exhaust over HCl storage drums, and vented to a packed-bed scrubber for HCl fume and particulate control.

**Production and Emission Related Information and Data**

Parameter	Value	Units	Basis
Batch Spraying Time	1198	minutes	Process operation design specifications
Maximum dust loading to scrubber	7.88	g/min	Engineering design estimate - worse case rate
Maximum HCl loading to scrubber	1.02	g/min	Engineering design estimate - worse case rate
Scrubber PM Control Efficiency	99	%	Nominal equipment performance assumed (Manufacturer's guaranteed control efficiency is 99.97%)
Scrubber HCl Control Efficiency	98	%	Nominal equipment performance assumed (Manufacturer's guaranteed control efficiency is 99.0%)

**Potential Emission Calculations Based on Worst Case Engineering Design Estimates:**

*Uncontrolled particulate:*

$$= 7.88 \text{ grams/minute} \times 60 \text{ minutes/hour} / 453.6 \text{ grams/pound}$$

Uncontrolled PM =	1.04	lb/hr
	25.02	lb/day
	<b>4.57</b>	<b>ton/yr</b>

*Controlled particulate:*

$$= 1.04 \text{ lbs uncontrolled PM/hr} \times (1 - 0.99)$$

Controlled PM =	0.010	lb/hr
	0.25	lb/day
	<b>0.046</b>	<b>ton/yr</b>

*Uncontrolled HCl:*

$$= 1.02 \text{ grams/minute} \times 60 \text{ minutes/hour} / 453.6 \text{ grams/pound}$$

Uncontrolled HCl =	0.13	lb/hr
	3.24	lb/day
	<b>0.59</b>	<b>ton/yr</b>

*Controlled HCl:*

$$= 0.13 \text{ lbs uncontrolled HCl/hr} \times (1 - 0.98)$$

Controlled HCl =	0.003	lb/hr
	0.065	lb/day
	<b>0.012</b>	<b>ton/yr</b>

**Appendix A: Emission Calculations  
Bohle Tablet Coater #7**

**Company Name:** Bristol-Myers Squibb Company  
**Address City IN Zip:** 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
**Permit Number:** 129-33093-00021  
**Permit Reviewer:** Diya Bhattacharjee

**Tablet Coating Process (S-40) - Building 122**

Tablet Coating Process comprised of three coating suspension prep tanks (coating solids, water, hydrochloric acid mixed into solution) and a single pan tablet coating machine (coating suspension sprayed onto uncoated tablets). Exhausts from prep tanks and pan coater are combined in a vent header with a local exhaust over HCl storage drums, and vented to a packed-bed scrubber for HCl fume and particulate control.

**Production and Emission Related Information and Data**

Parameter	Value	Units	Basis
Batch Spraying Time	1198	minutes	Process operation design specifications
Maximum dust loading to scrubber	7.88	g/min	Engineering design estimate - worse case rate
Maximum HCl loading to scrubber	1.02	g/min	Engineering design estimate - worse case rate
Scrubber PM Control Efficiency	99	%	Nominal equipment performance assumed (Manufacturer's guaranteed control efficiency is 99.97%)
Scrubber HCl Control Efficiency	98	%	Nominal equipment performance assumed (Manufacturer's guaranteed control efficiency is 99.0%)

**Potential Emission Calculations Based on Worst Case Engineering Design Estimates:**

*Uncontrolled particulate:*

$$= 7.88 \text{ grams/minute} \times 60 \text{ minutes/hour} / 453.6 \text{ grams/pound}$$

Uncontrolled PM =	1.04	lb/hr
	25.02	lb/day
	<b>4.57</b>	<b>ton/yr</b>

*Controlled particulate:*

$$= 1.04 \text{ lbs uncontrolled PM/hr} \times (1 - 0.99)$$

Controlled PM =	0.010	lb/hr
	0.25	lb/day
	<b>0.046</b>	<b>ton/yr</b>

*Uncontrolled HCl:*

$$= 1.02 \text{ grams/minute} \times 60 \text{ minutes/hour} / 453.6 \text{ grams/pound}$$

Uncontrolled HCl =	0.13	lb/hr
	3.24	lb/day
	<b>0.59</b>	<b>ton/yr</b>

*Controlled HCl:*

$$= 0.13 \text{ lbs uncontrolled HCl/hr} \times (1 - 0.98)$$

Controlled HCl =	0.003	lb/hr
	0.065	lb/day
	<b>0.012</b>	<b>ton/yr</b>

**Appendix A: Emission Calculations  
Bohle Tablet Coater #8**

**Company Name:** Bristol-Myers Squibb Company  
**Address City IN Zip:** 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
**Permit Number:** 129-33093-00021  
**Permit Reviewer:** Diya Bhattacharjee

**Tablet Coating Process (S-41) - Building 122**

Tablet Coating Process comprised of three coating suspension prep tanks (coating solids, water, hydrochloric acid mixed into solution) and a single pan tablet coating machine (coating suspension sprayed onto uncoated tablets). Exhausts from prep tanks and pan coater are combined in a vent header with a local exhaust over HCl storage drums, and vented to a packed-bed scrubber for HCl fume and particulate control.

**Production and Emission Related Information and Data**

Parameter	Value	Units	Basis
Batch Spraying Time	1198	minutes	Process operation design specifications
Maximum dust loading to scrubber	7.88	g/min	Engineering design estimate - worse case rate
Maximum HCl loading to scrubber	1.02	g/min	Engineering design estimate - worse case rate
Scrubber PM Control Efficiency	99	%	Nominal equipment performance assumed (Manufacturer's guaranteed control efficiency is 99.97%)
Scrubber HCl Control Efficiency	98	%	Nominal equipment performance assumed (Manufacturer's guaranteed control efficiency is 99.0%)

**Potential Emission Calculations Based on Worst Case Engineering Design Estimates:**

*Uncontrolled particulate:*

$$= 7.88 \text{ grams/minute} \times 60 \text{ minutes/hour} / 453.6 \text{ grams/pound}$$

Uncontrolled PM =	1.04	lb/hr
	25.02	lb/day
	<b>4.57</b>	<b>ton/yr</b>

*Controlled particulate:*

$$= 1.04 \text{ lbs uncontrolled PM/hr} \times (1 - 0.99)$$

Controlled PM =	0.010	lb/hr
	0.25	lb/day
	<b>0.046</b>	<b>ton/yr</b>

*Uncontrolled HCl:*

$$= 1.02 \text{ grams/minute} \times 60 \text{ minutes/hour} / 453.6 \text{ grams/pound}$$

Uncontrolled HCl =	0.13	lb/hr
	3.24	lb/day
	<b>0.59</b>	<b>ton/yr</b>

*Controlled HCl:*

$$= 0.13 \text{ lbs uncontrolled HCl/hr} \times (1 - 0.98)$$

Controlled HCl =	0.003	lb/hr
	0.065	lb/day
	<b>0.012</b>	<b>ton/yr</b>

**Appendix A: Emission Calculations**  
**Reciprocating Internal Combustion Engines - Diesel Fuel**  
**Output Rating (<=600 HP)**  
**Maximum Input Rate (<=4.2 MMBtu/hr)**

**Company Name:** Bristol-Myers Squibb Company  
**Address City IN Zip:** 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
**Permit Number:** 129-33093-00021  
**Permit Reviewer:** Diya Bhattacharjee

**Emissions calculated based on heat input capacity (MMBtu/hr)**

Emergency diesel generator (S-7)

Heat Input Capacity (MMBtu/hr)	0.7
Maximum Hours Operated per Year	500
Potential Throughput (MMBtu/yr)	350

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.31	0.31	0.31	0.29	4.41	0.36	0.95
Potential Emission in tons/yr	0.05	0.05	0.05	0.05	0.77	0.06	0.17

\*PM and PM2.5 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.

**Hazardous Air Pollutants (HAPs)**

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/MMBtu	9.33E-04	4.09E-04	2.85E-04	3.91E-05	1.18E-03	7.67E-04	9.25E-05	1.68E-04
Potential Emission in tons/yr	1.63E-04	7.16E-05	4.99E-05	6.84E-06	2.07E-04	1.34E-04	1.62E-05	2.94E-05

**Potential Emission of Total HAPs (tons/yr) | 6.78E-04**

**Green House Gas Emissions (GHG)**

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/MMBtu	163.05	6.61E-03	1.32E-03
Potential Emission in tons/yr	28.53	1.16E-03	2.31E-04

**Summed Potential Emissions in tons/yr | 28.54**

**CO2e Total in tons/yr | 28.63**

**Methodology**

Emission Factors and High Heat Value from 40 CFR 98 Subpart C Tables C-1 and C-2.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Unit of Measure Conversions from Table A-2 of 40 CFR Part 98 Subpart A.

Potential Throughput (MMBtu/yr) = [Heat Input Capacity (MMBtu/hr)] \* [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (MMBtu/yr)] \* [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O

Potential Emission ton/yr x N2O GWP (310).

**Appendix A: Emission Calculations**  
**Large Reciprocating Internal Combustion Engines - Diesel Fuel**  
**Output Rating (>600 HP)**  
**Maximum Input Rate (>4.2 MMBtu/hr)**

**Company Name: Bristol-Myers Squibb Company**  
**Address City IN Zip: 4601 Highway 62 East, Mt. Vernon, Indiana 47620**  
**Permit Number: 129-33093-00021**  
**Permit Reviewer: Diya Bhattacharjee**

**Emissions calculated based on heat input capacity (MMBtu/hr)**

Emergency diesel generator (S-3)	4.4
Caterpillar emergency diesel generator	5.0

Total Heat Input Capacity (MMBtu/hr)	9.4
Maximum Hours Operated per Year	500
Potential Throughput (MMBtu/yr)	4,700
Sulfur Content (S) of Fuel (% by weight)	0.050

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.10	0.0573	0.0573	0.051 (1.01S)	3.2 **see below	0.09	0.85
Potential Emission in tons/yr	0.24	0.13	0.13	0.12	7.52	0.21	2.00

\*No information was given regarding which method was used to determine the PM emission factor or whether condensable PM is included. The PM10 emission factor is filterable and condensable PM10 combined. The PM2.5 emissions were assumed to be equal to PM10.

\*\*NOx emissions: uncontrolled = 3.2 lb/MMBtu, controlled with ignition timing retard = 1.9 lb/MMBtu

**Hazardous Air Pollutants (HAPs)**

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/MMBtu	7.76E-04	2.81E-04	1.93E-04	7.89E-05	2.52E-05	7.88E-06	2.12E-04
Potential Emission in tons/yr	1.82E-03	6.60E-04	4.54E-04	1.85E-04	5.92E-05	1.85E-05	4.98E-04

\*\*\*PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

<b>Potential Emission of Total HAPs (tons/yr)</b>	<b>3.70E-03</b>
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**Green House Gas Emissions (GHG)**

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/MMBtu	163.05	6.61E-03	1.32E-03
Potential Emission in tons/yr	383.18	1.55E-02	3.11E-03

<b>Summed Potential Emissions in tons/yr</b>	<b>383.19</b>
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<b>CO2e Total in tons/yr</b>	<b>384.47</b>
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**Methodology**

Emission Factors and High Heat Value from 40 CFR 98 Subpart C Tables C-1 and C-2.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Unit of Measure Conversions from Table A-2 of 40 CFR Part 98 Subpart A.

Potential Throughput (MMBtu/yr) = [Heat Input Capacity (MMBtu/hr)] \* [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (MMBtu/yr)] \* [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O

Potential Emission ton/yr x N2O GWP (310).

**Appendix A: Emission Calculations  
Internal Combustion Engines - Diesel Fuel  
Reciprocating Ignition Internal Combustion Engines (> 4.2 MMBtu/hr)**

**Company Name: Bristol-Myers Squibb Company  
Address City IN Zip: 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
Permit Number: 129-33093-00021  
Permit Reviewer: Diya Bhattacharjee**

Potential Emissions calculated based on 500 hours per year.

		Generator Capacity			
Emergency diesel generator of 1500kW (S32)	14.25	MMBtu/hr	1,500.00	kW-hr	
Emergency diesel generator of 350kW (S34)	3.89	MMBtu/hr	350.00	kW-hr	
Total Heat Input Capacity	18.14	MMBtu/hr	1,850.00	Total kW-hr	
Maximum Hours Operated per Year	500				
Potential Throughput	9,070.00	MMBtu/yr			

	Pollutant						
	PM**	PM10**	PM2.5**	SO2*	NOx**	VOC**	CO**
Emission Factor in lb/MMBtu				0.05			
Emission Factor in g/kW-hr	0.18	0.18	0.18		6.40	0.64	3.50
Potential Emissions (tons per year)	0.18	0.18	0.18	0.23	6.53	0.65	3.57

**Methodology**

\*Emission Factors are from AP42 (October 1996), Table 3.4-1 and 3.4-3

\*\*Emission Factors are provided by source based on Tier II FEL stds - NSPS Subpart IIII applicable to this source

Potential Emission (tons/yr) = [Generator Capacity (MMBtu/hr) x Emission Factor (lb/MMBtu)] \* 500 hr/yr / (2,000 lb/ton)

Potential Emission (tons/yr) = [Kilowatt per hour x Emission Factor (g/kW-hr)] \* 500 hr/yr \*(.0000011023)

Conversion factor is 1 gram=0.0000011023 short tons

**HAPs - Organics**

	Benzene	Acetaldehyde	Xylenes	Toluene	Napthalene	Formaldehyde	TOTAL
Emission Factor in lb/MMBtu	7.76E-04	2.52E-05	1.93E-04	2.81E-04	1.30E-04	7.89E-05	
Potential Emissions (tons per year)	3.52E-03	1.14E-04	8.75E-04	1.27E-03	5.90E-04	3.58E-04	<b>6.73E-03</b>

Methodology is the same as above.

The six highest organic HAPs emission factors are provided above.

HAPs emission factors are available in AP-42, Chapter 3.4-3 and 3.4-4.

**Green House Gas Emissions (GHG)**

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/MMBtu	163.05	6.61E-03	1.32E-03
Potential Emission in tons/yr	739.45	0.03	0.01

<b>Summed Potential Emissions in tons/yr</b>	<b>739.48</b>
<b>CO2e Total in tons/yr</b>	<b>741.94</b>

**Methodology**

Emission Factors and High Heat Value from 40 CFR 98 Subpart C Tables C-1 and C-2.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Unit of Measure Conversions from Table A-2 of 40 CFR Part 98 Subpart A.

Potential Throughput (MMBtu/yr) = [Heat Input Capacity (MMBtu/hr)] \* [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (MMBtu/yr)] \* [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O

Potential Emission ton/yr x N2O GWP (310).

**Appendix A: Emission Calculations  
Internal Combustion Engines - Diesel Fuel  
Reciprocating Ignition Internal Combustion Engines (> 10 MMBtu/hr)**

**Company Name:** Bristol-Myers Squibb Company  
**Address City IN Zip:** 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
**Permit Number:** 129-33093-00021  
**Permit Reviewer:** Diya Bhattacharjee

Emergency diesel generator (S35)

Output Horsepower Rating (hp)	4423.0
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	2,211,500
Sulfur Content (S) of Fuel (% by weight)	0.05

	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx*	VOC*	CO*
Emission Factor in lb/hp-hr	7.50E-05	7.50E-05	7.50E-05	4.05E-04 (.00809S)	0.011	0.0002	0.0014
Potential Emissions (tons per year)	0.08	0.08	0.08	0.45	12.65	0.24	1.54

#### Methodology

\*Emission Factors from generator manufacturer. The generator manufacturer has certified that the emergency generator is in compliance with the emission standards in NSPS Subpart IIII and 40 CFR 89. All other emission factors are from AP 42 (Supplement B 10/96) Tables 3.4-1, 3.4-2, 3.4-3, and 3.4-4.

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] \* [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] \* [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

#### Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs**
Emission Factor in lb/hp-hr***	5.43E-06	1.97E-06	1.35E-06	5.52E-07	1.76E-07	5.52E-08	1.48E-06
Potential Emission in tons/yr	6.01E-03	2.18E-03	1.49E-03	6.11E-04	1.95E-04	6.10E-05	1.64E-03

\*\*PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

\*\*\*Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

<b>Potential Emission of Total HAPs (tons/yr)</b>	<b>1.22E-02</b>
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#### Green House Gas Emissions (GHG)

	Pollutant		
	CO2	CH4	N2O
Emission Factor in lb/hp-hr	1.14	4.63E-05	9.26E-06
Potential Emission in tons/yr	1,262.08	0.05	0.01

<b>Summed Potential Emissions in tons/yr</b>	<b>1,262.14</b>
<b>CO2e Total in tons/yr</b>	<b>1,266.33</b>

#### Methodology

Emission Factors and High Heat Value from 40 CFR 98 Subpart C Tables C-1 and C-2.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Unit of Measure Conversions from Table A-2 of 40 CFR Part 98 Subpart A.

Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] \* [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

**Appendix A: Emission Calculations  
VOC  
From Cold Cleaning Operation**

**Company Name:** Bristol-Myers Squibb Company  
**Address City IN Zip:** 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
**Permit Number:** 129-33093-00021  
**Permit Reviewer:** Diya Bhattacharjee

**Insignificant Activity: Two (2) cold cleaners/degreaser**

Potential Emissions:											
Material (as applied)	Process	Density (lb/gal)	Weight % Volatile (H <sub>2</sub> O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Vol (solids)	Gal of Mat. Lost (gal/day)*	Potential VOC Pounds per hour	Potential VOC pounds per day	Potential VOC tons per year
Safety-Kleen Premium Gold Solvent	Cold Cleaners (Buildings 104 and 122)	6.80	100.00%	0.00%	100.00%	0.00%	0.00%	0.027	0.01	0.19	0.03

**Total Potential Emissions:** **0.01                      0.19                      0.034**

Note: \* Gallons of material lost is based on actual material usage in 2005. According to the records Safety Kleen, in 2005 supplied total of 88 gallons of clean solvent and removed 78 gallons (of solvent after adjusting for the volume of sludge, dirt, etc.)

HAP content of the solvent is negligible.

**Methodology:**

Potential VOC Pounds per Hour = Density (lb/gal) \* Gal of Material (gal/day) / 24 hrs/day

Potential VOC Pounds per Day = Density (lb/gal) \* Gal of Material (gal/day)

Potential VOC Tons per Year = Density (lb/gal) \* Gal of Material (gal/day) \* (365 days/yr) \* (1 ton/2000 lbs)

**Appendix A: Emission Calculation:  
Process  
Particulate Matter Emissions**

**Company Name:** Bristol-Myers Squibb Company  
**Address City IN Zip:** 4601 Highway 62 East, Mt. Vernon, Indiana 47621  
**Permit Number:** 129-33093-00021  
**Permit Reviewer:** Diya Bhattacharjee

Particulate Matter Emissions from mixing, weighing, pressing, and coating facilities

Unit ID	Type of Process	Max. Process Weight Rate lb/hr	Emission Factor lb PM / 2000 lb solids	Source of Emission Factor *	Control Efficiency (%)	Potential Uncontrolled PM Emissions lbs/hr	Potential Uncontrolled PM Emissions tons/yr	Potential Controlled PM Emissions tons/yr ***
Pharmaceutical packaging lines (Building 122)	Packaging line 3	442.00	0.02	Engineering estimate. The materials handled are coated solid tablets; dust generation is negligible.	99.00	0.004	0.02	0.0002
Pharmaceutical packaging lines (Building 124)	Packaging lines 8, 9, 11, 12, and 14	3236.00	0.02	Engineering estimate. The materials handled are coated solid tablets; dust generation is negligible.	99.00	0.03	0.14	0.0014
Aqueous Granulations (Building 121, Room 1119)	Granulator	98.00	2.10	Emission factor developed from stack testing study conducted at Mead Johnson - Evansville (March 1993)	99.00	0.10	0.45	0.0045
Aqueous Granulations (Building 121, Room 1119)	Glatt 120 fluid bed dryer	98.00	10.00	Worse case engineering estimate - amount lost to product recovery bag filter from materials	99.00	0.49	2.15	0.0215
Tablet Coater (Building 121, Room 116c)	Single pan coater	50.00	2.00	Emission factor developed from stack testing study conducted at Mead Johnson - Evansville (March 1993)	99.00	0.05	0.22	0.0022
Tablet Coater (Building 121, Room 1023)	Single pan coater	50.00	2.00	Emission factor developed from stack testing study conducted at Mead Johnson - Evansville (March 1993)	99.00	0.05	0.22	0.0022
Tablet Core Press (Building 121, Room 116c)	Tablet Core Press	80.00	7.80	Emission factor developed from stack testing study conducted at Mead Johnson - Evansville (March 1993)	99.00	0.31	1.37	0.0137
Tablet Core Press (Building 121, Room 1014)	Tablet Core Press	80.00	7.80	Emission factor developed from stack testing study conducted at Mead Johnson - Evansville (March 1993)	99.00	0.31	1.37	0.0137
Small Weigh Room	Dry Material Weigh Room	1237.00	0.20	Engineering estimate. Closed Room, dust generation is negligible.	99.00	0.12	0.54	0.0054
<b>Total Potential PM Emissions (tons/yr):</b>							<b>6.47</b>	<b>0.06</b>

**Methodology**

Throughput (lb/hr) \* EF (lb PM / 2000 lb solids) \* 8760 hr/yr \* ton/2000 lb = throughput (ton/yr)

\* Emission factors are provided by the source: PM, PM10, PM2.5 presumed same.

\*\* Evansville Stack Test, 3/93, approved by IDEM.

**Appendix A: Emission Calculations  
Process  
Particulate Matter Emissions**

Company Name: Bristol-Myers Squibb Company  
Address City IN Zip: 4601 Highway 62 East, Mt. Vernon, Indiana 47620  
Permit Number: 129-33093-00021  
Permit Reviewer: Diya Bhattacharjee

Particulate Matter Emissions from mixing, weighing, pressing, and coating facilities

Unit ID	Type of Process	Max. Process Weight Rate lb/hr	Emission Factor lb PM / 1000 lb solids	Source of Emission Factor *	Control Efficiency (%)	Potential Uncontrolled PM Emissions lbs/hr	Potential Uncontrolled PM Emissions tons/yr	Potential Controlled PM Emissions tons/yr ***
Tablet Core Press (Building 122, Room 1106)	Tablet Core Press	165.00	3.90	Emission factor developed from stack testing study conducted at Mead Johnson - Evansville (March 1993)	99.00	0.64	2.82	0.0282
Tablet Core Press (Building 122, Room 1109)	Tablet Core Press	330.00	3.90	Emission factor developed from stack testing study conducted at Mead Johnson - Evansville (March 1993)	99.00	1.29	5.64	0.0564
Tablet Core Press (Building 122, Room 1113)	Tablet Core Press	165.00	3.90	Emission factor developed from stack testing study conducted at Mead Johnson - Evansville (March 1993)	99.00	0.64	2.82	0.0282
Encapsulator Machine (Building 122, Room 1123)	Encapsulates mixed solids	110.00	3.90	Emission factor developed from stack testing study conducted at Mead Johnson - Evansville (March 1993)	99.00	0.43	1.88	0.0188
Encapsulator Machine (Building 122, Room 1124)	Encapsulates mixed solids	185.00	3.90	Emission factor developed from stack testing study conducted at Mead Johnson - Evansville (March 1993)	99.00	0.72	3.16	0.0316
<b>Total Potential PM Emissions (tons/yr):</b>							<b>16.31</b>	<b>0.16</b>

**Methodology**

Throughput (lb/hr) \* EF (lb PM / 1000 lb solids) \* 8760 hr/yr \* ton/2000 lb = throughput (ton/yr)

\* Emission factors are provided by the source: PM, PM10, PM2.5 presumed same.

\*\* Evansville Stack Test, 3/93, approved by IDEM.



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

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**Michael R. Pence**  
*Governor*

**Thomas W. Easterly**  
*Commissioner*

## SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

**TO:** Daniel Charles  
Bristol-Myers Squibb Company  
4601 Highway 62 East  
Mount Vernon, IN 47620

**DATE:** August 23, 2013

**FROM:** Matt Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

**SUBJECT:** Final Decision  
Significant Permit Revision to a Federally Enforceable State Operating Permit (FESOP)  
129-33093-00021

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:  
Andrew Espejo, GM  
Jeff Slayback, TRC Environmental Corporation  
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](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 6/13/2013



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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**Michael R. Pence**  
*Governor*

**Thomas W. Easterly**  
*Commissioner*

August 23, 2013

TO: Alexandrian Public Library

From: Matthew Stuckey, Branch Chief  
Permits Branch  
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

**Applicant Name: Bristol-Myers Squibb Company**  
**Permit Number: 129-33093-00021**

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures  
Final Library.dot 6/13/2013

# Mail Code 61-53

IDEM Staff	VHAUN 8/23/2013 Bristol-Mvers Squibb Company 129-33093-00021 FINAL			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
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2		Andrew Espejo GM Bristol-Myers Squibb Company 4601 Hwy 62 E Mt Vernon IN 47620 (RO CAATS)										
3		Posey County Commissioners County Courthouse, 126 E. 3rd Street Mount Vernon IN 47620 (Local Official)										
4		Posey County Health Department 126 E. 3rd St, Coliseum Bldg Mount Vernon IN 47620-1811 (Health Department)										
5		Mount Vernon City Council and Mayors Office 520 Main Street Mount Vernon IN 47620 (Local Official)										
6		Dr. Jeff Seyler Univ. of So Ind., 8600 Univ. Blvd. Evansville IN 47712 (Affected Party)										
7		Mr. Don Mottley Save Our Rivers 6222 Yankeetown Hwy Boonville IN 47601 (Affected Party)										
8		Alexandrian Public Library 115 West 5th Mt. Vernon IN 47620 (Library)										
9		Mr. Mark Wilson Evansville Courier & Press P.O. Box 268 Evansville IN 47702-0268 (Affected Party)										
10		Mrs. Connie Parkinson 510 Western Hills Dr. Mt. Vernon IN 47620 (Affected Party)										
11		Robert Hess c/o Mellon Corporation 830 Post Road East, Suite 105 Westport CT 06880 (Affected Party)										
12		Juanita Burton 7911 W. Franklin Road Evansville IN 47712 (Affected Party)										
13		Jeff Slayback TRC Environmental Corporation 11231 Cornell Park Drive Cincinnati OH 45242 (Consultant)										
14		David Boggs 216 Western Hills Dr Mt Vernon IN 47620 (Affected Party)										
15		John Blair 800 Adams Ave Evansville IN 47713 (Affected Party)										

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<b>14</b>			