INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

To:	Interested Parties
Date:	July 7, 2014
From:	Matthew Stuckey, Chief Permits Branch Office of Air Quality
Source Name:	Building Materials Manufacturing Corporation
Permit Level:	FESOP - Significant Permit Revision
Permit Number:	091 - 32963 - 00051
Source Location:	505 North Roeske Avenue, Michigan City, Indiana
Type of Action Taken:	Modification at an existing source Revisions to permit requirements

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 matter referenced above.

The final decision is available on the IDEM website at: http://www.in.gov/apps/idem/caats/
To view the document, select Search option 3, then enter permit 32963.

If you would like to request a paper copy of the permit document, please contact IDEM's central file room:

Indiana Government Center North, Room 1201
100 North Senate Avenue, MC 50-07
Indianapolis, IN 46204
Phone: 1-800-451-6027 (ext. 4-0965)
Fax (317) 232-8659

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.

(continues on next page)

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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July 7, 2014

Don Bulyar, Plant Engineer
Building Materials Manufacturing Corporation
505 Roeske Avenue
Michigan City, Indiana 46360

Re: 091-32963-00051
Significant Permit Revision to
F091-18358-00051

Dear Don Bulyar:

Building Materials Manufacturing Corporation was issued a Federally Enforceable State Operating Permit Renewal No. F091-18358-00051 on January 8, 2007 for a stationary roof shingle manufacturing source located at 505 Roeske Avenue, Michigan City, Indiana 46360. An application to modify the source was received on March 15, 2013 requesting the following changes:

Modified Emission Units

(a) Two (2) asphalt receiving tanks, identified as Tank 1 (FST-1 / TK-1110A) and Tank 2 (FST-2 / TK-1110B), each installed in 1999, each venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 240,000 gallons of asphalt, each. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.)

(b) One (1) asphalt receiving/blend storage tank, identified as Tank 3 (TK-1120), installed in 2003, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 100,000 gallons of blended asphalt. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(c) One (1) heated asphalt flux storage tank, identified as TK-1010, installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 80,000 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(d) One (1) knock out storage tank, identified as TK-1210, installed in 2002, using water as a conditioning liquid, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 47,000 gallons of water/conditioner. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(e) Two (2) coating asphalt storage tanks, identified as West CST 1/TK-1030A, and East CST 2/TK 1030B, each installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity 38,000 gallons of coating asphalt.

(f) Asphalt and filler mix storage tank (Surge Tank), identified as TK-2100, installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 4,600 gallons of asphalt and filler mix. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(g) One (1) shingle machine, identified as SM-1 / RL1-01, installed in 1999, (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) consisting of the following:

 (1) One (1) coating dip tank, containing asphalt and limestone filler, venting to thermal oxidizer (TO-1 / TO-1200) for VOC control, capacity: 25 tons of asphalt per hour; and

 (2) One (1) aggregate (limestone, sand, granules, etc.) and adhesives application, equipped with a baghouse (BHA Collector) for particulate control, identified as Dust Collector V-10 / DC-9210, exhausting to Stack V-14, capacity: 50.0 tons of aggregate per hour.

(h) One (1) natural gas-fired thermal oxidizer, identified as TO-1 / TO-1200, installed in 1999 and modified in 2014, equipped with low NO_X burners, exhausting to Stack S-1, heat input capacity: 14.0 million British thermal units per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(i) One (1) coating storage tank, identified as TK-2420, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 14,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(j) One (1) laminate adhesive mix tank, identified as TK-2430, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(k) One (1) laminate adhesive run tank, identified as TK-2470, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 1,400 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(l) One (1) coating storage tank, identified as TK-2310, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 10,000 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(m) One (1) mix storage tank, identified as TK-2320, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(n) One (1) self seal tank, identified as TK 40, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(o) One (1) self-seal dip application process venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 750 pounds of self seal per hour. (Under NSPS 40

CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(p) One (1) laminate adhesive dip application venting to a coalescing filter, identified as CECO-1 for VOC control capacity: 2,850 pounds of laminate adhesive per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

New Emission Units

(a) One (1) natural gas-fired HEATEC hot oil heater, identified as HEATEC-1, with a maximum heat input capacity of 15.0 MMBtu/hr, approved for construction in 2014, emissions are uncontrolled, exhausting to stack HEATEC-1.

(b) One (1) natural gas-fired HEATEC hot oil heater, identified as HEATEC-2, with a maximum heat input capacity of 15.0 MMBtu/hr, approved for construction in 2014, emissions are uncontrolled, exhausting to stack HEATEC-2.

(c) One (1) natural gas-fired Cleaver-Brooks boiler, identified as CB-1, with a maximum heat input capacity of 12.6 MMBtu/hr, approved for construction in 2014, emissions are uncontrolled, exhausting to stack S-CB-1. [40 CFR 60, Subpart Dc]

(d) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, consisting of the following: Sixteen (16) natural gas-fired space heaters, each with a maximum heat input capacity of 0.35 MMBtu/hr, for a total of 5.6 MMBtu/hr, approved for construction in 2014, emissions are uncontrolled, no stacks.

(e) One (1) four stroke lean burn (4SLB) diesel-fired emergency generator, with a maximum power output of 750 brake HP, approved for construction in 2014, engine was manufactured after April 1, 2006, displacement is less than 30 liters per cylinder, emissions are uncontrolled, no stack. [40 CFR 60, Subpart IIII]
[40 CFR 63, Subpart ZZZZ]

Emission Units Removed from the Source

(a) One (1) natural gas-fired hot oil heater (Fulton Heater), identified as HT-9020, installed in 1999, exhausting to Stack S-7, heat input capacity: 6.00 million British thermal units per hour.

(b) One (1) natural gas-fired hot oil heater, identified as BO-1 / HT-1300, installed in 1999, utilizing exhaust gas from thermal oxidizer (TO-1 / TO-1200) as primary form of energy, heat input capacity: 10.5 million British thermal units per hour.

(c) One (1) hot oil heater, identified as BO-3 / HT-1325, installed in 1999, supplies hot oil to tracing steam generators and/or filler heater.

(d) One (1) natural gas-fired tracing steam generator (Caine waste heat boiler), identified as BO-2 / HT-1350, installed in 1999, exhausting to Stack S-5, heat input capacity: 10.5 million British thermal units per hour. (Under NSPS 40 CFR 60 Subpart Dc, this facility is a small industrial - commercial - institutional steam generating unit.)

The attached Technical Support Document (TSD) provides additional explanation of the changes to the source/permit. Pursuant to the provisions of 326 IAC 2-8-11.1, these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision (SPR) procedures of 326 IAC 2-8-11.1(f). Pursuant to the provisions of 326 IAC 2-8-11.1, a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document.

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

2. This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

Commenced Construction

4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. 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

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 David Matousek, of my staff, at 317-232-8253 or 1-800-451-6027, and ask for extension 2-8253.

Sincerely,

Jenny Acker, Section Chief
Permits Branch
Office of Air Quality

Attachments: Updated Permit, Permit Attachments, Technical Support Document and Appendix A

JA/djm

cc: File – LaPorte County
LaPorte County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch
Northwest Regional Office

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

Federally Enforceable State Operating Permit Renewal
OFFICE OF AIR QUALITY

Building Materials Manufacturing Corporation
505 North Roeske Avenue
Michigan City, Indiana 46360

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

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 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. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-8-11.1, applicable to those conditions. 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.

Operation Permit No.: F091-18358-00051	
Issued by: Original Signed by: Nisha Sizemore, Section Chief Permits Branch Office of Air Quality	Issuance Date: January 8, 2007 Expiration Date: January 8, 2017

Administrative Amendment No. 091-26108-00051, issued on February 29, 2008; and
Administrative Amendment No. 091-28574-00051, issued on October 27, 2009.

Significant Permit Revision No.: 091-32963-00051	
Issued by: Jenny Acker, Section Chief Permits Branch Office of Air Quality	Issuance Date: July 7, 2014 Expiration Date: January 8, 2017

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Attachment A	**40 CFR 63, Subpart AAAAAAA**	**National Emission Standards for Hazardous Air Pollutants for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing**
Attachment B	**40 CFR 63, Subpart ZZZZ**	**National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**
Attachment C	**40 CFR 60, Subpart UU**	**Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacturing**
Attachment D	**40 CFR 60, Subpart IIII**	**Standards of Performance for Stationary Compression Ignition Internal Combustion Engines**
Attachment E	**40 CFR 60, Subpart Dc**	**Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units**
Attachment F	**40 CFR 60, Subpart Kb**	**Standards of Performance for Volatile Organic Liquid Storage Vessels (including petroleum liquid storage vessels) for which Construction, Reconstruction, or Modification Commenced after July 23, 1984**

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)]

The Permittee owns and operates a stationary roof shingle manufacturing source.

Source Address:	505 North Roeske Avenue, Michigan City, Indiana 46360
General Source Phone Number:	(219) 872-1111
SIC Code:	2952
County Location:	LaPorte
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories Greenhouse Gas (GHG) potential to emit is less than one hundred thousand (100,000) tons of CO_2 equivalent (CO_2e) emissions per year

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

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

Asphalt Receiving

(a) Two (2) asphalt receiving tanks, identified as Tank 1 (FST-1 / TK-1110A) and Tank 2 (FST-2 / TK-1110B), each installed in 1999, each venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 240,000 gallons of asphalt, each. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(b) One (1) asphalt receiving/blend storage tank, identified as Tank 3 (TK-1120), installed in 2003, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 100,000 gallons of blended asphalt. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(c) One (1) natural gas-fired blending asphalt heater, identified as HT-1041, installed in 2001, exhausting to Stack S-3, heat input capacity: 3.00 million British thermal units per hour.

Blowstill Operations

(d) One (1) flux asphalt heating operation, identified as FAH-1 / HT-1250, installed in 2001, using waste heat from thermal oxidizer (TO-1 / TO-1200) in combination with a natural gas-fired burner rated at 7.50 million British thermal units per hour, exhausting to heater HT 1350 or to Stack S-4 depending on heat balance, capacity: 18,000 gallons of asphalt per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(e) One (1) heated asphalt flux storage tank, identified as TK-1010, installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 80,000 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(f) Two (2) asphalt blow stills (asphalt conditioners), identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B, each installed in 1999, each exhausting to thermal oxidizer (TO-1 / TO-1200) for VOC control, capacity: 30,000 pounds of asphalt per hour, each.
[40 CFR 60, Subpart UU] [40 CFR 63, Subpart AAAAAAA]

(g) One (1) knock out storage tank, identified as TK-1210, installed in 2002, using water as a conditioning liquid, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 47,000 gallons of water/conditioner. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

Coating Operations

(h) Two (2) coating asphalt storage tanks, identified as West CST 1/TK-1030A, and East CST 2/TK-1030B, each installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity 38,000 gallons of coating asphalt.
[40 CFR 60, Subpart UU]

(i) One (1) natural gas-fired coating asphalt heater (Borne Heater), identified as HT-1040, installed in 1999, exhausting to Stack S-2, heat input capacity: 7.50 million British thermal units per hour.

(j) One (1) natural gas-fired HEATEC hot oil heater, identified as HEATEC-1, with a maximum heat input capacity of 15.0 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, exhausting to stack HEATEC-1.

(k) One (1) natural gas-fired HEATEC hot oil heater, identified as HEATEC-2, with a maximum heat input capacity of 15.0 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, exhausting to stack HEATEC-2.

(l) Asphalt and filler mix storage tank (Surge Tank), identified as TK-2100, installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 4,600 gallons of asphalt and filler mix. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(m) One (1) shingle machine, identified as SM-1 / RL1-01, installed in 1999, (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 63, Subpart AAAAAAA] consisting of the following:

  (1) One (1) coating dip tank, containing asphalt and limestone filler, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 25 tons of asphalt per hour; and

  (2) One (1) aggregate (limestone, sand, granules, etc.) and adhesives application, equipped with a baghouse (BHA Collector) for particulate control, identified as Dust Collector V-10 / DC-9210, exhausting to Stack V-14, capacity: 50.0 tons of aggregate per hour.

(n) One (1) polymer storage tank TK 2410, with a volume of 10,000 gallons venting inside the building. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(o) One (1) rycolube storage tank TK 2500, with a volume of 10,000 gallons venting inside the building. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

Heat Load Servicing Operation

(p) One (1) natural gas-fired Cleaver-Brooks boiler, identified as CB-1, with a maximum heat input capacity of 12.6 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, exhausting to stack S-CB-1. [40 CFR 60, Subpart Dc]

(q) One (1) natural gas-fired tracing steam generator (Williams/Davis boiler), identified as HO-2 / HT-1355, installed in 1999, exhausting to Stack S-9, capacity: 12.6 million British thermal units per hour. (Under NSPS 40 CFR 60 Subpart Dc, this facility is a small industrial - commercial - institutional steam generating unit.)

Thermal Oxidizer

(r) One (1) natural gas-fired thermal oxidizer, identified as TO-1 / TO-1200, installed in 1999 and approved in 2014 for modification, equipped with low NO_X burners, exhausting to Stack S-1, heat input capacity: 14.0 million British thermal units per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 63, Subpart AAAAAAA]

Raw Material Storage and Handling System

(s) Six (6) storage silos, identified as LFS-1 through LFS-6 / SS-8910, SS-8920, SS-8930, SS-8940, SS-8950, SS-8960, each installed in 1999, equipped with six (6) bin vent filters, identified as V-1 / DC-8910 through V-6 / DC-8960, for particulate control, venting to Stacks V-1 through V-6, capacity: 300 tons of limestone filler each with a throughput of 40,000 pounds of limestone per hour each. [40 CFR 60, Subpart UU]

(t) One (1) limestone (cold filler bin) supply hopper, identified as CFH-1 / Tank TK-2000, installed in 1999, equipped with a pleated cartridge, identified as V-7 / DC-2000, for particulate control, venting inside the building, capacity: 50 tons of limestone cold filler at a throughput of 160,000 pounds of limestone cold filler per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(u) One (1) limestone (filler heater) fluid bed heater, identified as HT-2010, installed in 1999, equipped with a bin vent filter, identified as V-15 / DC-2095, for particulate control, venting inside the building, capacity: 70 tons of limestone cold filler with a throughput of 116,000 pounds of hot filler per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(v) One (1) limestone (hot filler bin) supply hopper, identified as TK-2060, installed in 1999, equipped with a bin vent filter, identified as V-14 / DC-2060, for particulate control, venting inside the building, capacity: 70 tons of limestone cold filler with a throughput of 116,000 pounds of hot filler per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(w) Two (2) storage silos, identified as SS-1 and SS-2 / SS-8210 and SS-8220, each installed in 1999, equipped with two (2) bin vent filters, identified as V-8 / DC-8210 and V-9 / DC-8220, for particulate control, venting inside the building, capacity: 125 tons of sand each with a throughput of 40,000 pounds of sand per hour each. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.)

(x) One (1) sand receiving bin, identified as TK-8645, installed in 1999, equipped with a bin vent filter, identified as V-11 / DC-8645, for particulate control, exhausting inside the building, capacity: 50 tons of sand with a throughput of 40,000 pounds of sand per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

Laminate Adhesive System

(y) One (1) coating storage tank, identified as TK-2420, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 14,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(z) One (1) laminate adhesive mix tank, identified as TK-2430, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(aa) One (1) laminate adhesive run tank, identified as TK-2470, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 1,400 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(bb) One (1) coating storage tank, identified as TK-2310, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 10,000 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(cc) One (1) mix storage tank, identified as TK-2320, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(dd) One (1) limestone filler transfer process, installed in 2000, equipped with a two (2) bin vent filters, identified as V-12 / DC-2435 and V-13 / DC-2330, for particulate control, venting inside the building, capacity: 160,000 pounds of limestone filler per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(ee) One (1) self seal tank, identified as TK 40, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(ff) One (1) self-seal dip application process venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 750 pounds of self seal per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(gg) One (1) laminate adhesive dip application venting to a coalescing filter, identified as CECO-1 for VOC control capacity: 2,850 pounds of laminate adhesive per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

Granules

(hh) Twenty (20) storage silos, identified as SS-8010 through SS-8200, installed in 1999, capacity: 200 tons of granules each with a throughput of 80,000 pounds of granules per hour total. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.)

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:

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, consisting of the following:

(1) One (1) natural gas-fired space heater, identified as HT-9240, installed in 1945, exhausting to Stack S-10, heat input capacity: 4.60 million British thermal units per hour.

(2) One (1) natural gas-fired space heater, identified as HT-9230, installed in 1945, exhausting to Stack S-11, heat input capacity: 4.30 million British thermal units per hour.

(3) One (1) natural gas-fired space heater, identified as HT-9220, installed in 1945, exhausting to Stack S-12, heat input capacity: 3.10 million British thermal units per hour.

(4) Sixteen (16) natural gas-fired space heaters, each with a maximum heat input capacity of 0.35 MMBtu/hr, for a total of 5.6 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, no stacks.

(b) Combustion source flame safety purging on startup.

(c) Application of oils, greases lubricants or other nonvolatile materials applied as temporary protective coatings.

(d) Closed loop heating and cooling systems.

(e) Replacement or repair of bags in baghouses and filters in other air filtration equipment.

(f) Heat exchanger cleaning and repair.

(g) Covered conveyors for limestone conveying of less than or equal to 7,200 tons per day for sources other than mineral processing plants constructed after August 31, 1983.

(h) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.

(i) Purge double block and bleed valves.

(j) Filter or coalescer media changeout.

(k) One (1) four stroke lean burn (4SLB) diesel-fired emergency generator, with a maximum power output of 750 brake HP, approved in 2014 for construction, engine was manufactured in 2014, displacement is less than 10 liters per cylinder, emissions are uncontrolled, no stack. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ]

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

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, F091-18358-00051, 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 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.9 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.10 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. All 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.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

(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.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, 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.

(c) 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).

(d) 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]

(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 Northwest 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
Northwest Regional Office phone: (219) 464-0233; fax: (219) 464-0553.

(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]

(a) All terms and conditions of permits established prior to F091-18358-00051 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)]

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]

(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)]

(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(42). 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;

(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; and

(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_2 equivalent emissions (CO_2e) 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]

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]

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]

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 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(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.9 Performance Testing [326 IAC 3-6]

(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.10 Compliance Requirements [326 IAC 2-1.1-11]

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.11 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

(a) For new units:
Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.

(b) For existing units:
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 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, 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).

C.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

(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. The analog instrument shall be capable of measuring values outside of the normal range.

(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.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

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.15 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

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.16 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.17 Emission Statement [326 IAC 2-6]

Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit an emission statement by July 1 following a calendar year when the source emits oxides of nitrogen or volatile organic compounds into the ambient air equal to or greater than twenty-five (25) tons. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement 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.18 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, where applicable:

(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.

Records of required monitoring information include the following, where applicable:

(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.19 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) 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.

Stratospheric Ozone Protection

C.20 Compliance with 40 CFR 82 and 326 IAC 22-1

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:

Asphalt Receiving

(a) Two (2) asphalt receiving tanks, identified as Tank 1 (FST-1 / TK-1110A) and Tank 2 (FST-2 / TK-1110B), each installed in 1999, each venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 240,000 gallons of asphalt, each. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(b) One (1) asphalt receiving/blend storage tank, identified as Tank 3 (TK-1120), installed in 2003, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 100,000 gallons of blended asphalt. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)
[40 CFR 60, Subpart Kb]

Blowstill Operations

(e) One (1) heated asphalt flux storage tank, identified as TK-1010, installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 80,000 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(f) Two (2) asphalt blow stills (asphalt conditioners), identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B, each installed in 1999, each exhausting to thermal oxidizer (TO-1 / TO-1200) for VOC control, capacity: 30,000 pounds of asphalt per hour, each.
[40 CFR 60, Subpart UU] [40 CFR 63, Subpart AAAAAAA]

(g) One (1) knock out storage tank, identified as TK-1210, installed in 2002, using water as a conditioning liquid, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 47,000 gallons of water/conditioner. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)
[40 CFR 60, Subpart Kb]

Coating Operations

(h) Two (2) coating asphalt storage tanks, identified as West CST 1/TK-1030A, and East CST 2/TK-1030B, each installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity 38,000 gallons of coating asphalt.
[40 CFR 60, Subpart UU]

(l) Asphalt and filler mix storage tank (Surge Tank), identified as TK-2100, installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 4,600 gallons of asphalt and filler mix. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(m) One (1) shingle machine, identified as SM-1 / RL1-01, installed in 1999, (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 63, Subpart AAAAAAA] consisting of the following:

    (1) One (1) coating dip tank, containing asphalt and limestone filler, venting a coalescing filter, identified as CECO-1 for VOC control, capacity: 25 tons of asphalt per hour; and

    (2) One (1) aggregate (limestone, sand, granules, etc.) and adhesives application, equipped with a baghouse (BHA Collector) for particulate control, identified as Dust Collector V-10 / DC-9210, exhausting to Stack V-14, capacity: 50.0 tons of aggregate per hour.

Thermal Oxidizer

(r) One (1) natural gas-fired thermal oxidizer, identified as TO-1 / TO-1200, installed in 1999 and approved in 2014 for modification, equipped with low NO_X burners, exhausting to Stack S-1, heat input capacity: 14.0 million British thermal units per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 63, Subpart AAAAAAA]

Raw Material Storage and Handling System

(s) Six (6) storage silos, identified as LFS-1 through LFS-6 / SS-8910, SS-8920, SS-8930, SS-8940, SS-8950, SS-8960, each installed in 1999, equipped with six (6) bin vent filters, identified as V-1 / DC-8910 through V-6 / DC-8960, for particulate control, venting to Stacks V-1 through V-6, capacity: 300 tons of limestone filler each with a throughput of 40,000 pounds of limestone per hour each. [40 CFR 60, Subpart UU]

(t) One (1) limestone (cold filler bin) supply hopper, identified as CFH-1 / Tank TK-2000, installed in 1999, equipped with a pleated cartridge, identified as V-7 / DC-2000, for particulate control, venting inside the building, capacity: 50 tons of limestone cold filler at a throughput of 160,000 pounds of limestone cold filler per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(u) One (1) limestone (filler heater) fluid bed heater, identified as HT-2010, installed in 1999, equipped with a bin vent filter, identified as V-15 / DC-2095, for particulate control, venting inside the building, capacity: 70 tons of limestone cold filler with a throughput of 116,000 pounds of hot filler per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(v) One (1) limestone (hot filler bin) supply hopper, identified as TK-2060, installed in 1999, equipped with a bin vent filter, identified as V-14 / DC-2060, for particulate control, venting inside the building, capacity: 70 tons of limestone cold filler with a throughput of 116,000 pounds of hot filler per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(w) Two (2) storage silos, identified as SS-1 and SS-2 / SS-8210 and SS-8220, each installed in 1999, equipped with two (2) bin vent filters, identified as V-8 / DC-8210 and V-9 / DC-8220, for particulate control, venting inside the building, capacity: 125 tons of sand each with a throughput of 40,000 pounds of sand per hour each. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.)

(x) One (1) sand receiving bin, identified as TK-8645, installed in 1999, equipped with a bin vent filter, identified as V-11 / DC-8645, for particulate control, exhausting inside the building, capacity: 50 tons of sand with a throughput of 40,000 pounds of sand per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

Laminate Adhesive System

(y) One (1) coating storage tank, identified as TK-2420, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 14,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(z) One (1) laminate adhesive mix tank, identified as TK-2430, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(aa) One (1) laminate adhesive run tank, identified as TK-2470, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 1,400 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(bb) One (1) coating storage tank, identified as TK-2310, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 10,000 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(cc) One (1) mix storage tank, identified as TK-2320, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(dd) One (1) limestone filler transfer process, installed in 2000, equipped with a two (2) bin vent filters, identified as V-12 / DC-2435 and V-13 / DC-2330, for particulate control, venting inside the building, capacity: 160,000 pounds of limestone filler per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(ee) One (1) self seal tank, identified as TK 40, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(ff) One (1) self-seal dip application process venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 750 pounds of self seal per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(gg) One (1) laminate adhesive dip application venting to a coalescing filter, identified as CECO-1 for VOC control capacity: 2,850 pounds of laminate adhesive per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

Granules

(hh) Twenty (20) storage silos, identified as SS-8010 through SS-8200, installed in 1999, capacity: 200 tons of granules each with a throughput of 80,000 pounds of granules per hour total. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.)

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

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

D.1.1 Best Available Control Technology [326 IAC 8-1-6]

Pursuant to FESOP SPR 091-32963-00051 and 326 IAC 8-1-6 (New facilities; general reduction requirements, BACT has been determined to be the following:

(a) IDEM, OAQ has established VOC BACT for the shingle machine, identified as SM-1 / RL1-01 as:

(1) VOC emissions from the shingle machine, including the coater, self-seal, and laminate adhesive processes, shall be controlled by a coalescing filter at all times the emission unit is in operation and generating VOC emissions.

(2) Total hydrocarbon emissions to the coalescing filter, identified as CECO-1 shall be reduced by 95% on a mass basis, or to a concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen.

(3) VOC emissions from the shingle machine shall not exceed 0.013 lb VOC/ton shingles produced.

(4) Shingle production shall not exceed 657,000 tons of shingles per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) IDEM, OAQ has established VOC BACT for each asphalt blowing still as:

(1) VOC emissions from the asphalt blowing stills, identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B shall be controlled by a thermal oxidizer at all times the emission units are in operation and generating VOC emissions.

(2) VOC emissions from each of the asphalt blowing stills, identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B shall not exceed 0.127 lb VOC per ton of asphalt blown.

(3) Combined asphalt throughput shall not exceed 262,800 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(4) Total hydrocarbon emissions to the thermal oxidizer, identified as TO-1/TO-1200 shall be reduced by 95% on a mass basis, or to a concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen.

D.1.2 Prevention of Significant Deterioration (PSD) Minor Limit [326 IAC 2-2]

PM emissions from the shingle machine aggregate and adhesive application baghouse, identified as Dust Collector V-10 / DC-9210, exhausting to stack V-14 shall not exceed 0.20 pound PM per hour. PM only includes filterable particulate matter.

Compliance with this limit, in conjunction with the potential to emit PM from all other emission units, shall limit the PM emissions from the entire source to less than two-hundred fifty (250) tons per twelve (12) consecutive month period and will render the requirements of 326 IAC 2-2 (PSD) not applicable.

D.1.3 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the processes listed in the table below shall not exceed the pounds per hour listed when operating at a process weight rate listed.

Emission Unit ID	Emission Unit Description	Material	Throughput (TPH)	Equation	6-3-2 Limit (lb/hr)
LFS-1 / SS-8910	Limestone Storage Silo	Limestone	20.00	(a)	30.5
LFS-2 / SS-8920	Limestone Storage Silo	Limestone	20.00	(a)	30.5
LFS-3 / SS-8930	Limestone Storage Silo	Limestone	20.00	(a)	30.5
LFS-4 / SS-8940	Limestone Storage Silo	Limestone	20.00	(a)	30.5
LFS-5 / SS-8950	Limestone Storage Silo	Limestone	20.00	(a)	30.5
LFS-6 / SS-8960	Limestone Storage Silo	Limestone	20.00	(a)	30.5
SS-1 / SS-8210	Sand Storage Silo	Sand	20.00	(a)	30.5
SS-2 / SS-8220	Sand Storage Silo	Sand	20.00	(a)	30.5
CFH-1 / TK-2000	Cold Filler Hopper	Limestone	80.00	(b)	49.1
TK-8645	Sand Receiving Bin	Sand	20.00	(a)	30.5
SS-8010 to SS-8200	Granule Storage Silos	Granules	40.00	(b)	42.5
DC-2330 & 2435	Limestone Transfer	Limestone	80.00	(b)	49.1
FST-1	Asphalt Receiving Tank	Asphalt	16.27	(a)	26.57
FST-2	Asphalt Receiving Tank	Asphalt	16.27	(a)	26.57

The pound per hour limitations were calculated with the following equations:

(a) 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:

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

(b) Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.1.4 FESOP and Prevention of Significant Deterioration (PSD) Minor Limits - Volatile Organic Compounds (VOCs) [326 IAC 2-2] [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4 (FESOP) and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following:

(a) VOC emissions from the thermal oxidizer controlling the blowing stills shall not exceed 16.65 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) VOC emissions from the coalescing filter controlling the shingle machine, truck unloading racks and multiple asphalt storage tanks shall not exceed 51.67 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits, in conjunction with the potential to emit VOC from all other emission units, shall limit the VOC emissions to less than one-hundred (100) tons per twelve (12) consecutive month period and will render the requirements of 326 IAC 2-2 and 326 IAC 2-7 not applicable.

D.1.5 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]

A Preventive Maintenance Plan for both blowing stills, the shingle machine, both unloading racks, and all asphalt storage facilities connected to the coalescing filter and their control devices. Section B – Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plant required by this condition.

Compliance Determination Requirements

D.1.6 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

(a) In order to demonstrate the compliance status with Condition D.1.1(b)(4), and within one hundred and eighty (180) days after initial startup of the modified thermal oxidizer identified (TO-1/ TO-1200), the Permittee shall perform total hydrocarbon testing on the thermal oxidizer utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every five years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(b) In order to demonstrate the compliance status with Condition D.1.1(a)(2), and within one hundred and eighty (180) days after initial startup of the coalescing filter identified CECO-1, the Permittee shall perform total hydrocarbon testing on the coalescing filter utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every five years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(c) In order to demonstrate the compliance status with Condition D.1.2, and within one hundred and eighty (180) days after issuance of 091-32963-00051, the Permittee shall perform particulate matter (PM) testing on the stack V-14 of Dust Collector V-10, DC-9210 utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every five years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM only includes filterable particulate matter.

(d) In order to demonstrate the compliance status with Condition D.1.1(b)(2), and within one hundred and eighty (180) days after initial startup of the thermal oxidizer identified (TO-1/ TO-1200), the Permittee shall perform VOC testing, after control, on the thermal oxidizer utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every five years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.1.7 Particulate Matter Control (PM) [326 IAC 2-2]

PM emissions from the shingle machine aggregate and adhesive application process shall be controlled by the baghouse identified as Dust Collector V-10 / DC-9210, at all times the process is in operation.

In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.1.8 VOC Emissions

(a) In order to demonstrate compliance with Condition D.1.4(a), the Permittee shall calculate VOC emissions from the thermal oxidizer once per month using the following equation:

Thermal Oxidizer VOC Emissions (ton VOC this month) = 0.127 lb VOC/ton asphalt x tons asphalt blown this month (ton asphalt) x 1 ton / 2,000 lb

(b) In order to demonstrate compliance with Condition D.1.4(b), the Permittee shall calculate VOC emissions from the coalescing filter once per month using the following equation:

Coalescing Filter VOC Emissions (ton VOC this month) = 0.013 lb VOC/ton shingles x ton shingles produced this month (ton shingle) 1 ton / 2,000 lb

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

D.1.9 Thermal Oxidizer Temperature

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature. For the purpose of this condition, continuous means no less than once every fifteen (15) minutes. The output of this system shall be recorded as a three-hour average. From the date of issuance of this permit until the stack test results are available, the Permittee shall operate the thermal oxidizer at or above the three-hour average temperature of 1,200^{o}F.

(b) The Permittee shall determine the three- (3-) hour average temperature from the most recent valid stack test that demonstrates compliance with Condition D.1.1(b)(4).

(c) On and after the date the stack test results are available, the Permittee shall operate the thermal oxidizer at or above the three- (3-) hour average temperature as observed during the compliant stack test.

D.1.10 Parametric Monitoring – Thermal Oxidizer

(a) The Permittee shall determine fan amperage or duct pressure from the most recent valid stack test that demonstrates compliance with Condition D.1.1(b)(4).

(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizer is in operation. On and after the date the stack test results are available, the duct pressure or fan amperage shall be maintained within the normal range as established in the most recent compliant stack test.

D.1.11 Parametric Monitoring – Coalescing Filter

The Permittee shall record the pressure drop across the coalescing filter used in conjunction with the shingle machine, asphalt loading racks, and multiple asphalt storage tanks, at least once per day when any of these processes are in operation. When for one reading, the pressure drop across the baghouse is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 5 and 6 inches of water unless a different upper-bound value for this range is determined during the latest stack test. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take a reasonable response shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C – Instrument Specifications, of this permit, and shall be subject to approval by IDEM, OAQ and shall be calibrated or replaced at least once every six months**.**

D.1.12 Visible Emissions Notations

(a) Visible emission notations of the aggregate and adhesive application baghouse, identified as Dust Collector V-10 / DC-9210 stack V-14 shall be performed once per day during normal daylight operations when exhausting to the atmosphere. 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 a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.13 Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has 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)

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit. 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)

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

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

D.1.14 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.1(a)(4), the Permittee shall maintain monthly records of the tons of shingles produced.

(b) To document the compliance status with Condition D.1.1(b)(3), the Permittee shall maintain monthly records of the combined tons of asphalt blown in the blowing stills.

(c) To document the compliance status with Condition D.1.4(a), the Permittee shall maintain monthly records of VOC emissions from the thermal oxidizer controlling emissions from the blowing stills.

(d) To document the compliance status with Condition D.1.4(b), the Permittee shall maintain monthly records of VOC emissions from the coalescing filter controlling the shingle machine, truck unloading racks and multiple asphalt storage tanks.

(e) To document the compliance status with Conditions D.1.4, D.1.8(a) and (b), the Permittee shall maintain all records of process operational data, mass balance, or other engineering estimation methods used to determine emissions to document compliance.

(f) To document the compliance status with Condition D.1.9, the Permittee shall maintain all records of the output of the thermal oxidizer continuous temperature monitoring system.

(g) To document the compliance status with Condition D.1.8, the Permittee shall maintain daily records of the fan amperage or duct pressure of the thermal oxidizer from the most recent valid stack test demonstrating compliance with Condition D.1.1(b)(4). The Permittee shall include in its daily record when a fan amperage or duct pressure reading is not taken and the reason for the lack of a fan amperage or duct pressure reading (e.g., the process did not operate that day).

(h) To document the compliance status with Condition D.1.11, the Permittee shall maintain daily records of the pressure drop across the coalescing filter controlling emissions from the shingle machine, asphalt truck unloading racks, and numerous asphalt storage tanks. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g., the process did not operate that day).

(i) To document the compliance status with Condition D.1.12, the Permittee shall maintain daily records of the visible emission notations of stack V-14 of the baghouse identified as Dust Collector V-10 / DC-9210. The Permittee shall include in its daily record when a visible emission notation reading is not taken and the reason for the lack of a visible emission notation reading (e.g., the process did not operate that day).

(j) Section C – General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

D.1.15 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.1.4 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C – General Reporting Requirements 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).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Asphalt Receiving

(c) One (1) natural gas-fired blending asphalt heater, identified as HT-1041, installed in 2001, exhausting to Stack S-3, heat input capacity: 3.00 million British thermal units per hour.

Blowstill Operations

(d) One (1) flux asphalt heating operation, identified as FAH-1 / HT-1250, installed in 2001, using waste heat from thermal oxidizer (TO-1 / TO-1200) in combination with a natural gas-fired burner rated at 7.50 million British thermal units per hour, exhausting to heater HT 1350 or to Stack S-4 depending on heat balance, capacity: 18,000 gallons of asphalt per hour.

Coating Operations

(i) One (1) natural gas-fired coating asphalt heater (Borne Heater), identified as HT-1040, installed in 1999, exhausting to Stack S-2, heat input capacity: 7.50 million British thermal units per hour.

(j) One (1) natural gas-fired HEATEC hot oil heater, identified as HEATEC-1, with a maximum heat input capacity of 15.0 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, exhausting to stack HEATEC-1.

(k) One (1) natural gas-fired HEATEC hot oil heater, identified as HEATEC-2, with a maximum heat input capacity of 15.0 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, exhausting to stack HEATEC-2.

Heat Load Servicing Operation

(p) One (1) natural gas-fired Cleaver-Brooks boiler, identified as CB-1, with a maximum heat input capacity of 12.6 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, exhausting to stack S-CB-1. [40 CFR 60, Subpart Dc]

(q) One (1) natural gas-fired tracing steam generator (Williams/Davis boiler), identified as HO-2 / HT-1355, installed in 1999, exhausting to Stack S-9, capacity: 12.6 million British thermal units per hour. (Under NSPS 40 CFR 60 Subpart Dc, this facility is a small industrial - commercial - institutional steam generating unit.)

(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 6-2-4]

Pursuant to 326 IAC 6-2-4, particulate emissions from indirect heating facilities constructed after September 21, 1983 shall be limited by the following equation:

$P_t = 1.09 \; / \; Q^{0.26}$

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

Individual emission unit PM limitations were calculated with the equation above and are shown in the table below:

Emission Unit	ID	Heat Input (MMBtu/hr)	Date Constructed	Q (MMBtu/hr)	PM Limit (lb/MMBtu)
Borne Heater	HT-1040	7.5	1999	20.1	0.50
Williams-Davis Boiler	HT-1355	12.6	1999		
Asphalt Heater	HT-1041	3.0	2001	30.6	0.45
Flux Heater	FAH-1	7.5	2001		
Hot Oil Heater	HEATEC-1	15.0	2014	73.2	0.36
Hot Oil Heater	HEATEC-2	15.0	2014		
Cleaver-Brooks Boiler	CB-1	12.6	2014		

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(f) Two (2) asphalt blow stills (asphalt conditioners), identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B, each installed in 1999, each exhausting to thermal oxidizer (TO-1 / TO-1200) for VOC control, capacity: 30,000 pounds of asphalt per hour, each.
[40 CFR 60, Subpart UU] [40 CFR 63, Subpart AAAAAAA]

(m) One (1) shingle machine, identified as SM-1 / RL1-01, installed in 1999, (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 63, Subpart AAAAAAA] consisting of the following:

(1) One (1) coating dip tank, containing asphalt and limestone filler, venting to thermal oxidizer (TO-1 / TO-1200) for VOC control, capacity: 25 tons of asphalt per hour; and

(2) One (1) aggregate (limestone, sand, granules, etc.) and adhesives application, equipped with a baghouse (BHA Collector) for particulate control, identified as Dust Collector V-10 / DC-9210, exhausting to Stack V-14, capacity: 50.0 tons of aggregate per hour.

(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 [326 IAC 20]

E.1.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 63, Subpart A] [326 IAC 20-1]

Pursuant to 40 CFR 63.11565, the Permittee shall comply with the provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, as specified in Table 5 of 40 CFR 63, Subpart AAAAAAA, in accordance with the schedule in 40 CFR 63, Subpart AAAAAAA.

E.1.2 National Emission Standards for Hazardous Air Pollutants for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing [40 CFR 63, Subpart AAAAAAA]

The Permittee shall comply with the following provisions of 40 CFR 63, Subpart AAAAAAA, included as Attachment A of this permit:

(a) The asphalt blowing stills, identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B shall comply with the following portions of Subpart AAAAAAA:

(1) 40 CFR 63.11559(a), (b)(1), and (f);
(2) 40 CFR 63.11560(a);
(3) 40 CFR 63.11561(a) and (c);
(4) 40 CFR 63.11562(a), (d), (g), (i)(1), (i)(2)(i), (i)(3) and (i)(4);
(5) 40 CFR 63.11563(a), (g), (h), and (i);
(6) 40 CFR 63.11564(a)(1), (a)(2), (a)(4), (a)(5), and (a)(6);
(7) 40 CFR 63.11564(b), and (c);
(9) 40 CFR 63.11565;
(10) 40 CFR 63.11566;
(11) 40 CFR 63.11567; and
(12) Table 1, 3 and 4.

(b) The shingle machine identified as SM-1 / RL1-01 shall comply with the following portions of Subpart AAAAAAA:

(1) 40 CFR 63.11559(a), (b)(2), (f);
(2) 40 CFR 63.11560(a);
(3) 40 CFR 63.11561(b), and (c);
(4) 40 CFR 63.11562(c), (d), (e), (f), (g), (i)(2)(ii), and (i)(4);
(5) 40 CFR 63.11563(a), (g), (h), and (i);
(6) 40 CFR 63.11564(a)(1), (a)(2), (a)(4), (a)(5), (a)(6);
(7) 40 CFR 63.11564(b), and (c);
(8) 40 CFR 63.11565;
(9) 40 CFR 63.11566;
(10) 40 CFR 63.11567; and
(11) Table 2, 3, and 4.

SECTION E.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Insignificant Activities:

(k) One (1) four stroke lean burn (4SLB) diesel-fired emergency generator, with a maximum power output of 750 brake HP, approved in 2014 for construction, engine was manufactured after April 1, 2006, displacement is less than 30 liters per cylinder, emissions are uncontrolled, no stack. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ]

(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 [326 IAC 20]

E.2.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 63, Subpart A] [326 IAC 20-1]

Pursuant to 40 CFR 63.6665, the Permittee shall comply with the provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, as specified in Table 8 of 40 CFR 63, Subpart ZZZZ, in accordance with the schedule in 40 CFR 63, Subpart ZZZZ.

E.2.2 National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR 63, Subpart ZZZZ] [326 IAC 20-82]

The Permittee shall comply with the following provisions of 40 CFR 63, Subpart ZZZZ, which is incorporated by reference as 326 IAC 20-82 (included as Attachment B of this permit), for the diesel-fired emergency generator upon startup of the affected source:

(1) 40 CFR 63.6580;
(2) 40 CFR 63.6585(a) and (c); and
(3) 40 CFR 63.6590(a)(2)(iii) and (c)(1).

SECTION E.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Asphalt Receiving

(a) Two (2) asphalt receiving tanks, identified as Tank 1 (FST-1 / TK-1110A) and Tank 2 (FST-2 / TK-1110B), each installed in 1999, each venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 240,000 gallons of asphalt, each. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(b) One (1) asphalt receiving/blend storage tank, identified as Tank 3 (TK-1120), installed in 2003, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 100,000 gallons of blended asphalt. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

Blowstill Operations

(d) One (1) flux asphalt heating operation, identified as FAH-1 / HT-1250, installed in 2001, using waste heat from thermal oxidizer (TO-1 / TO-1200) in combination with a natural gas-fired burner rated at 7.50 million British thermal units per hour, exhausting to heater HT 1350 or to Stack S-4 depending on heat balance, capacity: 18,000 gallons of asphalt per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(e) One (1) heated asphalt flux storage tank, identified as TK-1010, installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 80,000 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(f) Two (2) asphalt blow stills (asphalt conditioners), identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B, each installed in 1999, each exhausting to thermal oxidizer (TO-1 / TO-1200) for VOC control, capacity: 30,000 pounds of asphalt per hour, each.
[40 CFR 60, Subpart UU] [40 CFR 63, Subpart AAAAAAA]

(g) One (1) knock out storage tank, identified as TK-1210, installed in 2002, using water as a conditioning liquid, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 47,000 gallons of water/conditioner. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)
[40 CFR 60, Subpart Kb]

Coating Operations

(h) Two (2) coating asphalt storage tanks, identified as West CST 1/TK-1030A, and East CST 2/TK-1030B, each installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity 38,000 gallons of coating asphalt. [40 CFR 60, Subpart UU]

(l) Asphalt and filler mix storage tank (Surge Tank), identified as TK-2100, installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 4,600 gallons of asphalt and filler mix. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(m) One (1) shingle machine, identified as SM-1 / RL1-01, installed in 1999, (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 63, Subpart AAAAAAA] consisting of the following:

 (1) One (1) coating dip tank, containing asphalt and limestone filler, venting to thermal oxidizer (TO-1 / TO-1200) for VOC control, capacity: 25 tons of asphalt per hour; and

 (2) One (1) aggregate (limestone, sand, granules, etc.) and adhesives application, equipped with a baghouse (BHA Collector) for particulate control, identified as Dust Collector V-10 / DC-9210, exhausting to Stack V-14, capacity: 50.0 tons of aggregate per hour.

(n) One (1) polymer storage tank TK 2410, with a volume of 10,000 gallons venting inside the building. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(o) One (1) rycolube storage tank TK 2500, with a volume of 10,000 gallons venting inside the building. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

Thermal Oxidizer

(r) One (1) natural gas-fired thermal oxidizer, identified as TO-1 / TO-1200, installed in 1999 and approved in 2014 for modification, equipped with low NO_X burners, exhausting to Stack S-1, heat input capacity: 14.0 million British thermal units per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

Raw Material Storage and Handling System

(s) Six (6) storage silos, identified as LFS-1 through LFS-6 / SS-8910, SS-8920, SS-8930, SS-8940, SS-8950, SS-8960, each installed in 1999, equipped with six (6) bin vent filters, identified as V-1 / DC-8910 through V-6 / DC-8960, for particulate control, venting to Stacks V-1 through V-6, capacity: 300 tons of limestone filler each with a throughput of 40,000 pounds of limestone per hour each. [40 CFR 60, Subpart UU]

(t) One (1) limestone (cold filler bin) supply hopper, identified as CFH-1 / Tank TK-2000, installed in 1999, equipped with a pleated cartridge, identified as V-7 / DC-2000, for particulate control, venting inside the building, capacity: 50 tons of limestone cold filler at a throughput of 160,000 pounds of limestone cold filler per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(u) One (1) limestone (filler heater) fluid bed heater, identified as HT-2010, installed in 1999, equipped with a bin vent filter, identified as V-15 / DC-2095, for particulate control, venting inside the building, capacity: 70 tons of limestone cold filler with a throughput of 116,000 pounds of hot filler per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(v) One (1) limestone (hot filler bin) supply hopper, identified as TK-2060, installed in 1999, equipped with a bin vent filter, identified as V-14 / DC-2060, for particulate control, venting inside the building, capacity: 70 tons of limestone cold filler with a throughput of 116,000 pounds of hot filler per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(w) Two (2) storage silos, identified as SS-1 and SS-2 / SS-8210 and SS-8220, each installed in 1999, equipped with two (2) bin vent filters, identified as V-8 / DC-8210 and V-9 / DC-8220, for particulate control, venting inside the building, capacity: 125 tons of sand each with a throughput of 40,000 pounds of sand per hour each. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.)

(x) One (1) sand receiving bin, identified as TK-8645, installed in 1999, equipped with a bin vent filter, identified as V-11 / DC-8645, for particulate control, exhausting inside the building, capacity: 50 tons of sand with a throughput of 40,000 pounds of sand per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

Laminate Adhesive System

(y) One (1) coating storage tank, identified as TK-2420, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 14,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(z) One (1) laminate adhesive mix tank, identified as TK-2430, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(aa) One (1) laminate adhesive run tank, identified as TK-2470, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 1,400 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(bb) One (1) coating storage tank, identified as TK-2310, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 10,000 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(cc) One (1) mix storage tank, identified as TK-2320, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(dd) One (1) limestone filler transfer process, installed in 2000, equipped with a two (2) bin vent filters, identified as V-12 / DC-2435 and V-13 / DC-2330, for particulate control, venting inside the building, capacity: 160,000 pounds of limestone filler per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(ee) One (1) self seal tank, identified as TK 40, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(ff) One (1) self-seal dip application process venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 750 pounds of self seal per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(gg) One (1) laminate adhesive dip application venting to a coalescing filter, identified as CECO-1 for VOC control capacity: 2,850 pounds of laminate adhesive per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

Granules

(hh) Twenty (20) storage silos, identified as SS-8010 through SS-8200, installed in 1999, capacity: 200 tons of granules each with a throughput of 80,000 pounds of granules per hour total. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.)

(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 [326 IAC 12]

E.3.1 General Provisions Relating to New Source Performance Standards (NSPS) [40 CFR 60, Subpart A] [326 IAC 12-1]

The provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the emission units listed in the description box above, except when otherwise specified in 40 CFR 60, Subpart UU.

E.3.2 Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture (NSPS) [40 CFR 60, Subpart UU] [326 IAC 12]

The Permittee shall comply with the following provisions of 40 CFR 60, Subpart UU (Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture (included as Attachment C of this permit)), which is incorporated by reference as 326 IAC 12, for the emission units listed in the emission unit description box above, as follows:

(a) The shingle machine, identified as SM-1 / RL1-01 is subject to the following portions of Subpart UU:

(1) 40 CFR 60.470;
(2) 40 CFR 60.471;
(3) 40 CFR 60.472(a);
(4) 40 CFR 60.474(a); and
(5) 40 CFR 60.474(b), and (c)(1), (c)(2), c(3), (c)(5) and (d).

(b) The blowing stills identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B are subject to the following portions of Subpart UU:

(1) 40 CFR 60.470;
(2) 40 CFR 60.471;
(3) 40 CFR 60.472(b)(3) and (b)(5); and
(4) 40 CFR 60.474(b), (c)(1), (c)(2), (c)(4), and (c)(5).

(c) The asphalt storage tanks identified as FST-1, FST-2, TK-1120, FAH-1, TK-1010, TK-1210, West CST 1/TK-1030A, East CST 2/TK-1030B, TK-2100, TK-2420, TK-2430, TK-2470, TK-2310, and TK-2320 are subject to the following portions of Subpart UU:

(1) 40 CFR 60.470;
(2) 40 CFR 60.471;
(3) 40 CFR 60.472(c); and
(4) 40 CFR 60.474(b).

(d) The mineral handling and storage facilities identified as LFS-1 through LFS-6, TK-2000, HT-2010, TK-2060, SS-1, SS-2, TK-8645, limestone filler transfer process, and granule storage silos SS-8010 through SS-8200 are subject to the following portions of Subpart UU:

(1) 40 CFR 60.470;
(2) 40 CFR 60.471; and
(3) 40 CFR 60.472(d).

SECTION E.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Insignificant Activities:

(k) One (1) four stroke lean burn (4SLB) diesel-fired emergency generator, with a maximum power output of 750 brake HP, approved in 2014 for construction, engine was manufactured in 2014, displacement is less than 10 liters per cylinder, emissions are uncontrolled, no stack. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ]

(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 [326 IAC 12]

E.4.1 General Provisions Relating to New Source Performance Standards (NSPS) [40 CFR 60, Subpart A] [326 IAC 12-1]

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

E.4.2 Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (NSPS) [40 CFR 60, Subpart IIII] [326 IAC 12]

The Permittee shall comply with the following provisions of 40 CFR 60, Subpart IIII (Stationary Compression Ignition Internal Combustion Engines (included as Attachment D of this permit)), which is incorporated by reference as 326 IAC 12, for the emergency generator as follows:

(1) 40 CFR 63.6580;
(2) 40 CFR 63.6585(a) and (c); and
(3) 40 CFR 63.6590(a)(2)(iii) and (c)(1).

SECTION E.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Heat Load Servicing Operation

(p) One (1) natural gas-fired Cleaver-Brooks boiler, identified as CB-1, with a maximum heat input capacity of 12.6 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, exhausting to stack S-CB-1. [40 CFR 60, Subpart Dc]

(q) One (1) natural gas-fired tracing steam generator (Williams/Davis boiler), identified as HO-2 / HT-1355, installed in 1999, exhausting to Stack S-9, capacity: 12.6 million British thermal units per hour. (Under NSPS 40 CFR 60 Subpart Dc, this facility is a small industrial - commercial - institutional steam generating unit.)

(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 [326 IAC 12]

E.5.1 General Provisions Relating to New Source Performance Standards (NSPS) [40 CFR 60, Subpart A] [326 IAC 12-1]

The provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the Cleaver-Brooks and Williams/Davis boilers, except when otherwise specified in 40 CFR 60, Subpart Dc.

E.5.2 Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (NSPS) [40 CFR 60, Subpart Dc] [326 IAC 12]

The Permittee shall comply with the following provisions of 40 CFR 60, Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (included as Attachment E of this permit)), which is incorporated by reference as 326 IAC 12, for the Cleaver-Brooks boiler (CB-1) and the William/Davis boiler (HT-1355), as follows:

(1) 40 CFR 60.40c(a);
(2) 40 CFR 60.41c;
(3) 40 CFR 60.48c(a);
(4) 40 CFR 60.48c(f)(4);
(5) 40 CFR 60.48c(g)(1); and
(6) 40 CFR 60.48c(g)(2).

SECTION E.6 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Asphalt Receiving

(a) Two (2) asphalt receiving tanks, identified as Tank 1 (FST-1 / TK-1110A) and Tank 2 (FST-2 / TK-1110B), each installed in 1999, each venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 240,000 gallons of asphalt, each. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(b) One (1) asphalt receiving/blend storage tank, identified as Tank 3 (TK-1120), installed in 2003, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 100,000 gallons of blended asphalt. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

Blowstill Operations

(e) One (1) heated asphalt flux storage tank, identified as TK-1010, installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 80,000 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(g) One (1) knock out storage tank, identified as TK-1210, installed in 2002, using water as a conditioning liquid, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 47,000 gallons of water/conditioner. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(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 [326 IAC 12]

E.6.1 General Provisions Relating to New Source Performance Standards (NSPS) [40 CFR 60, Subpart A] [326 IAC 12-1]

The provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to TK-1110A, TK-1110B, TK-1120, TK-1010, and TK-1210, except when otherwise specified in 40 CFR 60, Subpart Kb.

E.6.2 Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 (NSPS) [40 CFR 60, Subpart Kb] [326 IAC 12]

The Permittee shall comply with the following provisions of 40 CFR 60, Subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 (included as Attachment F of this permit)), which is incorporated by reference as 326 IAC 12, for TK-1110A, TK-1110B, TK-1120, TK-1010, and TK-1210, as follows:

(1) 40 CFR 60.110b(a);
(2) 40 CFR 60.111b;
(3) 40 CFR 60.116b(a);
(4) 40 CFR 60.116b(b);
(5) 40 CFR 60.116b(d);
(6) 40 CFR 60.116b(e)(1) and (e)(3); and
(7) 40 CFR 60.116b.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION

Source Name: Building Materials Manufacturing Corporation
Source Address: 505 North Roeske Avenue, Michigan City, IN 46360
FESOP Permit No.: F091-18358-00051

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:	Building Materials Manufacturing Corporation
Source Address:	505 North Roeske Avenue, Michigan City, IN 46360
FESOP Permit No.:	F091-18358-00051

This form consists of 2 pages **Page 1 of 2**

☐ This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16

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

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

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by:________________________________

Title / Position:____________________________________

Date:____

Phone: ____

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

FESOP Quarterly Report

Source Name: Building Materials Manufacturing Corporation
Source Address: 505 North Roeske Avenue, Michigan City, IN 46360
FESOP Permit No.: F091-18358-00051
Facility: Thermal Oxidizer
Parameter: VOC
Limit: 16.65 tons VOC per twelve (12) consecutive month period.

YEAR:____________________

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

☐ No deviation occurred in this quarter.

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

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

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

FESOP Quarterly Report

Source Name: Building Materials Manufacturing Corporation
Source Address: 505 North Roeske Avenue, Michigan City, IN 46360
FESOP Permit No.: F091-18358-00051
Facility: Coalescing Filter
Parameter: VOC
Limit: 51.67 tons per twelve (12) consecutive month period.

YEAR:____________________

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

☐ No deviation occurred in this quarter.

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

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

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: Building Materials Manufacturing Corporation
Source Address: 505 North Roeske Avenue, Michigan City, IN 46360
FESOP Permit No.: F091-18358-00051

Months: ___________ **to** ____________ **Year:** ______________

Page 1 of 2

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".	
◻ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
◻ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Page 2 of 2

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

Form Completed by:_______________________________

Title / Position:__________________________________

Date:____

Phone: _______________________________________

Attachment A

Federally Enforceable Operating Permit (FESOP) No: F 091-18358-00051

[Downloaded from the eCFR on September 30, 2013]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 63—NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS

Subpart AAAAAAA—National Emissions Standards for Hazardous Air Pollutants for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing

Source: 74 FR 63260, Dec. 2, 2009, unless otherwise noted.

§63.11559 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate an asphalt processing operation and/or asphalt roofing manufacturing operation that is an area source of hazardous air pollutant (HAP) emissions, as defined in §63.2.

(b) This subpart applies to each new or existing affected source as defined in paragraphs (b)(1) and (b)(2) of this section.

(1) *Asphalt processing.* The affected source for asphalt processing operations is the collection of all blowing stills, as defined in §63.11566, at an asphalt processing operation.

(2) *Asphalt roofing manufacturing.* The affected source for asphalt roofing manufacturing operations is the collection of all asphalt coating equipment, as defined in §63.11566, at an asphalt roofing manufacturing operation.

(c) This subpart does not apply to hot mix asphalt plant operations that are used in the paving of roads or hardstand, or operations where asphalt may be used in the fabrication of a built-up roof.

(d) An affected source is a new affected source if you commenced construction or reconstruction after July 9, 2009.

(e) An affected source is reconstructed if it meets the criteria as defined in §63.2.

(f) An affected source is an existing source if it is not new or reconstructed.

(g) This subpart does not apply to research or laboratory facilities, as defined in section 112(c)(7) of the Clean Air Act.

(h) You are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not otherwise required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a). Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart.

§63.11560 What are my compliance dates?

(a) If you own or operate an existing affected source, you must be in compliance with the applicable provisions in this subpart no later than December 2, 2010. As specified in §63.11562(f), you must demonstrate initial compliance within 180 calendar days after December 2, 2010.

(b) If you own or operate a new affected source, you must be in compliance with the provisions in this subpart on or before December 2, 2009 or upon startup, whichever date is later. As specified in §63.11562(g), you must demonstrate initial compliance with the applicable emission limits no later than 180 calendar days after December 2, 2009 or within 180 calendar days after startup of the source, whichever is later.

Standards and Compliance Requirements

§63.11561 What are my standards and management practices?

(a) For asphalt processing operations, you must meet the emission limits specified in Table 1 of this subpart.

(b) For asphalt roofing manufacturing lines, you must meet the applicable emission limits specified in Table 2 of this subpart.

(c) These standards apply at all times.

§63.11562 What are my initial compliance requirements?

(a) For asphalt processing operations, you must:

(1) Demonstrate initial compliance with the emission limits specified in Table 1 of this subpart by:

(i) Conducting emission tests using the methods specified in Table 3 of this subpart; or

(ii) Using the results of a previously-conducted emission test as specified in paragraph (d) of this section.

(2) Establish the value or range of values of the operating parameters specified in Table 4 of this subpart:

(i) Using the operating parameter data recorded during the compliance emission tests; or

(ii) Using the operating parameter data recorded during a previously-conducted emission test.

(b) For asphalt roofing manufacturing lines that use a control device to comply with the emission limits in Table 2 of this subpart, you must:

(1) Demonstrate initial compliance by:

(i) Conducting emission tests using the methods specified in Table 3 of this subpart; or

(ii) Using the results of a previously-conducted emission test as specified in paragraph (d) of this section.

(2) Establish the value of the operating parameter specified in Table 4 of this subpart for thermal oxidizers:

(i) Using the operating parameter data recorded during the compliance emission tests; or

(ii) Using the operating parameter data recorded during a previously-conducted emission test.

(3) Establish the value or range of values of the operating parameters specified in Table 4 of this subpart for control devices other than thermal oxidizers:

(i) Using the operating parameter data recorded during the compliance emission tests;

(ii) Using the operating parameter data recorded during a previously-conducted emission test; or

(iii) Using manufacturer performance specifications.

(c) For asphalt roofing manufacturing lines that do not require a control device to comply with the emission limits in Table 2 of this subpart, you must:

(1) Demonstrate initial compliance by:

(i) Conducting emission tests using the methods specified in Table 3 of this subpart,

(ii) Using the results of a previously-conducted emission test as specified in paragraph (d) of this section; or

(iii) Using process knowledge and engineering calculations as specified in paragraph (e) of this section.

(2) Establish the value or range of values of the operating parameters specified in Table 4 of this subpart:

(i) Using the operating parameter data recorded during the compliance emission tests;

(ii) Using the operating parameter data recorded during a previously-conducted emission test; or

(iii) Using process knowledge and engineering calculations as specified in paragraph (f) of this section.

(d) If you are using a previously-conducted emission test to demonstrate compliance with the emission limitations in this subpart for existing sources, as specified in paragraphs (a)(1)(ii), (b)(1)(ii), or (c)(1)(ii) of this section, the following conditions must be met:

(1) The emission test was conducted within the last 5 years;

(2) No changes have been made to the process since the time of the emission test;

(3) The operating conditions and test methods used for the previous test conform to the requirements of this subpart; and

(4) The data used to establish the value or range of values of the operating parameters, as specified in paragraphs (a)(2)(ii), (b)(2)(ii), or (c)(2)(ii) of this section, were recorded during the emission test.

(e) If you are using process knowledge and engineering calculations to demonstrate initial compliance as specified in paragraph (c)(1)(iii) of this section, you must prepare written documentation that contains the data and any assumptions used to calculate the process emission rate that demonstrate compliance with the emission limits specified in Table 2 of this subpart.

(f) If you are using process knowledge and engineering calculations to establish the value or range of values of operating parameters as specified in paragraph (c)(2)(iii) of this section, you must prepare written documentation that contains the data and any assumptions used to show that the process parameters and corresponding parameter values correlate to the process emissions.

(g) For existing sources, you must demonstrate initial compliance no later than 180 calendar days after December 2, 2010.

(h) For new sources, you must demonstrate initial compliance no later than 180 calendar days after December 2, 2009 or within 180 calendar days after startup of the source, whichever is later.

(i) For emission tests conducted to demonstrate initial compliance with the emission limits specified in Tables 1 and 2 of this subpart, you must follow the requirements specified in paragraphs (i)(1) through (i)(4) of this section.

(1) You must conduct the tests while manufacturing the product that generates the greatest PAH and PM emissions to the control device inlet, or exiting the process if you are not using a control device to comply with the emissions limits specified in Tables 1 and 2 of this subpart.

(2) You must conduct a minimum of three separate test runs for each compliance test specified in paragraphs (a)(1)(i), (b)(1)(i), and (c)(1)(i) of this section according to the requirements specified in §63.7(e)(3). The sampling time and sample volume of each test run must be as follows:

(i) For asphalt processing operations, the sampling time and sample volume for each test run must be at least 90 minutes or the duration of the coating blow or non-coating blow, whichever is greater, and 2.25 dscm (79.4 dscf).

(ii) For asphalt coating operations, the sampling time and sample volume for each test run must be at least 120 minutes and 3.00 dscm (106 dscf).

(3) For asphalt processing operations, you must use the following equations to calculate the asphalt charging rate (P).

(i) $P = (Vd)/(K' \Theta)$

Where:

P = asphalt charging rate to blowing still, Mg/hr (ton/hr).

V = volume of asphalt charged, m^3 (ft^3).

d = density of asphalt, kg/m^3 (lb/ft^3).

K′ = conversion factor, 1000 kg/Mg (2000 lb/ton).

Θ = duration of test run, hr.

(ii) $d = K_1 - K_2 T_i$

Where:

d = Density of the asphalt, kg/m^3 (lb/ft^3)

$d = K_1 - K_2 T_i$

K_1 = 1056.1 kg/m^3 (metric units)

= 66.6147 lb/ft^3 (English Units)

K_2 = 0.6176 kg/(m^3 °C) (metric units)

= 0.02149 lb/(ft^3 °F) (English Units)

T_i = temperature at the start of the blow, °C (°F)

(4) You must use the following equation to demonstrate compliance with the emission limits specified in Table 2 of this subpart:

E = [(C)*(Q)/(P)*(K)]

Where:

E = emission rate of particulate matter, kg/Mg (lb/ton).

C = concentration of particulate matter, g/dscm (gr/dscf).

Q = volumetric flow rate of effluent gas, dscm/hr (dscf/hr).

P = the average asphalt roofing production rate or asphalt charging rate over the duration of the test, Mg/hr (ton/hr).

K = conversion factor, 1000 g/kg [7000 (gr/lb)].

§63.11563 What are my monitoring requirements?

(a) You must maintain the operating parameters established under §63.11562(a)(2), (b)(2), (b)(3), and (c)(2) as specified in Table 4 of this subpart.

(b) If you are using a control device to comply with the emission limits specified in Tables 1 and 2 of this subpart, you must develop and make available for inspection by the delegated authority, upon request, a site-specific monitoring plan for each monitoring system that addresses the following:

(1) Installation of the CPMS probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (*e.g.,* on or downstream of the last control device);

(2) Performance and equipment specifications for the probe or interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction system; and

(3) Performance evaluation procedures and acceptance criteria (*e.g.,* calibrations).

(i) In your site-specific monitoring plan, you must also address the following:

(A) Ongoing operation and maintenance procedures in accordance with the general requirements of §63.8(c)(1), (c)(3), (c)(4)(ii), (c)(7), and (c)(8);

(B) Ongoing data quality assurance procedures in accordance with the general requirements of §63.8(d); and

(C) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of §63.10(c), (e)(1), and (e)(2)(i).

(c) If you are using a control device to comply with the emission limits specified in Tables 1 and 2 of this subpart, you must install, operate, and maintain a continuous parameter monitoring system (CPMS) as specified in paragraphs (c)(1) through (c)(3) of this section.

(1) The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period.

(2) To determine the 3-hour average, you must:

(i) Have a minimum of four successive cycles of operation to have a valid hour of data.

(ii) Have valid data from at least three of four equally spaced data values for that hour from a CPMS that is not out-of-control according to your site-specific monitoring plan.

(iii) Determine the 3-hour average of all recorded readings for each operating day, except as stated in paragraph (g) of this section. You must have at least two of the three hourly averages for that period using only hourly average values that are based on valid data (*i.e.,* not from out-of-control periods).

(3) You must record the results of each inspection, calibration, and validation check of the CPMS.

(d) For each temperature monitoring device, you must meet the CPMS requirements in paragraphs (c)(1) through (c)(3) of this section and the following requirements:

(1) Locate the temperature sensor in a position that provides a representative temperature.

(2) For a noncryogenic temperature range, use a temperature sensor with a minimum measurement sensitivity of 2.8 °C or 1.0 percent of the temperature value, whichever is larger.

(3) If a chart recorder is used, the recorder sensitivity in the minor division must be at least 20 °F.

(4) Perform an accuracy check at least semiannually or following an operating parameter deviation:

(i) According to the procedures in the manufacturer's documentation; or

(ii) By comparing the sensor output to redundant sensor output; or

(iii) By comparing the sensor output to the output from a calibrated temperature measurement device; or

(iv) By comparing the sensor output to the output from a temperature simulator.

(5) Conduct accuracy checks any time the sensor exceeds the manufacturer's specified maximum operating temperature range or install a new temperature sensor.

(6) At least quarterly or following an operating parameter deviation, perform visual inspections of components if redundant sensors are not used.

(e) For each pressure measurement device, you must meet the CPMS requirements of paragraphs (e)(1) through (e)(6) of this section and the following requirements:

(1) Locate the pressure sensor(s) in, or as close as possible, to a position that provides a representative measurement of the pressure.

(2) Use a gauge with a minimum measurement sensitivity of 0.12 kiloPascals or a transducer with a minimum measurement sensitivity of 5 percent of the pressure range.

(3) Check pressure tap for blockage daily. Perform an accuracy check at least quarterly or following an operating parameter deviation:

(i) According to the manufacturer's procedures; or

(ii) By comparing the sensor output to redundant sensor output.

(4) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor.

(5) At least monthly or following an operating parameter deviation, perform a leak check of all components for integrity, all electrical connections for continuity, and all mechanical connections for leakage.

(6) At least quarterly or following an operating parameter deviation, perform visible inspections on all components if redundant sensors are not used.

(f) For each electrostatic precipitator (ESP) used to control emissions, you must install and operate a CPMS that meets the requirements of paragraphs (c)(1) through (c)(3) of this section to provide representative measurements of the voltage supplied to the ESP.

(g) If you are not using a control device to comply with the emission limits specified in Tables 1 and 2 of this subpart, you must develop and make available for inspection by the delegated authority, upon request, a site-specific monitoring plan. The plan must specify the process parameters established during the initial compliance assessment and how they are being monitored and maintained to demonstrate continuous compliance.

(h) If you would like to use parameters or means other than those specified in Table 4 of this subpart to demonstrate continuous compliance with the emission limits specified in Tables 1 and 2 of this subpart, you must apply to the Administrator for approval of an alternative monitoring plan under §63.8(f). The plan must specify how process parameters established during the initial compliance assessment will be monitored and maintained to demonstrate continuous compliance.

(i) At all times the owner or operator 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 the owner or operator 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.

(j) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(k) You must operate and maintain the CPMS in continuous operation according to the site-specific monitoring plan.

[74 FR 63260, Dec. 2, 2009, as amended at 75 FR 12989, Mar. 18, 2010]

§63.11564 What are my notification, recordkeeping, and reporting requirements?

(a) You must submit the notifications specified in paragraphs (a)(1) through (a)(6) of this section.

(1) You must submit all of the notifications in §§63.5(b), 63.7(b); 63.8(e) and (f); 63.9(b) through (e); and 63.9(g) and (h) that apply to you by the dates specified in those sections.

(2) As specified in §63.9(b)(2), if you have an existing affected source, you must submit an Initial Notification not later than 120 calendar days after December 2, 2009.

(3) As specified in §63.9(b)(4) and (5), if you have a new affected source, you must submit an Initial Notification not later than 120 calendar days after you become subject to this subpart.

(4) You must submit a notification of intent to conduct a compliance test at least 60 calendar days before the compliance test is scheduled to begin, as required in §63.7(b)(1).

(5) You must submit a Notification of Compliance Status according to §63.9(h)(2)(ii). You must submit the Notification of Compliance Status, including the compliance test results, before the close of business on the 60th calendar day following the completion of the compliance test according to §63.10(d)(2).

(6) If you are using data from a previously-conducted emission test to serve as documentation of compliance with the emission standards and operating limits of this subpart, you must submit the test data in lieu of the initial compliance test results with the Notification of Compliance Status required under paragraph (a)(5) of this section.

(b) You must submit a compliance report as specified in paragraphs (b)(1) through (b)(4) of this section.

(1) If you are using a control device to comply with the emission limits, the compliance report must identify the controlled units (*e.g.,* blowing stills, saturators, coating mixers, coaters). If you are not using a control device to comply with the emission limits, the compliance report must identify the site-specific process operating parameters monitored to determine compliance with the emission limits.

(2) During periods for which there are no deviations from any emission limitations (emission limit or operating limit) that apply to you, the compliance report must contain the information specified in paragraphs (b)(2)(i) through (b)(2)(v) of this section.

(i) Company name and address.

(ii) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(iii) Date of report and beginning and ending dates of the reporting period.

(iv) A statement that there were no deviations from the emission limitations during the reporting period.

(v) If there were no periods during which the CPMS was out-of-control as specified in §63.8(c)(7), a statement that there were no periods during which the CPMS was out-of-control during the reporting period.

(3) For each deviation from an emission limitation (emission limit and operating limit), you must include the information in paragraphs (b)(3)(i) through (b)(3)(xii) of this section.

(i) The date and time that each deviation started and stopped.

(ii) The date and time that each CPMS was inoperative, except for zero (low-level) and high-level checks.

(iii) The date, time and duration that each CPMS was out-of-control, including the information in §63.8(c)(8).

(iv) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(v) 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.

(vi) A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(vii) A summary of the total duration of CPMS downtime during the reporting period and the total duration of CPMS downtime as a percent of the total source operating time during that reporting period.

(viii) An identification of each air pollutant that was monitored at the affected source.

(ix) A brief description of the process units.

(x) A brief description of the CPMS.

(xi) The date of the latest CPMS certification or audit.

(xii) A description of any changes in CPMS or controls since the last reporting period.

(4) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report specified in paragraph (b) of this section according to the following dates:

(i) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.11560 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 §63.11560.

(ii) 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 §63.11560.

(iii) 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.

(iv) 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.

(c) You must maintain the records specified in paragraphs (c)(1) through (c)(10) 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 requirements in §63.10(b)(2)(xiv).

(2) Copies of emission tests used to demonstrate compliance and performance evaluations as required in §63.10(b)(2)(viii).

(3) Documentation that shows that the following conditions are true if you use a previously-conducted emission test to demonstrate initial compliance as specified in §63.11562(a)(1)(ii), (b)(1)(ii), and (c)(1)(ii):

(i) The test was conducted within the last 5 years;

(ii) No changes have been made to the process since the time of the emission test;

(iii) The operating conditions and test methods used for the previous test conform to the requirements of this subpart; and

(iv) The data used to establish the value or range of values of the operating parameters, as specified in §63.11562(a)(2)(ii), (b)(2)(ii), or (c)(2)(ii), were recorded during the emission test.

(4) Documentation that identifies the operating parameters and values specified in Table 4 of this subpart and that contains the data used to establish the parameter values as specified in §63.11562(a)(2), (b)(2), (b)(3), or (c)(2).

(5) Copies of the written manufacturers performance specifications used to establish operating parameter values as specified in §63.11562(b)(3)(iii).

(6) Documentation of the process knowledge and engineering calculations used to demonstrate initial compliance as specified in §63.11562(e).

(7) Documentation of the process knowledge and engineering calculations used to establish the value or range of values of operating parameters as specified in §63.11562(f).

(8) A copy of the site-specific monitoring plan required under §63.11563(b) or (g).

(9) A copy of the approved alternative monitoring plan required under §63.11563(h), if applicable.

(10) Records of the operating parameter values required in Table 4 of this subpart to show continuous compliance with each operating limit that applies to you.

[74 FR 63260, Dec. 2, 2009, as amended at 75 FR 12989, Mar. 18, 2010]

Other Requirements and Information

§63.11565 What general provisions sections apply to this subpart?

You must comply with the requirements of the General Provisions (40 CFR part 63, subpart A) according to Table 5 of this subpart.

§63.11566 What definitions apply to this subpart?

Asphalt coating equipment means the saturators, coating mixers, and coaters used to apply asphalt to substrate to manufacture roofing products (*e.g.,* shingles, roll roofing).

Asphalt flux means the organic residual material from distillation of crude oil that is generally used in asphalt roofing manufacturing and paving and non-paving asphalt products.

Asphalt processing operation means any operation engaged in the preparation of asphalt flux at stand-alone asphalt processing facilities, petroleum refineries, and asphalt roofing facilities. Asphalt preparation, called “blowing,” is the oxidation of asphalt flux, achieved by bubbling air through the heated asphalt, to raise the softening point and to reduce penetration of the oxidized asphalt. An asphalt processing facility includes one or more asphalt flux blowing stills.

Asphalt roofing manufacturing operation means the collection of equipment used to manufacture asphalt roofing products through a series of sequential process steps. The equipment configuration of an asphalt roofing manufacturing process varies depending upon the type of substrate used (*i.e.,* organic or inorganic). For example, an asphalt roofing manufacturing line that uses organic substrate (*e.g.,* felt) typically would consist of a saturator (and wet looper), coating mixer, and coater (although the saturator could be bypassed if the line manufacturers multiple types of products). An asphalt roofing manufacturing line that uses inorganic (fiberglass mat) substrate typically would consist of a coating mixer and coater.

Blowing still means the equipment in which air is blown through asphalt flux to change the softening point and penetration rate of the asphalt flux, creating oxidized asphalt.

Built-up roofing operations means operations involved in the on-site (*e.g.,* at a commercial building) assembly of roofing system components (*e.g.,* asphalt, substrate, surface granules).

Coater means the equipment used to apply amended (filled or modified) asphalt to the top and bottom of the substrate (typically fiberglass mat) used to manufacture shingles and rolled roofing products.

Coating mixer means the equipment used to mix coating asphalt and a mineral stabilizer, prior to applying the stabilized coating asphalt to the substrate.

Hot-mix asphalt operation means operations involved in mixing asphalt cement and aggregates to produce materials for paving roadways and hardstand (*e.g.,* vehicle parking lots, prepared surfaces for materiel storage).

Particulate matter (PM) means, for the purposes of this subpart, includes any material determined gravimetrically using EPA Method 5A—Determination of Particulate Matter Emissions From the Asphalt Processing And Asphalt Roofing Industry (40 CFR part 60, appendix A-3).

Responsible official is defined in §63.2.

Saturator means the equipment used to impregnate a substrate (predominantly organic felt) with asphalt. Saturators are predominantly used for the manufacture of rolled-roofing products (*e.g.,* saturated felt). For the purposes of this subpart, the term saturator includes impregnation vat and wet looper.

Wet looper means the series of rollers typically following the saturator used to provide additional absorption time for asphalt to penetrate the roofing substrate.

§63.11567 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by us, the U.S. Environmental Protection Agency (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, in addition to 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 if implementation and enforcement of this subpart is delegated.

(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 following authorities are retained by the Administrator of U.S. EPA:

(1) Approval of alternatives to the requirements in §§63.11559, 63.11560, 63.11561, 63.11562, and 63.11563.

(2) Approval of major changes to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major changes to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major changes to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

Table 1 of Subpart AAAAAAA of Part 63—Emission Limits for Asphalt Processing (Refining) Operations

For * * *	You must meet the following emission limits * * *
1. Blowing stills	a. Limit PAH emissions to 0.003 lb/ton of asphalt charged to the blowing stills; or
	b. Limit PM emissions to 1.2 lb/ton of asphalt charged to the blowing stills.

Table 2 of Subpart AAAAAAA of Part 63—Emission Limits for Asphalt Roofing Manufacturing (Coating) Operations

For * * *	
1. Coater-only production lines	a. Limit PAH emissions to 0.0002 lb/ton of asphalt roofing product manufactured; or
	b. Limit PM emissions to 0.06 lb/ton of asphalt roofing product manufactured.
2. Saturator-only production lines	a. Limit PAH emissions to 0.0007 lb/ton of asphalt roofing product manufactured; or
	b. Limit PM emissions to 0.30 lb/ton of asphalt roofing product manufactured.
3. Combined saturator/coater production lines	a. Limit PAH emissions to 0.0009 lb/ton of asphalt roofing product manufactured; or
	b. Limit PM emissions to 0.36 lb/ton of asphalt roofing product manufactured.

Table 3 of Subpart AAAAAAA of Part 63—Test Methods

For * * *	You must use * * *
1. Selecting the sampling locations[a] and the number of traverse points	EPA test method 1 or 1A in appendix A to part 60.
2. Determining the velocity and volumetric flow rate	EPA test method 2, 2A, 2C, 2D, 2F, or 2G, as appropriate, in appendix A to part 60.
3. Determining the gas molecular weight used for flow rate determination	EPA test method 3, 3A, 3B, as appropriate, in appendix A to part 60.
4. Measuring the moisture content of the stack gas	EPA test method 4 in appendix A to part 60.
5. Measuring the PM emissions	EPA test method 5A in appendix A to part 60.
6. Measuring the PAH emissions	EPA test method 23[b] with analysis by SW-846 Method 8270D.

[a]The sampling locations must be located at the outlet of the process equipment (or control device, if applicable), prior to any releases to the atmosphere.

[b]When using EPA Method 23, the toluene extraction step specified in section 3.1.2.1 of the method should be omitted.

Table 4 of Subpart AAAAAAA of Part 63—Operating Limits

If you comply with the emission limits using * * *	You must establish an operating value for * * *	And maintain[a] * * *
1. A thermal oxidizer	Combustion zone temperature	The 3-hour average combustion zone temperature at or above the operating value established as specified in §63.11562(a)(2) and (b)(2).
2. A high-efficiency air filter or fiber bed filter	a. Inlet gas temperature[b], and b. Pressure drop across device[b]	The 3-hour average inlet gas temperature within the operating range established as specified in §63.11562(a)(2) and (b)(3). The 3-hour average pressure drop across the device within the approved operating range established as specified in §63.11562(a)(2) and (b)(3).
3. An electrostatic precipitator (ESP)	Voltage[c] to the ESP	The 3-hour average ESP voltage[c] at or above the approved operating value established as specified in §63.11562(a)(2) and (b)(3).
4. Process modifications (*i.e.*, a control device is not required)	Appropriate process monitoring parameters.[d]	The monitoring parameters within the operating values established as specified in §63.11562(c)(2).

[a]The 3-hour averaging period applies at all times other than startup and shutdown, as defined in §63.2. Within 24 hours of a startup event, or 24 hours prior to a shutdown event, you must normalize the emissions that occur during the startup or shutdown, when there is no production rate available to assess compliance with the lb/ton of product emission limits, with emissions that occur when the process is operational. The emissions that occur during the startup or shutdown event must be included with the process emissions when assessing compliance with the emission limits specified in Tables 1 and 2 of this subpart.

[b]As an alternative to monitoring the inlet gas temperature and pressure drop, you can use a leak detection system that identifies when the filter media has been comprised.

[c]As an alternative to monitoring the ESP voltage, you can monitor the ESP instrumentation (*e.g.* light, alarm) that indicates when the ESP must be cleaned and maintain a record of the instrumentation on an hourly basis. Failure to service the ESP within one hour of the indication is an exceedance of the applicable monitoring requirements specified in §63.11563(a).

[d]If you are not using a control device to comply with the emission limits specified in Table 2 of this subpart, the process parameters and corresponding parameter values that you select to demonstrate continuous compliance must correlate to the process emissions.

Table 5 of Subpart AAAAAAA of Part 63—Applicability of General Provisions to Subpart AAAAAAA

Citation	Subject	Applies to subpart AAAAAAA
§63.1	Applicability	Yes.
§63.2	Definitions	Yes.
§63.3	Units and Abbreviations	Yes.
§63.4	Prohibited Activities	Yes.
§63.5	Construction/Reconstruction	Yes.
§63.6(a)-(d)	Compliance With Standards and Maintenance Requirements	Yes.
§63.6(e)(1)(i)	Operation and Maintenance Requirements	No.
§63.6(e)(1)(ii)	Operation and Maintenance Requirements	No.
§63.6(e)(1)(iii)	Operation and Maintenance Requirements	Yes.
§63.6(e)(2)	[Reserved]	
§63.6(e)(3)	Startup, Shutdown, and Malfunction Plan	No. Subpart AAAAAAA does not require startup, shutdown, and malfunction plans.
§63.6(f)(1)	Compliance with Nonopacity Emission Standards	No. The emission limits apply at all times.
§63.6(f)(2)-(3)	Methods for Determining Compliance and Finding of Compliance	Yes.
§63.6(h)	Opacity/Visible Emission (VE) Standards	No. Subpart AAAAAAA does not contain opacity or VE standards.
§63.6(i)	Compliance Extension	Yes.
§63.6(j)	Presidential Compliance Exemption	Yes.
§63.7(a)-(d)	Performance Testing Requirements	Yes.
§63.7(e)(1)	Performance Testing Requirements	No. Subpart AAAAAAA specifies the conditions under which performance tests must be conducted.
§63.7(e)(2)-(4)	Conduct of Performance Tests and Data Reduction	Yes.
§63.7(f)-(h)	Use of Alternative Test Method; Data Analysis, Recordkeeping, and Reporting; and Waiver of Performance Tests	Yes.

Citation	Subject	Applies to subpart AAAAAAA
§63.8(a)(1)	Applicability of Monitoring Requirements	Yes.
§63.8(a)(2)	Performance Specifications	No. Subpart AAAAAAA does not allow CEMS.
§63.8(a)(3)	[Reserved]	
§63.8(a)(4)	Monitoring with Flares	Yes.
§63.8(b)(1)	Conduct of 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)	CMS maintenance	Yes.
§63.8(c)(1)(ii)	Spare Parts for CMS Malfunction	Yes.
§63.8(c)(1)(iii)	Compliance with Operation and Maintenance Requirements	No. Subpart AAAAAAA does not require startup, shutdown, and malfunction plans.
§63.8(c)(2)-(3)	Monitoring System Installation	Yes.
§63.8(c)(4)	CMS Requirements	No; §63.11563 specifies the CMS requirements.
§63.8(c)(5)	COMS Minimum Procedures	No. Subpart AAAAAAA does not contain opacity or VE standards.
§63.8(c)(6)	CMS Requirements	No; §63.11563 specifies the CMS requirements.
§63.8(c)(7)-(8)	CMS Requirements	Yes.
§63.8(d)	CMS Quality Control	No; §63.11563 specifies the CMS requirements.
§63.8(e)-(f)	CMS Performance Evaluation	Yes.
§63.8(g)(1)-(4)	Data Reduction Requirements	Yes.
§63.8(g)(5)	Data to Exclude from Averaging	No. All monitoring data must be included when calculating averages.
§63.9	Notification Requirements	Yes.
§63.10(a)	Recordkeeping and Reporting Requirements—Applicability	Yes.
§63.10(b)(1)	General Recordkeeping Requirements	Yes.
§63.10(b)(2)(i)-(iii)	General Recordkeeping Requirements	Yes.
§63.10(b)(2)(iv)-(v)	Records of Actions Taken During Startup, Shutdown, and Malfunction Plans	No. Subpart AAAAAAA does not require startup, shutdown, and malfunction plans.
§63.10(b)(2)(vi)-(xiv)	General Recordkeeping Requirements	Yes.
§63.10(c)(1)-(14)	Additional Recordkeeping Requirements for Sources with Continuous Monitoring Systems	Yes.
§63.10(c)(15)	Additional Recordkeeping Requirements for Sources	No. Subpart AAAAAAA does not require

Citation	Subject	Applies to subpart AAAAAAA
	with Continuous Monitoring Systems	startup, shutdown, and malfunction plans.
§63.10(d)(1)-(4)	General Reporting Requirements	Yes.
§63.10(d)(5)	Periodic Startup, Shutdown, and Malfunction Reports	No. Subpart AAAAAAA does not require startup, shutdown, and malfunction plans.
§63.10(e)	Additional Reporting Requirements for Sources with Continuous Monitoring Systems	Yes.
§63.10(f)	Waiver of Recordkeeping or Reporting Requirements	Yes.
§63.11	Control Device and Work Practice Requirements	Yes.
§63.12	State Authority and Delegations	Yes.
§63.13	Addresses of State Air Pollution Control Agencies and EPA Regional Offices	Yes.
§63.14	Incorporations by Reference	Yes.
§63.15	Availability of Information and Confidentiality	Yes.
§63.16	Performance Track Provisions	No.

Attachment B

Federally Enforceable Operating Permit (FESOP) No: F 091-18358-00051

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 63—NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS

Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Source: 69 FR 33506, June 15, 2004, unless otherwise noted.

§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:

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

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:

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

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, dsm^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, dsm^3/J ($dscf/10^6$ Btu)

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

$$X_{CO2} = \frac{5.9}{F_O} \quad (Eq. 3)$$

Where:

X_{CO2} = 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:

$$C_{adj} = C_d \frac{X_{CO2}}{\%CO_2} \quad (Eq. 4)$$

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_{CO2} = 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_2 or CO_2 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_2 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_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 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_2 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_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 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_2 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*). 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.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 78 FR 6706, Jan. 30, 2013]

§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 or 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_2.

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_2.

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_X) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_X, CO, and volatile organic compounds (VOC) into CO_2, 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_3H_8.

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_X (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 PPPPP 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 1a **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 limitation, except during periods of startup . . .**	**During periods of startup you must . . .**
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.[1]
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2	

[1] 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 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**

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:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
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_2 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.[1]
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_2 and not using NSCR.	

[1]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 2a 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_2. 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_2 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.[1]
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_2	
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O_2	

[1]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 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

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:

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.[1]
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.[1]
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	

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
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.	

[1]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]

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

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:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Emergency stationary CI RICE and black start stationary CI RICE[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first.[2] 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.[3]	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.[3]
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.[2] 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.[3]	

For each . . .	**You must meet the following requirement, except during periods of startup . . .**	**During periods of startup you must . . .**
3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP	Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O_2.	
4. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	
5. Non-Emergency, non-black start stationary CI RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	
6. Emergency stationary SI RICE and black start stationary SI RICE.[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[2] b. Inspect spark plugs 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.[3]	
7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[2] b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.[3]	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
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;[2] 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.[3]	
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_2.	
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_2.	
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_2.	
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_2.	

[1]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.

[2]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.

[3]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]

Table 2d to Subpart ZZZZ of Part 63—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:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
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;[1] 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_2; 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_2; or	
	b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]	
	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.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
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.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]; 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;[1]	
	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;[1]	
	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;[1]	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	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;[1]	
	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 remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;[1]	
	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.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
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;[1] 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.	

[1]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.

[2]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.

[78 FR 6709, Jan. 30, 2013]

Table 3 to Subpart ZZZZ of Part 63—Subsequent Performance Tests

As stated in §§63.6615 and 63.6620, you must comply with the following subsequent performance test requirements:

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.[1]
2. 4SRB stationary RICE ≥5,000 HP located at major sources	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually.[1]
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.[1]

For each . . .	Complying with the requirement to . . .	You must . . .
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.

[1]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, 63.6620, 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. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and		(a) For CO and O_2 measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Measure the O_2 at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[ac] (heated probe not necessary)	(b) Measurements to determine O_2 must be made at the same time as the measurements for CO concentration.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		iii. Measure the CO at the inlet and the outlet of the control device	(1) ASTM D6522-00 (Reapproved 2005)[abc] (heated probe not necessary) or Method 10 of 40 CFR part 60, appendix A-4	(c) The CO concentration must be at 15 percent O_2, dry basis.
2. 4SRB stationary RICE	a. reduce formaldehyde emissions	i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and		(a) For formaldehyde, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A.
		ii. Measure O_2 at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[a] (heated probe not necessary)	(a) Measurements to determine O_2 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-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03[a]	(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 formalde-hyde 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[a], 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_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		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-7	(a) THC concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
3. Stationary RICE	a. limit the concentra-tion of formalde-hyde or CO in the stationary RICE exhaust	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary RICE; and		(a) For formaldehyde, CO, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A. If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2 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-2, or ASTM Method D6522-00 (Reapproved 2005)[a] (heated probe not necessary)	(a) Measurements to determine O_2 concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iii. Measure moisture content of the station-ary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03[a]	(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 formalde-hyde at the exhaust of the station-ary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03[a], 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_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		v. measure CO at the exhaust of the stationary RICE	(1) Method 10 of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (2005)[ac], Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03[a]	(a) CO concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

[a]You may also use Methods 3A and 10 as options to ASTM-D6522-00 (2005). You may obtain a copy of ASTM-D6522-00 (2005) from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[b]You may obtain a copy of ASTM-D6348-03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[79 FR 11290, Feb. 27, 2014]

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:

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

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		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_2 or CO_2 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_2 or CO_2 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

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		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_2, 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.

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
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_2, 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-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Reduce CO emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.
12. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.
13. 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. 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_2;
		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.
14. 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. 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_2, or the average reduction of emissions of THC is 30 percent or more;
		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.

[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:

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[a]; 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[a]; 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

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		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.[a]
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[a]; 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

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		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[a]; 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.
10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and using oxidation catalyst	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
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		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.
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and not using oxidation catalyst	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
		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.
12. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and 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 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.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
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_2; 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_2, 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.

[a]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:

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
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 non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP; 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	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, 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	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 the requirements in §63.6650(b)(6)-(9) for engines that are limited use stationary RICE subject to numerical emission limitations.
		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	i. Semiannually according to the requirements in §63.6650(b).
		c. If you had a malfunction during the reporting period, the information in §63.6650(c)(4).	i. Semiannually according to the requirements in §63.6650(b).
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	Report	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	i. Annually, according to the requirements in §63.6650.
		b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and	i. See item 2.a.i.

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
		c. Any problems or errors suspected with the meters.	i. See item 2.a.i.
3. Existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >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	Compliance report	a. The results of the annual compliance demonstration, if conducted during the reporting period.	i. Semiannually according to the requirements in §63.6650(b)(1)-(5).
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 §63.6640(f)(2)(ii) and (iii) or that operate for the purposes specified in §63.6640(f)(4)(ii)	Report	a. The information in §63.6650(h)(1)	i. annually according to the requirements in §63.6650(h)(2)-(3).

[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.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§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]		

General provisions citation	Subject of citation	Applies to subpart	Explanation
§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.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§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.

General provisions citation	Subject of citation	Applies to subpart	Explanation
		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.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§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_2) 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_2).

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_2)	*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_2, 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_2 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_2 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_2 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_2 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_2 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_2; 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_2. 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_2) is acceptable for calibration of the O_2 cell. If needed, any lower percentage O_2 calibration gas must be a mixture of O_2 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_2 Calibration Gas Concentration.

Select an O_2 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_2. When the average exhaust gas O_2 readings are above 6 percent, you may use dry ambient air (20.9 percent O_2) for the up-scale O_2 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_2).

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_2 concentrations.

8.3 EC Cell Rate. Maintain the EC cell sample flow rate so that it does not vary by more than ±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 ±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_2 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 ±3 percent of the up-scale gas value or ±1 ppm, whichever is less restrictive, for the CO channel and less than or equal to ±0.3 percent O_2 for the O_2 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 ±5 percent or ±1 ppm for CO or ±0.5 percent O_2, 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 ±2 percent or ±1 ppm for CO or ±0.5 percent O_2, 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_2 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 ±2 percent, or ±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 ±2 percent *or* ±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_2 gas standards that are generally recognized as representative of diesel-fueled engine NO and NO_2 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_2 interference response should be less than or equal to ±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 the EC cell is exposed to gas concentrations greater than 150 percent of the highest up-scale gas concentration.

13.3.1 Repeatability Check Procedure. Perform a complete EC cell sampling run (all three phases) by introducing the CO calibration gas to the measurement system and record the response. Follow Section 10.1.3. Use Figure 1 to record all data. Repeat the run three times for a total of four complete runs. During the four repeatability check runs, do not adjust the system except where necessary to achieve the correct calibration gas flow rate at the analyzer.

13.3.2 Repeatability Check Calculations. Determine the highest and lowest average “measurement data phase” CO concentrations from the four repeatability check runs and record the results on Figure 1 or a similar form. The absolute value of the difference between the maximum and minimum average values recorded must not vary more than ±3 percent or ±1 ppm of the up-scale gas value, whichever is less restrictive.

14.0 Pollution Prevention (Reserved)

15.0 Waste Management (Reserved)

16.0 Alternative Procedures (Reserved)

17.0 References

(1) “Development of an Electrochemical Cell Emission Analyzer Test Protocol”, Topical Report, Phil Juneau, Emission Monitoring, Inc., July 1997.

(2) “Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers, and Process Heaters Using Portable Analyzers”, EMC Conditional Test Protocol 30 (CTM-30), Gas Research Institute Protocol GRI-96/0008, Revision 7, October 13, 1997.

(3) “ICAC Test Protocol for Periodic Monitoring”, EMC Conditional Test Protocol 34 (CTM-034), The Institute of Clean Air Companies, September 8, 1999.

(4) “Code of Federal Regulations”, Protection of Environment, 40 CFR, Part 60, Appendix A, Methods 1-4; 10.

Table 1: Appendix A—Sampling Run Data.

Facility___________ Engine I.D.___________ Date______											
Run Type:	(_)			(_)			(_)			(_)	
(X)	Pre-Sample Calibration			Stack Gas Sample			Post-Sample Cal. Check			Repeatability Check	
Run #	1	1	2	2	3	3	4	4	Time	Scrub. OK	Flow- Rate
Gas	O_2	CO	O_2	CO	O_2	CO	O_2	CO			
Sample Cond. Phase											
"											
"											
"											
"											
Measurement Data Phase											
"											
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Mean											
Refresh Phase											
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[78 FR 6721, Jan. 30, 2013]

Attachment C

Federally Enforceable Operating Permit (FESOP) No: F 091-18358-00051

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart UU—Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture

Source: 47 FR 34143, Aug. 6, 1982, unless otherwise noted.

§ 60.470 Applicability and designation of affected facilities.

(a) The affected facilities to which this subpart applies are each saturator and each mineral handling and storage facility at asphalt roofing plants; and each asphalt storage tank and each blowing still at asphalt processing plants, petroleum refineries, and asphalt roofing plants.

(b) Any saturator or mineral handling and storage facility under paragraph (a) of this section that commences construction or modification after November 18, 1980, is subject to the requirements of this subpart. Any asphalt storage tank or blowing still that processes and/or stores asphalt used for roofing only or for roofing and other purposes, and that commences construction or modification after November 18, 1980, is subject to the requirements of this subpart.

Any asphalt storage tank or blowing still that processes and/or stores only nonroofing asphalts and that commences construction or modification after May 26, 1981, is subject to the requirements of this subpart.

§ 60.471 Definitions.

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

Afterburner (A/B) means an exhaust gas incinerator used to control emissions of particulate matter.

Asphalt processing means the storage and blowing of asphalt.

Asphalt processing plant means a plant which blows asphalt for use in the manufacture of asphalt products.

Asphalt roofing plant means a plant which produces asphalt roofing products (shingles, roll roofing, siding, or saturated felt).

Asphalt storage tank means any tank used to store asphalt at asphalt roofing plants, petroleum refineries, and asphalt processing plants. Storage tanks containing cutback asphalts (asphalts diluted with solvents to reduce viscosity for low temperature applications) and emulsified asphalts (asphalts dispersed in water with an emulsifying agent) are not subject to this regulation.

Blowing still means the equipment in which air is blown through asphalt flux to change the softening point and penetration rate.

Catalyst means a substance which, when added to asphalt flux in a blowing still, alters the penetrating-softening point relationship or increases the rate of oxidation of the flux.

Coating blow means the process in which air is blown through hot asphalt flux to produce coating asphalt. The coating blow starts when the air is turned on and stops when the air is turned off.

Electrostatic precipitator (ESP) means an air pollution control device in which solid or liquid particulates in a gas stream are charged as they pass through an electric field and precipitated on a collection suface.

High velocity air filter (HVAF) means an air pollution control filtration device for the removal of sticky, oily, or liquid aerosol particulate matter from exhaust gas streams.

Mineral handling and storage facility means the areas in asphalt roofing plants in which minerals are unloaded from a carrier, the conveyor transfer points between the carrier and the storage silos, and the storage silos.

Saturator means the equipment in which asphalt is applied to felt to make asphalt roofing products. The term saturator includes the saturator, wet looper, and coater.

[47 FR 34143, Aug. 6, 1982, as amended at 65 FR 61762, Oct. 17, 2000]

§ 60.472 Standards for particulate matter.

(a) On and after the date on which § 60.8(b) requires a performance test to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any saturator:

(1) Particulate matter in excess of:

(i) 0.04 kg/Mg (0.08 lb/ton) of asphalt shingle or mineral-surfaced roll roofing produced, or

(ii) 0.04 kg/Mg (0.08 lb/ton) of saturated felt or smooth-surfaced roll roofing produced;

(2) Exhaust gases with opacity greater than 20 percent; and

(3) Any visible emissions from a saturator capture system for more than 20 percent of any period of consecutive valid observations totaling 60 minutes. Saturators that were constructed before November 18, 1980, and that have not been reconstructed since that date and that become subject to these standards through modification are exempt from the visible emissions standard. Saturators that have been newly constructed or reconstructed since November 18, 1980 are subject to the visible emissions standard.

(b) On and after the date on which § 60.8(b) requires a performance test to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any blowing still:

(1) Particulate matter in excess of 0.67 kg/Mg (1.3 lb/ton) of asphalt charged to the still when a catalyst is added to the still; and

(2) Particulate matter in excess of 0.71 kg/Mg (1.4 lb/ton) of asphalt charged to the still when a catalyst is added to the still and when No. 6 fuel oil is fired in the afterburner; and

(3) Particulate matter in excess of 0.60 kg/Mg (1.2 lb/ton) of asphalt charged to the still during blowing without a catalyst; and

(4) Particulate matter in excess of 0.64 kg/Mg (1.3 lb/ton) of asphalt charged to the still during blowing without a catalyst and when No. 6 fuel oil is fired in the afterburner; and

(5) Exhaust gases with an opacity greater than 0 percent unless an opacity limit for the blowing still when fuel oil is used to fire the afterburner has been established by the Administrator in accordance with the procedures in § 60.474(g).

(c) Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any asphalt storage tank exhaust gases with opacity greater than 0 percent, except for one consecutive 15-minute period in any 24-hour period when the transfer lines are being blown for clearing. The control device shall not be bypassed during this 15-minute period. If, however, the emissions from any asphalt storage tank(s) are ducted to a control device for a saturator, the combined emissions shall meet the emission limit contained in paragraph (a) of this section during the time the saturator control device is operating. At any other time the asphalt storage tank(s) must meet the opacity limit specified above for storage tanks.

(d) Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any mineral handling and storage facility emissions with opacity greater than 1 percent.

[47 FR 34143, Aug. 6, 1982, as amended at 65 FR 61762, Oct. 17, 2000]

§ 60.473 Monitoring of operations.

(a) The owner or operator subject to the provisions of this subpart, and using either an electrostatic precipitator or a high velocity air filter to meet the emission limit in § 60.472(a)(1) and/or (b)(1) shall continuously monitor and record the temperature of the gas at the inlet of the control device. The temperature monitoring instrument shall have an accuracy of ±15 °C (±25 °F) over its range.

(b) The owner or operator subject to the provisions of this subpart and using an afterburner to meet the emission limit in § 60.472(a)(1) and/or (b)(1) shall continuously monitor and record the temperature in the combustion zone of the afterburner. The monitoring instrument shall have an accuracy of ±10 °C (±18 °F) over its range.

(c) An owner or operator subject to the provisions of this subpart and using a control device not mentioned in paragraphs (a) or (b) of this section shall provide to the Administrator information describing the operation of the control device and the process parameter(s) which would indicate proper operation and maintenance of the device. The Administrator may require continuous monitoring and will determine the process parameters to be monitored.

(d) The industry is exempted from the quarterly reports required under § 60.7(c). The owner/operator is required to record and report the operating temperature of the control device during the performance test and, as required by § 60.7(d), maintain a file of the temperature monitoring results for at least two years.

[47 FR 34143, Aug. 6, 1982, as amended at 65 FR 61762, Oct. 17, 2000]

§ 60.474 Test methods and procedures.

(a) For saturators, the owner or operator shall conduct performance tests required in § 60.8 as follows:

(1) If the final product is shingle or mineral-surfaced roll roofing, the tests shall be conducted while 106.6-kg (235-lb) shingle is being produced.

(2) If the final product is saturated felt or smooth-surfaced roll roofing, the tests shall be conducted while 6.8-kg (15-lb) felt is being produced.

(3) If the final product is fiberglass shingle, the test shall be conducted while a nominal 100-kg (220-lb) shingle is being produced.

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

(c) The owner or operator shall determine compliance with the particulate matter standards in § 60.472 as follows:

(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$E=(c_s\ Q_{sd})/(PK)$

where:

E=emission rate of particulate matter, kg/Mg (lb/ton).

c_s =concentration of particulate matter, g/dscm (gr/dscf).

Q_{sd} =volumetric flow rate of effluent gas, dscm/hr (dscf/hr).

P=asphalt roofing production rate or asphalt charging rate, Mg/hr (ton/hr).

K=conversion factor, 1000 g/kg [7000 (gr/lb)].

(2) Method 5A shall be used to determine the particulate matter concentration (c_s) and volumetric flow rate (Q_{sd}) of the effluent gas. For a saturator, the sampling time and sample volume for each run shall be at least 120 minutes and 3.00 dscm (106 dscf), and for the blowing still, at least 90 minutes or the duration of the coating blow or non-coating blow, whichever is greater, and 2.25 dscm (79.4 dscf).

(3) For the saturator, the asphalt roofing production rate (P) for each run shall be determined as follows: The amount of asphalt roofing produced on the shingle or saturated felt process lines shall be obtained by direct measurement. The asphalt roofing production rate is the amount produced divided by the time taken for the run.

(4) For the blowing still, the asphalt charging rate (P) shall be computed for each run using the following equation:

$P=(Vd)/(K'\ \theta)$

where:

P=asphalt charging rate to blowing still, Mg/hr (ton/hr).

V=volume of asphalt charged, m^3 (ft^3).

d=density of asphalt, kg/m^3 (lb/ft^3).

K′=conversion factor, 1000 kg/Mg (2000 lb/ton).

θ=duration of test run, hr.

(i) The volume (V) of asphalt charged shall be measured by any means accurate to within 10 percent.

(ii) The density (d) of the asphalt shall be computed using the following equation:

$$d = K_1 - K_2 T_i$$

Where:

d = Density of the asphalt, kg/m^3 (lb/ft^3)

K_1 = 1056.1 kg/m^3 (metric units)

= 64.70 lb/ft^3 (English Units)

K_2 = 0.6176 kg/(m^3 °C) (metric units)

= 0.0694 lb/(ft^3 °F) (English Units)

T_i = temperature at the start of the blow, °C ((°deg;F)

(5) Method 9 and the procedures in § 60.11 shall be used to determine opacity.

(d) The Administrator will determine compliance with the standards in § 60.472(a)(3) by using Method 22, modified so that readings are recorded every 15 seconds for a period of consecutive observations during representative conditions (in accordance with § 60.8(c)) totaling 60 minutes. A performance test shall consist of one run.

(e) The owner or operator shall use the monitoring device in § 60.473 (a) or (b) to monitor and record continuously the temperature during the particulate matter run and shall report the results to the Administrator with the performance test results.

(f) If at a later date the owner or operator believes that the emission limits in § 60.472(a) and (b) are being met even though one of the conditions listed in this paragraph exist, he may submit a written request to the Administrator to repeat the performance test and procedure outlined in paragraph (c) of this section.

(1) The temperature measured in accordance with § 60.473(a) is exceeding that measured during the performance test.

(2) The temperature measured in accordance with § 60.473(b) is lower than that measured during the performance test.

(g) If fuel oil is to be used to fire an afterburner used to control emissions from a blowing still, the owner or operator may petition the Administrator in accordance with § 60.11(e) of the General Provisions to establish an opacity standard for the blowing still that will be the opacity standard when fuel oil is used to fire the afterburner. To obtain this opacity standard, the owner or operator must request the Administrator to determine opacity during an initial, or subsequent, performance test when fuel oil is used to fire the afterburner. Upon receipt of the results of the performance test, the Administrator will make a finding concerning compliance with the mass standard for the blowing still. If the Administrator finds that the facility was in compliance with the mass standard during the performance test but failed to meet the zero opacity standard, the Administrator will establish and promulgate in the FEDERAL REGISTER an opacity standard for the blowing still that will be the opacity standard when fuel oil is used to fire the afterburner. When the afterburner is fired with natural gas, the zero percent opacity remains the applicable opacity standard.

[54 FR 6677, Feb. 14, 1989, as amended 54 FR 27016, June 27, 1989; 65 FR 61762, Oct. 17, 2000]

Attachment D

Federally Enforceable Operating Permit (FESOP) No: F 091-18358-00051

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

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) and other persons as specified in paragraphs (a)(1) through (4) 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 any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005.

(4) The provisions of § 60.4208 of this subpart are applicable to all owners and operators of stationary CI ICE that commence construction 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.

(e) Owners and operators of facilities with CI ICE that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011]

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 the following non-emergency stationary CI ICE 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:

(1) Their 2007 model year through 2012 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;

(2) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(3) Their 2013 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(e) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards and other requirements for new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.110, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 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.

(f) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary non-emergency CI ICE identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 1 to 40 CFR 1042.1 identifies 40 CFR part 1042 as being applicable, 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

(1) Areas of Alaska not accessible by the Federal Aid Highway System (FAHS); and

(2) Marine offshore installations.

(g) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (e) of this section that are applicable to the model year, maximum engine power, and displacement of the reconstructed stationary CI ICE.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011]

§ 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) [Reserved]

(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.

(e) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE 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:

(1) Their 2007 model year through 2012 emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder;

(3) Their 2013 model year emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder; and

(4) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(f) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE to the certification emission standards and other requirements applicable to Tier 3 new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power less than 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(g) Notwithstanding the requirements in paragraphs (a) through (d) of this section, stationary emergency CI internal combustion engines identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 2 to 40 CFR 1042.101 identifies Tier 3 standards as being applicable, the requirements applicable to Tier 3 engines in 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

(1) Areas of Alaska not accessible by the FAHS; and

(2) Marine offshore installations.

(h) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (f) of this section that are applicable to the model year, maximum engine power and displacement of the reconstructed emergency stationary CI ICE.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011]

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

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

[76 FR 37968, June 28, 2011]

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 engines with a displacement of greater than or equal to 30 liters per cylinder must meet the following requirements:

(1) For engines installed prior to January 1, 2012, limit the emissions of NOX in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 grams per kilowatt-hour (g/KW-hr) (12.7 grams per horsepower-hr (g/HP-hr)) when maximum engine speed is less than 130 revolutions per minute (rpm);

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012 and before January 1, 2016, limit the emissions of NOX in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) For engines installed on or after January 1, 2016, limit the emissions of NOX in the stationary CI internal combustion engine exhaust to the following:

(i) 3.4 g/KW-hr (2.5 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $9.0 \cdot n^{-0.20}$ g/KW-hr ($6.7 \cdot n^{-0.20}$ g/HP-hr) where n (maximum engine speed) is 130 or more but less than 2,000 rpm; and

(iii) 2.0 g/KW-hr (1.5 g/HP-hr) where maximum engine speed is greater than or equal to 2,000 rpm.

(4) 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).

(d) Owners and operators of non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the not-to-exceed (NTE) standards as indicated in § 60.4212.

(e) Owners and operators of any modified or reconstructed non-emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed non-emergency stationary CI ICE that are specified in paragraphs (a) through (d) of this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011]

§ 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 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 engines with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in this section.

(1) For engines installed prior to January 1, 2012, limit the emissions of NOX in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $45 \cdot n-0.2$ g/KW-hr ($34 \cdot n-0.2$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/kW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NOX in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n-0.23$ g/KW-hr ($33 \cdot n-0.23$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

(e) Owners and operators of emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the NTE standards as indicated in § 60.4212.

(f) Owners and operators of any modified or reconstructed emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed CI ICE that are specified in paragraphs (a) through (e) of this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

§ 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 over the entire life of the engine.

[76 FR 37969, June 28, 2011]

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, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.

(c) [Reserved]

(d) Beginning June 1, 2012, owners and operators of stationary CI ICE subject to this subpart with a displacement of greater than or equal to 30 liters per cylinder are no longer subject to the requirements of paragraph (a) of this section, and must use fuel that meets a maximum per-gallon sulfur content of 1,000 parts per million (ppm).

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

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011; 78 FR 6695, Jan. 30, 2013]

Other Requirements for Owners and Operators

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

(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) After December 31, 2018, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power greater than or equal to 600 KW (804 HP) and less than 2,000 KW (2,680 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that do not meet the applicable requirements for 2017 model year non-emergency engines.

(h) 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 (g) of this section after the dates specified in paragraphs (a) through (g) of this section.

(i) 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.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

§ 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 that does not meet the standards applicable to non-emergency engines, 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.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

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 (e) and § 60.4202(e) and (f) using the certification procedures required in 40 CFR part 94, subpart C, or 40 CFR part 1042, subpart C, as applicable, and must test their engines as specified in 40 CFR part 94 or 1042, as applicable.

(c) Stationary CI internal combustion engine manufacturers must meet the requirements of 40 CFR 1039.120, 1039.125, 1039.130, and 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, 40 CFR part 94 or 40 CFR part 1042 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 40 CFR parts 89, 94, 1039 or 1042, 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 40 CFR parts 89, 94, 1039 or 1042, 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 40 CFR parts 89, 94, 1039 or 1042 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.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

§ 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 do all of the following, except as permitted under paragraph (g) of this section:

(1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

(2) Change only those emission-related settings that are permitted by the manufacturer; and

(3) 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 emission-related specifications, except as permitted in paragraph (g) of this section.

(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 NOX 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 NOX 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) If you are an owner or operator of a modified or reconstructed stationary CI internal combustion engine and must comply with the emission standards specified in § 60.4204(e) or § 60.4205(f), you must demonstrate compliance according to one of the methods specified in paragraphs (e)(1) or (2) of this section.

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in § 60.4204(e) or § 60.4205(f), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in § 60.4212 or § 60.4213, as appropriate. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

(f) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (f)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE 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 (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (3) 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 ICE in emergency situations.

(2) You may operate your emergency stationary ICE 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 paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary ICE 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 ICE beyond 100 hours per calendar year.

(ii) Emergency stationary ICE 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 § 60.17), 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 ICE 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 ICE 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 paragraph (f)(3)(i) of this section, the 50 hours per calendar 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) 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.

(ii) [Reserved]

(g) If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:

(1) If you are an owner or operator of a stationary CI internal combustion engine with maximum engine power less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if you do not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.

(2) If you are an owner or operator of a stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.

(3) If you are an owner or operator of a stationary CI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37970, June 28, 2011; 78 FR 6695, Jan. 30, 2013]

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 (e) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F, for stationary CI ICE with a displacement of less than 10 liters per cylinder, and according to 40 CFR part 1042, subpart F, for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(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:

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

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.

(e) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1042 must not exceed the NTE standards for the same model year and maximum engine power as required in 40 CFR 1042.101(c).

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

§ 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 (f) 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:

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

Where:

Ci = concentration of NOX or PM at the control device inlet,

Co = concentration of NOX or PM at the control device outlet, and

R = percent reduction of NOX or PM emissions.

(2) You must normalize the NOX or PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen (O2) using Equation 3 of this section, or an equivalent percent carbon dioxide (CO2) using the procedures described in paragraph (d)(3) of this section.

$$C_{adj} = C_d \frac{5.9}{20.9 - \% O_2} \qquad \text{(Eq. 3)}$$

Where:

Cadj = Calculated NOX or PM concentration adjusted to 15 percent O2 .

Cd = Measured concentration of NOX or PM, uncorrected.

5.9 = 20.9 percent O2 −15 percent O2 , the defined O2 correction value, percent.

%O2 = Measured O2 concentration, dry basis, percent.

(3) If pollutant concentrations are to be corrected to 15 percent O2 and CO2 concentration is measured in lieu of O2 concentration measurement, a CO2 correction factor is needed. Calculate the CO2 correction factor as described in paragraphs (d)(3)(i) through (iii) of this section.

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

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

Where:

Fo = Fuel factor based on the ratio of O2 volume to the ultimate CO2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is O2 , percent/100.

Fd = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm3 /J (dscf/106 Btu).

Fc = Ratio of the volume of CO2 produced to the gross calorific value of the fuel from Method 19, dsm3 /J (dscf/106 Btu).

(ii) Calculate the CO2 correction factor for correcting measurement data to 15 percent O2 , as follows:

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

Where:

XCO2 = CO2 correction factor, percent.

5.9 = 20.9 percent O2 −15 percent O2 , the defined O2 correction value, percent.

(iii) Calculate the NOX and PM gas concentrations adjusted to 15 percent O2 using CO2 as follows:

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

Where:

Cadj = Calculated NOX or PM concentration adjusted to 15 percent O2 .

Cd = Measured concentration of NOX or PM, uncorrected.

%CO2 = Measured CO2 concentration, dry basis, percent.

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

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

Where:

ER = Emission rate in grams per KW-hour.

Cd = Measured NOX concentration in ppm.

1.912x10−3 = Conversion constant for ppm NOX 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:

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

Where:

ER = Emission rate in grams per KW-hour.

Cadj = 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.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

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.

(d) If you own or operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 60.4211(f)(2)(ii) and (iii) or that operates for the purposes specified in § 60.4211(f)(3)(i), you must submit an annual report according to the requirements in paragraphs (d)(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 § 60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in § 60.4211(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in § 60.4211(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purposes specified in § 60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in § 60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(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). 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 § 60.4.

[71 FR 39172, July 11, 2006, as amended at 78 FR 6696, Jan. 30, 2013]

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 with a displacement of less than 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in §§ 60.4202 and 60.4205.

(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.

(c) Stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the following emission standards:

(1) For engines installed prior to January 1, 2012, limit the emissions of NOX in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) 45 · n−0.2 g/KW-hr (34 · n−0.2 g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NOX in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) 44 · n−0.23 g/KW-hr (33 · n−0.23 g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

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

(a) Prior to December 1, 2010, owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder located in areas of Alaska not accessible by the FAHS should refer to 40 CFR part 69 to determine the diesel fuel requirements applicable to such engines.

(b) Except as indicated in paragraph (c) of this section, manufacturers, owners and operators of stationary CI ICE with a displacement of less than 10 liters per cylinder located in areas of Alaska not accessible by the FAHS may meet the requirements of this subpart by manufacturing and installing engines meeting the requirements of 40 CFR parts 94 or 1042, as appropriate, rather than the otherwise applicable requirements of 40 CFR parts 89 and 1039, as indicated in sections §§ 60.4201(f) and 60.4202(g) of this subpart.

(c) Manufacturers, owners and operators of stationary CI ICE that are located in areas of Alaska not accessible by the FAHS may choose to meet the applicable emission standards for emergency engines in § 60.4202 and § 60.4205, and not those for non-emergency engines in § 60.4201 and § 60.4204, except that for 2014 model year and later non-emergency CI ICE, the owner or operator of any such engine that was not certified as meeting Tier 4 PM standards, must meet the applicable requirements for PM in § 60.4201 and § 60.4204 or install a PM emission control device that achieves PM emission reductions of 85 percent, or 60 percent for engines with a displacement of greater than or equal to 30 liters per cylinder, compared to engine-out emissions.

(d) The provisions of § 60.4207 do not apply to owners and operators of pre-2014 model year stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS.

(e) The provisions of § 60.4208(a) do not apply to owners and operators of stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS until after December 31, 2009.

(f) The provisions of this section and § 60.4207 do not prevent owners and operators of stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS from using fuels mixed with used lubricating oil, in volumes of up to 1.75 percent of the total fuel. The sulfur content of the used lubricating oil must be less than 200 parts per million. The used lubricating oil must meet the on-specification levels and properties for used oil in 40 CFR 279.11.

[76 FR 37971, June 28, 2011]

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

Owners and operators of stationary CI ICE that do not use diesel fuel 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 § 60.4204 or § 60.4205 using such fuels and that use of such fuel is appropriate and reasonably necessary, considering cost, energy, technical feasibility, human health and environmental, and other factors, for the operation of the engine.

[76 FR 37972, June 28, 2011]

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.

Certified emissions 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 certified emissions 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 certified emissions 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).

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.

Date of manufacture means one of the following things:

(1) For freshly manufactured engines and modified engines, date of manufacture means the date the engine is originally produced.

(2) For reconstructed engines, date of manufacture means the date the engine was originally produced, except as specified in paragraph (3) of this definition.

(3) Reconstructed engines are assigned a new date of manufacture if the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable entirely new facility. An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine is produced using all new components except for the engine block. In these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced.

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 reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary ICE must comply with the requirements specified in § 60.4211(f) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in § 60.4211(f), then it is not considered to be an emergency stationary ICE under this subpart.

(1) The stationary ICE is operated to provide electrical power or mechanical work during an emergency situation. 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.

(2) The stationary ICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in § 60.4211(f).

(3) The stationary ICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in § 60.4211(f)(2)(ii) or (iii) and § 60.4211(f)(3)(i).

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.

Freshly manufactured engine means an engine that has not been placed into service. An engine becomes freshly manufactured when it is originally produced.

Installed means the engine is placed and secured at the location where it is intended to be operated.

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 the calendar year in which an engine is manufactured (see “date of manufacture”), except as follows:

(1) Model year means the annual new model production period of the engine manufacturer in which an engine is manufactured (see “date of manufacture”), if the annual new model production period is different than the calendar year and includes 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.

(2) 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 manufactured (see “date of manufacture”).

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, aircraft, 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.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37972, June 28, 2011; 78 FR 6696, Jan. 30, 2013]

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_X	HC	NO_X	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_X+ 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)[1]
KW<75 (HP<100)	2011
75≤KW<130 (100≤HP<175)	2010
130≤KW≤560 (175≤HP≤750)	2009
KW>560 (HP>750)	2008

[1]Manufacturers of fire pump stationary CI ICE with a maximum engine power greater than or equal to 37 kW (50 HP) and less than 450 KW (600 HP) and a rated speed of greater than 2,650 revolutions per minute (rpm) are not required to certify such engines until three model years following the model year indicated in this Table 3 for engines in the applicable engine power category.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37972, June 28, 2011]

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_X	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)

Maximum engine power	Model year(s)	NMHC + NO_X	CO	PM
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+ [1]	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+ [1]	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+ [2]	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+ [3]	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+ [3]	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)

[1] 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.

[2] 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.

[3] 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 [1]	Torque (percent) [2]	Weighting factors
1	Rated	100	0.30
2	Rated	75	0.50
3	Rated	50	0.20

[1] Engine speed: ±2 percent of point.

[2] 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_X 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_2 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_2 concentration must be made at the same time as the measurements for NO_X 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_X concentration.
		iv. Measure NO_X 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_X concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

For each	Complying with the requirement to	You must	Using	According to the following requirements
	b. Limit the concentration of NO_Xin 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_2concentration 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_2concentration must be made at the same time as the measurement for NO_Xconcentration.
		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_Xconcentration.
		iv. Measure NO_Xat 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_Xconcentration must be at 15 percent O_2, 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_2at 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_2concentration 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_2, 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.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		ii. Determine the O_2concentration 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_2concentration 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_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

Table 8 to Subpart IIII of Part 60—Applicability of General Provisions to Subpart IIII

[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 (≥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 IIII.
§ 60.12	Circumvention	Yes	
§ 60.13	Monitoring requirements	Yes	Except that § 60.13 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder.
§ 60.14	Modification	Yes	
§ 60.15	Reconstruction	Yes	
§ 60.16	Priority list	Yes	

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§ 60.17	Incorporations by reference	Yes	
§ 60.18	General control device requirements	No	
§ 60.19	General notification and reporting requirements	Yes	

Attachment E

Federally Enforceable Operating Permit (FESOP) No: F 091-18358-00051

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Source: 72 FR 32759, June 13, 2007, unless otherwise noted.

§ 60.40c Applicability and delegation of authority.

(a) Except as provided in paragraphs (d), (e), (f), and (g) 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 British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).

(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 that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO_2) 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.

(e) Affected facilities (*i.e.* heat recovery steam generators and fuel heaters) that are associated with stationary combustion turbines and meet the applicability requirements of subpart KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators, fuel heaters, and other affected facilities that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/h) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/h) heat input of fossil fuel. If the heat recovery steam generator, fuel heater, or other affected facility is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The stationary combustion turbine emissions are subject to subpart GG or KKKK, as applicable, of this part.)

(f) Any affected facility that meets the applicability requirements of and is subject to subpart AAAA or subpart CCCC of this part is not subject to this subpart.

(g) Any facility that meets the applicability requirements and is subject to an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBB of this part is not subject to this subpart.

(h) Affected facilities that also meet the applicability requirements under subpart J or subpart Ja of this part are subject to the PM and NO_X standards under this subpart and the SO_2 standards under subpart J or subpart Ja of this part, as applicable.

(i) Temporary boilers are not subject to this subpart.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9461, Feb. 16, 2012]

§ 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 (incorporated by reference, see § 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 not meeting the definition of natural gas, 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.

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 (incorporated by reference, see § 60.17), diesel fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see § 60.17), kerosine, as defined by the American Society of Testing and Materials in ASTM D3699 (incorporated by reference, see § 60.17), biodiesel as defined by the American Society of Testing and Materials in ASTM D6751 (incorporated by reference, see § 60.17), or biodiesel blends as defined by the American Society of Testing and Materials in ASTM D7467 (incorporated by reference, see § 60.17).

Dry flue gas desulfurization technology means a SO_2 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 reagent and water, whether introduced separately or as a premixed 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_2 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 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 (incorporated by reference, see § 60.17); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 34 and 43 megajoules (MJ) per dry standard cubic meter (910 and 1,150 Btu per dry standard cubic foot).

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_2 emissions (nanograms per joule (ng/J) or lb/MMBtu 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 (incorporated by reference, see § 60.17).

Steam generating unit means a device that combusts any fuel and produces steam or heats water or heats any 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.

Temporary boiler means a steam generating unit that combusts natural gas or distillate oil with a potential SO_2 emissions rate no greater than 26 ng/J (0.060 lb/MMBtu), and the unit is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A steam generating unit is not a temporary boiler if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) The steam generating unit or a replacement remains at a location for more than 180 consecutive days. Any temporary boiler that replaces a temporary boiler at a location and performs the same or similar function will be included in calculating the consecutive time period.

(3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

(4) The equipment is moved from one location to another in an attempt to circumvent the residence time requirements of this definition.

Wet flue gas desulfurization technology means an SO_2 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 PM or SO_2 .

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.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9461, Feb. 16, 2012]

§ 60.42c Standard for sulfur dioxide (SO2).

(a) Except as provided in paragraphs (b), (c), and (e) of this section, on and after the date on which the performance test is completed or required to be completed under § 60.8, whichever date comes first, the owner or operator of an affected facility that combusts only coal shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO_2 emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO_2 emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO_2 in excess of the emission limit is determined pursuant to paragraph (e)(2) of this section.

(b) Except as provided in paragraphs (c) and (e) of this section, on and after the date on which the performance test is completed or required to be completed under § 60.8, whichever date comes first, the owner or operator of an affected facility that:

(1) Combusts only coal refuse alone in a fluidized bed combustion steam generating unit shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 20 percent (0.20) of the potential SO_2 emission rate (80 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of SO_2 in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is fired with coal refuse, the affected facility subject to paragraph (a) of this section. If oil or any other fuel (except coal) is fired with coal refuse, the affected facility is subject to the 87 ng/J (0.20 lb/MMBtu) heat input SO_2 emissions limit or the 90 percent SO_2 reduction requirement specified in paragraph (a) of this section and the emission limit is determined pursuant to paragraph (e)(2) of this section.

(2) Combusts only coal and that uses an emerging technology for the control of SO_2 emissions shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 50 percent (0.50) of the potential SO_2 emission rate (50 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of 260 ng/J (0.60 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 50 percent SO_2 reduction requirement specified in this paragraph and the emission limit determined pursuant to paragraph (e)(2) of this section.

(c) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, alone or in combination with any other fuel, and is listed in paragraphs (c)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of the emission limit determined pursuant to paragraph (e)(2) of this section. Percent reduction requirements are not applicable to affected facilities under paragraphs (c)(1), (2), (3), or (4).

(1) Affected facilities that have a heat input capacity of 22 MW (75 MMBtu/h) or less;

(2) Affected facilities that have an annual capacity for coal of 55 percent (0.55) or less and are subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for coal of 55 percent (0.55) or less.

(3) Affected facilities located in a noncontinental area; or

(4) Affected facilities that combust coal in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from exhaust gases entering the duct burner.

(d) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, 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_2 in excess of 215 ng/J (0.50 lb/MMBtu) heat input from oil; 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.

(e) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, or coal and oil with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO_2 in excess of the following:

(1) The percent of potential SO_2 emission rate or numerical SO_2 emission rate required under paragraph (a) or (b)(2) of this section, as applicable, for any affected facility that

(i) Combusts coal in combination with any other fuel;

(ii) Has a heat input capacity greater than 22 MW (75 MMBtu/h); and

(iii) Has an annual capacity factor for coal greater than 55 percent (0.55); and

(2) The emission limit determined according to the following formula for any affected facility that combusts coal, oil, or coal and oil with any other fuel:

$$E_s = \frac{(K_a H_a + K_b H_b + K_c H_c)}{(H_a + H_b + H_c)}$$

Where:

E_s = SO_2 emission limit, expressed in ng/J or lb/MMBtu heat input;

K_a = 520 ng/J (1.2 lb/MMBtu);

K_b = 260 ng/J (0.60 lb/MMBtu);

K_c = 215 ng/J (0.50 lb/MMBtu);

H_a = Heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [MMBtu];

H_b = Heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (MMBtu); and

H_c = Heat input from the combustion of oil, in J (MMBtu).

(f) Reduction in the potential SO_2 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_2 emission rate; and

(2) Emissions from the pretreated fuel (without either combustion or post-combustion SO_2 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), (3), or (4) 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), as applicable.

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

(2) Residual oil-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

(3) Coal-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/h).

(4) Other fuels-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/h).

(i) The SO_2 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) For affected facilities located in noncontinental areas and affected facilities complying with the percent reduction standard, 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 for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9462, Feb. 16, 2012]

§ 60.43c Standard for particulate matter (PM).

(a) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or combusts mixtures of coal with other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.051 lb/MMBtu) heat input if the affected facility combusts only coal, or combusts coal with other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal with other fuels, has an annual capacity factor for the other fuels greater than 10 percent (0.10), and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(b) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts wood or combusts mixtures of wood with other fuels (except coal) and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emissions limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood greater than 30 percent (0.30); or

(2) 130 ng/J (0.30 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood of 30 percent (0.30) or less and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for wood of 30 percent (0.30) or less.

(c) On and after the date on which the initial performance test is completed or required to be completed under § 60.8, 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 MMBtu/h) 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. Owners and operators of an affected facility that elect to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and are subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less are exempt from the opacity standard specified in this paragraph (c).

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

(e)(1) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input, except as provided in paragraphs (e)(2), (e)(3), and (e)(4) of this section.

(2) As an alternative to meeting the requirements of paragraph (e)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under § 60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) An owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM standard under § 60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or SO_2 emissions is not subject to the PM limit in this section.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 77 FR 9462, Feb. 16, 2012]

§ 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 § 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.

(b) The initial performance test required under § 60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and SO_2 emission limits under § 60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affect facility will be operated, but not later than 180 days after the initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.

(c) After the initial performance test required under paragraph (b) of this section and § 60.8, compliance with the percent reduction requirements and SO_2 emission limits under § 60.42c is based on the average percent reduction and the average SO_2 emission rates for 30 consecutive steam generating unit operating days. A separate performance test is completed at the end of each steam generating unit operating day, and a new 30-day average percent reduction and SO_2 emission rate are calculated to show compliance with the standard.

(d) If only coal, only oil, or a mixture of coal and oil is combusted in an affected facility, the procedures in Method 19 of appendix A of this part are used to determine the hourly SO_2 emission rate (E_{ho}) and the 30-day average SO_2 emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the CEMS. Method 19 of appendix A of this part shall be used to calculate E_{ao} when using daily fuel sampling or Method 6B of appendix A of this part.

(e) If coal, oil, or coal and oil are combusted with other fuels:

(1) An adjusted E_{ho} (E_{ho} o) is used in Equation 19-19 of Method 19 of appendix A of this part to compute the adjusted E_{ao} (E_{ao} o). The E_{ho} o is computed using the following formula:

$$E_{ho}o = \frac{E_{ho} - E_w(1 - X_1)}{X_1}$$

Where:

E_{ho} o = Adjusted E_{ho} , ng/J (lb/MMBtu);

E_{ho} = Hourly SO_2 emission rate, ng/J (lb/MMBtu);

E_w = SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9 of appendix A of this part, ng/J (lb/MMBtu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume E_w = 0.

X_k = Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(2) The owner or operator of an affected facility that qualifies under the provisions of § 60.42c(c) or (d) (where percent reduction is not required) does not have to measure the parameters E_w or X_k if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19 of appendix A of this part.

(f) Affected facilities subject to the percent reduction requirements under § 60.42c(a) or (b) shall determine compliance with the SO_2 emission limits under § 60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

(1) If only coal is combusted, the percent of potential SO_2 emission rate is computed using the following formula:

$$\%P_s = 100\left(1 - \frac{\%R_g}{100}\right)\left(1 - \frac{\%R_f}{100}\right)$$

Where:

$\%P_s$ = Potential SO_2 emission rate, in percent;

$\%R_g$ = SO_2 removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and

$\%R_f$ = SO_2 removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

(2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:

(i) To compute the $\%P_s$, an adjusted $\%R_g$ ($\%R_g$ o) is computed from E_{ao} o from paragraph (e)(1) of this section and an adjusted average SO_2 inlet rate (E_{ai} o) using the following formula:

$$\%R_g^o = 100\left(1 - \frac{E_{ao}^o}{E_{ai}^o}\right)$$

Where:

$\%R_g$ o = Adjusted $\%R_g$, in percent;

E_{ao} o = Adjusted E_{ao} , ng/J (lb/MMBtu); and

E_{ai} o = Adjusted average SO_2 inlet rate, ng/J (lb/MMBtu).

(ii) To compute E_{ai} o, an adjusted hourly SO_2 inlet rate (E_{hi} o) is used. The E_{hi} o is computed using the following formula:

$$E_{hi}o = \frac{E_{hi} - E_w(1 - X_k)}{X_k}$$

Where:

E_{hi} o = Adjusted E_{hi} , ng/J (lb/MMBtu);

E_{hi} = Hourly SO_2 inlet rate, ng/J (lb/MMBtu);

E_w = SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume $E_w = 0$; and

X_k = Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(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_2 standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in § 60.48c(f), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the SO_2 standards under § 60.42c(c)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid SO_2 emissions data in calculating $\%P_s$ and E_{ho} under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under § 60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating $\%P_s$ or E_{ho} pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

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

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under § 60.43c shall conduct an initial performance test as required under § 60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods, except as specified in paragraph (c) of this section.

(1) Method 1 of appendix A of this part shall be used to select the sampling site and the number of traverse sampling points.

(2) Method 3A or 3B of appendix A-2 of this part shall be used for gas analysis when applying Method 5 or 5B of appendix A-3 of this part or 17 of appendix A-6 of this part.

(3) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 of appendix A of this part may be used at affected facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of Sections 8.1 and 11.1 of Method 5B of appendix A of this part may be used in Method 17 of appendix A of this part only if Method 17 of appendix A of this part is used in conjunction with a wet scrubber system. Method 17 of appendix A of this part shall not be used in conjunction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part may be used in conjunction with a wet scrubber system.

(4) The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry standard cubic meters (dscm) [60 dry standard cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(5) For Method 5 or 5B of appendix A of this part, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 ±14 °C (320±25 °F).

(6) For determination of PM emissions, an oxygen (O_2) or carbon dioxide (CO_2) measurement shall be obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(7) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rates expressed in ng/J (lb/MMBtu) heat input shall be determined using:

(i) The O_2 or CO_2 measurements and PM measurements obtained under this section, (ii) The dry basis F factor, and

(iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(8) Method 9 of appendix A-4 of this part shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under § 60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(c) In place of PM testing with Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs (c)(1) through (c)(14) of this section.

(1) Notify the Administrator 1 month before starting use of the system.

(2) Notify the Administrator 1 month before stopping use of the system.

(3) The monitor shall be installed, evaluated, and operated in accordance with § 60.13 of subpart A of this part.

(4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under § 60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.

(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under § 60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (d) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

(6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.

(7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraph (c)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) [Reserved]

(8) The 1-hour arithmetic averages required under paragraph (c)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under § 60.13(e)(2) of subpart A of this part.

(9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (c)(7) of this section are not met.

(10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.

(11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O_2 (or CO_2) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and performance tests conducted using the following test methods.

(i) For PM, Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall be used; and

(ii) For O2 (or CO_2), Method 3A or 3B of appendix A-2 of this part, as applicable shall be used.

(12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.

(13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours on a 30-day rolling average.

(14) As of January 1, 2012, and within 90 days after the date of completing each performance test, as defined in § 60.8, conducted to demonstrate compliance with this subpart, you must submit relative accuracy test audit (*i.e.,* reference method) data and performance test (*i.e.,* compliance test) data, except opacity data, electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see *http://www.epa.gov/ttn/chief/ert/ert tool.html/*) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE database.

(d) The owner or operator of an affected facility seeking to demonstrate compliance under § 60.43c(e)(4) shall follow the applicable procedures under § 60.48c(f). For residual oil-fired affected facilities, fuel supplier certifications are only allowed for facilities with heat input capacities between 2.9 and 8.7 MW (10 to 30 MMBtu/h).

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011; 77 FR 9463, Feb. 16, 2012]

§ 60.46c Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (d) and (e) of this section, the owner or operator of an affected facility subject to the SO_2 emission limits under § 60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO_2 concentrations and either O_2 or CO_2 concentrations at the outlet of the SO_2 control device (or the outlet of the steam generating unit if no SO_2 control device is used), and shall record the output of the system. The owner or operator of an affected facility subject to the percent reduction requirements under § 60.42c shall measure SO_2 concentrations and either O_2 or CO_2 concentrations at both the inlet and outlet of the SO_2 control device.

(b) The 1-hour average SO_2 emission rates measured by a CEMS shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under § 60.42c. Each 1-hour average SO_2 emission rate must be based on at least 30 minutes of operation, and shall be calculated using the data points required under § 60.13(h)(2). Hourly SO_2 emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(c) The procedures under § 60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

(3) For affected facilities subject to the percent reduction requirements under § 60.42c, the span value of the SO_2 CEMS at the inlet to the SO_2 control device shall be 125 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted, and the span value of the SO_2 CEMS at the outlet from the SO_2 control device shall be 50 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted.

(4) For affected facilities that are not subject to the percent reduction requirements of § 60.42c, the span value of the SO_2 CEMS at the outlet from the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) shall be 125 percent of the maximum estimated hourly potential SO_2 emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2 emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2 emission rate by using Method 6B of appendix A of this part. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B of appendix A of this part shall be conducted pursuant to paragraph (d)(3) of this section.

(1) For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according the Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average SO_2 input rate.

(2) As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fuel tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur content of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when

calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

(3) Method 6B of appendix A of this part may be used in lieu of CEMS to measure SO_2 at the inlet or outlet of the SO_2 control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable SO_2 and CO_2 measurement train operated at the candidate location and a second similar train operated according to the procedures in § 3.2 and the applicable procedures in section 7 of Performance Specification 2 of appendix B of this part. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).

(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_2 standards based on fuel supplier certification, as described under § 60.48c(f), as applicable.

(f) The owner or operator of an affected facility operating a CEMS pursuant to paragraph (a) of this section, or conducting as-fired fuel sampling pursuant to paragraph (d)(1) of this section, shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator.

§ 60.47c Emission monitoring for particulate matter.

(a) Except as provided in paragraphs (c), (d), (e), and (f) of this section, the owner or operator of an affected facility combusting coal, oil, or wood that is subject to the opacity standards under § 60.43c shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility subject to an opacity standard in § 60.43c(c) that is not required to use a COMS due to paragraphs (c), (d), (e), or (f) of this section that elects not to use a COMS shall conduct a performance test using Method 9 of appendix A-4 of this part and the procedures in § 60.11 to demonstrate compliance with the applicable limit in § 60.43c by April 29, 2011, within 45 days of stopping use of an existing COMS, or within 180 days after initial startup of the facility, whichever is later, and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of this section. The observation period for Method 9 of appendix A-4 of this part performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation.

(1) Except as provided in paragraph (a)(2) and (a)(3) of this section, the owner or operator shall conduct subsequent Method 9 of appendix A-4 of this part performance tests using the procedures in paragraph (a) of this section according to the applicable schedule in paragraphs (a)(1)(i) through (a)(1)(iv) of this section, as determined by the most recent Method 9 of appendix A-4 of this part performance test results.

(i) If no visible emissions are observed, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(ii) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; or

(iv) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted.

(2) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 of this part performance tests, elect to perform subsequent monitoring using Method 22 of appendix A-7 of this part according to the procedures specified in paragraphs (a)(2)(i) and (ii) of this section.

(i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A-7 of this part and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (*i.e.* , 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (*i.e.,* 90 seconds per 30 minute period), the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation (*i.e.,* 90 seconds) or conduct a new Method 9 of appendix A-4 of this part performance test using the procedures in paragraph (a) of this section within 45 calendar days according to the requirements in § 60.45c(a)(8).

(ii) If no visible emissions are observed for 10 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.

(3) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in paragraph (a)(2) of this section. For reference purposes in preparing the monitoring plan, see OAQPS "Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems." This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.

(b) All COMS shall be operated in accordance with the applicable procedures under Performance Specification 1 of appendix B of this part. The span value of the opacity COMS shall be between 60 and 80 percent.

(c) Owners and operators of an affected facilities that burn only distillate oil that contains no more than 0.5 weight percent sulfur and/or liquid or gaseous fuels with potential sulfur dioxide emission rates of 26 ng/J (0.060 lb/MMBtu) heat input or less and that do not use a post-combustion technology to reduce SO2 or PM emissions and that are subject to an opacity standard in § 60.43c(c) are not required to operate a COMS if they follow the applicable procedures in § 60.48c(f).

(d) Owners or operators complying with the PM emission limit by using a PM CEMS must calibrate, maintain, operate, and record the output of the system for PM emissions discharged to the atmosphere as specified in § 60.45c(c). The CEMS specified in paragraph § 60.45c(c) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(e) Owners and operators of an affected facility that is subject to an opacity standard in § 60.43c(c) and that does not use post-combustion technology (except a wet scrubber) for reducing PM, SO_2 , or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur, and is operated such that emissions of CO discharged to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a boiler operating day average basis is not required to operate a COMS. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (e)(1) through (4) of this section; or

(1) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (e)(1)(i) through (iv) of this section.

(i) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in § 60.58b(i)(3) of subpart Eb of this part.

(ii) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(iii) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. The 1-hour averages are calculated using the data points required in § 60.13(h)(2).

(iv) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(2) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(3) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(4) You must record the CO measurements and calculations performed according to paragraph (e) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(f) An owner or operator of an affected facility that is subject to an opacity standard in § 60.43c(c) is not required to operate a COMS provided that the affected facility meets the conditions in either paragraphs (f)(1), (2), or (3) of this section.

(1) The affected facility uses a fabric filter (baghouse) as the primary PM control device and, the owner or operator operates a bag leak detection system to monitor the performance of the fabric filter according to the requirements in section § 60.48Da of this part.

(2) The affected facility uses an ESP as the primary PM control device, and the owner or operator uses an ESP predictive model to monitor the performance of the ESP developed in accordance and operated according to the requirements in section § 60.48Da of this part.

(3) The affected facility burns only gaseous fuels and/or fuel oils that contain no greater than 0.5 weight percent sulfur, and the owner or operator operates the unit according to a written site-specific monitoring plan approved by the permitting authority. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard. For testing performed as part of this site-specific monitoring plan, the permitting authority may require as an alternative to the notification and reporting requirements specified in §§ 60.8 and 60.11 that the owner or operator submit any deviations with the excess emissions report required under § 60.48c(c).

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§ 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 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_2 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.

(b) The owner or operator of each affected facility subject to the SO_2 emission limits of § 60.42c, or the PM or opacity limits of § 60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part.

(c) In addition to the applicable requirements in § 60.7, the owner or operator of an affected facility subject to the opacity limits in § 60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period and maintain records according to the requirements specified in paragraphs (c)(1) through (3) of this section, as applicable to the visible emissions monitoring method used.

(1) For each performance test conducted using Method 9 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(1)(i) through (iii) of this section.

(i) Dates and time intervals of all opacity observation periods;

(ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

(iii) Copies of all visible emission observer opacity field data sheets;

(2) For each performance test conducted using Method 22 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(2)(i) through (iv) of this section.

(i) Dates and time intervals of all visible emissions observation periods;

(ii) Name and affiliation for each visible emission observer participating in the performance test;

(iii) Copies of all visible emission observer opacity field data sheets; and

(iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.

(3) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator

(d) The owner or operator of each affected facility subject to the SO_2 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_2 emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.42c 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_2 emission rate (ng/J or lb/MMBtu), 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_2 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 the corrective actions taken.

(4) Identification of any steam generating unit operating days for which SO_2 or diluent (O_2 or CO_2) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.

(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.

(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 of appendix B of this part.

(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) 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;

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

(iii) The sulfur content or maximum sulfur content of the oil.

(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.

(3) For coal:

(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(4) For other fuels:

(i) The name of the supplier of the fuel;

(ii) The potential sulfur emissions rate or maximum potential sulfur emissions rate of the fuel in ng/J heat input; and

(iii) The method used to determine the potential sulfur emissions rate of the fuel.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in § 60.48c(f) to demonstrate compliance with the SO_2 standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in § 60.42C to use fuel certification to demonstrate compliance with the SO_2 standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property 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 30th day following the end of the reporting period.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

Attachment F

Federally Enforceable Operating Permit (FESOP) No: F 091-18358-00051

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart Kb—Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984

SOURCE: 52 FR 11429, Apr. 8, 1987, unless otherwise noted.

§ 60.110b Applicability and designation of affected facility.

(a) Except as provided in paragraph (b) of this section, the affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 75 cubic meters (m^3) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.

(b) This subpart does not apply to storage vessels with a capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure less than 15.0 kPa.

(c) [Reserved]

(d) This subpart does not apply to the following:

(1) Vessels at coke oven by-product plants.

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

(3) Vessels permanently attached to mobile vehicles such as trucks, railcars, barges, or ships.

(4) Vessels with a design capacity less than or equal to 1,589.874 m^3 used for petroleum or condensate stored, processed, or treated prior to custody transfer.

(5) Vessels located at bulk gasoline plants.

(6) Storage vessels located at gasoline service stations.

(7) Vessels used to store beverage alcohol.

(8) Vessels subject to subpart GGGG of 40 CFR part 63.

(e) *Alternative means of compliance* —(1) *Option to comply with part 65.* Owners or operators may choose to comply with 40 CFR part 65, subpart C, to satisfy the requirements of §§ 60.112b through 60.117b for storage vessels that are subject to this subpart that meet the specifications in paragraphs (e)(1)(i) and (ii) of this section. When choosing to comply with 40 CFR part 65, subpart C, the monitoring requirements of § 60.116b(c), (e), (f)(1), and (g) still apply. Other provisions applying to owners or operators who choose to comply with 40 CFR part 65 are provided in 40 CFR 65.1.

(i) A storage vessel with a design capacity greater than or equal to 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa; or

(ii) A storage vessel with a design capacity greater than 75 m^3 but less than 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa.

(2) *Part 60, subpart A.* Owners or operators who choose to comply with 40 CFR part 65, subpart C, must also comply with §§ 60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for those storage vessels. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(2) do not apply to owners or operators of storage vessels complying with 40 CFR part 65, subpart C, except that provisions required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart C, must comply with 40 CFR part 65, subpart A.

(3) *Internal floating roof report.* If an owner or operator installs an internal floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.43. This report shall be an attachment to the notification required by 40 CFR 65.5(b).

(4) *External floating roof report.* If an owner or operator installs an external floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.44. This report shall be an attachment to the notification required by 40 CFR 65.5(b).

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989; 65 FR 78275, Dec. 14, 2000; 68 FR 59332, Oct. 15, 2003]

§ 60.111b Definitions.

Terms used in this subpart are defined in the Act, in subpart A of this part, or in this subpart as follows:

Bulk gasoline plant means any gasoline distribution facility that has a gasoline throughput less than or equal to 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal requirement or Federal, State or local law, and discoverable by the Administrator and any other person.

Condensate means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature or pressure, or both, and remains liquid at standard conditions.

Custody transfer means the transfer of produced petroleum and/or condensate, after processing and/or treatment in the producing operations, from storage vessels or automatic transfer facilities to pipelines or any other forms of transportation.

Fill means the introduction of VOL into a storage vessel but not necessarily to complete capacity.

Gasoline service station means any site where gasoline is dispensed to motor vehicle fuel tanks from stationary storage tanks.

Maximum true vapor pressure means the equilibrium partial pressure exerted by the volatile organic compounds (as defined in 40 CFR 51.100) in the stored VOL at the temperature equal to the highest calendar-month average of the VOL storage temperature for VOL's stored above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for VOL's stored at the ambient temperature, as determined:

(1) In accordance with methods described in American Petroleum institute Bulletin 2517, Evaporation Loss From External Floating Roof Tanks, (incorporated by reference—see § 60.17); or

(2) As obtained from standard reference texts; or

(3) As determined by ASTM D2879-83, 96, or 97 (incorporated by reference—see § 60.17);

(4) Any other method approved by the Administrator.

Petroleum means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.

Petroleum liquids means petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery.

Process tank means a tank that is used within a process (including a solvent or raw material recovery process) to collect material discharged from a feedstock storage vessel or equipment within the process before the material is transferred to other equipment within the process, to a product or by-product storage vessel, or to a vessel used to store recovered solvent or raw material. In many process tanks, unit operations such as reactions and blending are conducted. Other process tanks, such as surge control vessels and bottoms receivers, however, may not involve unit operations.

Reid vapor pressure means the absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids except liquified petroleum gases, as determined by ASTM D323-82 or 94 (incorporated by reference—see § 60.17).

Storage vessel means each tank, reservoir, or container used for the storage of volatile organic liquids but does not include:

(1) Frames, housing, auxiliary supports, or other components that are not directly involved in the containment of liquids or vapors;

(2) Subsurface caverns or porous rock reservoirs; or

(3) Process tanks.

Volatile organic liquid (VOL) means any organic liquid which can emit volatile organic compounds (as defined in 40 CFR 51.100) into the atmosphere.

Waste means any liquid resulting from industrial, commercial, mining or agricultural operations, or from community activities that is discarded or is being accumulated, stored, or physically, chemically, or biologically treated prior to being discarded or recycled.

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989; 65 FR 61756, Oct. 17, 2000; 68 FR 59333, Oct. 15, 2003]

§ 60.112b Standard for volatile organic compounds (VOC).

(a) The owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with one of the following:

(1) A fixed roof in combination with an internal floating roof meeting the following specifications:

(i) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

(ii) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:

(A) A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.

(B) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.

(C) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

(iii) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

(iv) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.

(v) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.

(vi) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.

(vii) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

(viii) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(ix) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(2) An external floating roof. An external floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof. Each external floating roof must meet the following specifications:

(i) Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in § 60.113b(b)(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall.

(B) The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in § 60.113b(b)(4).

(ii) Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(iii) The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

(3) A closed vent system and control device meeting the following specifications:

(i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, § 60.485(b).

(ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (§ 60.18) of the General Provisions.

(4) A system equivalent to those described in paragraphs (a)(1), (a)(2), or (a)(3) of this section as provided in § 60.114b of this subpart.

(b) The owner or operator of each storage vessel with a design capacity greater than or equal to 75 m^3 which contains a VOL that, as stored, has a maximum true vapor pressure greater than or equal to 76.6 kPa shall equip each storage vessel with one of the following:

(1) A closed vent system and control device as specified in § 60.112b(a)(3).

(2) A system equivalent to that described in paragraph (b)(1) as provided in § 60.114b of this subpart.

(c) *Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia.* This paragraph applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia ("site").

(1) For any storage vessel that otherwise would be subject to the control technology requirements of paragraphs (a) or (b) of this section, the site shall have the option of either complying directly with the requirements of this subpart, or reducing the site-wide total criteria pollutant emissions cap (total emissions cap) in accordance with the procedures set forth in a permit issued pursuant to 40 CFR 52.2454. If the site chooses the option of reducing the total emissions cap in accordance with the procedures set forth in such permit, the requirements of such permit shall apply in lieu of the otherwise applicable requirements of this subpart for such storage vessel.

(2) For any storage vessel at the site not subject to the requirements of 40 CFR 60.112b (a) or (b), the requirements of 40 CFR 60.116b (b) and (c) and the General Provisions (subpart A of this part) shall not apply.

[52 FR 11429, Apr. 8, 1987, as amended at 62 FR 52641, Oct. 8, 1997]

§ 60.113b Testing and procedures.

The owner or operator of each storage vessel as specified in § 60.112b(a) shall meet the requirements of paragraph (a), (b), or (c) of this section. The applicable paragraph for a particular storage vessel depends on the control equipment installed to meet the requirements of § 60.112b.

(a) After installing the control equipment required to meet § 60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall:

(1) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.

(2) For Vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in § 60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(3) For vessels equipped with a double-seal system as specified in § 60.112b(a)(1)(ii)(B):

(i) Visually inspect the vessel as specified in paragraph (a)(4) of this section at least every 5 years; or

(ii) Visually inspect the vessel as specified in paragraph (a)(2) of this section.

(4) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in paragraphs (a)(2) and (a)(3)(ii) of this section and at intervals no greater than 5 years in the case of vessels specified in paragraph (a)(3)(i) of this section.

(5) Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by paragraphs (a)(1) and (a)(4) of this section to afford the Administrator the opportunity to have an observer present. If the inspection required by paragraph (a)(4) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

(b) After installing the control equipment required to meet § 60.112b(a)(2) (external floating roof), the owner or operator shall:

(1) Determine the gap areas and maximum gap widths, between the primary seal and the wall of the storage vessel and between the secondary seal and the wall of the storage vessel according to the following frequency.

(i) Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within 60 days of the initial fill with VOL and at least once every 5 years thereafter.

(ii) Measurements of gaps between the tank wall and the secondary seal shall be performed within 60 days of the initial fill with VOL and at least once per year thereafter.

(iii) If any source ceases to store VOL for a period of 1 year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill for the purposes of paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

(2) Determine gap widths and areas in the primary and secondary seals individually by the following procedures:

(i) Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.

(ii) Measure seal gaps around the entire circumference of the tank in each place where a 0.32-cm diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the storage vessel and measure the circumferential distance of each such location.

(iii) The total surface area of each gap described in paragraph (b)(2)(ii) of this section shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

(3) Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the respective standards in paragraph (b)(4) of this section.

(4) Make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the requirements listed in (b)(4) (i) and (ii) of this section:

(i) The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 Cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm.

(A) One end of the mechanical shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 61 cm above the stored liquid surface.

(B) There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.

(ii) The secondary seal is to meet the following requirements:

(A) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (b)(2)(iii) of this section.

(B) The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm^2 per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.

(C) There are to be no holes, tears, or other openings in the seal or seal fabric.

(iii) If a failure that is detected during inspections required in paragraph (b)(1) of § 60.113b(b) cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in § 60.115b(b)(4). Such extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(5) Notify the Administrator 30 days in advance of any gap measurements required by paragraph (b)(1) of this section to afford the Administrator the opportunity to have an observer present.

(6) Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.

(i) If the external floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.

(ii) For all the inspections required by paragraph (b)(6) of this section, the owner or operator shall notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the Administrator the opportunity to inspect the storage vessel prior to refilling. If the inspection required by paragraph (b)(6) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

(c) The owner or operator of each source that is equipped with a closed vent system and control device as required in § 60.112b (a)(3) or (b)(2) (other than a flare) is exempt from § 60.8 of the General Provisions and shall meet the following requirements.

(1) Submit for approval by the Administrator as an attachment to the notification required by § 60.7(a)(1) or, if the facility is exempt from § 60.7(a)(1), as an attachment to the notification required by § 60.7(a)(2), an operating plan containing the information listed below.

(i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 °C is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.

(ii) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

(2) Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the Administrator in accordance with paragraph (c)(1) of this section, unless the plan was modified by the Administrator during the review process. In this case, the modified plan applies.

(d) The owner or operator of each source that is equipped with a closed vent system and a flare to meet the requirements in § 60.112b (a)(3) or (b)(2) shall meet the requirements as specified in the general control device requirements, § 60.18 (e) and (f).

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989]

§ 60.114b   Alternative means of emission limitation.

(a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in emissions at least equivalent to the reduction in emissions achieved by any requirement in § 60.112b, the Administrator will publish in the Federal Register a notice permitting the use of the alternative means for purposes of compliance with that requirement.

(b) Any notice under paragraph (a) of this section will be published only after notice and an opportunity for a hearing.

(c) Any person seeking permission under this section shall submit to the Administrator a written application including:

(1) An actual emissions test that uses a full-sized or scale-model storage vessel that accurately collects and measures all VOC emissions from a given control device and that accurately simulates wind and accounts for other emission variables such as temperature and barometric pressure.

(2) An engineering evaluation that the Administrator determines is an accurate method of determining equivalence.

(d) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same emissions reduction as specified in § 60.112b.

§ 60.115b Reporting and recordkeeping requirements.

The owner or operator of each storage vessel as specified in § 60.112b(a) shall keep records and furnish reports as required by paragraphs (a), (b), or (c) of this section depending upon the control equipment installed to meet the requirements of § 60.112b. The owner or operator shall keep copies of all reports and records required by this section, except for the record required by (c)(1), for at least 2 years. The record required by (c)(1) will be kept for the life of the control equipment.

(a) After installing control equipment in accordance with § 60.112b(a)(1) (fixed roof and internal floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of § 60.112b(a)(1) and § 60.113b(a)(1). This report shall be an attachment to the notification required by § 60.7(a)(3).

(2) Keep a record of each inspection performed as required by § 60.113b (a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

(3) If any of the conditions described in § 60.113b(a)(2) are detected during the annual visual inspection required by § 60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

(4) After each inspection required by § 60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in § 60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of § 61.112b(a)(1) or § 60.113b(a)(3) and list each repair made.

(b) After installing control equipment in accordance with § 61.112b(a)(2) (external floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of § 60.112b(a)(2) and § 60.113b(b)(2), (b)(3), and (b)(4). This report shall be an attachment to the notification required by § 60.7(a)(3).

(2) Within 60 days of performing the seal gap measurements required by § 60.113b(b)(1), furnish the Administrator with a report that contains:

(i) The date of measurement.

(ii) The raw data obtained in the measurement.

(iii) The calculations described in § 60.113b (b)(2) and (b)(3).

(3) Keep a record of each gap measurement performed as required by § 60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain:

(i) The date of measurement.

(ii) The raw data obtained in the measurement.

(iii) The calculations described in § 60.113b (b)(2) and (b)(3).

(4) After each seal gap measurement that detects gaps exceeding the limitations specified by § 60.113b(b)(4), submit a report to the Administrator within 30 days of the inspection. The report will identify the vessel and contain the information specified in paragraph (b)(2) of this section and the date the vessel was emptied or the repairs made and date of repair.

(c) After installing control equipment in accordance with § 60.112b (a)(3) or (b)(1) (closed vent system and control device other than a flare), the owner or operator shall keep the following records.

(1) A copy of the operating plan.

(2) A record of the measured values of the parameters monitored in accordance with § 60.113b(c)(2).

(d) After installing a closed vent system and flare to comply with § 60.112b, the owner or operator shall meet the following requirements.

(1) A report containing the measurements required by § 60.18(f) (1), (2), (3), (4), (5), and (6) shall be furnished to the Administrator as required by § 60.8 of the General Provisions. This report shall be submitted within 6 months of the initial start-up date.

(2) Records shall be kept of all periods of operation during which the flare pilot flame is absent.

(3) Semiannual reports of all periods recorded under § 60.115b(d)(2) in which the pilot flame was absent shall be furnished to the Administrator.

§ 60.116b Monitoring of operations.

(a) The owner or operator shall keep copies of all records required by this section, except for the record required by paragraph (b) of this section, for at least 2 years. The record required by paragraph (b) of this section will be kept for the life of the source.

(b) The owner or operator of each storage vessel as specified in § 60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

(c) Except as provided in paragraphs (f) and (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

(d) Except as provided in paragraph (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 m^3 but less than 151 m^3 storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor vapor pressure values for each volume range.

(e) Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below.

(1) For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

(2) For crude oil or refined petroleum products the vapor pressure may be obtained by the following:

(i) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference—see § 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

(ii) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

(3) For other liquids, the vapor pressure:

(i) May be obtained from standard reference texts, or

(ii) Determined by ASTM D2879-83, 96, or 97 (incorporated by reference—see § 60.17); or

(iii) Measured by an appropriate method approved by the Administrator; or

(iv) Calculated by an appropriate method approved by the Administrator.

(f) The owner or operator of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.

(1) Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in paragraph (e) of this section.

(2) For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in § 60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:

(i) ASTM D2879-83, 96, or 97 (incorporated by reference—see § 60.17); or

(ii) ASTM D323-82 or 94 (incorporated by reference—see § 60.17); or

(iii) As measured by an appropriate method as approved by the Administrator.

(g) The owner or operator of each vessel equipped with a closed vent system and control device meeting the specification of § 60.112b or with emissions reductions equipment as specified in 40 CFR 65.42(b)(4), (b)(5), (b)(6), or (c) is exempt from the requirements of paragraphs (c) and (d) of this section.

[52 FR 11429, Apr. 8, 1987, as amended at 65 FR 61756, Oct. 17, 2000; 65 FR 78276, Dec. 14, 2000; 68 FR 59333, Oct. 15, 2003]

§ 60.117b   Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States: §§ 60.111b(f)(4), 60.114b, 60.116b(e)(3)(iii), 60.116b(e)(3)(iv), and 60.116b(f)(2)(iii).

[52 FR 11429, Apr. 8, 1987, as amended at 52 FR 22780, June 16, 1987]

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

Source Name: **Building Materials Manufacturing Corporation**
Source Location: **505 North Roeske Avenue, Michigan City, Indiana 46360**
County: **LaPorte County, Michigan Township**
SIC Code: **2952 (Asphalt Felts and Coatings)**
Operation Permit No.: **F 091-18358-00051**
Operation Permit Issuance Date: **January 8, 2007**
Significant Permit Revision No.: **091-32963-00051**
Permit Reviewer: **David Matousek**

On March 15, 2013, the Office of Air Quality (OAQ) received an application from Building Materials Manufacturing Corporation related to a modification to its existing stationary roof shingle manufacturing source.

Existing Approvals

The source was issued FESOP Renewal No. F 091-18358-00051 on January 8, 2007. The source has since received the following approvals:

(a) Administrative Amendment No. 091-26108-00051, issued on February 29, 2008; and

(b) Administrative Amendment No. 091-28574-00051, issued on October 27, 2009.

County Attainment Status

The source is located in LaPorte County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Attainment effective July 20, 2012, for the 8-hour ozone standard.[1]
$PM_{2.5}$	Unclassifiable or attainment effective April 5, 2005, for the annual $PM_{2.5}$ standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 24-hour $PM_{2.5}$ standard.
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.
[1]Unclassifiable or attainment effective November 15, 1990, for the 1-hour ozone standard which was revoked effective June 15, 2005.	

(a) **Ozone Standards**
Volatile Organic Compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. LaPorte County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) **$PM_{2.5}$**
LaPorte County has been classified as attainment for $PM_{2.5}$. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ 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 $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective June 28, 2011. Therefore, direct $PM_{2.5}$, SO_2, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(e) **Other Criteria Pollutants**
LaPorte County has been classified as attainment or unclassifiable in Indiana for SO_2, CO, PM_{10}, NO_x, and lead. 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 F 091-18358-00051, issued on January 8, 2007.

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)*									
	PM	PM10	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO_2e**	Total HAPs	Worst Single HAP
Blow Stills, Asphalt Coating Applications, and Asphalt Storage Tanks venting to Thermal Oxidizer (TO-1 / TO-1200)	6.22	6.22	not reported	44.4	8.94	98.6	79.5	not reported	0.25	0.24
Raw Material Storage and Handling	213	34.5	not reported	0.00	0.00	0.00	0.00	not reported	0.00	0.00

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)*									
	PM	PM10	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO_2e**	Total HAPs	Worst Single HAP
Source wide natural gas combustion, excluding thermal oxidizer	0.447	1.79	not reported	0.141	23.5	1.29	19.7	not reported	0.44	0.42
Total PTE of Entire Source	**220**	**42.5**	not reported	**44.5**	**32.4**	**< 100**	**99.2**	not reported	**< 25**	**< 10**
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
* This PTE table is from the TSD or Appendix A of F 091-18358-00051, issued on January 8, 2007.
**The 100,000 CO_2e 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)

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed modification applications, submitted by Building Materials Manufacturing Corporation on March 15, 2013 and November 25, 2013 for changes to the air pollution control devices controlling truck unloading stations #1 and #2, coating storage tanks #1 and #2, flux storage tanks #1 and #2, flux heating tanks #1 and #2, the self-seal and laminate storage tanks, the self-seal and laminate mix tanks, the self-seal and laminate use tanks, the laminating process, self-seal process, coating process, a surge tank, and the waste oil tank from a thermal oxidizer to a coalescing filter. In addition, the source is adding two hot oil heaters, a boiler, a diesel fired emergency generator and sixteen natural gas fired space heaters to the source.

The potential to emit of all emission units listed in this section did not increase. The applicant has updated the control device descriptions and reduced the heat input capacity of the thermal oxidizer. The following is a list of the modified emission units and pollution control devices:

(a) Two (2) asphalt receiving tanks, identified as Tank 1 (FST-1 / TK-1110A) and Tank 2 (FST-2 / TK-1110B), each installed in 1999, each venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 240,000 gallons of asphalt, each. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(b) One (1) asphalt receiving/blend storage tank, identified as Tank 3 (TK-1120), installed in 2003, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 100,000 gallons of blended asphalt. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(c) One (1) heated asphalt flux storage tank, identified as TK-1010, installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 80,000 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(d) One (1) knock out storage tank, identified as TK-1210, installed in 2002, using water as a conditioning liquid, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 47,000 gallons of water/conditioner. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(e) Two (2) coating asphalt storage tanks, identified as West CST 1/TK-1030A, and East CST 2/TK-1030B, each installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity 38,000 gallons of coating asphalt each. [40 CFR 60, Subpart UU]

(f) Asphalt and filler mix storage tank (Surge Tank), identified as TK-2100, installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 4,600 gallons of asphalt and filler mix. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(g) One (1) shingle machine, identified as SM-1 / RL1-01, installed in 1999, (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFF 63, Subpart AAAAAAA] consisting of the following:

  (1) One (1) coating dip tank, containing asphalt and limestone filler, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 25 tons of asphalt per hour; and

  (2) One (1) aggregate (limestone, sand, granules, etc.) and adhesives application, equipped with a baghouse (BHA Collector) for particulate control, identified as Dust Collector V-10 / DC-9210, exhausting to Stack V-14, capacity: 50.0 tons of aggregate per hour.

(h) One (1) natural gas-fired thermal oxidizer, identified as TO-1 / TO-1200, installed in 1999 and approved in 2014 for modification, equipped with low NO_X burners, exhausting to Stack S-1, heat input capacity: 14.0 million British thermal units per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 63, Subpart AAAAAAA]

(i) One (1) coating storage tank, identified as TK-2420, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 14,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(j) One (1) laminate adhesive mix tank, identified as TK-2430, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(k) One (1) laminate adhesive run tank, identified as TK-2470, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 1,400 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(l) One (1) coating storage tank, identified as TK-2310, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 10,000 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(m) One (1) mix storage tank, identified as TK-2320, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(n) One (1) self seal tank, identified as TK 40, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(o) One (1) self-seal dip application process venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 750 pounds of self seal per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(p) One (1) laminate adhesive dip application venting to a coalescing filter, identified as CECO-1 for VOC control capacity: 2,850 pounds of laminate adhesive per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

The following is a list of the new emission units and pollution control devices:

(a) One (1) natural gas-fired HEATEC hot oil heater, identified as HEATEC-1, with a maximum heat input capacity of 15.0 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, exhausting to stack HEATEC-1.

(b) One (1) natural gas-fired HEATEC hot oil heater, identified as HEATEC-2, with a maximum heat input capacity of 15.0 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, exhausting to stack HEATEC-2.

(c) One (1) natural gas-fired Cleaver-Brooks boiler, identified as CB-1, with a maximum heat input capacity of 12.6 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, exhausting to stack S-CB-1. [40 CFR 60, Subpart Dc]

(d) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, consisting of the following: Sixteen (16) natural gas-fired space heaters, each with a maximum heat input capacity of 0.35 MMBtu/hr, for a total of 5.6 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, no stacks.

(e) One (1) four stroke lean burn (4SLB) diesel-fired emergency generator, with a maximum power output of 750 brake HP, approved in 2014 for construction, the engine was manufactured in 2014, displacement is less than 10 liters per cylinder, emissions are uncontrolled, no stack. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ]

The following is a list of the existing emission units removed from the source:

(a) One (1) natural gas-fired hot oil heater (Fulton Heater), identified as HT-9020, installed in 1999, exhausting to Stack S-7, heat input capacity: 6.00 million British thermal units per hour.

(b) One (1) natural gas-fired hot oil heater, identified as BO-1 / HT-1300, installed in 1999, utilizing exhaust gas from thermal oxidizer (TO-1 / TO-1200) as primary form of energy, heat input capacity: 10.5 million British thermal units per hour.

(c) One (1) hot oil heater, identified as BO-3 / HT-1325, installed in 1999, supplies hot oil to tracing steam generators and/or filler heater.

(d) One (1) natural gas-fired tracing steam generator (Caine waste heat boiler), identified as BO-2 / HT-1350, installed in 1999, exhausting to Stack S-5, heat input capacity: 10.5 million British thermal units per hour. (Under NSPS 40 CFR 60 Subpart Dc, this facility is a small industrial - commercial - institutional steam generating unit.)

Enforcement Issues

There are no pending enforcement actions related to this modification.

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.

PTE of Proposed Revision (tons/year)										
Process / Emission Unit	**PM**	**PM_{10}**	**Direct $PM_{2.5}$**	**SO_2**	**VOC**	**CO**	**NO_x**	**GHG (CO_2e)**	**Total HAP**	**Hexane**
Modified Thermal Oxidizer (decrease shown as 0.00)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Space Heaters	0.05	0.18	0.18	0.01	2.40	0.13	2.02	2,872	0.04	0.04
Emergency Generator	0.13	0.13	0.13	0.20	0.12	1.12	4.20	215	1.96E-03	0.00
Heatec-1	0.12	0.49	0.49	0.04	6.44	0.35	5.41	7,693	0.13	0.12
Heatec-2	0.12	0.49	0.49	0.04	6.44	0.35	5.41	7,693	0.13	0.12
Cleaver Brooks Boiler	0.10	0.41	0.41	0.03	5.41	0.30	4.54	6,462	0.10	0.10
PTE of Proposed Revision	**0.52**	**1.70**	**1.70**	**0.32**	**20.81**	**2.25**	**21.58**	**24,935**	**0.40**	**0.38**

Pursuant to 326 IAC 2-8-11.1(f)(1)(C), 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 is subject to 326 IAC 8-1-6.

PTE of the Entire Source After Issuance of the FESOP Revision

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.

Potential To Emit of the Entire Source After Revision (tons/year)

Process / Emission Unit	PM	PM_{10}	Direct $PM_{2.5}$	SO_2	VOC	CO	NO_x	GHG (CO_2e)	Total HAP	Hexane
Material Handling	171.17	28.79	28.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Blow Still	2.56	2.56	2.56	22.21		17.74	0.00	8,169	1.90E-03	0.00
West Blow Still	2.56	2.56	2.56	22.21	16.65	17.74	0.00	8,169	1.90E-03	0.00
Thermal Oxidizer	0.11	0.46	0.46	0.04		0.33	5.05	(a)	0.12	0.11
Existing Combustion	0.35	1.39	1.39	0.11	1.01	15.37	18.29	21,849	0.35	0.33
New Space Heaters	0.05	0.18	0.18	0.01	2.40	0.13	2.02	2,872	0.04	0.04
Emergency Generator	0.13	0.13	0.13	0.20	0.12	1.12	4.20	215	1.96E-03	0.00
Heatec-1	0.12	0.49	0.49	0.04	6.44	0.35	5.41	7,693	0.13	0.12
Heatec-2	0.12	0.49	0.49	0.04	6.44	0.35	5.41	7,693	0.13	0.12
Cleaver Brooks Boiler	0.10	0.41	0.41	0.03	5.41	0.30	4.54	6,462	0.10	0.10
Truck Unloading	5.98	5.98	5.98	0.00		0.00	0.00	0	0.00	0.00
Shingle Machine	0.88	23.00	23.00	0.82	51.67	1.64	0.00	0	0.12	0.00
Asphalt Storage Tanks	11.41	11.41	11.41	0.00		3.92	0.00	0	0.00	0.00
PTE of Entire Source	**195.54**	**77.85**	**77.85**	**45.70**	**90.14**	**58.99**	**44.92**	**63,122**	**1.00**	**0.82**
Title V Major Source Thresholds	**NA**	**100**	**100**	**100**	**100**	**100**	**100**	**100,000**	**25**	**10**

(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).

In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the source shall comply with the following:

VOC

(1) VOC emissions from the thermal oxidizer controlling the blowing stills shall not exceed 16.65 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(2) VOC emissions from the coalescing filter controlling the shingle machine, truck unloading racks and multiple storage tanks shall not exceed 51.67 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits, in conjunction with the potential to emit VOC from all other emission units, shall limit the VOC emissions to less than one-hundred (100) tons per twelve (12) consecutive month period and will render the requirements of 326 IAC 2-2 and 326 IAC 2-7 not applicable.

(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.

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, PM emissions from the shingle machine aggregate and adhesive application baghouse, identified as Dust Collector V-10 / DC-9210, exhausting to stack V-14 shall not exceed 0.20 pound PM per hour. PM only includes filterable particulate matter.

Compliance with this limit, in conjunction with the potential to emit PM from all other emission units, shall limit the PM emissions from the entire source to less than two-hundred fifty (250) tons per twelve (12) consecutive month period and will render the requirements of 326 IAC 2-2 (PSD) not applicable.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

(a) 40 CFR 60, Subpart D – Standards of Performance for Fossil-Fuel-Fired Steam Generators: This subpart applies to fossil fuel and wood residue steam generating units with a heat input capacity of 250 MMBtu/hr or more. None of the steam generating units located at this source have a heat input capacity of 250 MMBtu/hr or more. Therefore, Subpart D does not apply and the requirements of the subpart are not included in the permit.

(b) 40 CFR 60, Subpart Db – Standards of Performance for Industrial – Commercial – Institutional Steam Generating Units: This subpart applies to each steam generating unit that commenced construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 100 MMBtu/hr. This source does not include any steam generating units with a heat input capacity of 100 MMBtu/hr or more. Therefore, Subpart Db does not apply and the requirements of the subpart are not included in the permit.

(c) The Cleaver-Brooks boiler (CB-1) and the Williams/Davis boiler (HO-2 / HT-1355) are subject to the Standards of Performance for Small Industrial – Commercial - Institutional Steam Generating Units, 40 CFR 60.40c, Subpart Dc, which is incorporated by reference as 326 IAC 12. This subpart applies to steam generating units for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 100 MMBtu/hr or less, but greater than 10 MMBtu/hr. This source contains two steam generating units constructed after June 9, 1989 with a heat input capacity of 100 MMBtu/hr or less and more than 10 MMBtu/hr. Therefore, Subpart Dc applies.

The units subject to this subpart include the following:

(1) One (1) natural gas-fired Cleaver-Brooks boiler, identified as CB-1, with a maximum heat input capacity of 12.6 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, exhausting to stack S-CB-1.
[40 CFR 60, Subpart Dc]

(2) One (1) natural gas-fired tracing steam generator (Williams/Davis boiler), identified as HO-2 / HT-1355, installed in 1999, exhausting to Stack S-9, capacity: 12.6 million British thermal units per hour. (Under NSPS 40 CFR 60 Subpart Dc, this facility is a small industrial - commercial - institutional steam generating unit.)

Nonapplicable portions of the NSPS will not be included in the permit. The Cleaver-Brooks and Williams Davis boilers are subject to the following portions of Subpart Dc.

(1) 40 CFR 60.40c(a);
(2) 40 CFR 60.41c;
(3) 40 CFR 60.48c(a);
(4) 40 CFR 60.48c(f)(4);
(5) 40 CFR 60.48c(g)(1); and
(6) 40 CFR 60.48c(g)(2).

(d) 40 CFR 60, Subpart I – Standards of Performance for Hot Mix Asphalt Facilities: This subpart applies to each hot mix asphalt facility that commences construction or modification after June 11, 1973. A hot mix asphalt facility is a facility comprised only of any combination of the following: dryers; systems for screenings, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler, systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems. Building Materials Manufacturing Corporation does not meet the definition of a hot mix asphalt facility. Therefore, Subpart I does not apply and the requirements of the subpart are not included in the permit.

(e) 40 CFR 60, Subpart J – Standards of Performance for Petroleum Refineries: This subpart applies to petroleum refineries as defined in 40 CFR 60.101. A petroleum refinery means any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of petroleum or through redistillation, cracking or reforming of unfinished petroleum derivatives. Building Materials Manufacturing Corporation does not meet the definition of a petroleum refinery and does not contain any affected units. Therefore, Subpart J does not apply and the requirements of the subpart are not included in the permit.

(f) 40 CFR 60, Subpart Ja – Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007: This subpart applies to petroleum refineries as defined in 40 CFR 60.101a. A petroleum refinery is defined as any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, asphalt (bitumen) or other products through distillation of petroleum or through redistillation, cracking or reforming of unfinished petroleum derivatives. This subpart does not apply to Building Materials Manufacturing Corporation because it does not meet the definition of a petroleum refinery and does not contain affected units. Therefore, the requirements of the subpart are not included in the permit

(g) 40 CFR 60, Subpart K – Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to 1978: All VOC containing storage tanks located at Building Materials Manufacturing Corporation were constructed after 1978. Therefore, Subpart K does not apply and the requirements of the subpart are not included in the permit.

(h) 40 CFR 60, Subpart Ka - Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984: All VOC containing storage tanks located at Building Materials Manufacturing Corporation were constructed after July 23, 1984. Therefore, Subpart Ka does not apply and the requirements of the subpart are not included in the permit.

(i) 40 CFR 60, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984: This subpart applies to each volatile organic liquid storage vessel with a capacity greater than or equal to 75 cubic meters (19,813 gallons) for which construction, reconstruction, or modification commenced after July 23, 1984. Volatile organic storage vessels with a capacity greater than or equal to 151 cubic meters (39,890 gallons) storing a liquid with a maximum true vapor pressure less than 3.5 kPa are exempt. Volatile organic storage vessels with a capacity greater than 75 cubic meters but less than 151 cubic meters storing a liquid with a maximum true vapor pressure less than 15 kPa are also exempt. In the background document for 40 CFR 63, Subpart LLLLL, U.S, EPA determined asphalt storage vessels maintained at a temperature of 500 °F or higher will have a true vapor pressure of 10.5 KPa or higher.

Asphalt storage vessels below 19,813 gallons are exempt from this subpart. This exemption applies to the following asphalt storage tanks: TK-2301, TK-2320, TK-40, TK-2420, TK-2430, and TK-2470.

Asphalt storage vessels between 19,813 gallons and 39,809 gallons with a storage temperature below 500 °F (maximum true vapor pressure of less than 10.5 kPa) are exempt. This exemption applies to the following storage tanks: TK-1030A and TK-1030B.

Storage vessels over 39,809 gallons containing a volatile organic liquid are subject to the rule. The following storage tanks are subject to Subpart Kb:

Tank Number	Material Stored	Storage Capacity
FST-1	Asphalt Receiving	240,000 gallons
FST-2	Asphalt Receiving	240,000 gallons
TK-1120	Asphalt Receiving/Mixing	100,000 gallons
TK-1010	Asphalt Flux	80,000 gallons
TK-1210	Waste Oil	47,000 gallons

Volatile organic storage tanks FST-1, FST-2, TK-1120, TK-1010, and TK-1210 are subject to Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, 40 CFR 60.110b, Subpart Kb, which is incorporated by reference as 326 IAC 12.

The units subject to this subpart include the following:

(1) Two (2) asphalt receiving tanks, identified as Tank 1 (FST-1 / TK-1110A) and Tank 2 (FST-2 / TK-1110B), each installed in 1999, each venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 240,000 gallons of asphalt, each. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(2) One (1) asphalt receiving/blend storage tank, identified as Tank 3 (TK-1120), installed in 2003, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 100,000 gallons of blended asphalt. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(3) One (1) heated asphalt flux storage tank, identified as TK-1010, installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 80,000 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(4) One (1) knock out storage tank, identified as TK-1210, installed in 2002, using water as a conditioning liquid, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 47,000 gallons of water/conditioner. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

Nonapplicable portions of the NSPS will not be included in the permit. The volatile organic liquid storage tanks subject to the following portions of Subpart Kb:

(1) 40 CFR 60.110b(a);
(2) 40 CFR 60.111b;
(3) 40 CFR 60.116b(a);
(4) 40 CFR 60.116b(b);
(5) 40 CFR 60.116b(d);
(6) 40 CFR 60.116b(e)(1) and (e)(3); and
(7) 40 CFR 60.116b.

(j) This source is still subject to the Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture, 40 CFR 60.470, Subpart UU, which is incorporated by reference as 326 IAC 12. This rule applies to each saturator, mineral handling and storage facility at asphalt roofing plants; and each asphalt storage tank and each blowing still at asphalt processing plants, petroleum refineries, and asphalt roofing plants. The following emission units are subject to 40 CFR 60, Subpart UU:

Asphalt Receiving

(1) Two (2) asphalt receiving tanks, identified as Tank 1 (FST-1 / TK-1110A) and Tank 2 (FST-2 / TK-1110B), each installed in 1999, each venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 240,000 gallons of asphalt, each. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(2) One (1) asphalt receiving/blend storage tank, identified as Tank 3 (TK-1120), installed in 2003, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 100,000 gallons of blended asphalt. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

Blowing Still Operations

(3) One (1) flux asphalt heating operation, identified as FAH-1 / HT-1250, installed in 2001, using waste heat from thermal oxidizer (TO-1 / TO-1200) in combination with a natural gas-fired burner rated at 7.50 million British thermal units per hour, exhausting to heater HT 1350 or to Stack S-4 depending on heat balance, capacity: 18,000 gallons of asphalt per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(4) One (1) heated asphalt flux storage tank, identified as TK-1010, installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 80,000 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(5) Two (2) asphalt blow stills (asphalt conditioners), identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B, each installed in 1999, each exhausting to thermal oxidizer (TO-1 / TO-1200) for VOC control, capacity: 30,000 pounds of asphalt per hour, each. [40 CFR 60, Subpart UU] [40 CFR 63, Subpart AAAAAAA]

(6) One (1) knock out storage tank, identified as TK-1210, installed in 2002, using water as a conditioning liquid, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 47,000 gallons of water/conditioner. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

Coating Operations

(7) Two (2) coating asphalt storage tanks, identified as West CST 1/TK-1030A, and East CST 2/TK-1030B, each installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity 38,000 gallons of coating asphalt. [40 CFR 60, Subpart UU]

(8) Asphalt and filler mix storage tank (Surge Tank), identified as TK-2100, installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 4,600 gallons of asphalt and filler mix. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(9) One (1) shingle machine, identified as SM-1 / RL1-01, installed in 1999, (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 63, Subpart AAAAAAA] consisting of the following:

  (i) One (1) coating dip tank, containing asphalt and limestone filler, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 25 tons of asphalt per hour; and

(ii) One (1) aggregate (limestone, sand, granules, etc.) and adhesives application, equipped with a baghouse (BHA Collector) for particulate control, identified as Dust Collector V-10 / DC-9210, exhausting to Stack V-14, capacity: 50.0 tons of aggregate per hour.

Thermal Oxidizer

(10) One (1) natural gas-fired thermal oxidizer, identified as TO-1 / TO-1200, installed in 1999 and approved in 2014 for modification, equipped with low NO_X burners, exhausting to Stack S-1, heat input capacity: 30.0 million British thermal units per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)
[40 CFR 63, Subpart AAAAAAA]

Raw Material Storage and Handling System

(11) Six (6) storage silos, identified as LFS-1 through LFS-6 / SS-8910, SS-8920, SS-8930, SS-8940, SS-8950, SS-8960, each installed in 1999, equipped with six (6) bin vent filters, identified as V-1 / DC-8910 through V-6 / DC-8960, for particulate control, venting to Stacks V-1 through V-6, capacity: 300 tons of limestone filler each with a throughput of 40,000 pounds of limestone per hour each.
[40 CFR 60, Subpart UU]

(12) One (1) limestone (cold filler bin) supply hopper, identified as CFH-1 / Tank TK-2000, installed in 1999, equipped with a pleated cartridge, identified as V-7 / DC-2000, for particulate control, venting inside the building, capacity: 50 tons of limestone cold filler at a throughput of 160,000 pounds of limestone cold filler per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(13) One (1) limestone (filler heater) fluid bed heater, identified as HT-2010, installed in 1999, equipped with a bin vent filter, identified as V-15 / DC-2095, for particulate control, venting inside the building, capacity: 70 tons of limestone cold filler with a throughput of 116,000 pounds of hot filler per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(14) One (1) limestone (hot filler bin) supply hopper, identified as TK-2060, installed in 1999, equipped with a bin vent filter, identified as V-14 / DC-2060, for particulate control, venting inside the building, capacity: 70 tons of limestone cold filler with a throughput of 116,000 pounds of hot filler per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(15) Two (2) storage silos, identified as SS-1 and SS-2 / SS-8210 and SS-8220, each installed in 1999, equipped with two (2) bin vent filters, identified as V-8 / DC-8210 and V-9 / DC-8220, for particulate control, venting inside the building, capacity: 125 tons of sand each with a throughput of 40,000 pounds of sand per hour each. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.)

(16) One (1) sand receiving bin, identified as TK-8645, installed in 1999, equipped with a bin vent filter, identified as V-11 / DC-8645, for particulate control, exhausting inside the building, capacity: 50 tons of sand with a throughput of 40,000 pounds of sand per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

Laminate Adhesive System

(17) One (1) coating storage tank, identified as TK-2420, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 14,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(18) One (1) laminate adhesive mix tank, identified as TK-2430, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(19) One (1) laminate adhesive run tank, identified as TK-2470, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 1,400 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(20) One (1) coating storage tank, identified as TK-2310, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 10,000 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(21) One (1) mix storage tank, identified as TK-2320, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(22) One (1) limestone filler transfer process, installed in 2000, equipped with a two (2) bin vent filters, identified as V-12 / DC-2435 and V-13 / DC-2330, for particulate control, venting inside the building, capacity: 160,000 pounds of limestone filler per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(23) One (1) self seal tank, identified as TK 40, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(24) One (1) self-seal dip application process venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 750 pounds of self seal per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(25) One (1) laminate adhesive dip application venting to a coalescing filter, identified as CECO-1 for VOC control capacity: 2,850 pounds of laminate adhesive per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

Granules

(26) Twenty (20) storage silos, identified as SS-8010 through SS-8200, installed in 1999, capacity: 200 tons of granules each with a throughput of 80,000 pounds of granules per hour total. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.)

Nonapplicable portions of the NSPS will not be included in the permit. The shingle machine, identified as SM-1 / RL1-01 is subject to the following portions of Subpart UU:

(1) 40 CFR 60.470;
(2) 40 CFR 60.471;
(3) 40 CFR 60.472(a);
(4) 40 CFR 60.474(a); and
(5) 40 CFR 60.474(b), and (c)(1), (c)(2), c(3), (c)(5) and (d).

Nonapplicable portions of the NSPS will not be included in the permit. The blowing stills identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B are subject to the following portions of Subpart UU:

(1) 40 CFR 60.470;
(2) 40 CFR 60.471;
(3) 40 CFR 60.472(b)(3) and (b)(5); and
(4) 40 CFR 60.474(b), (c)(1), (c)(2), (c)(4), and (c)(5).

Nonapplicable portions of the NSPS will not be included in the permit. The asphalt storage tanks identified as FST-1, FST-2, TK-1120, FAH-1, TK-1010, TK-1210, West CST 1/TK-1030A, East CST 2/TK-1030B, TK-2100, TK-2420, TK-2430, TK-2470, TK-2310, and TK-2320 are subject to the following portions of Subpart UU:

(1) 40 CFR 60.470;
(2) 40 CFR 60.471;
(3) 40 CFR 60.472(c); and
(4) 40 CFR 60.474(b).

Nonapplicable portions of the NSPS will not be included in the permit. The mineral handling and storage facilities identified as LFS-1 through LFS-6, TK-2000, HT-2010, TK-2060, SS-1, SS-2, TK-8645, limestone filler transfer process, and granule storage silos SS-8010 through SS-8200 are subject to the following portions of Subpart UU:
(1) 40 CFR 60.470;
(2) 40 CFR 60.471; and
(3) 40 CFR 60.472(d).

(k) 40 CFR 60, Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants: This subpart applies to affected facilities located at nonmetallic mineral processing plants. A nonmetallic mineral processing plant is defined as any combination of equipment that is used to crush or grind any nonmetallic mineral wherever located. Limestone is considered a nonmetallic mineral. However, this source is not grinding or crushing the limestone. Therefore, Subpart OOO does not apply and the requirements of the subpart are not included in the permit.

(l) The emergency generator is subject to the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60.4200, Subpart IIII, which is incorporated by reference as 326 IAC 12. This subpart applies to owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006. The emission unit subject to Subpart IIII is identified as:

(1) One (1) four stroke lean burn (4SLB) diesel-fired emergency generator, with a maximum power output of 750 brake HP, approved in 2014 for construction, the engine was manufactured in 2014, displacement is less than 10 liters per cylinder, emissions are uncontrolled, no stack. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ]

Nonapplicable portions of the NSPS will not be included in the permit. The emergency generator is subject to the following portions of Subpart IIII:

(1) 40 CFR 60.4200(a)(2)(i);
(2) 40 CFR 60.4202(a)(2);
(3) 40 CFR 60.4205(b) and (f);
(4) 40 CFR 60.4206;
(5) 40 CFR 60.4209(a) and (b);
(6) 40 CFR 60.4211(a)(1), (c), (f), and (g)(3);
(7) 40 CFR 60.4212(c);
(8) 40 CFR 60.4214(b), and (c);
(9) 40 CFR 60.4218;
(10) 40 CFR 60.4219;
(11) Table 8

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(m) The emergency generator is subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63.6580, Subpart ZZZZ, which is incorporated by reference as 326 IAC 20-82. The unit subject to this subpart is listed below:

(1) One (1) four stroke lean burn (4SLB) diesel-fired emergency generator, with a maximum power output of 750 brake HP, approved in 2014 for construction, the engine was manufactured in 2014, displacement is less than 10 liters per cylinder, emissions are uncontrolled, no stack. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ]

Nonapplicable portions of the NESHAP will not be included in the permit. The emergency generator is subject to the following portions of Subpart ZZZZ:

(1) 40 CFR 63.6580;
(2) 40 CFR 63.6585(a) and (c); and
(3) 40 CFR 63.6590(a)(2)(iii) and (c)(1).

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

(n) 40 CFR 63, Subpart LLLLL – National Emission Standards for Hazardous Air Pollutants: Asphalt Processing and Asphalt Roofing Manufacturing: This subpart is applicable to asphalt roofing manufacturing facilities located at major sources of HAP. Building Materials Manufacturing Corporation is a minor source of HAP. Therefore, this subpart does not apply and the requirements of the subpart are not included in the permit.

(o) 40 CFR 63, Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources: This rule applies to industrial, commercial, or institutional boilers located at area sources of HAP. This source contains industrial boilers fired by natural gas. Pursuant to 40 CFR 63.11195(e), gas-fired boilers are not subject to Subpart JJJJJJ. Therefore, this subpart does not apply and the requirements of the subpart are not included in the permit.

(p) The shingle machine and blowing stills are subject to the National Emission Standards for Hazardous Air Pollutants for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63.11559, Subpart AAAAAAA. This rule applies to asphalt processing and asphalt roofing manufacturing lines located at area sources of HAP. Therefore, this rule applies to the shingle machine and the blowing stills. The emission units subject to this subpart are as follows:

(1) Two (2) asphalt blow stills (asphalt conditioners), identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B, each installed in 1999, each exhausting to thermal oxidizer (TO-1 / TO-1200) for VOC control, capacity: 30,000 pounds of asphalt per hour, each. [40 CFR 60, Subpart UU]
[40 CFR 63, Subpart AAAAAAA]

(2) One (1) shingle machine, identified as SM-1 / RL1-01, installed in 1999, (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 63, Subpart AAAAAAA] consisting of the following:

  (i) One (1) coating dip tank, containing asphalt and limestone filler, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 25 tons of asphalt per hour; and

  (ii) One (1) aggregate (limestone, sand, granules, etc.) and adhesives application, equipped with a baghouse (BHA Collector) for particulate control, identified as Dust Collector V-10 / DC-9210, exhausting to Stack V-14, capacity: 50.0 tons of aggregate per hour.

Nonapplicable portions of the NESHAP will not be included in the permit. The blowing stills are subject to the following portions of Subpart AAAAAAA:

(1) 40 CFR 63.11559(a), (b)(1), and (f);
(2) 40 CFR 63.11560(a);
(3) 40 CFR 63.11561(a) and (c);
(4) 40 CFR 63.11562(a), (d), (g), (i)(1), (i)(2)(i), (i)(3) and (i)(4);
(5) 40 CFR 63.11563(a), (g), (h), and (i);
(6) 40 CFR 63.11564(a)(1), (a)(2), (a)(4), (a)(5), and (a)(6);
(7) 40 CFR 63.11564(b), and (c);
(9) 40 CFR 63.11565;
(10) 40 CFR 63.11566;
(11) 40 CFR 63.11567; and
(12) Table 1, 3 and 4.

Nonapplicable portions of the NESHAP will not be included in the permit. The shingle machine is subject to the following portions of Subpart AAAAAAA:

(1) 40 CFR 63.11559(a), (b)(2), (f);
(2) 40 CFR 63.11560(a);
(3) 40 CFR 63.11561(b), and (c);
(4) 40 CFR 63.11562(c), (d), (e), (f), (g), (i)(2)(ii), and (i)(4);
(5) 40 CFR 63.11563(a), (g), (h), and (i);
(6) 40 CFR 63.11564(a)(1), (a)(2), (a)(4), (a)(5), (a)(6);
(7) 40 CFR 63.11564(b), and (c);
(8) 40 CFR 63.11565;
(9) 40 CFR 63.11566;
(10) 40 CFR 63.11567; and
(11) Table 2, 3, and 4.

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63 Subpart AAAAAAA.

Compliance Assurance Monitoring (CAM)

(q) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to 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 1-7 (Stack Height Provisions)
This rule applies to all sources having exhaust gas stacks through which a potential of twenty-five (25) tons per year or more of particulate matter (PM) or sulfur dioxide (SO_2) are emitted. This source does not contain any stacks through which 25 tons per year or more of PM or SO_2 are emitted. Therefore, 326 IAC 1-7 does not apply to this source.

(b) 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.

(c) 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.

(d) 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/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.

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

(f) 326 IAC 3-5 (Continuous Monitoring of Emissions)
This rule applies to any emission unit required to perform continuous monitoring under an NSPS (326 IAC 12), fossil fuel-fired steam generators of greater than 100 MMBtu/hr, emission units located in Clark and Floyd Counties with a potential to emit NO_x of greater than 40 TPY, that are located at sources with a source-wide potential to emit NO_x of greater than 100 TPY. This source is located in LaPorte County, the Cleaver-Brooks boiler (CB-1) and the Williams-Davis boiler (HO-2 / HT-1355) each have a maximum heat input of less than 100 MMBtu/hr, and no emission units are required to continuously monitor emissions pursuant to an NSPS requirement. Therefore, none of the emission units at this source are subject to 326 IAC 3-5.

(g) 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.

(h) 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
This rule apples emission units that combust fuel for the purpose of generating heat and use water or other liquid media to transfer the heat to a manufacturing process or storage device. Sources of indirect heating include boilers and process heaters. This rule does not apply to direct-fired emission units such as space heaters, incinerators, thermal oxidizers or units where there is contact between the combustion gases and the material being heated. The following emission units are subject to 326 IAC 6-2:

(1) One (1) natural gas-fired blending asphalt heater, identified as HT-1041, installed in 2001, exhausting to Stack S-3, heat input capacity: 3.00 million British thermal units per hour.

(2) One (1) flux asphalt heating operation, identified as FAH-1 / HT-1250, installed in 2001, using waste heat from thermal oxidizer (TO-1 / TO-1200) in combination with a natural gas-fired burner rated at 7.50 million British thermal units per hour, exhausting to heater HT 1350 or to Stack S-4 depending on heat balance, capacity: 18,000 gallons of asphalt per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(3) One (1) natural gas-fired coating asphalt heater (Borne Heater), identified as HT-1040, installed in 1999, exhausting to Stack S-2, heat input capacity: 7.50 million British thermal units per hour.

(4) One (1) natural gas-fired HEATEC hot oil heater, identified as HEATEC-1, with a maximum heat input capacity of 15.0 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, exhausting to stack HEATEC-1.

(5) One (1) natural gas-fired HEATEC hot oil heater, identified as HEATEC-2, with a maximum heat input capacity of 15.0 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, exhausting to stack HEATEC-2.

(6) One (1) natural gas-fired Cleaver-Brooks boiler, identified as CB-1, with a maximum heat input capacity of 12.6 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, exhausting to stack S-CB-1. [40 CFR 60, Subpart Dc]

(7) One (1) natural gas-fired tracing steam generator (Williams/Davis boiler), identified as HO-2 / HT-1355, installed in 1999, exhausting to Stack S-9, capacity: 12.6 million British thermal units per hour. (Under NSPS 40 CFR 60 Subpart Dc, this facility is a small industrial – commercial – institutional steam generating unit.)

Pursuant to 326 IAC 6-2-4, particulate emissions from indirect heating facilities constructed after September 21, 1983 shall be limited by the following equation:

$P_t = 1.09 \ / \ Q^{0.26}$

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

Individual emission unit PM limitations were calculated with the equation above and are shown in the table below:

Emission Unit	ID	Heat Input (MMBtu/hr)	Date Constructed	Q (MMBtu/hr)	PM Limit (lb/MMBtu)
Borne Heater	HT-1040	7.5	1999	20.1	0.50
Williams-Davis Boiler	HT-1355	12.6	1999		
Asphalt Heater	HT-1041	3.0	2001	30.6	0.45
Flux Heater	FAH-1	7.5	2001		
Hot Oil Heater	HEATEC-1	15.0	2014	73.2	0.36
Hot Oil Heater	HEATEC-2	15.0	2014		
Cleaver-Brooks Boiler	CB-1	12.6	2014		

(i) **326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)**
Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the processes listed in the table below shall not exceed the pounds per hour listed when operating at a process weight rate listed.

Emission Unit ID	Emission Unit Description	Material	Throughput (TPH)	PTE (TPY)	PTE (lb/hr)	Equation	6-3-2 Limit (lb/hr)
LFS-1 / SS-8910	Limestone Storage Silo	Limestone	20.00	17.52	4.0	(a)	30.5
LFS-2 / SS-8920	Limestone Storage Silo	Limestone	20.00	17.52	4.0	(a)	30.5
LFS-3 / SS-8930	Limestone Storage Silo	Limestone	20.00	17.52	4.0	(a)	30.5
LFS-4 / SS-8940	Limestone Storage Silo	Limestone	20.00	17.52	4.0	(a)	30.5
LFS-5 / SS-8950	Limestone Storage Silo	Limestone	20.00	17.52	4.0	(a)	30.5
LFS-6 / SS-8960	Limestone Storage Silo	Limestone	20.00	17.52	4.0	(a)	30.5
SS-1 / SS-8210	Sand Storage Silo	Sand	20.00	17.52	4.0	(a)	30.5

Emission Unit ID	Emission Unit Description	Material	Throughput (TPH)	PTE (TPY)	PTE (lb/hr)	Equation	6-3-2 Limit (lb/hr)
SS-2 / SS-8220	Sand Storage Silo	Sand	20.00	17.52	4.0	(a)	30.5
CFH-1 / TK-2000	Cold Filler Hopper	Limestone	80.00	2.42	0.553	(b)	49.1
HT-2010	Limestone Filler Heater	Limestone	58.00	1.75	0.4	Exempt	NA
TK-2060	Hot Filler Hopper	Limestone	58.00	1.75	0.4	Exempt	NA
TK-8645	Sand Receiving Bin	Sand	20.00	17.52	4.0	(a)	30.5
SS-8010 to SS-8200	Granule Storage Silos	Granules	40.00	5.15	1.18	(b)	42.5
None (DC-2330&2435)	Limestone Transfer	Limestone	80.00	2.42	0.553	(b)	49.1
FST-1	Asphalt Receiving Tank	Asphalt	16.27	2.89	0.66	(a)	26.57
FST-2	Asphalt Receiving Tank	Asphalt	16.27	2.89	0.66	(a)	26.57
Asphalt Storage Tanks: TK-1120, TK-1010, TK-1030A, TK-1030B, TK-2301, TK-2320, TK-40, TK-2420, TK-2430, TK-2470, and TK-1210 have potential PM emission of less than 0.551 lb/hr and are exempt from 326 IAC 6-3-2.							

The pound per hour limitations were calculated with the following equations:

(a) 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:

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

(b) Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\, P^{0.11} - 40$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

The Permittee can comply with the 326 IAC 6-3-2 particulate matter emission limitations without the use of add-on controls. The requirements of 326 IAC 6-3-2 do not apply to the blowing stills or the asphalt coating operations because they are subject to a more stringent emission limitation under Subpart UU. Opacity limitations are not considered more restrictive than pound per hour emission limitations.

(j) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

(k) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
This rule applies to any new source of fugitive particulate matter emissions, located anywhere in the state, requiring a permit as set forth in 326 IAC 2, which has not received all necessary preconstruction approvals before December 13, 1985. All sources subject to 326 IAC 6-5 are also subject to 326 IAC 6-4-2. This source was constructed after 1985 but fugitive particulate matter emissions are less than 25 tons per year. Therefore, 326 IAC 6-5 does not apply.

(l) 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)
This rule applies to all emission units with a potential to emit twenty-five (25) tons per year or ten (10) pounds per hour of sulfur dioxide. None of the emission units located at this source have a potential to emit 25 tons per year or more of sulfur dioxide. Therefore, this rule does not apply.

(m) 326 IAC 8-1-6 (General Reduction Requirements)
This rule applies to new facilities as of January 1, 1980, that have potential emissions of twenty-five tons per year or more, are located anywhere in the state, and are not otherwise regulated by another Article 8 rule, 326 IAC 20-48, or 326 IAC 20-56. The asphalt blowing stills, and the shingle machine have potential emissions of 25 tons per year or more of VOC and are not regulated by another Article 8 rule, 326 IAC 20-48, or 326 IAC 20-56. Therefore, 326 IAC 8-1-6 applies to the asphalt blowing stills and the shingle machine, identified as SM-1 / RL1-01.

Pursuant to 326 IAC 8-1-6 (General Reduction Requirements), IDEM, OAQ has established VOC BACT for the shingle machine, identified as SM-1 / RL1-01 as:

(1) VOC emissions from the shingle machine, including the coater, self-seal, and laminate adhesive processes, shall be controlled by a coalescing filter at all times the emission unit is in operation and generating VOC emissions.

(2) Total hydrocarbon emissions to the coalescing filter, identified as CECO-1 shall be reduced by 95% on a mass basis, or to a concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen.

(3) VOC emissions from the shingle machine shall not exceed 0.013 lb VOC/ton shingles produced.

(4) Shingle production shall not exceed 657,000 tons of shingles per twelve (12) consecutive month period with compliance determined at the end of each month.

Pursuant to 326 IAC 8-1-6 (General Reduction Requirements), IDEM, OAQ has established VOC BACT for each asphalt blowing still as:

(1) VOC emissions from the asphalt blowing stills, identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B shall be controlled by a thermal oxidizer at all times the emission units are in operation and generating VOC emissions.

(2) VOC emissions from each of the asphalt blowing stills, identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B shall not exceed 0.127 lb VOC per ton of asphalt blown.

(3) Combined asphalt throughput shall not exceed 262,800 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(4) Total hydrocarbon emissions to the thermal oxidizer, identified as TO-1/TO-1200 shall be reduced by 95% on a mass basis, or to a concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen.

(n) 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)
This rule applies to all petroleum liquid storage vessels with capacities greater than 39,000 gallons containing VOC whose true vapor pressure is greater than 10.5 kPa. None of the storage tanks greater than 39,000 gallons store VOC with a vapor pressure greater than 10.5 kPa. Therefore, 326 IAC 8-4-3 does not apply.

(o) 326 IAC 9-8 (Volatile Organic Liquid Storage Vessels)
This rule applies to stationary vessels used to store volatile organic liquids that are located in Clark, Floyd, Lake, and Porter Counties. This source is located in LaPorte County. Therefore, 326 IAC 9-8 does not apply.

(p) 326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.

(q) 326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

Compliance Determination, Monitoring and Testing Requirements

(a) The compliance determination requirements applicable to this source as a result of this permit revision are listed below:

Compliance Determination Requirements		
Emission Unit	**Parameter**	**Frequency**
Blowing Stills, Controlled by Thermal Oxidizer	Use of Thermal Oxidizer	At all times
	VOC Record Keeping	Monthly
Shingle Machine, Unloading Racks, Asphalt Storage Tanks, Controlled by a Coalescing Filter	Use Coalescing Filter	At all times
	VOC Record Keeping	Monthly

Summary of Testing Requirements				
Emission Unit	**Control Device**	**Timeframe**	**Pollutant**	**Frequency**
Blowing Stills	Thermal Oxidizer	Within 180 days after startup of modified thermal oxidizer	Total Hydrocarbon	Every 5 Years
		Within 180 days after startup of modified thermal oxidizer	VOC, after control	Every 5 Years
Shingle Machine, Unloading Racks, and Asphalt Storage	Coalescing Filter	Within 180 days after startup of the filter	Total Hydrocarbon	Every 5 Years
Shingle Machine, Aggregate and Adhesive Application	Baghouse	Within 180 days of permit issuance	PM (Filterable Only)	Every 5 Years

(b) The compliance monitoring requirements applicable to this source as a result of this permit revision are listed below:

Compliance Monitoring Requirements			
Emission Units	**Parameter**	**Frequency**	**Response to Excursions or Exceedances**
Blowing Stills	Temperature	Continuous	A Reasonable Response
	Fan Amperage or Pressure Drop	Once per day	A Reasonable Response
Shingle Machine, Unloading Racks, Asphalt Storage Tanks	Pressure Drop	Once per day	A Reasonable Response
Shingle Machine, Aggregate/Adhesive Application	VE Notations	Once per day	A Reasonable Response

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. F 091-18358-00051. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Revisions to Section A

Modification No. 1:

Mailing Address
IDEM, OAQ no longer includes the source mailing address in Section A.1 of the permit. This is to minimize changes to the permit in the future. IDEM, OAQ updated the source status to include greenhouse gas emissions. Revisions are shown below:

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

The Permittee owns and operates a stationary roof shingle manufacturing source.

Source Address:	505 North Roeske Avenue, Michigan City, Indiana 46360
~~Mailing Address:~~	~~505 North Roeske Avenue, Michigan City, Indiana 46360~~
General Source Phone Number:	**(**219**)-**872-1111
SIC Code:	2952
County Location:	LaPorte
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD Rules Minor Source, Section 112 of the Clean Air Act **Not 1 of 28 Source Categories** **Greenhouse Gas (GHG) potential to emit is less than one hundred thousand (100,000) tons of CO_2 equivalent (CO_2e) emissions per year**

Modification No. 2:

Emission Unit Description Updates
IDEM, OAQ updated Section A.2 - Emission Units and Pollution Control Equipment Summary to remove one waste heat boiler, and three hot oil heaters. The heat input of the thermal oxidizer was revised down due to the lower airflow rate. Control device descriptions were updated on several emission units. Several emission units were renumbered because of new equipment. Revisions are shown below:

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

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

Asphalt Receiving

(a) Two (2) asphalt receiving tanks, identified as Tank 1 (FST-1 / TK-1110A) and Tank 2 (FST-2 / TK-1110B), each installed in 1999, each venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 240,000 gallons of asphalt, each. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.)
[40 CFR 60, Subpart Kb]

(b) One (1) asphalt receiving/blend storage tank, identified as Tank 3 (TK-1120), installed in 2003, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 100,000 gallons of blended asphalt. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) **[40 CFR 60, Subpart Kb]**

(c) **********

Blowstill Operations

(d) **********

(e) One (1) heated asphalt flux storage tank, identified as TK-1010, installed in 1999, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 80,000 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)
[40 CFR 60, Subpart Kb]

(f) Two (2) asphalt blow stills (asphalt conditioners), identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B, each installed in 1999, each exhausting to thermal oxidizer (TO-1 / TO-1200) for VOC control, capacity: 30,000 pounds of asphalt per hour, each.
[40 CFR 60, Subpart UU] [40 CFR 63, Subpart AAAAAAA]

(g) One (1) knock out storage tank, identified as TK-1210, installed in 2002, using water as a conditioning liquid, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 47,000 gallons of water/conditioner. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) **[40 CFR 60, Subpart Kb]**

Coating Operations

(h) Two (2) coating asphalt storage tanks, identified as West CST 1/TK-1030A, and East CST 2/TK-1030B, each installed in 1999, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity 38,000 gallons of coating asphalt. **[40 CFR 60, Subpart UU]**

(i) **********

(j) ~~One (1) natural gas-fired hot oil heater (Fulton Heater), identified as HT-9020, installed in 1999, exhausting to Stack S-7, heat input capacity: 6.00 million British thermal units per hour.~~**One (1) natural gas-fired HEATEC hot oil heater, identified as HEATEC-1, with a maximum heat input capacity of 15.0 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, exhausting to stack HEATEC-1.**

(k) One (1) natural gas-fired HEATEC hot oil heater, identified as HEATEC-2, with a maximum heat input capacity of 15.0 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, exhausting to stack HEATEC-2.

(~~k~~**l**) Asphalt and filler mix storage tank (Surge Tank), identified as TK-2100, installed in 1999, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 4,600 gallons of asphalt and filler mix. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(~~l~~**m**) One (1) shingle machine, identified as SM-1 / RL1-01, installed in 1999, (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) **[40 CFR 63, Subpart AAAAAAA]** consisting of the following:

(1) One (1) coating dip tank, containing asphalt and limestone filler, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 25 tons of asphalt per hour; and

(2) **********

(~~m~~**n**) **********

(~~n~~**o**) **********

Heat Load Servicing Operation

~~(o) One (1) natural gas-fired hot oil heater, identified as BO-1 / HT-1300, installed in 1999, utilizing exhaust gas from thermal oxidizer (TO-1 / TO-1200) as primary form of energy, heat input capacity: 10.5 million British thermal units per hour.~~

~~(p) One (1) hot oil heater, identified as BO-3 / HT-1325, installed in 1999, supplies hot oil to tracing steam generators and/or filler heater.~~

~~(q) One (1) natural gas-fired tracing steam generator (Caine waste heat boiler), identified as BO-2 / HT-1350, installed in 1999, exhausting to Stack S-5, heat input capacity: 10.5 million British thermal units per hour. (Under NSPS 40 CFR 60 Subpart Dc, this facility is a small industrial - commercial - institutional steam generating unit.)~~

(p) One (1) natural gas-fired Cleaver-Brooks boiler, identified as CB-1, with a maximum heat input capacity of 12.6 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, exhausting to stack S-CB-1. [40 CFR 60, Subpart Dc]

(**q**~~r~~) **********

Thermal Oxidizer

(**r**~~s~~) One (1) natural gas-fired thermal oxidizer, identified as TO-1 / TO-1200, installed in 1999 **and approved in 2014 for modification**, equipped with low NO_X burners, exhausting to Stack S-1, heat input capacity: ~~30.0~~**14.0** million British thermal units per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) **[40 CFR 63, Subpart AAAAAAA]**

Raw Material Storage and Handling System

(**s**~~t~~) Six (6) storage silos, identified as LFS-1 through LFS-6 / SS-8910, SS-8920, SS-8930, SS-8940, SS-8950, SS-8960, each installed in 1999, equipped with six (6) bin vent filters, identified as V-1 / DC-8910 through V-6 / DC-8960, for particulate control, venting to Stacks V-1 through V-6, capacity: 300 tons of limestone filler each with a throughput of 40,000 pounds of limestone per hour each. **[40 CFR 60, Subpart UU]**

(**t**~~u~~) **********

(**u**~~v~~) **********

(**v**~~w~~) **********

(**w**~~x~~) **********

(**x**~~y~~) **********

Laminate Adhesive System

(**y**~~z~~) One (1) coating storage tank, identified as TK-2420, installed in 2000, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 14,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(**z**~~aa~~) One (1) laminate adhesive mix tank, identified as TK-2430, installed in 2000, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(**aa**~~bb~~) One (1) laminate adhesive run tank, identified as TK-2470, installed in 2000, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 1,400 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(**bb**~~cc~~) One (1) coating storage tank, identified as TK-2310, installed in 2000, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 10,000 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(**cc**~~dd~~) One (1) mix storage tank, identified as TK-2320, installed in 2000, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(**dd**~~ee~~) **********

(**ee**~~ff~~) One (1) self seal tank, identified as TK 40, installed in 2000, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(**ff**~~gg~~) One (1) self-seal dip application process venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 750 pounds of self seal per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(**gg**~~hh~~) One (1) laminate adhesive dip application venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control capacity: 2,850 pounds of laminate adhesive per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

Granules

(**hh**~~ii~~) **********

Modification No. 3:

Emission Unit Description Updates
IDEM, OAQ updated Section A.3 - Insignificant Activities to add an emergency generator and sixteen natural gas-fired space heaters. Revisions are shown below:

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

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, consisting of the following:

(1) **********

(4) Sixteen (16) natural gas-fired space heaters, each with a maximum heat input capacity of 0.35 MMBtu/hr, for a total of 5.6 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, no stacks.

(b) **********

**(k) One (1) four stroke lean burn (4SLB) diesel-fired emergency generator, with a maximum power output of 750 brake HP, approved in 2014 for construction, engine was manufactured in 2014, displacement is less than 10 liters per cylinder, emissions are uncontrolled, no stack. [40 CFR 60, Subpart IIII]
[40 CFR 63, Subpart ZZZZ]**

Section B Revisions

Modification No. 4:

Duty to Provide Information
IDEM, OAQ has determined that rather than having a certification condition and various references throughout the permit as to whether a particular report, notice or correspondence needs to include a certification, the specific conditions that require an affirmation of truth and completeness shall state so. IDEM, OAQ is updating original Condition B.7 – Duty to Provide Information by removing the certification requirement. Revisions are shown below:

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. ~~The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~ Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit. **********

Modification No. 5:

Certification
To clarify that original Condition B.9 – Certification only states what a certification must be, IDEM, OAQ has revised the condition. Revisions are shown below:

B.9 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

~~(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by~~

~~an "authorized individual" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.~~

~~(b) One (1) certification shall be included, using the attached Certification Form, 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).~~

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

(i) it contains a certification by an "authorized individual," as defined by 326 IAC 2-1.1-1(1).

(ii) 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).

Modification No. 6:

Section B – Annual Compliance Certification Clarification
IDEM, OAQ has decided to clarify what rule requirements a certification needs to meet. Revisions to Section B – Annual Compliance Certification is shown below:

B.10 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

(a) **********

(c) **********

~~The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~**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).**

Modification No. 7:

Section B – Preventive Maintenance Plan Clarifications
IDEM, OAQ has added a new paragraph (b) to handle a future situation where the Permittee adds units that need preventive maintenance plans developed. IDEM, OAQ had decided to clarify other aspects of Section B – Preventive Maintenance Plans. Rule citations were updated. Revisions are shown below:

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]~~[326 IAC 2-8-5(a)(1)]~~

~~(a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) 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.~~

~~(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 or potential to emit. The PMPs do not require the certification 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.~~

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

(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.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, 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.

(c) 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).

(d) 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.

Modification No. 8:

Section B – Emergency Provisions
IDEM, OAQ is updating the emergency provisions condition to fix typographical errors, to update the contact information for the Northwest Regional Office, and to clarify what a certification contains. The Permittee is now given the option of contacting IDEM, OAQ or the Northwest Regional Office during an emergency. IDEM, OAQ is deleting paragraph (h). 326 IAC 2-8-4(3)(C)(ii) allows deviations reported under an independent requirement to not be included in the Quarterly Deviation and Compliance Monitoring Report. Revisions are shown below:

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

(a) **********

(b) **********

(1) **********

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ ~~and~~**or** Northwest 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
~~Northwest Regional Office phone: (219) 757-0265; fax: (219) 757-0267~~
Northwest Regional Office phone: (219) 464-0233; fax: (219) 464-0553

(5) **********

~~The notification which shall be submitted by the Permittee does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~**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). **********

~~(h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report. Any emergencies that have been previously reported pursuant to paragraph (b)(5) of this condition and certified by an "authorized individual" need only referenced by the date of the original report.~~

Modification No. 9:

Deviations from Permit Requirements

IDEM, OAQ had decided that having a separate condition for the reporting of deviations is unnecessary. Therefore, IDEM, OAQ has removed Section B – Deviations for Permit Requirements and Conditions and added the requirements of that condition to Section C – General Reporting Requirements. IDEM, OAQ removed the condition and renumbered the remaining conditions. Revisions are shown below:

~~B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]~~

~~(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported 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~~

~~using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. 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.~~

~~The Quarterly Deviation and Compliance Monitoring Report does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~

~~(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.~~

Modification No. 10:

Additional Certification Clarifications

Section B – Permit Modification, Reopening, Revocation and Reissuance, or Termination, Section B – Permit Renewal, and Section B – Permit Amendment or Revision have been clarified to explain the requirements for a certification. Rule citations have been updated. A rule citation was added to the permit renewal condition to provide a reference for application deadlines. Revisions are shown below:

B.1~~6~~**5** 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]

(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 the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~**The notification by the**

Permittee does require a certification by 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) **********

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(~~c~~**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.1~~7~~**6** Permit Renewal [326 IAC 2-8-3(h)]

(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(4~~0~~**2**). ~~The renewal application does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~**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).** **********

(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.1~~8~~**7** Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

****

(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 shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~**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 in 326 IAC 2-1.1-1(1).**********

Modification No. 11:

Section B – Operational Flexibility Rule Citations

IDEM, OAQ updated the rule citation listed in Section B – Operational Flexibility. Revisions are shown below:

B.~~19~~**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) through (d) without a prior permit revision, if each of the following conditions is met:~~**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:** **********

(4) **********

(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) through (d)~~**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)(2), (c)(1), and (d)~~**326 IAC 2-8-15(b)(1) and (c)**.

(b) Emission Trades [326 IAC 2-8-15(~~c~~**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(~~c~~**b**).

****

Modification No. 12:

Section C – Source Modification Requirement Renumbered
IDEM, OAQ is renumbering original Condition B.20 to B.19 and original Condition B.21 to B.20 as a result of modifications listed above:

B.**19**~~20~~ 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**~~21~~ Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2] [IC 13-17-3-2] [IC 13-17-3-2] [IC 13-30-3-1]

****

Modification No. 13:

Transfer of Control
IDEM, OAQ is clarifying the certification requirements. All references to notice only changes have been revised to administrative amendment to more closely match the underlying rule. Revisions are shown below:

B.2**1**~~2~~ Transfer of Ownership or Operational Control [326 IAC 2-8-10]

(a) **********

(b) **********
~~The application which shall be submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~**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 notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request.~~**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)]

Modification No. 14:

Annual Fee Payment – "Not Later Than"
IDEM, OAQ has determined that the phrases "no later than" and "not later than" are clearer than "within" in relation to the end of a timeline. Therefore, the timeline in Section B – Annual Fee Payment has been revised. What constitutes a certification has been clarified. The consequences of nonpayment has been added to the condition. Revisions are shown below:

B.2**2**~~3~~ 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, within 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.~~**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.

(~~b~~**c**) **********

Modification No. 15:

Section C – Credible Evidence Renumbered
IDEM, OAQ is renumbering original Condition B.24 to Condition B.23 to reflect the changes listed above. Revisions are shown below:

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

****

Modification No. 16:

Overall Source Limit – Greenhouse Gas Emissions
IDEM, OAQ is updating the overall source limit condition to address greenhouse gas emissions and to clarify this limit also renders the requirements of 326 IAC 2-2 Prevention of Significant Deterioration (PSD) not applicable. Revisions are shown below:

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.~~ This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-3 (Emission Offset) not applicable;~~

(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~~.~~**; and**

(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_2 equivalent emissions (CO_2e) per twelve consecutive month period.

(b) ~~The~~**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 ~~and~~ fifty (250) tons per twelve (12) consecutive month period.~~ This limitation shall make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) not applicable.~~ **********

Modification No. 17:

Rule Citations in Section C - Opacity
IDEM, OAQ has added 326 IAC 5-1-1 to the exception clause of Section C – Opacity, since 326 IAC 5-1-1 does list exceptions. Revisions are shown below:

C.3 Opacity [326 IAC 5-1]

~~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:~~**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 the permit:** **********

Modification No. 18:

Incineration Requirements
IDEM, OAQ has added 326 IAC 5-1-1 to the exception clause of Section C – Opacity, since 326 IAC 5-1-1 does list exceptions. Revisions are shown below:

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

~~The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.~~**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.** **********

Modification No. 19:

Asbestos Abatement and Testing Protocol
IDEM, OAQ revised Section C – Asbestos Abatement Projects and Performance Testing to clarify the requirements of a certification. The performance testing condition was updated to remove the first paragraph due to the fact that specific testing conditions elsewhere in the permit will specify the timeline and procedures. Revisions are shown below:

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

****

(d) **********

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 by an "authorized individual" as defined by 326~~

~~IAC 2-1.1-1(1).~~**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).************

C.9 Performance Testing [326 IAC 3-6]

~~(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.~~

(a) **For performance testing required by this permit, a**~~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 certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~**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 certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~**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).** **********

Modification No. 20:

Compliance Monitoring Clarifications

IDEM, OAQ has revised Section C – Compliance Monitoring. The reference to record keeping has been removed due to the fact that other conditions already address record keeping. The voice of the condition has been changed to clearly indicate that it is the Permittee that must follow the requirements of the condition. The requirements of a certification have been clarified. IDEM is changing the compliance monitoring condition to clearly describe when monitoring for new and existing units must begin. Revisions are shown below:

C.11 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

~~Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, 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 the certification 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.~~

(a) For new units:
Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.

(b) For existing units:
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 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 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).

Modification No. 21:

Removal of Section C – Monitoring Methods
IDEM, OAQ has decided to remove Section C – Monitoring Methods. The conditions that require the monitoring or testing, if required, state what shall be used. The condition was removed and all remaining conditions were renumbered. Revisions are shown below:

~~C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]~~

~~Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63 or other approved methods as specified in this permit.~~

Modification No. 22:

Section C – Instrument Specification Revisions
IDEM, OAQ clarified the following condition to indicate that the analog instrument must be capable of measuring the parameters outside the normal range. Revisions are shown below:

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

(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. **The analog instrument shall be capable of measuring values outside of the normal range.** **********

Modification No. 23:

Section C – Emergency Reduction Plans

IDEM, OAQ has decided not to list the submission date of the ERP because the ERP can be updated without permit change. The revised condition is shown below:

C.1**3**~~4~~ Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) ~~The Permittee prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on June 5, 2005.~~**The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.** **********

Modification No. 24:

Section C – Risk Management Plan Renumbered

IDEM, OAQ is renumbering original Condition C.15 to C.14 to reflect changes listed above. The revised condition is shown below:

C.1**4**~~5~~ Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

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.

Modification No. 25:

Section C – Response to Excursions or Exceedances

IDEM, OAQ has revised Section C – Response to Excursions or Exceedances. An introduction sentence has been added to clarify that it is only when an excursion or exceedance is detected that the requirements of this condition need to be followed. The word “excess” was added to the last sentence of paragraph (a) because the Permittee only has to minimize excess emissions. The middle of paragraph (b) has been deleted as it was duplicative of paragraph (a). The phrase “or are returning” was added to subparagraph (b)(2) as this is an acceptable response assuming the operation or emission unit does return to normal or its usual manner of operation. The phrase “within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable” was replaced with “normal or usual manner of operation” because the first phrase is just a limited list of the second phrase. The record keeping required by paragraph (e) was changed to require only records of the response because the previously listed items are required to be recorded elsewhere in the permit. Revisions are shown below:

C.1**5**~~6~~ Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

~~(a) Upon detecting an excursion or exceedance, the Permittee shall 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 emissions.~~

~~(b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by~~

~~excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:~~

~~(1) initial inspection and evaluation~~

~~(2) recording that operations returned 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 within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.~~

~~(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;~~

~~(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 maintain the following records:~~

~~(1) monitoring data;~~

~~(2) monitor performance data, if applicable; and~~

~~(3) corrective actions taken.~~

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.

Modification No. 26:

Section C – Noncompliant Stack Tests
IDEM, OAQ has revised Section C – Actions Related to Noncompliance Demonstrated by a Stack Test. The requirements to take response steps and minimize excess emissions have been removed because Section C – Response to Excursions or Exceedances already requires response steps related to exceedances and excess emissions minimization. The start of the timelines was switched from "the receipt of the test results" to the "date of the test." There was confusion if the "receipt" was by IDEM, OAQ or someone else. Since the start of the timelines has been moved up, the length of the timelines was increased. The new timelines require action within a comparable timeline; and the new timelines still ensure that the Permittee will return to compliance within a reasonable timeframe. Revisions are shown below:

C.1**6**~~7~~ 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 take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.~~

~~(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) 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 the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~

(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).

Modification No. 27:

Section C – Emission Statements

326 IAC 2-6 applies to all sources located in LaPorte County that emit volatile organic compounds (VOC) or oxides of nitrogen (NOx) into the ambient air at levels equal to or greater than twenty-five (25) tons per year. This source emits more than 25 TPY of VOC; therefore, 326 IAC 2-6 applies. The condition added to the permit is shown below:

C.17 Emission Statement [326 IAC 2-6]

Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit an emission statement by July 1 following a calendar year when the source emits oxides of nitrogen or volatile organic compounds into the ambient air equal to or greater than twenty-five (25) tons. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement 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).

Modification No. 28:

General Record Keeping Clarifications

IDEM, OAQ has clarified the Permittee's responsibility with regards to record keeping. The reference to "within" has been changed to "allowed up to" to more closely match the underlying rule. The condition was renumbered. Revisions to the condition are shown below:

C.18 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. 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, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.~~

(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, where applicable:

(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.

Records of required monitoring information include the following, where applicable:

(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.

Modification No. 29:

General Reporting Clarifications
IDEM, OAQ has decided that having a separate condition for the reporting of deviations is unnecessary. Therefore, IDEM, OAQ has removed Section B – Deviation from Permit Requirements and Conditions and added the requirements to Section C – General Reporting Requirements. Paragraph (d) of Section C – General Reporting Requirements has been removed because IDEM already states the timeline and certification needs of each report in the condition requiring the report. The requirements of a certification have been clarified. All references to "within" have been changed to "not later than" to make the timeline for the report clearer. Revisions are shown below:

C.19 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. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~ **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 report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to~~**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) ~~**********~~

(d) ~~Unless otherwise specified in this permit, all reports required in Section D of this permit 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).~~

~~(e)~~ 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.

Modification No. 30:

Simplified Language for 40 CFR 82 and 326 IAC 22-1
IDEM, OAQ has decided to simplify the referencing in Section C – Compliance with 40 CFR 82 and 326 IAC 22-1. Revisions are shown below:

C.20 Compliance with 40 CFR 82 and 326 IAC 22-1

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**~~the~~ standards for recycling and emissions reduction**.**~~:~~

~~(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.~~

~~(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.~~

~~(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.~~

Section D Modifications

Modification No. 31:

Updated Emission Unit Descriptions
IDEM, OAQ is revising the emission unit description box to remove emission units only subject to NSPS or NESHAP requirements. These units were moved to Sections E.1 to E.6. Revisions are shown below:

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Shingle Manufacturing Processes

Asphalt Receiving

(a) Two (2) asphalt receiving tanks, identified as Tank 1 (FST-1 / TK-1110A) and Tank 2 (FST-2 / TK-1110B), each installed in 1999, each venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 240,000 gallons of asphalt, each. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.) **[40 CFR 60, Subpart Kb]**

(b) One (1) asphalt receiving/blend storage tank, identified as Tank 3 (TK-1120), installed in 2003, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 100,000 gallons of blended asphalt. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) **[40 CFR 60, Subpart Kb]** **************

Blowstill Operations

~~(d) One (1) flux asphalt heating operation, identified as FAH-1 / HT-1250, installed in 2001, using waste heat from thermal oxidizer (TO-1 / TO-1200) in combination with a natural gas-fired burner rated at 7.50 million British thermal units per hour, exhausting to heater HT 1350 or to Stack S-4 depending on heat balance, capacity: 18,000 gallons of asphalt per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)~~

(e) One (1) heated asphalt flux storage tank, identified as TK-1010, installed in 1999, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 80,000 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) **[40 CFR 60, Subpart Kb]**

(f) Two (2) asphalt blow stills (asphalt conditioners), identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B, each installed in 1999, each exhausting to thermal oxidizer (TO-1 / TO-1200) for VOC control, capacity: 30,000 pounds of asphalt per hour, each. **[40 CFR 60, Subpart UU] [40 CFR 63, Subpart AAAAAAA]**

(g) One (1) knock out storage tank, identified as TK-1210, installed in 2002, using water as a conditioning liquid, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 47,000 gallons of water/conditioner. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) **[40 CFR 60, Subpart Kb]**

Coating Operations

(h) Two (2) coating asphalt storage tanks, identified as West CST 1/TK-1030A, and East CST 2/TK-1030B, each installed in 1999, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity 38,000 gallons of coating asphalt.
[40 CFR 60, Subpart UU] **********

(~~k~~**l**) Asphalt and filler mix storage tank (Surge Tank), identified as TK-2100, installed in 1999, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 4,600 gallons of asphalt and filler mix. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(~~l~~**m**) One (1) shingle machine, identified as SM-1 / RL1-01, installed in 1999, (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) **[40 CFR 63, Subpart AAAAAAA]** consisting of the following:

(1) One (1) coating dip tank, containing asphalt and limestone filler, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 25 tons of asphalt per hour; and

(2) **********

~~Facility Description [326 IAC 2-8-4(10)]: Shingle Manufacturing Processes (continued)~~

~~Coating Operations~~

~~(m) One (1) polymer storage tank TK 2410, with a volume of 10,000 gallons venting inside the building. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)~~

~~(n) One (1) rycolube storage tank TK 2500, with a volume of 10,000 gallons venting inside the building. (Under NSPS 40 CFR 60 Subpart UU~~, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

Thermal Oxidizer

(~~s~~**r**) One (1) natural gas-fired thermal oxidizer, identified as TO-1 / TO-1200, installed in 1999 **and approved in 2014 for modification**, equipped with low NO_X burners, exhausting to Stack S-1, heat input capacity: ~~30.0~~**14.0** million British thermal units per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) **[40 CFR 63, Subpart AAAAAAA]**

Raw Material Storage and Handling System

(~~t~~**s**) **********

(~~u~~**t**) **********

(~~v~~**u**) **********

(~~w~~**v**) **********

(~~x~~**w**) **********

(~~x~~**w**) **********

(~~y~~**x**) **********

Laminate Adhesive System

(~~z~~**y**) One (1) coating storage tank, identified as TK-2420, installed in 2000, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 14,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

~~Facility Description [326 IAC 2-8-4(10)]: Shingle Manufacturing Processes (continued)~~

~~Laminate Adhesive System~~

(~~aa~~**z**) One (1) laminate adhesive mix tank, identified as TK-2430, installed in 2000, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(~~bb~~**aa**) One (1) laminate adhesive run tank, identified as TK-2470, installed in 2000, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 1,400 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(~~cc~~**bb**) One (1) coating storage tank, identified as TK-2310, installed in 2000, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 10,000 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(~~dd~~**cc**) One (1) mix storage tank, identified as TK-2320, installed in 2000, venting to ~~thermal oxidizer (TO-1 / TO-1200)~~**a coalescing filter, identified as CECO-1** for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(~~ee~~**dd**) **********

(~~ff~~**ee**) One (1) self seal tank, identified as TK 40, installed in 2000, venting to **a coalescing filter, identified as CECO-1**~~thermal oxidizer (TO-1 / TO-1200)~~ for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(~~gg~~**ff**) One (1) self-seal dip application process venting to **a coalescing filter, identified as CECO-1**~~thermal oxidizer (TO-1 / TO-1200)~~ for VOC control, capacity: 750 pounds of self seal per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(~~hh~~**gg**) One (1) laminate adhesive dip application venting to **a coalescing filter, identified as CECO-1**~~thermal oxidizer (TO-1 / TO-1200)~~ for VOC control capacity: 2,850 pounds of laminate adhesive per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

Granules

(~~ii~~**hh**) ~~**********~~

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

Modification No. 32:

Updated Emission Unit Descriptions
IDEM, OAQ revised original condition D.1.1 to reflect the BACT determination included with this modification. Revisions are shown below:

D.1.1 Best Available Control Technology [326 IAC 8-1-6]

~~Pursuant to F 091-10904-00051 issued on October 6, 1999 and 326 IAC 8-1-6 (New facilities: General reduction Requirements), BACT has been determined to be the following:~~

~~(a) The utilization of a thermal oxidizer.~~

~~(b) The total volatile organic compound (VOC) emissions from all facilities venting to thermal oxidizer TO-1 / TO-1200 shall not exceed 98.9 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~(c) Compliance with paragraph (b) of this condition shall be determined as follows:~~

~~VOC emissions (tons per twelve (12) consecutive month period) = Total input of VOC to all facilities vented to TO-1 / TO-1200 * (1 - overall control efficiency % of TO-1 / TO-1200)~~

Pursuant to FESOP SPR 091-32963-00051 and 326 IAC 8-1-6 (New facilities; general reduction requirements, BACT has been determined to be the following:

(a) IDEM, OAQ has established VOC BACT for the shingle machine, identified as SM-1 / RL1-01 as:

(1) VOC emissions from the shingle machine, including the coater, self-seal, and laminate adhesive processes, shall be controlled by a coalescing filter at all times the emission unit is in operation and generating VOC emissions.

(2) Total hydrocarbon emissions to the coalescing filter, identified as CECO-1 shall be reduced by 95% on a mass basis, or to a concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen.

(3) VOC emissions from the shingle machine shall not exceed 0.013 lb VOC/ton shingles produced.

(4) Shingle production shall not exceed 657,000 tons of shingles per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) IDEM, OAQ has established VOC BACT for each asphalt blowing still as:

(1) VOC emissions from the asphalt blowing stills, identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B shall be controlled by a thermal oxidizer at all times the emission units are in operation and generating VOC emissions.

(2) VOC emissions from each of the asphalt blowing stills, identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B shall not exceed 0.127 lb VOC per ton of asphalt blown.

(3) Combined asphalt throughput shall not exceed 262,800 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(4) Total hydrocarbon emissions to the thermal oxidizer, identified as TO-1/TO-1200 shall be reduced by 95% on a mass basis, or to a concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen.

Modification No. 33:

Prevention of Significant Deterioration (PSD) Minor Limit
IDEM, OAQ is including an emission limitation to ensure PM emissions do not exceed 250 tons per year. This limit will render the requirements of PSD not applicable. The proposed condition is shown below:

D.1.2 Prevention of Significant Deterioration (PSD) Minor Limit [326 IAC 2-8-4][326 IAC 2-2]

PM emissions from the shingle machine aggregate and adhesive application baghouse, identified as Dust Collector V-10 / DC-9210, exhausting to stack V-14 shall not exceed 0.20 pound PM per hour. PM only includes filterable particulate matter.

Compliance with this limit, in conjunction with the potential to emit PM from all other emission units, shall limit the PM emissions from the entire source to less than two-hundred fifty (250) tons per twelve (12) consecutive month period and will render the requirements of 326 IAC 2-2 (PSD) not applicable.

Modification No. 34:

VOC Limitations
IDEM, OAQ is replacing Original Condition D.1.2 with a new Condition D.1.4 which is shown later in this TSD.

~~D.1.2 Volatile Organic Compounds (VOC) Limitation [326 IAC 2-8-4] [326 IAC 2-2]~~

~~(a) When operating, the thermal oxidizer shall have an overall VOC control efficiency of ninety-one and six-tenths percent (91.6%) or greater.~~

~~(b) The total volatile organic compound (VOC) emissions from all facilities venting to thermal oxidizer TO-1 / TO-1200 shall not exceed 98.6 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~(c) Compliance with paragraph (b) of this condition shall be determined as follows:~~

~~VOC emissions (tons per twelve (12) consecutive month period) = Total input of VOC to all facilities vented to TO-1 / TO-1200 * (1 - overall control efficiency % of TO-1 / TO-1200)~~

~~(d) Compliance with the limitation in (b) in combination with the natural gas usage limitation in Condition D.2.1 shall ensure that VOC emissions from the entire source do not exceed one hundred (100) tons per year and shall render the requirements of 326 IAC 2-7 (Part 70 Permit) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.~~

Modification No. 35:

Particulate Matter (PM) Emissions from Manufacturing Processes
IDEM, OAQ is updating original Condition D.1.3 to include all emission units and insignificant activities subject to the rule. Emission units subject to a more restrictive PM limitation in an NSPS or NESHAP are exempt. Opacity limitations are not considered more restrictive than pound per hour limits. Revisions to Condition D.1.3 are shown below:

D.1.3 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 limestone silos, the limestone (cold filler) supply hopper, the sand silos, the limestone transfer process, limestone (filler heater) fluid bed heater, and aggregate and adhesives application, shall not exceed the pounds per hour limits specified in the table below when operating at the specified process weight rates in pounds or tons per hour:~~

~~Emission Unit(s)~~	~~Process Weight Rate (tons/hr)~~	~~Allowable Particulate Emission Rate (lbs/hr)~~
~~Limestone Silos LFS-1 through LFS-6~~	~~20.0, each~~	~~30.5, each~~
~~Limestone (cold filler bin) supply hopper~~	~~80.0~~	~~49.1~~
~~Sand Silos SS-1 and SS-2~~	~~20.0, each~~	~~30.5, each~~
~~Limestone Filler Transfer process~~	~~80.0~~	~~49.1~~
~~Limestone (filler heater) fluid bed heater~~	~~58.0~~	~~46.0~~
~~Aggregate and Adhesives Application (Shingle Machine)~~	~~50.0~~	~~44.6~~

~~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:~~

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

~~or~~

~~Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:~~

$\cancel{E = 55.0 P^{0.11} - 40}$ ~~where E = rate of emission in pounds per hour and~~
~~P = process weight rate in tons per hour~~

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the processes listed in the table below shall not exceed the pounds per hour listed when operating at a process weight rate listed.

Emission Unit ID	Emission Unit Description	Material	Throughput (TPH)	Equation	6-3-2 Limit (lb/hr)
LFS-1 / SS-8910	**Limestone Storage Silo**	**Limestone**	**20.00**	**(a)**	**30.5**
LFS-2 / SS-8920	**Limestone Storage Silo**	**Limestone**	**20.00**	**(a)**	**30.5**
LFS-3 / SS-8930	**Limestone Storage Silo**	**Limestone**	**20.00**	**(a)**	**30.5**
LFS-4 / SS-8940	**Limestone Storage Silo**	**Limestone**	**20.00**	**(a)**	**30.5**
LFS-5 / SS-8950	**Limestone Storage Silo**	**Limestone**	**20.00**	**(a)**	**30.5**
LFS-6 / SS-8960	**Limestone Storage Silo**	**Limestone**	**20.00**	**(a)**	**30.5**
SS-1 / SS-8210	**Sand Storage Silo**	**Sand**	**20.00**	**(a)**	**30.5**
SS-2 / SS-8220	**Sand Storage Silo**	**Sand**	**20.00**	**(a)**	**30.5**
CFH-1 / TK-2000	**Cold Filler Hopper**	**Limestone**	**80.00**	**(b)**	**49.1**
TK-8645	**Sand Receiving Bin**	**Sand**	**20.00**	**(a)**	**30.5**
SS-8010 to SS-8200	**Granule Storage Silos**	**Granules**	**40.00**	**(b)**	**42.5**
DC-2330 & 2435	**Limestone Transfer**	**Limestone**	**80.00**	**(b)**	**49.1**
FST-1	**Asphalt Receiving Tank**	**Asphalt**	**16.27**	**(a)**	**26.57**
FST-2	**Asphalt Receiving Tank**	**Asphalt**	**16.27**	**(a)**	**26.57**

The pound per hour limitations were calculated with the following equations:

(a) 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:

$$E = 4.10\ P^{0.67}$$

where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

(b) Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0\ P^{0.11} - 40$$

where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

Modification No. 36:

VOC Compliance Determination

IDEM, OAQ is including a long term emission limitation on emission units connected to the thermal oxidizer and the coalescing filter. These emission limitations will ensure VOC emissions are less than 100 tons per year. The proposed condition is shown below:

D.1.4 FESOP and Prevention of Significant Deterioration (PSD) Minor Limits - Volatile Organic Compounds (VOCs) [326 IAC 2-2] [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4 (FESOP) and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following:

(a) VOC emissions from the thermal oxidizer controlling the blowing stills shall not exceed 16.65 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) VOC emissions from the coalescing filter controlling the shingle machine, truck unloading racks and multiple asphalt storage tanks shall not exceed 51.67 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits, in conjunction with the potential to emit VOC from all other emission units, shall limit the VOC emissions to less than one-hundred (100) tons per twelve (12) consecutive month period and will render the requirements of 326 IAC 2-2 and 326 IAC 2-7 not applicable.

Modification No. 37:

Preventive Maintenance Plan
On October 27, 2010, the Indiana Air Pollution Control Board issued revisions to 326 IAC 2. These revisions resulted in changes to the rule citations listed in the permit. These changes are not changes to the underlying provisions. In addition, the original condition referenced 326 IAC 2-7. This source is not subject to 326 IAC 2-7. Finally, the condition was renumbered due to new conditions added to the permit. Revisions to Original Condition D.1.4 are shown below:

~~D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]~~

~~A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for all of the facilities vented to the thermal oxidizer (TO-1 / TO-1200) and the thermal oxidizer (TO-1 / TO-1200).~~

D.1.5 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]

A Preventive Maintenance Plan for both blowing stills, the shingle machine, both unloading racks, and all asphalt storage facilities connected to the coalescing filter and their control devices. Section B – Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plant required by this condition.

Modification No. 38:

Use of Thermal Oxidizer
The use of the thermal oxidizer is required for both blowing stills. This requirement is included in Condition D.1.1 and a second reference is not required. Original Condition D.1.5 has been removed. The condition removed from the permit is shown below:

~~D.1.5 Volatile Organic Compounds (VOCs)~~

~~In order to comply with Conditions D.1.1(b) and D.1.2, the thermal oxidizer (TO-1 / TO-1200) shall control the VOC emissions from each facility in Section D.1 that has an exhaust vented to the thermal oxidizer (TO-1 / TO-1200) and shall be in operation at all times when any one (1) of those facilities is in operation.~~

Modification No. 39:

Compliance Determination – PM and VOC Testing
IDEM, OAQ is updating the testing condition due to the addition of a new control device and the modification of the existing thermal oxidizer. The revised testing condition is shown below:

D.1.6 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

~~On or before July 29, 2009, in order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall conduct a performance test on the thermal oxidizer exhaust to verify VOC control efficiency utilizing methods as approved by the Commissioner. The VOC control efficiency test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing~~.

(a) **In order to demonstrate the compliance status with Condition D.1.1(b)(4), and within one hundred and eighty (180) days after initial startup of the modified thermal oxidizer identified (TO-1/ TO-1200), the Permittee shall perform total hydrocarbon testing on the thermal oxidizer utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every five years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.**

(b) **In order to demonstrate the compliance status with Condition D.1.1(a)(2), and within one hundred and eighty (180) days after initial startup of the coalescing filter identified CECO-1, the Permittee shall perform total hydrocarbon testing on the coalescing filter utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every five years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.**

(c) **In order to demonstrate the compliance status with Condition D.1.2, and within one hundred and eighty (180) days after issuance of 091-32963-00051, the Permittee shall perform particulate matter (PM) testing on the stack V-14 of Dust Collector V-10, DC-9210 utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every five years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM only includes filterable particulate matter.**

(d) **In order to demonstrate the compliance status with Condition D.1.1(b)(2), and within one hundred and eighty (180) days after initial startup of the thermal oxidizer identified (TO-1/ TO-1200), the Permittee shall perform VOC testing, after control, on the thermal oxidizer utilizing methods as approved by the Commissioner. This testing shall be repeated at least once every five years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.**

Modification No. 40:

PSD Compliance Determination Requirements - PM

The baghouse controlling the shingle machine aggregate and adhesives application process must function properly to ensure the source-wide potential to emit PM is less than 250 tons per year to render the requirements of PSD not applicable. Therefore, IDEM, OAQ is adding a condition requiring the baghouse to be in operation at all time the aggregate and adhesives application process is in operation. The proposed condition is shown below:

D.1.7 Particulate Matter Control (PM) [326 IAC 2-2]

PM emissions from the shingle machine aggregate and adhesive application process shall be controlled by the baghouse identified as Dust Collector V-10 / DC-9210, at all times the process is in operation.

In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Modification No. 41:

Compliance Determination – VOC Emissions

IDEM, OAQ is adding conditions to require the Permittee to determine actual VOC emissions from the coalescing filter and thermal oxidizer. The proposed condition is shown below:

D.1.8 VOC Emissions

(a) In order to demonstrate compliance with Condition D.1.4(a), the Permittee shall calculate VOC emissions from the thermal oxidizer once per month using the following equation:

Thermal Oxidizer VOC Emissions (ton VOC this month) = 0.127 lb VOC/ton asphalt x tons asphalt blown this month (ton asphalt) x 1 ton / 2,000 lb

(b) In order to demonstrate compliance with Condition D.1.4(b), the Permittee shall calculate VOC emissions from the coalescing filter once per month using the following equation:

Coalescing Filter VOC Emissions (ton VOC this month) = 0.013 lb VOC/ton shingles x ton shingles produced this month (ton shingle) 1 ton / 2,000 lb

Modification No. 42:

Continuous Temperature Monitoring – Thermal Oxidizer

IDEM, OAQ is updating references to other conditions in Original Condition D.1.7 to reflect revised emission limitations on the blowing stills. The condition was renumbered. IDEM, OAQ has decided taking a data point no less than every fifteen minutes is sufficient to demonstrate continuous compliance. IDEM, OAQ is revising the condition for clarity. The Permittee should begin monitoring against the new set point or range as soon as the valid compliant results are available. The revised condition is shown below:

D.1.~~7~~**9** Thermal Oxidizer Temperature

(a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizer for measuring operating temperature~~ in the combustion zone~~. **For the purpose of this condition, continuous means no less than once every fifteen (15) minutes.** The output of this system shall be recorded as a three-hour average. From the date of issuance of this permit until the ~~approved~~ stack test results are available, the Permittee shall operate the thermal oxidizer at or above the three-hour average temperature of 1,200^{o}F.

(b) The Permittee shall determine the three- (3-) hour~~ly~~ average temperature from the most recent valid stack test that demonstrates compliance with ~~Conditions D.1.1 and D.1.2~~**Condition D.1.1(b)(4)**~~, as approved by IDEM~~.

(c) On and after the date the ~~approved~~ stack test results are available, the Permittee shall operate the thermal oxidizer at or above the three- (3-) hour~~ly~~ average temperature as observed during the compliant stack test.

Modification No. 43:

Daily Compliance Monitoring – Thermal Oxidizer
IDEM, OAQ is renumbering the condition. IDEM, OAQ is updating references to other conditions in the permit. IDEM, OAQ is revising the condition for clarity. The Permittee should begin monitoring against the new set point or range as soon as the valid compliant results are available. The revised condition is shown below

D.1.~~8~~**10** Parametric Monitoring **– Thermal Oxidizer**

(a) The Permittee shall determine fan amperage or duct pressure from the most recent valid stack test that demonstrates compliance with ~~Conditions D.1.1 and D.1.2, as approved by IDEM.~~**Condition D.1.1(b)(4).**

(b) The duct pressure or fan amperage shall be observed at least once per day when the thermal oxidizer is in operation. ~~When for any one reading, the duct pressure or fan amperage is outside the normal range as established in most recent compliant stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A reading that is outside the range as established in the most recent compliant stack test is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.~~**On and after the date the stack test results are available, the duct pressure or fan amperage shall be maintained within the normal range as established in the most recent compliant stack test.**

Modification No. 44:

Daily Compliance Monitoring – Coalescing Filter
Proper operation of the coalescing filter is required for this source to avoid major source status under 326 IAC 2-2 and 326 IAC 2-7. Therefore, IDEM, OAQ is adding a daily pressure drop reading for the coalescing filter. The proposed condition is shown below:

D.1.11 Parametric Monitoring – Coalescing Filter

The Permittee shall record the pressure drop across the coalescing filter used in conjunction with the shingle machine, asphalt loading racks, and multiple asphalt storage tanks, at least once per day when any of these processes are in operation. When for one reading, the pressure drop across the baghouse is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop

between 5 and 6 inches of water unless a different upper-bound value for this range is determined during the latest stack test. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take a reasonable response shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C – Instrument Specifications, of this permit, and shall be subject to approval by IDEM, OAQ and shall be calibrated or replaced at least once every six months.

Modification No. 45:

Daily Compliance Monitoring – Aggregate and Adhesive Application
The only baghouse required to be in operation to control PM emissions by state rule is the aggregate and adhesive application baghouse, Dust Collector V-10 / DC-9210. The other baghouses are in operation to ensure compliance with the opacity standard in Subpart UU. The thermal oxidizer already has sufficient compliance monitoring using fan amperage and continuous temperature monitoring. Therefore, IDEM, OAQ is removing all references to any baghouse other than Dust Collector V-10 / DC-9210. The condition was renumbered. The revised condition is shown below:

D.1.~~9~~**12** Visible Emissions Notations

(a) **Visible emission notations of the aggregate and adhesive application baghouse, identified as Dust Collector V-10 / DC-9210 stack V-14**~~thermal oxidizer, bin vent filter, and dust collector stack exhausts (Stacks S-1, V-1 through V-9, V-14 and V-15, and exhausts with general ventilation)~~ shall be performed once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) **********

(e) ~~If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.~~ **If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response required by this condition. Failure to take response steps shall be considered a deviation from this permit.**

Modification No. 46:

Broken or Failed Bag Detection
IDEM, OAQ is adding a condition to provide guidance on proper actions during bag failure in a baghouse. The proposed condition is shown below:

D.1.13 Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has 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)

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit. 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)

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

Modification No. 47:

Record Keeping Requirements
IDEM, OAQ is updating the record keeping requirements due to significant changes to permit conditions. The condition was renumbered. The new condition is shown below.

D.1.1~~0~~**4** Record Keeping Requirements

~~(a) To document compliance with Conditions D.1.1(b) and D.1.2(b), the Permittee shall maintain monthly records of the total VOC input to all of the facilities vented to the thermal oxidizer (TO-1 / TO-1200).~~

~~(b) To document compliance with Condition D.1.7, the Permittee shall maintain continuous temperature records (on a 3-hour average basis) for the thermal oxidizer and the 3-hour average temperature used to demonstrate compliance during the most recent compliant stack test.~~

~~(c) To document compliance with Condition D.1.8, the Permittee shall maintain daily records of the duct pressure or fan amperage.~~

~~(d) To document compliance with Condition D.1.9, the Permittee shall maintain records of visible emission notations of the thermal oxidizer, bin vent filter, and dust collector stack exhausts (Stacks S-1, V-1 through V-9, V-14 and V-15, and exhausts with general ventilation) once per day when exhausting to the atmosphere.~~

~~(e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.~~

(a) To document the compliance status with Condition D.1.1(a)(4), the Permittee shall maintain monthly records of the tons of shingles produced.

(b) To document the compliance status with Condition D.1.1(b)(3), the Permittee shall maintain monthly records of the combined tons of asphalt blown in the blowing stills.

(c) To document the compliance status with Condition D.1.4(a), the Permittee shall maintain monthly records of VOC emissions from the thermal oxidizer controlling emissions from the blowing stills.

(d) To document the compliance status with Condition D.1.4(b), the Permittee shall maintain monthly records of VOC emissions from the coalescing filter controlling the shingle machine, truck unloading racks and multiple asphalt storage tanks.

(e) **To document the compliance status with Conditions D.1.4, D.1.8(a) and (b), the Permittee shall maintain all records of process operational data, mass balance, or other engineering estimation methods used to determine emissions to document compliance.**

(f) **To document the compliance status with Condition D.1.9, the Permittee shall maintain all records of the output of the thermal oxidizer continuous temperature monitoring system.**

(g) **To document the compliance status with Condition D.1.8, the Permittee shall maintain daily records of the fan amperage or duct pressure of the thermal oxidizer from the most recent valid stack test demonstrating compliance with Condition D.1.1(b)(4). The Permittee shall include in its daily record when a fan amperage or duct pressure reading is not taken and the reason for the lack of a fan amperage or duct pressure reading (e.g., the process did not operate that day).**

(h) **To document the compliance status with Condition D.1.11, the Permittee shall maintain daily records of the pressure drop across the coalescing filter controlling emissions from the shingle machine, asphalt truck unloading racks, and numerous asphalt storage tanks. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g., the process did not operate that day).**

(i) **To document the compliance status with Condition D.1.12, the Permittee shall maintain daily records of the visible emission notations of stack V-14 of the baghouse identified as Dust Collector V-10 / DC-9210. The Permittee shall include in its daily record when a visible emission notation reading is not taken and the reason for the lack of a visible emission notation reading (e.g., the process did not operate that day).**

(j) **Section C – General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.**

Modification No. 48:

Reporting Requirements
IDEM, OAQ is updating the reporting requirements due to the changes to the permit listed above.

D.1.1~~1~~**5** Reporting Requirements

~~A quarterly summary of the information to document compliance with Conditions D.1.1(b) and D.1.2(b) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~
A quarterly summary of the information to document the compliance status with Condition D.1.4 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C – General Reporting Requirements 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).

Modification No. 49:

Updated Emission Unit Descriptions

IDEM, OAQ no longer includes the text of NSPS/NESHAP subparts in Section D Conditions. The requirements of 40 CFR 60, Subpart UU were removed from Section D.1 and moved to Section E.3.

~~New Source Performance Standards (NSPS) Requirements [326 IAC 2-8-4]~~

~~D.1.12 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 facilities described in this section except when otherwise specified in 40 CFR Part 60, Subpart UU.~~

~~D.1.13 NSPS UU Requirements [40 CFR Part 60, Subpart UU]~~

~~Pursuant to 40 CFR Part 60, Subpart UU, the Permittee shall comply with the provisions of 40 CFR Part 60.470 for the asphalt coating operating, raw material storage and handling operation, blowing stills and asphalt storage facilities at a asphalt roofing plant, as specified as follows:~~

~~§ 60.470 Applicability and designation of affected facilities.~~

~~(a) The affected facilities to which this subpart applies are each saturator and each mineral handling and storage facility at asphalt roofing plants; and each asphalt storage tank and each blowing still at asphalt processing plants, petroleum refineries, and asphalt roofing plants.~~

~~(b) Any saturator or mineral handling and storage facility under paragraph (a) of this section that commences construction or modification after November 18, 1980, is subject to the requirements of this subpart. Any asphalt storage tank or blowing still that processes and/or stores asphalt used for roofing only or for roofing and other purposes, and that commences construction or modification after November 18, 1980, is subject to the requirements of this subpart.~~

~~Any asphalt storage tank or blowing still that processes and/or stores only nonroofing asphalts and that commences construction or modification after May 26, 1981, is subject to the requirements of this subpart.~~

~~§ 60.471 Definitions.~~

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

~~*Afterburner (A/B)* means an exhaust gas incinerator used to control emissions of particulate matter.~~

~~*Asphalt processing* means the storage and blowing of asphalt.~~

~~*Asphalt processing plant* means a plant which blows asphalt for use in the manufacture of asphalt products.~~

~~*Asphalt roofing plant* means a plant which produces asphalt roofing products (shingles, roll roofing, siding, or saturated felt).~~

~~*Asphalt storage tank* means any tank used to store asphalt at asphalt roofing plants, petroleum refineries, and asphalt processing plants. Storage tanks containing cutback asphalts (asphalts diluted with solvents to reduce viscosity for low temperature applications) and emulsified asphalts (asphalts dispersed in water with an emulsifying agent) are not subject to this regulation.~~

~~*Blowing still* means the equipment in which air is blown through asphalt flux to change the softening point and penetration rate.~~

~~*Catalyst* means a substance which, when added to asphalt flux in a blowing still, alters the penetrating-softening point relationship or increases the rate of oxidation of the flux.~~

~~*Coating blow* means the process in which air is blown through hot asphalt flux to produce coating asphalt. The coating blow starts when the air is turned on and stops when the air is turned off.~~

~~*Electrostatic precipitator (ESP)* means an air pollution control device in which solid or liquid particulates in a gas stream are charged as they pass through an electric field and precipitated on a collection surface.~~

~~*High velocity air filter (HVAF)* means an air pollution control filtration device for the removal of sticky, oily, or liquid aerosol particulate matter from exhaust gas streams.~~

~~*Mineral handling and storage facility* means the areas in asphalt roofing plants in which minerals are unloaded from a carrier, the conveyor transfer points between the carrier and the storage silos, and the storage silos.~~

~~*Saturator* means the equipment in which asphalt is applied to felt to make asphalt roofing products. The term saturator includes the saturator, wet looper, and coater.~~

~~§ 60.472 Standards for particulate matter.~~

~~(a) On and after the date on which §60.8(b) requires a performance test to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any saturator:~~

~~(1) Particulate matter in excess of:~~

~~(i) 0.04 kg/Mg (0.08 lb/ton) of asphalt shingle or mineral-surfaced roll roofing produced,~~

~~(2) Exhaust gases with opacity greater than 20 percent; and~~

~~(3) Any visible emissions from a saturator capture system for more than 20 percent of any period of consecutive valid observations totaling 60 minutes. Saturators that were constructed before November 18, 1980, and that have not been reconstructed since that date and that become subject to these standards through modification are exempt from the visible emissions standard. Saturators that have been newly constructed or reconstructed since November 18, 1980 are subject to the visible emissions standard.~~

~~(b) On and after the date on which §60.8(b) requires a performance test to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any blowing still:~~

~~(1) Particulate matter in excess of 0.67 kg/Mg (1.3 lb/ton) of asphalt charged to the still when a catalyst is added to the still; and~~

~~(3) Particulate matter in excess of 0.60 kg/Mg (1.2 lb/ton) of asphalt charged to the still during blowing without a catalyst; and~~

~~(c) Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the~~

~~atmosphere from any asphalt storage tank exhaust gases with opacity greater than 0 percent, except for one consecutive 15-minute period in any 24-hour period when the transfer lines are being blown for clearing. The control device shall not be bypassed during this 15-minute period. If, however, the emissions from any asphalt storage tank(s) are ducted to a control device for a saturator, the combined emissions shall meet the emission limit contained in paragraph (a) of this section during the time the saturator control device is operating. At any other time the asphalt storage tank(s) must meet the opacity limit specified above for storage tanks.~~

~~(d) Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any mineral handling and storage facility emissions with opacity greater than 1 percent.~~

~~§ 60.473 Monitoring of operations.~~

~~(b) The owner or operator subject to the provisions of this subpart and using an afterburner to meet the emission limit in §60.472(a)(1) and/or (b)(1) shall continuously monitor and record the temperature in the combustion zone of the afterburner. The monitoring instrument shall have an accuracy of ±10 °C (±18 °F) over its range.~~

~~(d) The industry is exempted from the quarterly reports required under §60.7(c). The owner/operator is required to record and report the operating temperature of the control device during the performance test and, as required by §60.7(d), maintain a file of the temperature monitoring results for at least two years.~~

~~§ 60.474 Test methods and procedures.~~

~~(a) For saturators, the owner or operator shall conduct performance tests required in §60.8 as follows:~~

~~(3) If the final product is fiberglass shingle, the test shall be conducted while a nominal 100-kg (220-lb) shingle is being produced.~~

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

~~(c) The owner or operator shall determine compliance with the particulate matter standards in §60.472 as follows:~~

~~(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:~~

$$\cancel{E = (c_s \cdot Q_{sd})/(PK)}$$

~~Where:~~
~~E = emission rate of particulate matter, kg/Mg (lb/ton).~~
~~c_s = concentration of particulate matter, g/dscm (gr/dscf).~~
~~Q_{sd} = volumetric flow rate of effluent gas, dscm/hr (dscf/hr).~~
~~P = asphalt roofing production rate or asphalt charging rate, Mg/hr (ton/hr).~~
~~K=conversion factor, 1000 g/kg [7000 (gr/lb)].~~

~~(2) Method 5A shall be used to determine the particulate matter concentration (cs) and volumetric flow rate (Qsd) of the effluent gas. For a saturator, the sampling time and sample volume for each run shall be at least 120 minutes and 3.00 dscm (106 dscf),~~

~~and for the blowing still, at least 90 minutes or the duration of the coating blow or non-coating blow, whichever is greater, and 2.25 dscm (79.4 dscf).~~

~~(3) For the saturator, the asphalt roofing production rate (P) for each run shall be determined as follows: The amount of asphalt roofing produced on the shingle or saturated felt process lines shall be obtained by direct measurement. The asphalt roofing production rate is the amount produced divided by the time taken for the run.~~

~~(4) For the blowing still, the asphalt charging rate (P) shall be computed for each run using the following equation:~~

~~P = (Vd)/(K′ Θ)~~

~~where:~~
~~P = asphalt charging rate to blowing still, Mg/hr (ton/hr).~~
~~V = volume of asphalt charged, m3 (ft3).~~
~~d = density of asphalt, kg/m3 (lb/ft 3).~~
~~K′ = conversion factor, 1000 kg/Mg (2000 lb/ton).~~
~~Θ = duration of test run, hr.~~

~~(i) The volume (V) of asphalt charged shall be measured by any means accurate to within 10 percent.~~

~~(ii) The density (d) of the asphalt shall be computed using the following equation:~~

$$\cancel{d = K_1 - K_2 T_i}$$

~~Where:~~
~~d = Density of the asphalt, kg/m 3 (lb/ft 3)~~
~~K_1 = 1056.1 kg/m^3 (metric units) = 64.70 lb/ft^3 (English Units)~~
~~K_2 = 0.6176 kg/(m^3 °C) (metric units) = 0.0694 lb/(ft^3 °F) (English Units)~~
~~T_i = temperature at the start of the blow, °C (°F)~~

~~(5) Method 9 and the procedures in §60.11 shall be used to determine opacity.~~

~~(d) The Administrator will determine compliance with the standards in §60.472(a)(3) by using Method 22, modified so that readings are recorded every 15 seconds for a period of consecutive observations during representative conditions (in accordance with §60.8(c)) totaling 60 minutes. A performance test shall consist of one run.~~

~~(e) The owner or operator shall use the monitoring device in §60.473 (a) or (b) to monitor and record continuously the temperature during the particulate matter run and shall report the results to the Administrator with the performance test results~~

~~(f) If at a later date the owner or operator believes that the emission limits in §60.472(a) and (b) are being met even though one of the conditions listed in this paragraph exist, he may submit a written request to the Administrator to repeat the performance test and procedure outlined in paragraph (c) of this section.~~

~~(2) The temperature measured in accordance with §60.473(b) is lower than that measured during the performance test.~~

Modification No. 50:

Emission Unit Descriptions - Sections D.2

IDEM, OAQ is updating the emission unit description box to remove emission units no longer subject to specific state rules. New emission units subject to state rules were added. Revisions are shown below:

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Source-wide Natural Gas Combustion

Asphalt Receiving

(c) One (1) natural gas-fired blending asphalt heater, identified as HT-1041, installed in 2001, exhausting to Stack S-3, heat input capacity: 3.00 million British thermal units per hour.

Blowstill Operations

(d) One (1) flux asphalt heating operation, identified as FAH-1 / HT-1250, installed in 2001, using waste heat from thermal oxidizer (TO-1 / TO-1200) in combination with a natural gas-fired burner rated at 7.50 million British thermal units per hour, exhausting to heater HT 1350 or to Stack S-4 depending on heat balance, capacity: 18,000 gallons of asphalt per hour.

Coating Operations

(i) One (1) natural gas-fired coating asphalt heater (Borne Heater), identified as HT-1040, installed in 1999, exhausting to Stack S-2, heat input capacity: 7.50 million British thermal units per hour.

(j) One (1) natural gas-fired HEATEC hot oil heater, identified as HEATEC-1, with a maximum heat input capacity of 15.0 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, exhausting to stack HEATEC-1.

(k) One (1) natural gas-fired HEATEC hot oil heater, identified as HEATEC-2, with a maximum heat input capacity of 15.0 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, exhausting to stack HEATEC-2.

~~(j) One (1) natural gas-fired hot oil heater (Fulton Heater), identified as HT-9020, installed in 1999, exhausting to Stack S-7, heat input capacity: 6.00 million British thermal units per hour.~~

Heat Load Servicing Operation

~~(o) One (1) natural gas-fired hot oil heater, identified as BO-1 / HT-1300, installed in 1999, utilizing exhaust gas from thermal oxidizer (TO-1 / TO-1200) as primary form of energy, heat input capacity: 10.5 million British thermal units per hour.~~

~~(q) One (1) natural gas-fired tracing steam generator (Caine waste heat boiler), identified as BO-2 / HT-1350, installed in 1999, exhausting to Stack S-5, heat input capacity: 10.5 million British thermal units per hour. (Under NSPS 40 CFR 60 Subpart Dc, this facility is a small industrial - commercial - institutional steam generating unit.)~~

(p) One (1) natural gas-fired Cleaver-Brooks boiler, identified as CB-1, with a maximum heat input capacity of 12.6 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, exhausting to stack S-CB-1. [40 CFR 60, Subpart Dc]

(~~r~~**q**) One (1) natural gas-fired tracing steam generator (Williams/Davis boiler), identified as HO-2 / HT-1355, installed in 1999, exhausting to Stack S-9, capacity: 12.6 million British thermal units per hour. (Under NSPS 40 CFR 60 Subpart Dc, this facility is a small industrial - commercial - institutional steam generating unit.)

~~Insignificant Activities~~

~~(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour, consisting of the following:~~

~~(1) One (1) natural gas-fired space heater, identified as HT-9240, installed in 1945, exhausting to Stack S-10, heat input capacity: 4.60 million British thermal units per hour.~~

~~(2) One (1) natural gas-fired space heater, identified as HT-9230, installed in 1945, exhausting to Stack S-11, heat input capacity: 4.30 million British thermal units per hour.~~

~~(3) One (1) natural gas-fired space heater, identified as HT-9220, installed in 1945, exhausting to Stack S-12, heat input capacity: 3.10 million British thermal units per hour.~~

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

Modification No. 51:

Natural Gas Usage Limitation
The applicant has accepted limitations on VOC emissions from the blowing stills and the shingle machine to reduce VOC emissions below 100 TPY. Therefore, original Condition D.2.1 is no longer needed. The condition removed is shown below:

~~D.2.1 Natural Gas Usage Limitation [326 IAC 2-8-4] [326 IAC 2-2]~~

~~(a) The total natural gas usage from the source-wide natural gas-fired combustion units at this source, excluding the thermal oxidizer (TO-1 / TO-1200), shall be less than 470 million cubic feet per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~(b) CO emissions from the source-wide natural gas-fired combustion units at this source, excluding the thermal oxidizer (TO-1 / TO-1200), shall not exceed 84.0 pounds per million cubic feet of natural gas combusted.~~

~~(c) Compliance with these limitations in combination with the limitation in Condition D.1.2(b) shall ensure that VOC and CO emissions from the entire source are less than one hundred (100) tons per year, each, and shall render the requirements of 326 IAC 2-7 (Part 70 Permit), and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.~~

Modification No. 52:

326 IAC 6-2 Requirements
IDEM, OAQ added the Cleaver-Brooks boiler and the HEATEC hot oil heater to the list of emission units subject to 326 IAC 6-2-4. The condition was renumbered. The revised condition is shown below:

D.2.~~2~~**1** Particulate [326 IAC 6-2-4]

~~Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating) the PM emissions from the two (2) boilers, identified as BO-2 / HT-1350 and HO-2 / HT-1355, rated at 23.1 million British thermal units per hour heat input, total, shall be limited to 0.482 pounds per million~~

~~British thermal units heat input.~~
Pursuant to 326 IAC 6-2-4, particulate emissions from indirect heating facilities constructed after September 21, 1983 shall be limited by the following equation:

$$P_t = 1.09 \ / \ Q^{0.26}$$

Where: P_t **= Pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input.**
Q **= Total source maximum operating capacity rating in MMBtu/hr heat input.**

Individual emission unit PM limitations were calculated with the equation above and are shown in the table below:

Emission Unit	ID	Heat Input (MMBtu/hr)	Date Constructed	Q (MMBtu/hr)	PM Limit (lb/MMBtu)
Borne Heater	HT-1040	7.5	1999	20.1	0.50
Williams-Davis Boiler	HT-1355	12.6	1999		
Asphalt Heater	HT-1041	3.0	2001	30.6	0.45
Flux Heater	FAH-1	7.5	2001		
Hot Oil Heater	HEATEC-1	15.0	2014	73.2	0.36
Hot Oil Heater	HEATEC-2	15.0	2014		
Cleaver-Brooks Boiler	CB-1	12.6	2014		

Modification No. 53:

Record Keeping / Reporting Requirements for Boilers and Process Heaters
IDEM, OAQ removed the limit on source-wide natural gas usage. Therefore, the obligation to keep records and report natural gas usage are no longer required. The condition removed is shown below:

~~D.2.3 Record Keeping Requirements~~

~~(a) To document compliance with Condition D.2.1, the Permittee shall maintain monthly records of the total natural gas fuel usage from all of the source-wide natural gas-fired combustion units except for the thermal oxidizer (TO-1 / TO-1200).~~

~~(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.~~

~~D.2.4 Reporting Requirements~~

~~A quarterly summary of the information to document compliance with Condition D.2.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

Modification No. 54:

Updated Emission Unit Descriptions

IDEM, OAQ no longer includes the text of NSPS/NESHAP subparts in a Section D Conditions. The requirements of 40 CFR 60, Subpart Dc were removed from Section D.2 and moved to Section E.5.

~~New Source Performance Standards (NSPS) Requirements [326 IAC 2-8-4]~~

~~D.2.5 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 facilities described in this section except when otherwise specified in 40 CFR Part 60, Subpart Dc.~~

~~D.2.6 NSPS Dc Requirements [40 CFR Part 60, Subpart Dc]~~

~~Pursuant to 40 CFR Part 60, Subpart Dc, the Permittee shall comply with the provisions of 40 CFR Part 60.40c for the two (2) boilers, identified as BO-2 / HT-1350 and HO-2 / HT-1355, 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_2) 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.~~

~~§ 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 §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_2) 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_2 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_2 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_2 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_2.~~

~~*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.~~

~~*§ 60.48c 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.~~

~~(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.~~

~~(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.~~

Section E Modifications

Modification No. 55:

40 CFR 63, Subpart AAAAAAA
IDEM, OAQ added Section E.1 to incorporate the requirements of NESHAP Subpart AAAAAAA. The section added is shown below:

SECTION E.1 FACILITY OPERATION CONDITIONS

Emissions Unit Description:

(f) Two (2) asphalt blow stills (asphalt conditioners), identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B, each installed in 1999, each exhausting to thermal oxidizer (TO-1 / TO-1200) for VOC control, capacity: 30,000 pounds of asphalt per hour, each. [40 CFR 60, Subpart UU] [40 CFR 63, Subpart AAAAAAA]

(m) One (1) shingle machine, identified as SM-1 / RL1-01, installed in 1999, (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 63, Subpart AAAAAAA] consisting of the following:

(1) One (1) coating dip tank, containing asphalt and limestone filler, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 25 tons of asphalt per hour; and

(2) One (1) aggregate (limestone, sand, granules, etc.) and adhesives application, equipped with a baghouse (BHA Collector) for particulate control, identified as Dust Collector V-10 / DC-9210, exhausting to Stack V-14, capacity: 50.0 tons of aggregate per hour.

(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 [326 IAC 20]

E.1.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 63, Subpart A] [326 IAC 20-1]

Pursuant to 40 CFR 63.11565, the Permittee shall comply with the provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, as specified in Table 5 of 40 CFR 63, Subpart AAAAAAA, in accordance with the schedule in 40 CFR 63, Subpart AAAAAAA.

E.1.2 National Emission Standards for Hazardous Air Pollutants for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing [40 CFR 63, Subpart AAAAAAA]

The Permittee shall comply with the following provisions of 40 CFR 63, Subpart AAAAAAA, included as Attachment A of this permit:

(a) The asphalt blowing stills, identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B shall comply with the following portions of Subpart AAAAAAA:

(1) 40 CFR 63.11559(a), (b)(1), and (f);
(2) 40 CFR 63.11560(a);
(3) 40 CFR 63.11561(a) and (c);
(4) 40 CFR 63.11562(a), (d), (g), (i)(1), (i)(2)(i), (i)(3) and (i)(4);
(5) 40 CFR 63.11563(a), (g), (h), and (i);
(6) 40 CFR 63.11564(a)(1), (a)(2), (a)(4), (a)(5), and (a)(6);
(7) 40 CFR 63.11564(b), and (c);
(9) 40 CFR 63.11565;
(10) 40 CFR 63.11566;
(11) 40 CFR 63.11567; and
(12) Table 1, 3 and 4.

(b) The shingle machine identified as SM-1 / RL1-01 shall comply with the following portions of Subpart AAAAAAA:

(1) 40 CFR 63.11559(a), (b)(2), (f);
(2) 40 CFR 63.11560(a);
(3) 40 CFR 63.11561(b), and (c);
(4) 40 CFR 63.11562(c), (d), (e), (f), (g), (i)(2)(ii), and (i)(4);
(5) 40 CFR 63.11563(a), (g), (h), and (i);
(6) 40 CFR 63.11564(a)(1), (a)(2), (a)(4), (a)(5), (a)(6);
(7) 40 CFR 63.11564(b), and (c);
(8) 40 CFR 63.11565;
(9) 40 CFR 63.11566;
(10) 40 CFR 63.11567; and
(11) Table 2, 3, and 4.

Modification No. 56:

40 CFR 63, Subpart ZZZZ

IDEM, OAQ added Section E.2 to incorporate the requirements of NESHAP Subpart ZZZZ. The section added is shown below:

SECTION E.2 FACILITY OPERATION CONDITIONS

Emissions Unit Description:

Insignificant Activities:

(k) One (1) four stroke lean burn (4SLB) diesel-fired emergency generator, with a maximum power output of 750 brake HP, approved in 2014 for construction, engine was manufactured in 2014, displacement is less than 10 liters per cylinder, emissions are uncontrolled, no stack. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ]

(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 [326 IAC 20]

E.2.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants (NESHAP) [40 CFR 63, Subpart A] [326 IAC 20-1]

Pursuant to 40 CFR 63.6665, the Permittee shall comply with the provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, as specified in Table 8 of 40 CFR 63, Subpart ZZZZ, in accordance with the schedule in 40 CFR 63, Subpart ZZZZ.

E.2.2 National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR 63, Subpart ZZZZ] [326 IAC 20-82]

The Permittee shall comply with the following provisions of 40 CFR 63, Subpart ZZZZ, which is incorporated by reference as 326 IAC 20-82 (included as Attachment B of this permit), for the diesel-fired emergency generator upon startup of the affected source:

(1) 40 CFR 63.6580;
(2) 40 CFR 63.6585(a) and (c); and
(3) 40 CFR 63.6590(a)(2)(iii) and (c)(1).

Modification No. 57:

40 CFR 60, Subpart UU

IDEM, OAQ added section E.3 to incorporate the requirements of NSPS Subpart UU. The section added is shown below:

SECTION E.3 FACILITY OPERATION CONDITIONS

Emissions Unit Description:

Asphalt Receiving

(a) Two (2) asphalt receiving tanks, identified as Tank 1 (FST-1 / TK-1110A) and Tank 2 (FST-2 / TK-1110B), each installed in 1999, each venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 240,000 gallons of asphalt, each. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(b) **One (1) asphalt receiving/blend storage tank, identified as Tank 3 (TK-1120), installed in 2003, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 100,000 gallons of blended asphalt. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]**

Blowstill Operations

(d) **One (1) flux asphalt heating operation, identified as FAH-1 / HT-1250, installed in 2001, using waste heat from thermal oxidizer (TO-1 / TO-1200) in combination with a natural gas-fired burner rated at 7.50 million British thermal units per hour, exhausting to heater HT 1350 or to Stack S-4 depending on heat balance, capacity: 18,000 gallons of asphalt per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)**

(e) **One (1) heated asphalt flux storage tank, identified as TK-1010, installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 80,000 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]**

(f) **Two (2) asphalt blow stills (asphalt conditioners), identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B, each installed in 1999, each exhausting to thermal oxidizer (TO-1 / TO-1200) for VOC control, capacity: 30,000 pounds of asphalt per hour, each. [40 CFR 60, Subpart UU] [40 CFR 63, Subpart AAAAAAA]**

(g) **One (1) knock out storage tank, identified as TK-1210, installed in 2002, using water as a conditioning liquid, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 47,000 gallons of water/conditioner. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]**

Coating Operations

(h) **Two (2) coating asphalt storage tanks, identified as West CST 1/TK-1030A, and East CST 2/TK-1030B, each installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity 38,000 gallons of coating asphalt. [40 CFR 60, Subpart UU]**

(l) **Asphalt and filler mix storage tank (Surge Tank), identified as TK-2100, installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 4,600 gallons of asphalt and filler mix. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)**

(m) **One (1) shingle machine, identified as SM-1 / RL1-01, installed in 1999, (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 63, Subpart AAAAAAA] consisting of the following:**

> **(1)** **One (1) coating dip tank, containing asphalt and limestone filler, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 25 tons of asphalt per hour; and**

(2) One (1) aggregate (limestone, sand, granules, etc.) and adhesives application, equipped with a baghouse (BHA Collector) for particulate control, identified as Dust Collector V-10 / DC-9210, exhausting to Stack V-14, capacity: 50.0 tons of aggregate per hour.

(n) One (1) polymer storage tank TK 2410, with a volume of 10,000 gallons venting inside the building. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(o) One (1) rycolube storage tank TK 2500, with a volume of 10,000 gallons venting inside the building. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

Thermal Oxidizer

(r) One (1) natural gas-fired thermal oxidizer, identified as TO-1 / TO-1200, installed in 1999 and approved in 2014 for modification, equipped with low NO_X burners, exhausting to Stack S-1, heat input capacity: 14.0 million British thermal units per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 63, Subpart AAAAAAA]

Raw Material Storage and Handling System

(s) Six (6) storage silos, identified as LFS-1 through LFS-6 / SS-8910, SS-8920, SS-8930, SS-8940, SS-8950, SS-8960, each installed in 1999, equipped with six (6) bin vent filters, identified as V-1 / DC-8910 through V-6 / DC-8960, for particulate control, venting to Stacks V-1 through V-6, capacity: 300 tons of limestone filler each with a throughput of 40,000 pounds of limestone per hour each. [40 CFR 60, Subpart UU]

(t) One (1) limestone (cold filler bin) supply hopper, identified as CFH-1 / Tank TK-2000, installed in 1999, equipped with a pleated cartridge, identified as V-7 / DC-2000, for particulate control, venting inside the building, capacity: 50 tons of limestone cold filler at a throughput of 160,000 pounds of limestone cold filler per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(u) One (1) limestone (filler heater) fluid bed heater, identified as HT-2010, installed in 1999, equipped with a bin vent filter, identified as V-15 / DC-2095, for particulate control, venting inside the building, capacity: 70 tons of limestone cold filler with a throughput of 116,000 pounds of hot filler per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(v) One (1) limestone (hot filler bin) supply hopper, identified as TK-2060, installed in 1999, equipped with a bin vent filter, identified as V-14 / DC-2060, for particulate control, venting inside the building, capacity: 70 tons of limestone cold filler with a throughput of 116,000 pounds of hot filler per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)

(w) Two (2) storage silos, identified as SS-1 and SS-2 / SS-8210 and SS-8220, each installed in 1999, equipped with two (2) bin vent filters, identified as V-8 / DC-8210 and V-9 / DC-8220, for particulate control, venting inside the building, capacity: 125 tons of sand each with a throughput of 40,000 pounds of sand per hour each. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.)

(x) **One (1) sand receiving bin, identified as TK-8645, installed in 1999, equipped with a bin vent filter, identified as V-11 / DC-8645, for particulate control, exhausting inside the building, capacity: 50 tons of sand with a throughput of 40,000 pounds of sand per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)**

Laminate Adhesive System

(y) **One (1) coating storage tank, identified as TK-2420, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 14,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)**

(z) **One (1) laminate adhesive mix tank, identified as TK-2430, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)**

(aa) **One (1) laminate adhesive run tank, identified as TK-2470, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 1,400 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)**

(bb) **One (1) coating storage tank, identified as TK-2310, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 10,000 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)**

(cc) **One (1) mix storage tank, identified as TK-2320, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)**

(dd) **One (1) limestone filler transfer process, installed in 2000, equipped with a two (2) bin vent filters, identified as V-12 / DC-2435 and V-13 / DC-2330, for particulate control, venting inside the building, capacity: 160,000 pounds of limestone filler per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)**

(ee) **One (1) self seal tank, identified as TK 40, installed in 2000, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 3,500 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)**

(ff) **One (1) self-seal dip application process venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 750 pounds of self seal per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)**

(gg) **One (1) laminate adhesive dip application venting to a coalescing filter, identified as CECO-1 for VOC control capacity: 2,850 pounds of laminate adhesive per hour. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.)**

Granules

(hh) Twenty (20) storage silos, identified as SS-8010 through SS-8200, installed in 1999, capacity: 200 tons of granules each with a throughput of 80,000 pounds of granules per hour total. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.)

(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 [326 IAC 12]

E.3.1 General Provisions Relating to New Source Performance Standards (NSPS) [40 CFR 60, Subpart A] [326 IAC 12-1]

The provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the emission units listed in the description box above, except when otherwise specified in 40 CFR 60, Subpart UU.

E.3.2 Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture (NSPS) [40 CFR 60, Subpart UU] [326 IAC 12]

The Permittee shall comply with the following provisions of 40 CFR 60, Subpart UU (Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture (included as Attachment C of this permit)), which is incorporated by reference as 326 IAC 12, for the emission units listed in the emission unit description box above, as follows:

(a) The shingle machine, identified as SM-1 / RL1-01 is subject to the following portions of Subpart UU:

(1) 40 CFR 60.470;
(2) 40 CFR 60.471;
(3) 40 CFR 60.472(a);
(4) 40 CFR 60.474(a); and
(5) 40 CFR 60.474(b), and (c)(1), (c)(2), c(3), (c)(5) and (d).

(b) The blowing stills identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B are subject to the following portions of Subpart UU:

(1) 40 CFR 60.470;
(2) 40 CFR 60.471;
(3) 40 CFR 60.472(b)(3) and (b)(5); and
(4) 40 CFR 60.474(b), (c)(1), (c)(2), (c)(4), and (c)(5).

(c) The asphalt storage tanks identified as FST-1, FST-2, TK-1120, FAH-1, TK-1010, TK-1210, West CST 1/TK-1030A, East CST 2/TK-1030B, TK-2100, TK-2420, TK-2430, TK-2470, TK-2310, and TK-2320 are subject to the following portions of Subpart UU:

(1) 40 CFR 60.470;
(2) 40 CFR 60.471;
(3) 40 CFR 60.472(c); and
(4) 40 CFR 60.474(b).

(d) The mineral handling and storage facilities identified as LFS-1 through LFS-6, TK-2000, HT-2010, TK-2060, SS-1, SS-2, TK-8645, limestone filler transfer process, and granule storage silos SS-8010 through SS-8200 are subject to the following portions of Subpart UU:

(1) 40 CFR 60.470;
(2) 40 CFR 60.471; and
(3) 40 CFR 60.472(d).

Modification No. 58:

40 CFR 60, Subpart IIII
IDEM, OAQ added Section E.4 to include the requirements of NSPS Subpart IIII. The section added is shown below:

SECTION E.4 FACILITY OPERATION CONDITIONS

Emissions Unit Description:

Insignificant Activities:

(k) One (1) four stroke lean burn (4SLB) diesel-fired emergency generator, with a maximum power output of 750 brake HP, approved in 2014 for construction, engine was manufactured in 2014, displacement is less than 10 liters per cylinder, emissions are uncontrolled, no stack. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ]

(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 [326 IAC 12]

E.4.1 General Provisions Relating to New Source Performance Standards (NSPS) [40 CFR 60, Subpart A] [326 IAC 12-1]

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

E.4.2 Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (NSPS) [40 CFR 60, Subpart IIII] [326 IAC 12]

The Permittee shall comply with the following provisions of 40 CFR 60, Subpart IIII (Stationary Compression Ignition Internal Combustion Engines (included as Attachment D of this permit)), which is incorporated by reference as 326 IAC 12, for the emergency generator as follows:

(1) 40 CFR 63.6580;
(2) 40 CFR 63.6585(a) and (c); and
(3) 40 CFR 63.6590(a)(2)(iii) and (c)

Modification No. 59:

40 CFR 60, Subpart Dc

IDEM, OAQ added Section E.5 to include the requirements of NSPS Subpart Dc. The section added is shown below:

SECTION E.5 FACILITY OPERATION CONDITIONS

Emissions Unit Description: **Heat Load Servicing Operation** **(p) One (1) natural gas-fired Cleaver-Brooks boiler, identified as CB-1, with a maximum heat input capacity of 12.6 MMBtu/hr, approved in 2014 for construction, emissions are uncontrolled, exhausting to stack S-CB-1. [40 CFR 60, Subpart Dc]** **(q) One (1) natural gas-fired tracing steam generator (Williams/Davis boiler), identified as HO-2 / HT-1355, installed in 1999, exhausting to Stack S-9, capacity: 12.6 million British thermal units per hour. (Under NSPS 40 CFR 60 Subpart Dc, this facility is a small industrial - commercial - institutional steam generating unit.)** **(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 [326 IAC 12]

E.5.1 General Provisions Relating to New Source Performance Standards (NSPS) [40 CFR 60, Subpart A] [326 IAC 12-1]

The provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the Cleaver-Brooks and Williams/Davis boilers, except when otherwise specified in 40 CFR 60, Subpart Dc.

E.5.2 Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (NSPS) [40 CFR 60, Subpart Dc] [326 IAC 12]

The Permittee shall comply with the following provisions of 40 CFR 60, Subpart Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (included as Attachment E of this permit)), which is incorporated by reference as 326 IAC 12, for the Cleaver-Brooks boiler (CB-1) and the William/Davis boiler (HT-1355), as follows:

(1) 40 CFR 60.40c(a);
(2) 40 CFR 60.41c;
(3) 40 CFR 60.48c(a);
(4) 40 CFR 60.48c(f)(4);
(5) 40 CFR 60.48c(g)(1); and
(6) 40 CFR 60.48c(g)(2).

Modification No. 60:

40 CFR 60, Subpart Kb
IDEM, OAQ added Section E.6 to include the requirements of NSPS Subpart Kb. The section added is shown below:

SECTION E.6 FACILITY OPERATION CONDITIONS

Emissions Unit Description:

Asphalt Receiving

(a) Two (2) asphalt receiving tanks, identified as Tank 1 (FST-1 / TK-1110A) and Tank 2 (FST-2 / TK-1110B), each installed in 1999, each venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 240,000 gallons of asphalt, each. (Under NSPS 40 CFR 60 Subpart UU, these facilities are part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(b) One (1) asphalt receiving/blend storage tank, identified as Tank 3 (TK-1120), installed in 2003, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 100,000 gallons of blended asphalt. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

Blowstill Operations

(e) One (1) heated asphalt flux storage tank, identified as TK-1010, installed in 1999, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 80,000 gallons. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(g) One (1) knock out storage tank, identified as TK-1210, installed in 2002, using water as a conditioning liquid, venting to a coalescing filter, identified as CECO-1 for VOC control, capacity: 47,000 gallons of water/conditioner. (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 60, Subpart Kb]

(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 [326 IAC 12]

E.6.1 General Provisions Relating to New Source Performance Standards (NSPS) [40 CFR 60, Subpart A] [326 IAC 12-1]

The provisions of 40 CFR 60, Subpart A – General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to TK-1110A, TK-1110B, TK-1120, TK-1010, and TK-1210, except when otherwise specified in 40 CFR 60, Subpart Kb.

E.6.2 Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 (NSPS) [40 CFR 60, Subpart Kb] [326 IAC 12]

The Permittee shall comply with the following provisions of 40 CFR 60, Subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels (Including

Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 (included as Attachment F of this permit)), which is incorporated by reference as 326 IAC 12, for TK-1110A, TK-1110B, TK-1120, TK-1010, and TK-1210, as follows:

(1) 40 CFR 60.110b(a);
(2) 40 CFR 60.111b;
(3) 40 CFR 60.116b(a);
(4) 40 CFR 60.116b(b);
(5) 40 CFR 60.116b(d);
(6) 40 CFR 60.116b(e)(1) and (e)(3); and
(7) 40 CFR 60.116b.

Reporting Forms

Modification No. 61:

Reporting Form Mailing Address
IDEM, OAQ is revising the reporting forms by removing the source mailing address to minimize future changes to the permit. The certification statement has been removed from each permit form. The underlying permit condition now states whether a certification by the authorized individual is required. The reporting form for natural gas usage was removed because the limit was removed. The reporting form for total VOC was removed and replaced with a version reflecting the current permit limits. Typographical errors were fixed and some forms were clarified. Revisions are shown below:

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

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION

Source Name: Building Materials Manufacturing Corporation
Source Address: 505 North Roeske Avenue, Michigan City, IN 46360
~~Mailing Address: 505 North Roeske Avenue, Michigan City, IN 46360~~
FESOP No.: F091-18358-00051

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: Building Materials Manufacturing Corporation
Source Address: 505 North Roeske Avenue, Michigan City, IN 46360
~~Mailing Address: 505 North Roeske Avenue, Michigan City, IN 46360~~
FESOP No.: F 091-18358-00051

This form consists of 2 pages — Page 1 of 2

☐ This is an emergency as defined in 326 IAC 2-7-1(12)

- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-1078, ask for Compliance **Section**~~and Enforcement Branch~~); and
- The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16

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

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

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

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: ____

Title / Position: ____

Date: ____

Phone: ____

~~A certification is not required for this report.~~

~~INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT~~
~~OFFICE OF AIR QUALITY~~
~~Compliance and Enforcement Branch~~

~~FESOP Quarterly Report~~

~~Source Name: Building Materials Manufacturing Corporation~~
~~Source Address: 505 North Roeske Avenue, Michigan City, IN 46360~~
~~Mailing Address: 505 North Roeske Avenue, Michigan City, IN 46360~~
~~FESOP No.: F 091-18358-00051~~
~~Facilities: All facilities vented to thermal oxidizer (TO-1 / TO-1200)~~
~~Parameter: Total VOC emissions~~
~~Limit: Not to exceed 98.6 tons per twelve (12) consecutive month period with compliance determined at the end of each month [326 IAC 2-8-4 and 326 IAC 2-2]~~

~~Not to exceed 98.9 tons per twelve (12) consecutive month period with compliance determined at the end of each month [326 IAC 8-1-6] based on the following equation:~~

~~VOC emissions (tons per twelve (12) consecutive month period) = Total input of VOC to all facilities vented to TO-1 / TO-1200 * (1 - overall control efficiency % of TO-1 / TO-1200)~~

~~YEAR:~~ ______________________

~~Month~~	~~Total VOC Emissions (tons)~~	~~Total VOC Emissions (tons)~~	~~Total VOC Emissions (tons)~~
	~~This Month~~	~~Previous 11 Months~~	~~12 Month Total~~

☐ ~~No deviation occurred in this month.~~

☐ ~~Deviation/s occurred in this month.~~
~~Deviation has been reported on~~ ______________________

~~Submitted by:~~ ______________________
~~Title/Position:~~ ______________________
~~Signature:~~ ______________________
~~Date:~~ ______________________
~~Phone:~~ ______________________

~~Attach a signed certification to complete this report.~~

~~INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT~~
~~OFFICE OF AIR QUALITY~~
~~Compliance and Enforcement Branch~~

~~FESOP Quarterly Report~~

~~Source Name:~~ ~~Building Materials Manufacturing Corporation~~
~~Source Address:~~ ~~505 North Roeske Avenue, Michigan City, IN 46360~~
~~Mailing Address:~~ ~~505 North Roeske Avenue, Michigan City, IN 46360~~
~~FESOP No.:~~ ~~F 091-18358-00051~~
~~Facilities:~~ ~~Source-wide natural gas combustion units except thermal oxidizer (TO-1 / TO-1200)~~
~~Parameter:~~ ~~Natural Gas Usage~~
~~Limit:~~ ~~Not to exceed a total of 470 million cubic feet per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~YEAR:~~ ____________________

~~Month~~	~~Natural Gas Usage (mmcf)~~	~~Natural Gas Usage (mmcf)~~	~~Natural Gas Usage (mmcf)~~
	~~This Month~~	~~Previous 11 Months~~	~~12 Month Total~~

☐ ~~No deviation occurred in this month.~~

☐ ~~Deviation/s occurred in this month.~~
~~Deviation has been reported on~~ ____________________

~~Submitted by:~~ ____________________
~~Title/Position:~~ ____________________
~~Signature:~~ ____________________
~~Date:~~ ____________________
~~Phone:~~ ____________________

~~Attach a signed certification to complete this report.~~

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

FESOP Quarterly Report

Source Name: Building Materials Manufacturing Corporation
Source Address: 505 North Roeske Avenue, Michigan City, Indiana 46360
FESOP Permit No.: F091-18358-00051
Facility: Thermal Oxidizer
Parameter: VOC
Limit: 16.65 tons VOC per twelve (12) consecutive month period.

YEAR:_____________________

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

☐ **No deviation occurred in this quarter.**

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

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

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

FESOP Quarterly Report

Source Name: Building Materials Manufacturing Corporation
Source Address: 505 North Roeske Avenue, Michigan City, Indiana 46360
FESOP Permit No.: F091-18358-00051
Facility: Coalescing Filter
Parameter: VOC
Limit: 51.67 tons per twelve (12) consecutive month period.

YEAR:______________________

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

☐ **No deviation occurred in this quarter.**

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

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

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: Building Materials Manufacturing Corporation
Source Address: 505 North Roeske Avenue, Michigan City, IN 46360
~~Mailing Address: 505 North Roeske Avenue, Michigan City, IN 46360~~
FESOP No.: F 091-18358-00051

Months: __________ to __________ Year: ____________

Page 1 of 2

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 **"**~~A~~No deviations occurred this reporting period~~@~~**."**
☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.
☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD
Permit Requirement (specify permit condition #)
Date of Deviation: Duration of Deviation:
Number of Deviations:
Probable Cause of Deviation:
Response Steps Taken:
Permit Requirement (specify permit condition #)
Date of Deviation: Duration of Deviation:
Number of Deviations:
Probable Cause of Deviation:
Response Steps Taken:

Page 2 of 2

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

Form Completed by: ______________________________

Title / Position: ______________________________

Date: ______________________________

Phone: ______________________________

~~A certification is required for this report.~~

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 March 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. 091-32963-00051. The staff recommends to the Commissioner that this FESOP (Minor or Significant) Permit Revision be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to David Matousek 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) 232-8253 or toll free at 1-800-451-6027 extension 2-8253.

(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

Appendix A to the Technical Support Document (TSD)
Potential to Emit after Issuance Summary

Company Name: Building Materials Manufacturing Corporation
Address: 505 N. Roeske Avenue, Michigan City, Indiana 46360
Permit Number: SPR 091-32963-00051
Reviewer: David Matousek
Date: October 17, 2013

Uncontrolled Potential to Emit of the Entire Source (TPY)

Process / Emission Unit	PM	PM_{10}	Direct $PM_{2.5}$	SO_2	VOC	CO	NO_x	GHG (CO_2e)	Total HAP	Hexane
Material Handling	171.17	28.79	28.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Blow Still	2.56	2.56	2.56	22.21	106.43	17.74	0.00	8,169	1.90E-03	0.00
West Blow Still	2.56	2.56	2.56	22.21	106.43	17.74	0.00	8,169	1.90E-03	0.00
Thermal Oxidizer	0.11	0.46	0.46	0.04	6.01	0.33	5.05	(a)	0.12	0.11
Existing Combustion	0.35	1.39	1.39	0.11	1.01	15.37	18.29	21,849	0.35	0.33
New Space Heaters	0.05	0.18	0.18	0.01	2.40	0.13	2.02	2,872	0.04	0.04
Emergency Generator	0.13	0.13	0.13	0.20	0.12	1.12	4.20	215	1.96E-03	0.00
Heatec-1	0.12	0.49	0.49	0.04	6.44	0.35	5.41	7,693	0.13	0.12
Heatec-2	0.12	0.49	0.49	0.04	6.44	0.35	5.41	7,693	0.13	0.12
Cleaver Brooks Boiler	0.10	0.41	0.41	0.03	5.41	0.30	4.54	6,462	0.10	0.10
Truck Unloading	5.98	5.98	5.98	0.00	5.98	0.00	0.00	0	0.00	0.00
Shingle Machine	60.23	23.00	23.00	0.82	85.61	1.64	0.00	0	0.12	0.00
Asphalt Storage Tanks	11.41	11.41	11.41	0.00	40.47	3.92	0.00	0	0.00	0.00
PTE of Entire Source	**254.89**	**77.85**	**77.85**	**45.70**	**372.76**	**58.99**	**44.92**	**63,122**	**1.00**	**0.82**
Title V Major Source Thresholds	**NA**	**100**	**100**	**100**	**100**	**100**	**100**	**100,000**	**25**	**10**

(a) Greenhouse gas emissions from the thermal oxidizer are accounted for in the blowstill emissions

(Continued on Next Page)

Appendix A to the Technical Support Document (TSD)
Potential to Emit after Issuance Summary
(Continued from Previous Page)

Controlled Potential to Emit of the Entire Source (TPY)										
Process / Emission Unit	**PM**	**PM_{10}**	**Direct $PM_{2.5}$**	**SO_2**	**VOC**	**CO**	**NO_x**	**GHG (CO_2e)**	**Total HAP**	**Hexane**
Material Handling	8.47	1.65	1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00
East Blow Still	2.56	2.56	2.56	22.21	5.32	17.74	0.00	8,169	1.90E-03	0.00
West Blow Still	2.56	2.56	2.56	22.21	5.32	17.74	0.00	8,169	1.90E-03	0.00
Thermal Oxidizer	0.11	0.46	0.46	0.04	6.01	0.33	5.05	(a)	0.12	0.11
Existing Combustion	0.35	1.39	1.39	0.11	1.01	15.37	18.29	21,849	0.35	0.33
New Space Heaters	0.05	0.18	0.18	0.01	2.40	0.13	2.02	2,872	0.04	0.04
Emergency Generator	0.13	0.13	0.13	0.20	0.12	1.12	4.20	215	1.96E-03	0.00
Heatec-1	0.12	0.49	0.49	0.04	6.44	0.35	5.41	7,693	0.13	0.12
Heatec-2	0.12	0.49	0.49	0.04	6.44	0.35	5.41	7,693	0.13	0.12
Cleaver Brooks Boiler	0.10	0.41	0.41	0.03	5.41	0.30	4.54	6,462	0.10	0.10
Truck Unloading	0.30	0.30	0.30	0.00	0.30	0.00	0.00	0	0.00	0.00
Shingle Machine	1.70	0.95	0.95	0.82	5.22	1.64	0.00	0	6.08E-03	0.00
Asphalt Storage Tanks	0.57	0.57	0.57	0.00	2.02	3.92	0.00	0	0.00	0.00
PTE of Entire Source	**17.15**	**12.15**	**12.15**	**45.70**	**46.01**	**58.99**	**44.92**	**63,122**	**0.88**	**0.82**
Title V Major Source Thresholds	**NA**	**100**	**100**	**100**	**100**	**100**	**100**	**100,000**	**25**	**10**

(a) Greenhouse gas emissions from the thermal oxidizer are accounted for in the blowstill emissions

(Continued on Next Page)

Appendix A to the Technical Support Document (TSD)
Potential to Emit after Issuance Summary
(Continued from Previous Page)

<table>
<tr><th colspan="11">Limited Potential to Emit of the Entire Source (TPY)</th></tr>
<tr><th>Process / Emission Unit</th><th>PM</th><th>PM_{10}</th><th>Direct $PM_{2.5}$</th><th>SO_2</th><th>VOC</th><th>CO</th><th>NO_x</th><th>GHG (CO_2e)</th><th>Total HAP</th><th>Hexane</th></tr>
<tr><td>Material Handling</td><td>171.17</td><td>28.79</td><td>28.79</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td></tr>
<tr><td>East Blow Still</td><td>2.56</td><td>2.56</td><td>2.56</td><td>22.21</td><td rowspan="3">16.65</td><td>17.74</td><td>0.00</td><td>8,169</td><td>1.90E-03</td><td>0.00</td></tr>
<tr><td>West Blow Still</td><td>2.56</td><td>2.56</td><td>2.56</td><td>22.21</td><td>17.74</td><td>0.00</td><td>8,169</td><td>1.90E-03</td><td>0.00</td></tr>
<tr><td>Thermal Oxidizer</td><td>0.11</td><td>0.46</td><td>0.46</td><td>0.04</td><td>0.33</td><td>5.05</td><td>(a)</td><td>0.12</td><td>0.11</td></tr>
<tr><td>Existing Combustion</td><td>0.35</td><td>1.39</td><td>1.39</td><td>0.11</td><td>1.01</td><td>15.37</td><td>18.29</td><td>21,849</td><td>0.35</td><td>0.33</td></tr>
<tr><td>New Space Heaters</td><td>0.05</td><td>0.18</td><td>0.18</td><td>0.01</td><td>2.40</td><td>0.13</td><td>2.02</td><td>2,872</td><td>0.04</td><td>0.04</td></tr>
<tr><td>Emergency Generator</td><td>0.13</td><td>0.13</td><td>0.13</td><td>0.20</td><td>0.12</td><td>1.12</td><td>4.20</td><td>215</td><td>1.96E-03</td><td>0.00</td></tr>
<tr><td>Heatec-1</td><td>0.12</td><td>0.49</td><td>0.49</td><td>0.04</td><td>6.44</td><td>0.35</td><td>5.41</td><td>7,693</td><td>0.13</td><td>0.12</td></tr>
<tr><td>Heatec-2</td><td>0.12</td><td>0.49</td><td>0.49</td><td>0.04</td><td>6.44</td><td>0.35</td><td>5.41</td><td>7,693</td><td>0.13</td><td>0.12</td></tr>
<tr><td>Cleaver Brooks Boiler</td><td>0.10</td><td>0.41</td><td>0.41</td><td>0.03</td><td>5.41</td><td>0.30</td><td>4.54</td><td>6,462</td><td>0.10</td><td>0.10</td></tr>
<tr><td>Truck Unloading</td><td>5.98</td><td>5.98</td><td>5.98</td><td>0.00</td><td rowspan="3">51.67</td><td>0.00</td><td>0.00</td><td>0</td><td>0.00</td><td>0.00</td></tr>
<tr><td>Shingle Machine</td><td>0.88</td><td>23.00</td><td>23.00</td><td>0.82</td><td>1.64</td><td>0.00</td><td>0</td><td>0.12</td><td>0.00</td></tr>
<tr><td>Asphalt Storage Tanks</td><td>11.41</td><td>11.41</td><td>11.41</td><td>0.00</td><td>3.92</td><td>0.00</td><td>0</td><td>0.00</td><td>0.00</td></tr>
<tr><td>PTE of Entire Source</td><td>195.54</td><td>77.85</td><td>77.85</td><td>45.70</td><td>90.14</td><td>58.99</td><td>44.92</td><td>63,122</td><td>1.00</td><td>0.82</td></tr>
<tr><td>Title V Major Source Thresholds</td><td>NA</td><td>100</td><td>100</td><td>100</td><td>100</td><td>100</td><td>100</td><td>100,000</td><td>25</td><td>10</td></tr>
</table>

(a) Greenhouse gas emissions from the thermal oxidizer are accounted for in the blowstill emissions

Appendix A to the Technical Support Document (TSD)
Potential to Emit Summary - Material Handling Operations

Company Name: Building Materials Manufacturing Corporation
Address: 505 N. Roeske Avenue, Michigan City, Indiana 46360
Permit Number: SPR 091-32963-00051
Reviewer: David Matousek
Date: October 17, 2013

PM Emissions										
Emission Unit ID	**Emission Unit Description**	**Material**	**Throughput (TPH)**	**PM Emission Factor**		**PTE (TPY)**	**Control Efficiency**	**Controlled PTE (TPY)**	**Limited PTE (TPY)**	**Emission Factor Source**
LFS-1 / SS-8910	Limestone Storage Silo	Limestone	20.00	0.20	lb/ton	17.52	98%	0.35	17.52	SCC# 3-05-006-19
LFS-2 / SS-8920	Limestone Storage Silo	Limestone	20.00	0.20	lb/ton	17.52	98%	0.35	17.52	SCC# 3-05-006-19
LFS-3 / SS-8930	Limestone Storage Silo	Limestone	20.00	0.20	lb/ton	17.52	98%	0.35	17.52	SCC# 3-05-006-19
LFS-4 / SS-8940	Limestone Storage Silo	Limestone	20.00	0.20	lb/ton	17.52	98%	0.35	17.52	SCC# 3-05-006-19
LFS-5 / SS-8950	Limestone Storage Silo	Limestone	20.00	0.20	lb/ton	17.52	98%	0.35	17.52	SCC# 3-05-006-19
LFS-6 / SS-8960	Limestone Storage Silo	Limestone	20.00	0.20	lb/ton	17.52	98%	0.35	17.52	SCC# 3-05-006-19
SS-1 / SS-8210	Sand Storage Silo	Sand	20.00	0.20	lb/ton	17.52	98%	0.35	17.52	SCC# 3-05-006-19
SS-2 / SS-8220	Sand Storage Silo	Sand	20.00	0.20	lb/ton	17.52	98%	0.35	17.52	SCC# 3-05-006-19
CFH-1 / TK-2000	Limestone Cold Filler Bin Hopper	Limestone	80.00	0.0069	lb/ton	2.42	98%	0.05	2.42	SCC# 3-05-011-04,-21,-23
HT-2010	Limestone Filler Heater	Limestone	58.00	0.0069	lb/ton	1.75	98%	0.04	1.75	SCC# 3-05-011-04,-21,-23
TK-2060	Limestone Hot Filler Bin Hopper	Limestone	58.00	0.0069	lb/ton	1.75	98%	0.04	1.75	SCC# 3-05-011-04,-21,-23
TK-8645	Sand Receiving Bin	Sand	20.00	0.20	lb/ton	17.52	98%	0.35	17.52	SCC# 3-05-006-19
SS-8010 to SS-8200	Twenty Granule Storage Silos	Granules	40.00	0.0294	lb/ton	5.15	0%	5.15	5.15	SCC# 3-05-025-03
None (DC-2330&2435)	Limestone Filler Transfer	Limestone	80.00	0.0069	lb/ton	2.42	98%	0.05	2.42	SCC# 3-05-011-04,-21,-23
					Total	171.17		8.47	171.17	

(Continued on Next Sheet)

Appendix A to the Technical Support Document (TSD)
Potential to Emit Summary - Material Handling Operations
(Continued from Previous Sheet)

PM10 and PM2.5 Emissions										
Emission Unit ID	**Emission Unit Description**	**Material**	**Throughput (TPH)**	**PM10 and PM2.5 Emission Factors**		**PTE (TPY)**	**Control Efficiency**	**Controlled PTE (TPY)**	**Limited PTE (TPY)**	**Emission Factor Source**
LFS-1 / SS-8910	Limestone Storage Silo	Limestone	20.00	0.03	lb/ton	2.63	98%	0.05	2.63	SCC# 3-05-002-02
LFS-2 / SS-8920	Limestone Storage Silo	Limestone	20.00	0.03	lb/ton	2.63	98%	0.05	2.63	SCC# 3-05-002-02
LFS-3 / SS-8930	Limestone Storage Silo	Limestone	20.00	0.03	lb/ton	2.63	98%	0.05	2.63	SCC# 3-05-002-02
LFS-4 / SS-8940	Limestone Storage Silo	Limestone	20.00	0.03	lb/ton	2.63	98%	0.05	2.63	SCC# 3-05-002-02
LFS-5 / SS-8950	Limestone Storage Silo	Limestone	20.00	0.03	lb/ton	2.63	98%	0.05	2.63	SCC# 3-05-002-02
LFS-6 / SS-8960	Limestone Storage Silo	Limestone	20.00	0.03	lb/ton	2.63	98%	0.05	2.63	SCC# 3-05-002-02
SS-1 / SS-8210	Sand Storage Silo	Sand	20.00	0.03	lb/ton	2.63	98%	0.05	2.63	SCC# 3-05-002-02
SS-2 / SS-8220	Sand Storage Silo	Sand	20.00	0.03	lb/ton	2.63	98%	0.05	2.63	SCC# 3-05-002-02
CFH-1 / TK-2000	Limestone Cold Filler Bin Hopper	Limestone	80.00	0.0033	lb/ton	1.16	98%	0.02	1.16	SCC# 3-05-011-04,-21,-23
HT-2010	Limestone Filler Heater	Limestone	58.00	0.0033	lb/ton	0.84	98%	0.02	0.84	SCC# 3-05-011-04,-21,-23
TK-2060	Limestone Hot Filler Bin Hopper	Limestone	58.00	0.0033	lb/ton	0.84	98%	0.02	0.84	SCC# 3-05-011-04,-21,-23
TK-8645	Sand Receiving Bin	Sand	20.00	0.0300	lb/ton	2.63	98%	0.05	2.63	SCC# 3-05-002-02
SS-8010 to SS-8200	Twenty (20) Granule Storage Silos	Granules	40.00	0.0064	lb/ton	1.12	0%	1.12	1.12	SCC# 3-05-025-03
None (DC-2330&2435)	Limestone Filler Transfer Process	Limestone	80.00	0.0033	lb/ton	1.16	98%	0.02	1.16	SCC# 3-05-011-04,-21,-23
					Total	28.79		1.65	28.79	

Appendix A to the Technical Support Document (TSD)
Potential to Emit - East Blow Still BS-2 / HT-1020B

Company Name: Building Materials Manufacturing Corporation
Address: 505 N. Roeske Avenue, Michigan City, Indiana 46360
Permit Number: SPR 091-32963-00051
Reviewer: David Matousek
Date: October 17, 2013

Design Data

Maximum Throughput	30,000	lb/hr	15.00	ton asphalt per hour
Limited Throughput	30,000	lb/hr	15.00	ton asphalt per hour
VOC Control Efficiency	95.00%			
Organic PM Emission Factor (default values)	2.54E-04	lb/ton asphalt		
Maximum Q_{ab} (Quantity of Asphalt Blown)	0.730	MMbbl/yr (One barrel = 42 gallons, Density = 8.57 lb/gallon)		
Limited Q_{ab} (Quantity of Asphalt Blown)	0.730	MMbbl/yr (One barrel = 42 gallons, Density = 8.57 lb/gallon)		

Criteria Pollutants

Pollutant	Emission Factors		PTE (TPY)	Controlled PTE (TPY)	Limited PTE (TPY)	Emission Factor Source
PM	0.039	lb/ton	2.56	2.56	2.56	Stack Test, GAF, Baltimore, Md., Feb 1991
PM_{10}	0.039	lb/ton	2.56	2.56	2.56	Assumed the same as PM
$PM_{2.5}$	0.039	lb/ton	2.56	2.56	2.56	Assumed the same as PM
SO_2	0.338	lb/ton	22.21	22.21	22.21	Stack Test, GAF, Baltimore, Md., Feb 1991
VOC	1.620	lb/ton	106.43	5.322	5.322	Provided by Applicant
CO	0.270	lb/ton	17.74	17.74	17.74	Provided by Applicant
NO_x	0.000	lb/ton	0.00	0.00	0.00	Stack Test, GAF, Baltimore, Md., Feb 1991

HAP Emissions

Pollutant	% Organic PM	Emission Factors		PTE (TPY)	Controlled PTE (TPY)	Limited PTE (TPY)	Emission Factor Source
Acenaphthene	0.4700%	1.19E-06	lb/ton	7.84E-05	3.92E-06	3.92E-06	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Acenaphthylene	0.0140%	3.56E-08	lb/ton	2.34E-06	1.17E-07	1.17E-07	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Anthracene	0.1300%	3.30E-07	lb/ton	2.17E-05	1.08E-06	1.08E-06	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Benzo(a)anthracene	0.0560%	1.42E-07	lb/ton	9.35E-06	4.67E-07	4.67E-07	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Benzo(e)pyrene	0.0095%	2.41E-08	lb/ton	1.59E-06	7.93E-08	7.93E-08	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Chrysene	0.2100%	5.33E-07	lb/ton	3.50E-05	1.75E-06	1.75E-06	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Fluoranthene	0.1500%	3.81E-07	lb/ton	2.50E-05	1.25E-06	1.25E-06	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Fluorene	1.0100%	2.57E-06	lb/ton	1.69E-04	8.43E-06	8.43E-06	AP-42, Ch. 11.1, Table 11.1-15 Speciation
2-Methylnaphthalene	**5.2700%**	**1.34E-05**	**lb/ton**	**8.79E-04**	**4.40E-05**	**4.40E-05**	**AP-42, Ch. 11.1, Table 11.1-15 Speciation**
Naphthalene	1.8200%	4.62E-06	lb/ton	3.04E-04	1.52E-05	1.52E-05	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Perylene	0.0300%	7.62E-08	lb/ton	5.01E-06	2.50E-07	2.50E-07	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Phenanthrene	1.8000%	4.57E-06	lb/ton	3.00E-04	1.50E-05	1.50E-05	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Pyrene	0.4400%	1.12E-06	lb/ton	7.34E-05	3.67E-06	3.67E-06	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Total HAP	11.4095%			1.90E-03	9.52E-05	9.52E-05	

Methodology:
PTE (TPY) = Throughput (ton asphalt/hr) x Emission Factor (lb/ton asphalt) * 4.38 ton-hr/lb-yr
HAP Emission Factor (lb/ton asphalt) = % Organic PM x (2.54 x E-04 lb organic PM/ton asphalt)

(Continued on Next Sheet)

Appendix A to the Technical Support Document (TSD)
Potential to Emit - East Blow Still BS-2 / HT-1020B
(Continued from Previous Sheet)

Greenhouse Gas Emissions - Potential to Emit

Carbon Dioxide

40 CFR 98.253(h)(2) - Equation Y-16A - Asphalt Operations Controlled by a Thermal Oxidizer

$$\mathbf{CO_2 = 0.98 \times [Q_{ab} \times CEF_{ab} \times 44/12]}$$

CO_2 = Annual CO_2 emissions from controlled asphalt blowing (metric tons/year)

0.98 = Assumed combustion efficiency of thermal oxidizer

Q_{ab} = Quantity of asphalt blown (MMbbl/year)

CEF_{ab} = Carbon emission factor from asphalt blowing from specific test data

Q_{ab} = 0.730 MMbbl/year

CEF_{ab} = 2,750 metric tons C/MMbbl asphalt blown (default 2,750)

CO_2 = 7,215 metric tons/year

CO_2 = 7,936 short tons/year

Methane

40 CFR 98.253(h)(2) - Equation Y-17 - Asphalt Operations Controlled by a Thermal Oxidizer

$$\mathbf{CH_4 = 0.02 \times [Q_{ab} \times EF_{ab,CH4}]}$$

0.02 = Fraction of methane emissions from controlled asphalt blowing (metric tons/yr)

CH_4 = Annual CH_4 emissions from controlled asphalt blowing (metric tons/year)

Q_{ab} = Quantity of asphalt blown (MMbbl/year)

$EF_{ab,CH4}$ = Emission factor for CH_4 from uncontrolled asphalt blowing from test data (580 default)

Q_{ab} = 0.730 MMbbl/year

$EF_{ab,CH4}$ = 580 metric tons CH_4/MMbbl asphalt blown

CH_4 = 8.47 metric tons/year

CH_4 = 9.32 short tons/year

Total Emissions as CO_2e

CO_2 =	7,936	TPY	as	CO_2e =	7,936	TPY
CH_4 =	9.32	TPY	as	CO_2e =	232.91	TPY
				Total GHG as CO_2e =	8,169	TPY

(Continued on Next Sheet)

Appendix A to the Technical Support Document (TSD)
Potential to Emit - East Blow Still BS-2 / HT-1020B
(Continued from Previous Sheet)

Greenhouse Gas Emissions - Limited Potential to Emit

Carbon Dioxide

40 CFR 98.253(h)(2) - Equation Y-16A - Asphalt Operations Controlled by a Thermal Oxidizer

$CO_2 = 0.98 \times [Q_{ab} \times CEF_{ab} \times 44/12]$

CO_2 =	Annual CO_2 emissions from controlled asphalt blowing (metric tons/year)	
0.98 =	Assumed combustion efficiency of thermal oxidizer	
Q_{ab} =	Quantity of asphalt blown (MMbbl/year)	
CEF_{ab} =	Carbon emission factor from asphalt blowing from specific test data	
Q_{ab} =	0.730	MMbbl/year
CEF_{ab} =	2,750	metric tons C/MMbbl asphalt blown (default 2,750)
CO_2 =	7,215	metric tons/year
CO_2 =	7,936	short tons/year

Methane

40 CFR 98.253(h)(2) - Equation Y-17 - Asphalt Operations Controlled by a Thermal Oxidizer

$CH_4 = 0.02 \times [Q_{ab} \times EF_{ab,CH4}]$

0.02 =	Fraction of methane emissions from controlled asphalt blowing (metric tons/yr)	
CH_4 =	Annual CH_4 emissions from controlled asphalt blowing (metric tons/year)	
Q_{ab} =	Quantity of asphalt blown (MMbbl/year)	
$EF_{ab,CH4}$ =	Emission factor for CH_4 from uncontrolled asphalt blowing from test data (580 default)	
Q_{ab} =	0.730	MMbbl/year
$EF_{ab,CH4}$ =	580	metric tons CH_4/MMbbl asphalt blown
CH_4 =	8.47	metric tons/year
CH_4 =	9.32	short tons/year

Total Emissions as CO_2e

CO_2 =	7,936	TPY	as	CO_2e =	7,936	TPY
CH_4 =	9.32	TPY	as	CO_2e =	232.91	TPY
				Total GHG as CO2e =	8,169	TPY

Appendix A to the Technical Support Document (TSD)
Potential to Emit - West Blow Still BS-1 / HT-1020A

Company Name: Building Materials Manufacturing Corporation
Address: 505 N. Roeske Avenue, Michigan City, Indiana 46360
Permit Number: SPR 091-32963-00051
Reviewer: David Matousek
Date: October 17, 2013

Design Data

Maximum Throughput	30,000	lb/hr	15.00	ton asphalt per hour
Limited Throughput	30,000	lb/hr	15.00	ton asphalt per hour
VOC Control Efficiency	95.00%			
Organic PM Emission Factor (default values)	2.54E-04	lb/ton asphalt		
Maximum Q_{ab} (Quantity of Asphalt Blown)	0.730	MMbbl/yr (One barrel = 42 gallons, Density = 8.57 lb/gallon)		
Limited Q_{ab} (Quantity of Asphalt Blown)	0.730	MMbbl/yr (One barrel = 42 gallons, Density = 8.57 lb/gallon)		

Criteria Pollutants

Pollutant	Emission Factors		PTE (TPY)	Controlled PTE (TPY)	Limited PTE (TPY)	Emission Factor Source
PM	0.039	lb/ton	2.56	2.56	2.56	Stack Test, GAF, Baltimore, Md., Feb 1991
PM_{10}	0.039	lb/ton	2.56	2.56	2.56	Assumed the same as PM
$PM_{2.5}$	0.039	lb/ton	2.56	2.56	2.56	Assumed the same as PM
SO_2	0.338	lb/ton	22.21	22.21	22.21	Stack Test, GAF, Baltimore, Md., Feb 1991
VOC	1.620	lb/ton	106.43	5.322	5.322	Provided by Applicant
CO	0.270	lb/ton	17.74	17.74	17.74	Provided by Applicant
NO_x	0.000	lb/ton	0.00	0.00	0.00	Stack Test, GAF, Baltimore, Md., Feb 1991

HAP Emissions

Pollutant	% Organic PM	Emission Factors		PTE (TPY)	Controlled PTE (TPY)	Limited PTE (TPY)	Emission Factor Source
Acenaphthene	0.4700%	1.19E-06	lb/ton	7.84E-05	3.92E-06	3.92E-06	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Acenaphthylene	0.0140%	3.56E-08	lb/ton	2.34E-06	1.17E-07	1.17E-07	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Anthracene	0.1300%	3.30E-07	lb/ton	2.17E-05	1.08E-06	1.08E-06	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Benzo(a)anthracene	0.0560%	1.42E-07	lb/ton	9.35E-06	4.67E-07	4.67E-07	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Benzo(e)pyrene	0.0095%	2.41E-08	lb/ton	1.59E-06	7.93E-08	7.93E-08	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Chrysene	0.2100%	5.33E-07	lb/ton	3.50E-05	1.75E-06	1.75E-06	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Fluoranthene	0.1500%	3.81E-07	lb/ton	2.50E-05	1.25E-06	1.25E-06	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Fluorene	1.0100%	2.57E-06	lb/ton	1.69E-04	8.43E-06	8.43E-06	AP-42, Ch. 11.1, Table 11.1-15 Speciation
2-Methylnaphthalene	**5.2700%**	**1.34E-05**	**lb/ton**	**8.79E-04**	**4.40E-05**	**4.40E-05**	**AP-42, Ch. 11.1, Table 11.1-15 Speciation**
Naphthalene	1.8200%	4.62E-06	lb/ton	3.04E-04	1.52E-05	1.52E-05	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Perylene	0.0300%	7.62E-08	lb/ton	5.01E-06	2.50E-07	2.50E-07	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Phenanthrene	1.8000%	4.57E-06	lb/ton	3.00E-04	1.50E-05	1.50E-05	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Pyrene	0.4400%	1.12E-06	lb/ton	7.34E-05	3.67E-06	3.67E-06	AP-42, Ch. 11.1, Table 11.1-15 Speciation
Total HAP	11.4095%			1.90E-03	9.52E-05	9.52E-05	

Methodology:
PTE (TPY) = Throughput (ton asphalt/hr) x Emission Factor (lb/ton asphalt) * 4.38 ton-hr/lb-yr
HAP Emission Factor (lb/ton asphalt) = % Organic PM x (2.54 x E-04 lb organic PM/ton asphalt)

(Continued on Next Sheet)

Appendix A to the Technical Support Document (TSD)
Potential to Emit - West Blow Still BS-1 / HT-1020A
(Continued from Previous Sheet)

Greenhouse Gas Emissions - Potential to Emit

Carbon Dioxide

40 CFR 98.253(h)(2) - Equation Y-16A - Asphalt Operations Controlled by a Thermal Oxidizer

CO_2 = 0.98 x [Q_{ab} x CEF_{ab} x 44/12]

CO_2 = Annual CO_2 emissions from controlled asphalt blowing (metric tons/year)
0.98 = Assumed combustion efficiency of thermal oxidizer
Q_{ab} = Quantity of asphalt blown (MMbbl/year)
CEF_{ab} = Carbon emission factor from asphalt blowing from specific test data

Q_{ab} =	0.730	MMbbl/year
CEF_{ab} =	2,750	metric tons C/MMbbl asphalt blown (default 2,750)
CO_2 =	7,215	metric tons/year
CO_2 =	7,936	short tons/year

Methane

40 CFR 98.253(h)(2) - Equation Y-17 - Asphalt Operations Controlled by a Thermal Oxidizer

CH_4 = 0.02 x [Q_{ab} x $EF_{ab,CH4}$]

0.02 = Fraction of methane emissions from controlled asphalt blowing (metric tons/yr)
CH_4 = Annual CH_4 emissions from controlled asphalt blowing (metric tons/year)
Q_{ab} = Quantity of asphalt blown (MMbbl/year)
$EF_{ab,CH4}$ = Emission factor for CH_4 from uncontrolled asphalt blowing from test data (580 default)

Q_{ab} =	0.730	MMbbl/year
$EF_{ab,CH4}$ =	580	metric tons CH_4/MMbbl asphalt blown
CH_4 =	8.47	metric tons/year
CH_4 =	9.32	short tons/year

Total Emissions as CO_2e

CO_2 =	7,936	TPY	as	CO_2e =	7,936	TPY
CH_4 =	9.32	TPY	as	CO_2e =	232.91	TPY
				Total GHG as CO2e =	8,169	TPY

(Continued on Next Sheet)

Appendix A to the Technical Support Document (TSD)
Potential to Emit - West Blow Still BS-1 / HT-1020A
(Continued from Previous Sheet)

Greenhouse Gas Emissions - Limited Potential to Emit

Carbon Dioxide

40 CFR 98.253(h)(2) - Equation Y-16A - Asphalt Operations Controlled by a Thermal Oxidizer

$CO_2 = 0.98 \times [Q_{ab} \times CEF_{ab} \times 44/12]$

CO_2 = Annual CO_2 emissions from controlled asphalt blowing (metric tons/year)

0.98 = Assumed combustion efficiency of thermal oxidizer

Q_{ab} = Quantity of asphalt blown (MMbbl/year)

CEF_{ab} = Carbon emission factor from asphalt blowing from specific test data

Q_{ab} = 0.730 MMbbl/year

CEF_{ab} = 2,750 metric tons C/MMbbl asphalt blown (default 2,750)

CO_2 = 7,215 metric tons/year

CO_2 = 7,936 short tons/year

Methane

40 CFR 98.253(h)(2) - Equation Y-17 - Asphalt Operations Controlled by a Thermal Oxidizer

$CH_4 = 0.02 \times [Q_{ab} \times EF_{ab,CH4}]$

0.02 = Fraction of methane emissions from controlled asphalt blowing (metric tons/yr)

CH_4 = Annual CH_4 emissions from controlled asphalt blowing (metric tons/year)

Q_{ab} = Quantity of asphalt blown (MMbbl/year)

$EF_{ab,CH4}$ = Emission factor for CH_4 from uncontrolled asphalt blowing from test data (580 default)

Q_{ab} = 0.730 MMbbl/year

$EF_{ab,CH4}$ = 580 metric tons CH_4/MMbbl asphalt blown

CH_4 = 8.47 metric tons/year

CH_4 = 9.32 short tons/year

Total Emissions as CO_2e

CO_2 =	7,936	TPY	as	CO_2e =	7,936	TPY
CH_4 =	9.32	TPY	as	CO_2e =	232.91	TPY
				Total GHG as CO2e =	8,169	TPY

Appendix A to the Technical Support Document (TSD)
Potential to Emit - Thermal Oxidizer (TO-1 / TO-1200)

Company Name: Building Materials Manufacturing Corporation
Address: 505 N. Roeske Avenue, Michigan City, Indiana 46360
Permit Number: SPR 091-32963-00051
Reviewer: David Matousek
Date: October 17, 2013

Thermal Oxidizer Design Data

Heat Input Capacity	14.00	MMBtu/hr		
Higher Heating Value of Natural Gas	1,020.00	MMBtu/MMCF		
Maximum Fuel Usage	120.24	MMCF/yr	122,640	MMBtu/yr
Limited Fuel Usage	120.24	MMCF/yr	122,640	MMBtu/yr

Criteria Pollutants					
Pollutant	**Emission Factors**		**PTE (TPY)**	**Limited PTE (TPY)**	**Emission Factor Source**
PM	1.9	lb/MMCF	0.11	0.11	AP-42, Chapter 1.4, Table 1.4-2, July 1998
PM_{10}	7.6	lb/MMCF	0.46	0.46	AP-42, Chapter 1.4, Table 1.4-2, July 1998
$PM_{2.5}$	7.6	lb/MMCF	0.46	0.46	$PM_{10} = PM_{2.5}$
SO_2	0.6	lb/MMCF	0.04	0.04	AP-42, Chapter 1.4, Table 1.4-2, July 1998
VOC	100	lb/MMCF	6.01	6.01	AP-42, Chapter 1.4, Table 1.4-1, July 1998
CO	5.5	lb/MMCF	0.33	0.33	AP-42, Chapter 1.4, Table 1.4-2, July 1998
NO_x	84	lb/MMCF	5.05	5.05	AP-42, Chapter 1.4, Table 1.4-1, July 1998
HAP Emissions					
Pollutant	**Emission Factors**		**PTE (TPY)**	**Limited PTE (TPY)**	**Emission Factor Source**
Benzene	2.10E-03	lb/MMCF	1.26E-04	1.26E-04	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Dichlorobenzene	1.20E-03	lb/MMCF	7.21E-05	7.21E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Formaldehyde	7.50E-02	lb/MMCF	4.51E-03	4.51E-03	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Hexane	**1.8**	**lb/MMCF**	**0.11**	**0.11**	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Toluene	3.40E-03	lb/MMCF	2.04E-04	2.04E-04	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Lead	5.00E-04	lb/MMCF	3.01E-05	3.01E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Cadmium	1.10E-03	lb/MMCF	6.61E-05	6.61E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Chromium	1.40E-03	lb/MMCF	8.42E-05	8.42E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Manganese	3.80E-04	lb/MMCF	2.28E-05	2.28E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Nickel	2.10E-03	lb/MMCF	1.26E-04	1.26E-04	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Total HAP			0.12	0.12	
Greenhouse Gas Emissions					
See the blow still emission calculations for greenhouse gas emissions.					

Appendix A to the Technical Support Document (TSD)
Potential to Emit - Existing Natural Gas Combustion Sources < 100 MMBtu/hr

Company Name: Building Materials Manufacturing Corporation
Address: 505 N. Roeske Avenue, Michigan City, Indiana 46360
Permit Number: SPR 091-32963-00051
Reviewer: David Matousek
Date: October 17, 2013

Emission Unit Description	Unit ID	Heat Input Capacity	
Asphalt Heater	HT-1041	3.00	MMBtu/hr
Flux Asphalt Heater	FAH-1/HT-1250	7.50	MMBtu/hr
Borne Coating Asphalt Heater	HT-1040	7.50	MMBtu/hr
Williams Davis Boiler	HO-2/HT-1355	12.60	MMBtu/hr
Building Heater	HT-9220	3.10	MMBtu/hr
Building Heater	HT-9230	4.30	MMBtu/hr
Building Heater	HT-9240	4.60	MMBtu/hr
Combined Heat Input Capacity		**42.60**	**MMBtu/hr**

Higher Heating Value	1,020	MMBtu/MMCF		
Potential Throughput	365.86	MMCF/yr		
Limited Throughput	365.86	MMCF/yr	373,176	MMBtu/yr

Pollutant	Emission Factor		PTE (TPY)	Limited PTE (TPY)	Emission Factor Source
PM (Filterable)	1.9	lb/MMCF	0.35	0.35	AP-42, Chapter 1.4, Table 1.4-2, July 1998
PM_{10} (filterable+condensible)	7.6	lb/MMCF	1.39	1.39	AP-42, Chapter 1.4, Table 1.4-2, July 1998
$PM_{2.5}$ (filterable+condensible)	7.6	lb/MMCF	1.39	1.39	$PM_{10} = PM_{2.5}$
SO_2	0.6	lb/MMCF	0.11	0.11	AP-42, Chapter 1.4, Table 1.4-2, July 1998
NO_x	100	lb/MMCF	18.29	18.29	AP-42, Chapter 1.4, Table 1.4-1, July 1998
VOC	5.5	lb/MMCF	1.01	1.01	AP-42, Chapter 1.4, Table 1.4-2, July 1998
CO	84	lb/MMCF	15.37	15.37	AP-42, Chapter 1.4, Table 1.4-1, July 1998
Benzene	2.10E-03	lb/MMCF	3.84E-04	3.84E-04	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Dichlorobenzene	1.20E-03	lb/MMCF	2.20E-04	2.20E-04	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Formaldehyde	7.50E-02	lb/MMCF	1.37E-02	0.01	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Hexane	**1.8**	**lb/MMCF**	**0.33**	**0.33**	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Toluene	3.40E-03	lb/MMCF	6.22E-04	6.22E-04	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Lead	5.00E-04	lb/MMCF	9.15E-05	9.15E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Cadmium	1.10E-03	lb/MMCF	2.01E-04	2.01E-04	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Chromium	1.40E-03	lb/MMCF	2.56E-04	2.56E-04	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Manganese	3.80E-04	lb/MMCF	6.95E-05	6.95E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Nickel	2.10E-03	lb/MMCF	3.84E-04	3.84E-04	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Total HAP			**0.35**	**0.35**	
CO_2	53.06	kg/MMBtu	21,826.33	21,826.33	40 CFR 98, Subpart C, Table C-1
CH_4	1.00E-03	kg/MMBtu	0.41	0.41	40 CFR 98, Subpart C, Table C-2
N_2O	1.00E-04	kg/MMBtu	0.04	0.04	40 CFR 98, Subpart C, Table C-2
CO_2e			**21,849**	**21,849**	

Methodology:
1) Gas Throughput (MMCF/yr) = Heat Input (MMBtu/hr) x 8,760 hr/yr / Heating Value (MMBtu/MMCF)
2) PTE (TPY) = Gas Throughput (MMCF/yr) x Emission Factor (lb/MMCF) / 2,000 lb/ton
3) Emission Factor (lb/MMBtu) = Emission Factor (kg/MMBtu) x 2.2046
4) PTE (TPY) = Emission Factor (lb/MMBtu) x Heating Value (MMBtu/MMCF) x Throughput (MMCF/yr) / 2,000 lb/ton

Appendix A to the Technical Support Document (TSD)
Potential to Emit - Sixteen Natural Gas-Fired Space Heaters

Company Name: Building Materials Manufacturing Corporation
Address: 505 N. Roeske Avenue, Michigan City, Indiana 46360
Permit Number: SPR 091-32963-00051
Reviewer: David Matousek
Date: October 17, 2013

Space Heater Design Data				
Combined Heat Input Capacity	5.60	MMBtu/hr		
Higher Heating Value of Natural Gas	1,020.00	MMBtu/MMCF		
Maximum Fuel Usage	48.09	MMCF/yr	49,051.80	MMBtu/yr
Limited Fuel Usage	48.09	MMCF/yr	49,051.80	MMBtu/yr

Criteria Pollutants					
Pollutant	Emission Factors		PTE (TPY)	Limited PTE (TPY)	Emission Factor Source
PM	1.9	lb/MMCF	0.05	0.05	AP-42, Chapter 1.4, Table 1.4-2, July 1998
PM_{10}	7.6	lb/MMCF	0.18	0.18	AP-42, Chapter 1.4, Table 1.4-2, July 1998
$PM_{2.5}$	7.6	lb/MMCF	0.18	0.18	$PM_{10} = PM_{2.5}$
SO_2	0.6	lb/MMCF	0.01	0.01	AP-42, Chapter 1.4, Table 1.4-2, July 1998
VOC	100	lb/MMCF	2.40	2.40	AP-42, Chapter 1.4, Table 1.4-1, July 1998
CO	5.5	lb/MMCF	0.13	0.13	AP-42, Chapter 1.4, Table 1.4-2, July 1998
NO_x	84	lb/MMCF	2.02	2.02	AP-42, Chapter 1.4, Table 1.4-1, July 1998
HAP Emissions					
Pollutant	Emission Factors		PTE (TPY)	Limited PTE (TPY)	Emission Factor Source
Benzene	2.10E-03	lb/MMCF	5.05E-05	5.05E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Dichlorobenzene	1.20E-03	lb/MMCF	2.89E-05	2.89E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Formaldehyde	7.50E-02	lb/MMCF	1.80E-03	1.80E-03	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Hexane	1.8	lb/MMCF	0.04	0.04	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Toluene	3.40E-03	lb/MMCF	8.18E-05	8.18E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Lead	5.00E-04	lb/MMCF	1.20E-05	1.20E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Cadmium	1.10E-03	lb/MMCF	2.64E-05	2.64E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Chromium	1.40E-03	lb/MMCF	3.37E-05	3.37E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Manganese	3.80E-04	lb/MMCF	9.14E-06	9.14E-06	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Nickel	2.10E-03	lb/MMCF	5.05E-05	5.05E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Total HAP			0.04	0.04	
Greenhouse Gas Emissions					
Pollutant	Emission Factors		PTE (TPY)	Limited PTE (TPY)	Emission Factor Source
CO_2	53.06	kg/MMBtu	2,868.94	2,868.94	40 CFR 98, Table C-1
CH_4	1.00E-03	kg/MMBtu	0.05	0.05	40 CFR 98, Table C-2
N_2O	1.00E-04	kg/MMBtu	0.01	0.01	40 CFR 98, Table C-2
CO_2e			2,872	2,872	

Methodology:
1) Gas Throughput (MMCF/yr) = Heat Input (MMBtu/hr) x 8,760 hr/yr / Heating Value (MMBtu/MMCF)
2) PTE (TPY) = Gas Throughput (MMCF/yr) x Emission Factor (lb/MMCF) / 2,000 lb/ton
3) Emission Factor (lb/MMBtu) = Emission Factor (kg/MMBtu) x 2.2046
4) PTE (TPY) = Emission Factor (lb/MMBtu) x Heating Value (MMBtu/MMCF) x Throughput (MMCF/yr) / 2,000 lb/ton

Appendix A to the Technical Support Document (TSD)
Potential to Emit - Large Diesel Emergency Generator (GEN-1)

Company Name: Building Materials Manufacturing Corporation
Address: 505 N. Roeske Avenue, Michigan City, Indiana 46360
Permit Number: SPR 091-32963-00051
Reviewer: David Matousek
Date: October 17, 2013

Diesel Generator Design Data

Engine Output	750.00	HP	Provided by Applicant
Brake Specific Fuel Consumption	7,000.00	Btu/Hp.hr	Estimated By IDEM
Heat Input Capacity	5.25	MMBtu/hr	Estimated By IDEM from HP Output
Fuel Oil Sulfur Content	0.15	%	Estimated By IDEM
Hours of Operation for PTE	500	hr/yr	
Limited Hours of Operation	500	hr/yr	

Criteria Pollutants					
Pollutant	Emission Factors		PTE (TPY)	Limited PTE (TPY)	Emission Factor Source
PM	0.100	lb/MMBtu	0.130	0.130	AP-42, Chapter 3.4, Table 3.4-1
PM_{10}	0.100	lb/MMBtu	0.130	0.130	Assumed the same as PM
$PM_{2.5}$	0.100	lb/MMBtu	0.130	0.130	Assumed the same as PM
SO_2	0.152	lb/MMBtu	0.200	0.200	AP-42, Chapter 3.4, Table 3.4-1, SO_x = 1.01S
VOC	0.090	lb/MMBtu	0.120	0.120	AP-42, Chapter 3.4, Table 3.4-1, TOC = VOC
CO	0.850	lb/MMBtu	1.120	1.120	AP-42, Chapter 3.4, Table 3.4-1
NO_x	3.200	lb/MMBtu	4.200	4.200	AP-42, Chapter 3.4, Table 3.4-1
HAP Emissions					
Pollutant	Emission Factors		PTE (TPY)	Limited PTE (TPY)	Emission Factor Source
Benzene	7.76E-04	lb/MMBtu	1.02E-03	1.02E-03	AP-42, Chapter 3.4, Table 3.4-3 and 3.4-4
Toluene	2.81E-04	lb/MMBtu	3.69E-04	3.69E-04	AP-42, Chapter 3.4, Table 3.4-3 and 3.4-4
Xylene	1.93E-04	lb/MMBtu	2.53E-04	2.53E-04	AP-42, Chapter 3.4, Table 3.4-3 and 3.4-4
Formaldehyde	7.89E-05	lb/MMBtu	1.04E-04	1.04E-04	AP-42, Chapter 3.4, Table 3.4-3 and 3.4-4
Acetaldehyde	2.52E-05	lb/MMBtu	3.31E-05	3.31E-05	AP-42, Chapter 3.4, Table 3.4-3 and 3.4-4
Acrolein	7.88E-06	lb/MMBtu	1.03E-05	1.03E-05	AP-42, Chapter 3.4, Table 3.4-3 and 3.4-4
Naphthalene	1.30E-04	lb/MMBtu	1.71E-04	1.71E-04	AP-42, Chapter 3.4, Table 3.4-3 and 3.4-4
Total HAP			1.96E-03	1.96E-03	
Greenhouse Gas Emissions					
Pollutant	Emission Factors		PTE (TPY)	Limited PTE (TPY)	Emission Factor Source
CO_2	73.96	kg/MMBtu	214.01	214.01	40 CFR 98, Table C-1
CH_4	3.00E-03	kg/MMBtu	8.70E-03	8.70E-03	40 CFR 98, Table C-2
N_2O	6.00E-04	kg/MMBtu	1.70E-03	1.70E-03	40 CFR 98, Table C-2
CO_2e			214.73	214.73	

Methodology:
1) PTE (TPY) = Heat Input (MMBtu/hr) x Hours Operated (hr/yr) x Emission Factor (lb/MMBtu) x 1 ton / 2,000 lb
2) PTE (TPY) = Engine Output (HP) x Hours Operated (hr/yr) x Emission Factor (lb/hp-hr) x 1 ton / 2,000 lb
3) $CO_2e = CO_2$ (ton/yr) + CH_4 (ton/yr) x 25 + N_2O (ton/yr) x 298

Appendix A to the Technical Support Document (TSD)
Potential to Emit - HEATEC Hot Oil Heater - Heatec-1

Company Name: Building Materials Manufacturing Corporation
Address: 505 N. Roeske Avenue, Michigan City, Indiana 46360
Permit Number: SPR 091-32963-00051
Reviewer: David Matousek
Date: October 17, 2013

Design Data

Combined Heat Input Capacity	15.00	MMBtu/hr		
Higher Heating Value of Natural Gas	1,020.00	MMBtu/MMCF		
Maximum Fuel Usage	128.824	MMCF/yr	131,400.00	MMBtu/yr
Limited Fuel Usage	128.824	MMCF/yr	131,400.00	MMBtu/yr

Criteria Pollutants					
Pollutant	**Emission Factors**		**PTE (TPY)**	**Limited PTE (TPY)**	**Emission Factor Source**
PM	1.9	lb/MMCF	0.12	0.12	AP-42, Chapter 1.4, Table 1.4-2, July 1998
PM_{10}	7.6	lb/MMCF	0.49	0.49	AP-42, Chapter 1.4, Table 1.4-2, July 1998
$PM_{2.5}$	7.6	lb/MMCF	0.49	0.49	$PM_{10} = PM_{2.5}$
SO_2	0.6	lb/MMCF	0.04	0.04	AP-42, Chapter 1.4, Table 1.4-2, July 1998
VOC	100	lb/MMCF	6.44	6.44	AP-42, Chapter 1.4, Table 1.4-1, July 1998
CO	5.5	lb/MMCF	0.35	0.35	AP-42, Chapter 1.4, Table 1.4-2, July 1998
NO_x	84	lb/MMCF	5.41	5.41	AP-42, Chapter 1.4, Table 1.4-1, July 1998
HAP Emissions					
Pollutant	**Emission Factors**		**PTE (TPY)**	**Limited PTE (TPY)**	**Emission Factor Source**
Benzene	2.10E-03	lb/MMCF	1.35E-04	1.35E-04	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Dichlorobenzene	1.20E-03	lb/MMCF	7.73E-05	7.73E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Formaldehyde	7.50E-02	lb/MMCF	4.83E-03	4.83E-03	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Hexane	**1.8**	**lb/MMCF**	**0.12**	**0.12**	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Toluene	3.40E-03	lb/MMCF	2.19E-04	2.19E-04	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Lead	5.00E-04	lb/MMCF	3.22E-05	3.22E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Cadmium	1.10E-03	lb/MMCF	7.09E-05	7.09E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Chromium	1.40E-03	lb/MMCF	9.02E-05	9.02E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Manganese	3.80E-04	lb/MMCF	2.45E-05	2.45E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Nickel	2.10E-03	lb/MMCF	1.35E-04	1.35E-04	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Total HAP			0.13	0.13	
Greenhouse Gas Emissions					
Pollutant	**Emission Factors**		**PTE (TPY)**	**Limited PTE (TPY)**	**Emission Factor Source**
CO_2	53.06	kg/MMBtu	7,685.33	7,685.33	40 CFR 98, Table C-1
CH_4	1.00E-03	kg/MMBtu	0.14	0.14	40 CFR 98, Table C-2
N_2O	1.00E-04	kg/MMBtu	0.01	0.01	40 CFR 98, Table C-2
CO_2e			7,693	7,693	

Methodology:
1) Gas Throughput (MMCF/yr) = Heat Input (MMBtu/hr) x 8,760 hr/yr / Heating Value (MMBtu/MMCF)
2) PTE (TPY) = Gas Throughput (MMCF/yr) x Emission Factor (lb/MMCF) / 2,000 lb/ton
3) Emission Factor (lb/MMBtu) = Emission Factor (kg/MMBtu) x 2.2046
4) PTE (TPY) = Emission Factor (lb/MMBtu) x Heating Value (MMBtu/MMCF) x Throughput (MMCF/yr) / 2,000 lb/ton
5) CO_2e = PTE CO_2 + (PTE CH_4 x 25) + (PTE N_2O x 298)

Appendix A to the Technical Support Document (TSD)
Potential to Emit - HEATEC Hot Oil Heater - Heatec-2

Company Name: Building Materials Manufacturing Corporation
Address: 505 N. Roeske Avenue, Michigan City, Indiana 46360
Permit Number: SPR 091-32963-00051
Reviewer: David Matousek
Date: October 17, 2013

Design Data

Combined Heat Input Capacity	15.00	MMBtu/hr		
Higher Heating Value of Natural Gas	1,020.00	MMBtu/MMCF		
Maximum Fuel Usage	128.824	MMCF/yr	131,400	MMBtu/yr
Limited Fuel Usage	128.824	MMCF/yr	131,400	MMBtu/yr

Criteria Pollutants					
Pollutant	**Emission Factors**		**PTE (TPY)**	**Limited PTE (TPY)**	**Emission Factor Source**
PM	1.9	lb/MMCF	0.12	0.12	AP-42, Chapter 1.4, Table 1.4-2, July 1998
PM_{10}	7.6	lb/MMCF	0.49	0.49	AP-42, Chapter 1.4, Table 1.4-2, July 1998
$PM_{2.5}$	7.6	lb/MMCF	0.49	0.49	$PM_{10} = PM_{2.5}$
SO_2	0.6	lb/MMCF	0.04	0.04	AP-42, Chapter 1.4, Table 1.4-2, July 1998
VOC	100	lb/MMCF	6.44	6.44	AP-42, Chapter 1.4, Table 1.4-1, July 1998
CO	5.5	lb/MMCF	0.35	0.35	AP-42, Chapter 1.4, Table 1.4-2, July 1998
NO_x	84	lb/MMCF	5.41	5.41	AP-42, Chapter 1.4, Table 1.4-1, July 1998

HAP Emissions					
Pollutant	**Emission Factors**		**PTE (TPY)**	**Limited PTE (TPY)**	**Emission Factor Source**
Benzene	2.10E-03	lb/MMCF	1.35E-04	1.35E-04	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Dichlorobenzene	1.20E-03	lb/MMCF	7.73E-05	7.73E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Formaldehyde	7.50E-02	lb/MMCF	4.83E-03	4.83E-03	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Hexane	**1.8**	**lb/MMCF**	**0.12**	**0.12**	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Toluene	3.40E-03	lb/MMCF	2.19E-04	2.19E-04	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Lead	5.00E-04	lb/MMCF	3.22E-05	3.22E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Cadmium	1.10E-03	lb/MMCF	7.09E-05	7.09E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Chromium	1.40E-03	lb/MMCF	9.02E-05	9.02E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Manganese	3.80E-04	lb/MMCF	2.45E-05	2.45E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Nickel	2.10E-03	lb/MMCF	1.35E-04	1.35E-04	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Total HAP			0.13	0.13	

Greenhouse Gas Emissions					
Pollutant	**Emission Factors**		**PTE (TPY)**	**Limited PTE (TPY)**	**Emission Factor Source**
CO_2	53.06	kg/MMBtu	7,685.33	7,685.33	40 CFR 98, Table C-1
CH_4	1.00E-03	kg/MMBtu	0.14	0.14	40 CFR 98, Table C-2
N_2O	1.00E-04	kg/MMBtu	0.01	0.01	40 CFR 98, Table C-2
CO_2e			7,693	7,693	

Methodology:
1) Gas Throughput (MMCF/yr) = Heat Input (MMBtu/hr) x 8,760 hr/yr / Heating Value (MMBtu/MMCF)
2) PTE (TPY) = Gas Throughput (MMCF/yr) x Emission Factor (lb/MMCF) / 2,000 lb/ton
3) Emission Factor (lb/MMBtu) = Emission Factor (kg/MMBtu) x 2.2046
4) PTE (TPY) = Emission Factor (lb/MMBtu) x Heating Value (MMBtu/MMCF) x Throughput (MMCF/yr) / 2,000 lb/ton
5) CO_2e = PTE CO_2 + (PTE CH_4 x 25) + (PTE N_2O x 298)

Appendix A to the Technical Support Document (TSD)
Potential to Emit - Cleaver Brooks Boiler - CB-1

Company Name: Building Materials Manufacturing Corporation
Address: 505 N. Roeske Avenue, Michigan City, Indiana 46360
Permit Number: SPR 091-32963-00051
Reviewer: David Matousek
Date: October 17, 2013

Design Data

Combined Heat Input Capacity	12.60	MMBtu/hr		
Higher Heating Value of Natural Gas	1,020.00	MMBtu/MMCF		
Maximum Fuel Usage	108.21	MMCF/yr	110,376.00	MMBtu/yr
Limited Fuel Usage	108.21	MMCF/yr	110,376.00	MMBtu/yr

Criteria Pollutants					
Pollutant	**Emission Factors**		**PTE (TPY)**	**Limited PTE (TPY)**	**Emission Factor Source**
PM	1.9	lb/MMCF	0.10	0.10	AP-42, Chapter 1.4, Table 1.4-2, July 1998
PM_{10}	7.6	lb/MMCF	0.41	0.41	AP-42, Chapter 1.4, Table 1.4-2, July 1998
$PM_{2.5}$	7.6	lb/MMCF	0.41	0.41	$PM_{10} = PM_{2.5}$
SO_2	0.6	lb/MMCF	0.03	0.03	AP-42, Chapter 1.4, Table 1.4-2, July 1998
VOC	100	lb/MMCF	5.41	5.41	AP-42, Chapter 1.4, Table 1.4-1, July 1998
CO	5.5	lb/MMCF	0.30	0.30	AP-42, Chapter 1.4, Table 1.4-2, July 1998
NO_x	84	lb/MMCF	4.54	4.54	AP-42, Chapter 1.4, Table 1.4-1, July 1998
HAP Emissions					
Pollutant	**Emission Factors**		**PTE (TPY)**	**Limited PTE (TPY)**	**Emission Factor Source**
Benzene	2.10E-03	lb/MMCF	1.14E-04	1.14E-04	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Dichlorobenzene	1.20E-03	lb/MMCF	6.49E-05	6.49E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Formaldehyde	7.50E-02	lb/MMCF	4.06E-03	4.06E-03	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Hexane	**1.8**	**lb/MMCF**	**0.10**	**0.10**	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Toluene	3.40E-03	lb/MMCF	1.84E-04	1.84E-04	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Lead	5.00E-04	lb/MMCF	2.71E-05	2.71E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Cadmium	1.10E-03	lb/MMCF	5.95E-05	5.95E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Chromium	1.40E-03	lb/MMCF	7.57E-05	7.57E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Manganese	3.80E-04	lb/MMCF	2.06E-05	2.06E-05	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Nickel	2.10E-03	lb/MMCF	1.14E-04	1.14E-04	AP-42, Chapter 1.4, Table 1.4-3, July 1998
Total HAP			0.10	0.10	
Greenhouse Gas Emissions					
Pollutant	**Emission Factors**		**PTE (TPY)**	**Limited PTE (TPY)**	**Emission Factor Source**
CO_2	53.06	kg/MMBtu	6,455.68	6,455.68	40 CFR 98, Table C-1
CH_4	1.00E-03	kg/MMBtu	0.12	0.12	40 CFR 98, Table C-2
N_2O	1.00E-04	kg/MMBtu	0.01	0.01	40 CFR 98, Table C-2
CO_2e			6,462	6,462	

Methodology:
1) Gas Throughput (MMCF/yr) = Heat Input (MMBtu/hr) x 8,760 hr/yr / Heating Value (MMBtu/MMCF)
2) PTE (TPY) = Gas Throughput (MMCF/yr) x Emission Factor (lb/MMCF) / 2,000 lb/ton
3) Emission Factor (lb/MMBtu) = Emission Factor (kg/MMBtu) x 2.2046
4) PTE (TPY) = Emission Factor (lb/MMBtu) x Heating Value (MMBtu/MMCF) x Throughput (MMCF/yr) / 2,000 lb/ton
5) CO_2e = PTE CO_2 + (PTE CH_4 x 25) + (PTE N_2O x 298)

Appendix A to the Technical Support Document (TSD)
Truck Unload #1 and #2

Company Name: Building Materials Manufacturing Corporation
Address: 505 N. Roeske Avenue, Michigan City, Indiana 46360
Permit Number: SPR 091-32963-00051
Reviewer: David Matousek
Date: March 10, 2014

Emission Estimate Assumptions

Delivery Temperature (T)	300.00	°F	(Assumed by IDEM)
	759.67	°R	(Converted, R = F + 459.67)
Saturation Factor (S)	1.45	no units	(AP-42, Ch. 5.2, Table 5.2-1, Worst Case)
Asphalt Flux Throughput	60,000.00	lb/hr	(Capacity of Both Blow Stills)
Asphalt Density	59.09	lb/Ft^3	
Asphalt Throughput	66,533,897	gallons/yr	
Vapor Molecular Weight (M)	84.00	lb/lb.mole	(Average from Trumbore, Owens Corning)

Vapor Pressure Estimation

Clausius Clapeyron Equation

$LN (V_p) = a - b / T$

Where:

V_P =	calculated	in mmHg	(Vapor Pressure of Flux)
a =	18.2891	Physical Constant (Trumbore)	
b =	12,725.60	Physical Constant (Trumbore)	
T =	759.67	°R	

$LN (V_p)$ = 1.5376 V_p = 4.6535 mmHg
0.0900 psi

Equation (1) - AP-42, Ch. 5.2, June 2008

$$L_L = 12.46 \times S \times P \times M / T$$

Where:

L_L = Loading Loss in pounds per 1,000 gallons	L_L =	0.1798	lb / 1,000 gallon
S = Saturation Factor, unitless	S =	1.45	unitless
P = True Vapor Pressure of Liquid, psia	P =	0.09	psia
M = Molecular Weight of Vapors	M =	84.00	lb-lb.mole
T = Temperature of Bulk Liquid, °R	T =	759.67	°R

Loading Loss Estimation

Loading Loss (TPY) = Emission Factor (lb/1,000 gallons) x Throughput (gallons/yr) x 1 ton/2,000 lb

Loading Losses = 5.98 TPY
VOC/Particulate Control Efficiency = 95%

	Uncontrolled PTE	Controlled PTE
PTE VOC (TPY) =	5.98 TPY	0.30 TPY
PTE $PM/PM_{10}/PM_{2.5}$ (TPY) =	5.98 TPY	0.30 TPY

Appendix A to the Technical Support Document (TSD)
Shingle Machine

Company Name: Building Materials Manufacturing Corporation
Address: 505 N. Roeske Avenue, Michigan City, Indiana 46360
Permit Number: SPR 091-32963-00051
Reviewer: David Matousek
Date: March 10, 2014

Shingle Machine

Coater/Surge Tank

Pollutant	Throughput (ton/yr)	Emission Factor (lb/ton)	PTE (TPY)	Control Efficiency	Controlled PTE (TPY)	Source
VOC	219,000 (asphalt)	0.6020	65.92	95%	3.30	Current Permit
PM/PM10/PM2.5	657,000 (Shingles)	0.0500	16.43	95%	0.82	Owens Corning, Brookville, IN 047-32917-00005
CO		0.0050	1.64	0%	1.64	
SO_2		0.0025	0.82	0%	0.82	
H_2S		0.0024	0.79	0%	0.79	
1,1,1-trichloroethane		3.03E-04	0.10	95%	4.98E-03	
Lead		2.10E-06	6.90E-04	95%	3.45E-05	
Antimony		3.00E-07	9.86E-05	95%	4.93E-06	
Arsenic		4.00E-07	1.31E-04	95%	6.57E-06	
Beryllium		2.00E-07	6.57E-05	95%	3.29E-06	
Cadmium		2.00E-07	6.57E-05	95%	3.29E-06	
Chromium		2.30E-06	7.56E-04	95%	3.78E-05	
Cobalt		2.20E-06	7.23E-04	95%	3.61E-05	
Manganese		2.20E-06	7.23E-04	95%	3.61E-05	
Nickel		3.30E-06	1.08E-03	95%	5.42E-05	
Selenium		4.00E-07	1.31E-04	95%	6.57E-06	
Napthalene		5.55E-06	1.82E-03	95%	9.12E-05	Owens Corning, Brookville, IN Application F047-15014-00005
2-methylnaphthalene		8.93E-06	2.93E-03	95%	1.47E-04	
Acenaphthylene		3.90E-07	1.28E-04	95%	6.41E-06	
Acenaphthene		9.55E-07	3.14E-04	95%	1.57E-05	
Flourene		6.35E-06	2.09E-03	95%	1.04E-04	
Phrenathrene		6.18E-06	2.03E-03	95%	1.02E-04	
Anthracene		5.48E-06	1.80E-03	95%	9.00E-05	
Fluoranthene		3.90E-07	1.28E-04	95%	6.41E-06	
Pyrene		1.05E-06	3.45E-04	95%	1.72E-05	
Benz(a)anthracene		9.38E-07	3.08E-04	95%	1.54E-05	
Chrysene		5.55E-06	1.82E-03	95%	9.12E-05	
Benzo(b)fluoranthene		5.20E-07	1.71E-04	95%	8.54E-06	
Benzo(k)fluoranthene		3.90E-07	1.28E-04	95%	6.41E-06	
Benzo(e)pyrene		4.35E-07	1.43E-04	95%	7.14E-06	
Benzo(a)pyrene		3.90E-07	1.28E-04	95%	6.41E-06	
Perylene		3.90E-07	1.28E-04	95%	6.41E-06	
Indo(1,2,3-c,d)pyrene		9.33E-06	3.06E-03	95%	1.53E-04	
Dibenzo(a,h)anthracene		3.90E-07	1.28E-04	95%	6.41E-06	
Benzo(g,h,i)perylene		1.69E-07	5.55E-05	95%	2.78E-06	
Total HAP			0.12		0.01	Summation

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Appendix A to the Technical Support Document (TSD)
Shingle Machine
(Continued from Previous Page)

Granule Application

Pollutant	Throughput (ton/hr)	Emission Factor (lb/ton)	PTE (TPY)	Control Efficiency	Controlled or Limited PTE (TPY)	Source
PM	50.00 (granule)	0.2000 (granule)	43.80	98%	0.88	Current Permit
PM_{10} / $PM_{2.5}$	50.00 (granule)	0.0300 (granule)	6.57	98%	0.13	Current Permit
VOC	75.00 (shingle)	0.0030 (shingle)	0.99	0%	0.99	047-32917-00005

Self-Seal Application and Cooling Section

Pollutant	Throughput (ton/hr)	Emission Factor (lb/ton)	PTE (TPY)	Control Efficiency	Controlled PTE (TPY)	Emission Factor Source
VOC	2.0240 (Adhesive)	1.6000 (Adhesive)	14.18	95%	0.71	Worst Case - Same as blow still

Laminate Adhesive Application

Pollutant	Throughput (ton/hr)	Emission Factor (lb/ton)	PTE (TPY)	Control Efficiency	Controlled PTE (TPY)	Emission Factor Source
VOC	0.6445 (Adhesive)	1.6000 (Adhesive)	4.52	95%	0.23	Worst Case - Same as blow still

Summary for Shingle Machine

Pollutant	PTE (TPY)	Controlled PTE (TPY)	Limited PTE (TPY)
PM	60.23	1.70	1.70
PM_{10}/$PM_{2.5}$	23.00	0.95	23.00
VOC	85.61	5.22	5.22
CO	1.64	1.64	1.64
SO_2	0.82	0.82	0.82
H_2S	0.79	0.79	0.79
1,1,1-trichloroethane	0.10	4.98E-03	4.98E-03
Total HAP	0.12	6.08E-03	6.08E-03

Appendix A to the Technical Support Document (TSD)
Miscellaneous Storage Tanks

Company Name: Building Materials Manufacturing Corporation
Address: 505 N. Roeske Avenue, Michigan City, Indiana 46360
Permit Number: SPR 091-32963-00051
Reviewer: David Matousek
Date: March 10, 2014

TANKS 4.0.9d - Entry Data													
Tank / Property	**FST-1**	**FST-2**	**TK-1120**	**TK-1010**	**TK-1030A**	**TK-1030B**	**TK-2301**	**TK-2320**	**TK-40**	**TK-2420**	**TK-2430**	**TK-2470**	**TK-1210**
Type of Tank	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical	Vertical	Horizontal	Horizontal	Vertical	Horizontal	Horizontal	Vertical

Identification Tab													
Description	Asphalt Receiving	Asphalt Receiving	Asphalt Receive /	Asphalt Flux Storage	Coating Asphalt Tank	Coating Asphalt Tank	Coating Storage Tank	Mix Storage Tank	Self Seal Tank	Coating Storage	Laminate Adhesive	Laminate Adhesive	Waste Oil

Physical Characteristics Tab													
Shell Height (ft)	35.00	35.00	35.00	35.00	45.00	45.00	13.00	12.17	12.17	17.00	12.17	9.00	20.00
Shell Diameter (ft)	35.00	35.00	22.00	20.00	12.00	12.00	12.00	7.00	7.00	12.00	7.00	5.33	20.00
Max Liquid Height (ft)	34.00	34.00	34.00	34.00	44.00	44.00	12.00	na	na	16.00	na	na	19.00
Avg Liquid Height (ft)	18.00	18.00	18.00	18.00	22.00	22.00	8.00	na	na	9.00	na	na	10.00
Working Volume (gal)	244,702.32	244,702.32	96,682.39	79,902.80	37,225.30	37,225.30	10,152.36	3,500.00	3,500.00	14,500.00	3,500.00	1,400.00	44,651.56
Turnovers / Year	135.95	135.95	344.08	416.34	256.16	256.16	359.52	365.00	365.00	390.98	365.00	365.00	365.00
Throughput (gal/yr)	33,266,950	33,266,950	33,266,950	33,266,950	9,535,625	9,535,625	3,650,000	1,277,500	1,277,500	5,292,500	1,277,500	511,000	16,297,824
Heated	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	no
Shell Color	white/white	white/white	white/white	white/white	white/white	white/white	white/white	white/white	white/white	white/white	white/white	white/white	white/white
Shell Condition	good	good	good	good	good	good	good	good	good	good	good	good	good
Roof Color	white/white	white/white	white/white	white/white	white/white	white/white	white/white	na	na	white/white	na	na	white/white
Roof Condition	good	good	good	good	good	good	good	na	na	good	na	na	good
Roof Type	cone	cone	cone	cone	cone	cone	cone	na	na	cone	na	na	cone
Roof Height (ft)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	na	na	0.00	na	na	0.00
Roof Radius (ft)	na	na	na	na	na	na	na	na	na	na	na	na	na
Slope (ft/ft)	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	na	na	0.0625	na	na	0.0625
Vent Vacuum Setting (psig)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vent Pressure Setting (psig)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Appendix A to the Technical Support Document (TSD)
Miscellaneous Storage Tanks
(Continued from Previous Page)

TANKS 4.0.9d - Summary Data

Tank / Property	FST-1	FST-2	TK-1120	TK-1010	TK-1030A	TK-1030B	TK-2301	TK-2320	TK-40	TK-2420	TK-2430	TK-2470	TK-1210
Site Selection Tab													
Nearest Major City	Chicago, IL	Chicago, IL	Chicago, IL	Chicago, IL	Chicago, IL	Chicago, IL	Chicago, IL	Chicago, IL	Chicago, IL	Chicago, IL	Chicago, IL	Chicago, IL	Chicago, IL
Tank Contents Tab													
Chemical Category	Petro Distill	Petro Distill	Petro Distill	Petro Distill	Petro Distill	Petro Distill	Petro Distill	Petro Distill	Petro Distill	Petro Distill	Petro Distill	Petro Distill	Petro Distill
Single/Multicomponent	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single	Single
Chemical Name	Asphalt 300F	Asphalt 300F	Asphalt 300F	Asphalt 300F	Asphalt 300F	Asphalt 300F	Asphalt 300F	Asphalt 300F	Asphalt 300F	Asphalt 300F	Asphalt 300F	Asphalt 300F	Distillate No. 2
CAS Number	na	na	na	na	na	na	na	na	na	na	na	na	na
Avg Liq Surface Temp (F)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50.66
Min Liq Surface Temp (F)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45.76
Max Liq Surface Temp (F)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	55.55
Bulk Liquid Temp (F)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.02
Vapor Pressure (psi)	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.352	0.00
Liq Molecular Weight	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	188.00
Vapor Molecular Weight	190	190	190	190	190	190	190	190	190	190	190	190	130.00
Output Summary													
Working Losses (lb/yr)	20,518.72	20,518.72	13,447.60	12,646.01	4,309.03	4,309.03	1,453.69	506.24	506.24	1,957.93	506.24	202.50	58.14
Breathing Losses (lb/yr)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.41
Total Losses (lb/yr)	20,518.72	20,518.72	13,447.60	12,646.01	4,309.03	4,309.03	1,453.69	506.24	506.24	1,957.93	506.24	202.50	62.55
Total Losses (ton/yr)	10.26	10.26	6.72	6.32	2.15	2.15	0.73	0.25	0.25	0.98	0.25	0.10	0.03
VOC (note 1)	10.26	10.26	6.72	6.32	2.15	2.15	0.73	0.25	0.25	0.98	0.25	0.10	0.03
CO (note 2)	0.99	0.99	0.65	0.61	0.21	0.21	0.07	0.02	0.02	0.09	0.02	0.01	0.003
$PM/PM_{10}/PM_{2.5}$ (note 3)	2.89	2.89	1.90	1.78	0.61	0.61	0.21	0.07	0.07	0.28	0.07	0.03	0.000
Tank Air Flow (SCFM)	500	500	500	500	500	500	250	250	250	250	250	250	500
H_2S (note 4)	5.81	5.81	5.81	5.81	5.81	5.81	2.91	2.91	2.91	2.91	2.91	2.91	0.00

PTE Summary for Tanks

Pollutant	Uncontrolled PTE (TPY)	Control Efficiency	Controlled PTE (TPY)
VOC	40.47	95%	2.02
CO	3.92	0%	3.92
$PM/PM_{10}/PM_{2.5}$	11.41	95%	0.57
H_2S	52.31	95%	2.62

Notes:
1) All tank losses are assumed to be VOC, worst case
2) CO was calculated using the ratio of CO/VOC from AP-42, Ch. 11.1, Table 11.1-14 (3/2004), silo filling.
3) PM was calculated using the ratio of 0.22/0.78 from "Estimates of Air Emissions from Asphalt Storage Tanks and Truck Loading," David C. Trumbore.
4) H_2S emissions were estimated using 500 ppm concentration, 527.67 °R, and air flows provided by the Permittee. H_2S concentration was also from the Trumbore article.
5) Tank capacities were taken from issued permits and past applications. The dimensions of the tanks were adjusted in some cases to make the final tank volumes correct.
6) Worst case throughputs were assumed for tanks over 10,000 gallons. Smaller tanks were assumed to be day tanks, with 365 turnovers per year.
7) 3,500 and 1,400 gallon tanks were assumed to be horizontal.

Appendix A to the Technical Support Document (TSD)
BACT Limit Determination

Company Name: Building Material Manufacturing Corporation
Address: 505 N. Roeske Ave., Michigan City, Indiana 46360
Permit Number: 091-32963-00051
Reviewer: David Matousek
Date: April 22, 1014

Blowing Still Emission Limit - 95% Reduction by Mass

Potential to Emit VOC after Control

Controlled VOC Emissions from Blowing Still West BS-1 / HT-1020A	5.322	TPY		
Controlled VOC Emissions from Blowing Still East BS-2 / HT-1020B	5.322	TPY		
VOC Emissions from Natural Gas Combustion in Thermal Oxidizer	6.01	TPY		
Allowable VOC Emissions from Thermal Oxidizer	16.653	ton/yr	3.80	lb VOC/hr
Maximum Asphalt Throughput - Both Stills			30.00	ton asphalt /hr
		326 IAC 8-1-6 BACT Limit	**0.127**	**lb VOC / ton asphalt**

Asphalt Shingle Machine Emission Limit - 95% Reduction by Mass

Controlled VOC Emissions from Coater / Surge Tank	3.30	TPY		
Controlled VOC Emissions from Self-Seal / Cooling Application	0.71	TPY		
Controlled VOC Emissions from Laminate Application	0.23	TPY		
Allowable VOC Emissions from Shingle Machine	4.23	ton/yr	0.96598	lb VOC/hr
Maximum Shingle Production			75.00	ton shingle/hr
Maximum Asphalt Throughput			25.00	ton asphalt/hr
		326 IAC 8-1-6 BACT Limit	**0.013**	**lb VOC/ton shingle**
			0.04	lb VOC/ton asphalt

Appendix A to the Technical Support Document (TSD)
40 CFR 63, Subpart AAAAAAA - Compliance Determination

Company Name: Building Materials Manufacturing Corporation
Address: 505 N. Roeske Avenue, Michigan City, Indiana 46360
Permit Number: SPR 091-32963-00051
Reviewer: David Matousek
Date: March 10, 2014

Shingle Machine

Coater/Surge Tank

Limit Based on PM Emissions						
Pollutant	**Shingle Throughput (ton/yr)**	**Emission Factor (lb/ton)**	**PTE (TPY)**	**Control Efficiency**	**Controlled PTE (TPY)**	**Source**
$PM/PM_{10}/PM_{2.5}$	657,000	0.0500	16.43	95%	0.82	See sheet 20 of 26
		Estimated Emission Rates (lb / ton shingle)	0.05 lb/ton		0.0025 lb/ton	
		NESHAP 6A Limit - Based on PM	0.06 lb/ton	Can comply with PM Limit Without Control		

Polynuclear Aromatic Hydrocarbons (PAH) - 16 Group						
Pollutant	**Shingle Throughput (ton/yr)**	**Emission Factor (lb/ton)**	**PTE (TPY)**	**Control Efficiency**	**Controlled PTE (TPY)**	**Source**
Acenaphthene	657,000	9.55E-07	3.14E-04	95%	1.57E-05	See Sheet 20 of 26
Acenaphthylene		3.90E-07	1.28E-04	95%	6.41E-06	
Anthracene		5.48E-06	1.80E-03	95%	9.00E-05	
Benz(a)anthracene		9.38E-07	3.08E-04	95%	1.54E-05	
Benzo(a)pyrene		3.90E-07	1.28E-04	95%	6.41E-06	
Benzo(b)fluoranthene		5.20E-07	1.71E-04	95%	8.54E-06	
Benzo(g,h,i)perylene		1.69E-07	5.55E-05	95%	2.78E-06	
Benzo(k)fluoranthene		3.90E-07	1.28E-04	95%	6.41E-06	
Chrysene		5.55E-06	1.82E-03	95%	9.12E-05	
Dibenz(a,h)anthracene		3.90E-07	1.28E-04	95%	6.41E-06	
Fluoranthene		3.90E-07	1.28E-04	95%	6.41E-06	
Flourene		6.35E-06	2.09E-03	95%	1.04E-04	
Indo(1,2,3-c,d)pyrene		9.33E-06	3.06E-03	95%	1.53E-04	
Napthalene		5.55E-06	1.82E-03	95%	9.12E-05	
Phrenathrene		6.18E-06	2.03E-03	95%	1.02E-04	
Pyrene		1.05E-06	3.45E-04	95%	1.72E-05	
Total PAH			1.45E-02		7.23E-04	
		Emission Rates (lb / ton shingle)	4.4E-05 lb/ton		2.2E-06 lb/ton	
		NESHAP 6A Limit - Based on PAH	2.0E-04 lb/ton	Can comply with PAH Limit Without Control		

Methodology:
1) PTE (TPY) = Throughput (tons/yr) x Emission Factor (lb/ton) x 1 ton / 2,000 lb
2) Controlled PTE (TPY) = PTE (TPY) x (1 - Control Efficiency)

Appendix A to the Technical Support Document (TSD)
40 CFR 63, Subpart AAAAAAA - Compliance Determination

Blowing Still - Typical of Both Units

Limit Based on PM Emissions						
Pollutant	**Apshalt Throughput (ton/hr)**	**Emission Factor (lb/ton)**	**PTE (TPY)**	**Control Efficiency**	**Controlled PTE (TPY)**	**Source**
$PM/PM_{10}/PM_{2.5}$	15.00	0.0390	2.56	95%	0.13	See Sheet 6 of 26
Estimated Emission Rates (lb / ton asphalt)			0.039 lb/ton		0.0020 lb/ton	
NESHAP 6A Limit - Based on PM			1.20 lb/ton	Can comply with PM Limit Without Control		

Polynuclear Aromatic Hydrocarbons (PAH) - 16 Group						
Pollutant	**Asphalt Throughput (ton/yr)**	**Emission Factor (lb/ton)**	**PTE (TPY)**	**Control Efficiency**	**Controlled PTE (TPY)**	**Source**
Acenaphthene	131,400	1.19E-06	7.82E-05	95%	3.91E-06	See Sheet 6 of 26
Acenaphthylene		3.56E-08	2.34E-06	95%	1.17E-07	
Anthracene		3.30E-07	2.17E-05	95%	1.08E-06	
Benz(a)anthracene		1.42E-07	9.33E-06	95%	4.66E-07	
Benzo(a)pyrene		0.00E+00	0.00E+00	95%	0.00E+00	
Benzo(b)fluoranthene		0.00E+00	0.00E+00	95%	0.00E+00	
Benzo(g,h,i)perylene		0.00E+00	0.00E+00	95%	0.00E+00	
Benzo(k)fluoranthene		0.00E+00	0.00E+00	95%	0.00E+00	
Chrysene		5.33E-07	3.50E-05	95%	1.75E-06	
Dibenz(a,h)anthracene		0.00E+00	0.00E+00	95%	0.00E+00	
Fluoranthene		3.81E-07	2.50E-05	95%	1.25E-06	
Flourene		2.57E-06	1.69E-04	95%	8.44E-06	
Indo(1,2,3-c,d)pyrene		0.00E+00	0.00E+00	95%	0.00E+00	
Napthalene		4.62E-06	3.04E-04	95%	1.52E-05	
Phrenathrene		4.57E-06	3.00E-04	95%	1.50E-05	
Pyrene		1.12E-06	7.36E-05	95%	3.68E-06	
Total PAH			1.02E-03		5.09E-05	
Emission Rates (lb / ton asphalt)			1.5E-05 lb/ton		7.7E-07 lb/ton	
NESHAP 6A Limit - Based on PAH			3.0E-03 lb/ton	Can comply with PAH Limit Without Control		

Indiana Department of Environmental Management
Office of Air Quality

Appendix B to the Technical Support Document (TSD)
BACT Analysis

Source Background and Description

Source Name:	Building Materials Manufacturing Corporation
Source Location:	505 North Roeske Avenue, Michigan City, Indiana 46360
County:	LaPorte County, Michigan Township
SIC Code:	2952 (Asphalt Felts and Coatings)
Operation Permit No.:	F 091-18358-00051
Operation Permit Issuance Date:	January 8, 2007
Significant Permit Revision No.:	091-32963-00051
Permit Reviewer:	David Matousek

On March 15, 2013, the Office of Air Quality (OAQ) received an application from Building Materials Manufacturing Corporation related to a modification to an existing stationary roof shingle manufacturing source. The application requested revisions to the air pollution control devices used to control VOC from the blow stills, the shingle machine and several asphalt storage tanks. The application also requested the addition of a hot oil heater, an emergency generator, and sixteen natural gas fired space heaters.

On November 25, 2013, Building Materials Manufacturing Corporation revised the March 15, 2013 application to include a second hot oil heater, and a new boiler. Additionally, three existing hot oil heaters were removed from service. The blow stills and the asphalt coating process are subject to a BACT limit issued under F 091-10904-00051 issued on October 6, 1999. The 326 IAC 8-1-6 limit required the blow stills and asphalt coating process to be controlled by a thermal oxidizer. Also, VOC emissions from the thermal oxidizer were not to exceed 98.9 tons per twelve consecutive month period with compliance determined at the end of each month. The VOC limit on the thermal oxidizer was intended to ensure the source was under Title V Major Source Thresholds. The current application requests IDEM, OAQ to reopen the 326 IAC 8-1-6 BACT to allow the asphalt coating process to be removed from the thermal oxidizer and connected to a coalescing filter. The blow stills will remain connected to the existing thermal oxidizer, which will be modified by reducing the heat input capacity and the air flow.

326 IAC 8-1-6 (New Facilities General Reduction Requirements)
Best Available Control Technology (BACT) Review

Pursuant to 326 IAC 8-1-6, new facilities as of January 1, 1980 that: have potential VOC emissions of twenty-five (25) ton or more per year; are located anywhere in the state; and are not otherwise regulated by other Article 8 rules; 326 IAC 20-48; or 326 IAC 20-56; shall reduce VOC emissions using best available control technology (BACT). Once a facility becomes subject to an Article 8 rule, the facility shall remain subject to such rule, pursuant to 326 IAC 8-1-1(a). The commissioner may exempt an existing facility subject to an Article 8 rule if:

(1) The facility accepts an enforceable permit issued under 326 IAC 2 or a federally-approved SIP revision that permanently restricts production, hours of operation or capacity utilization such that the facility's actual emissions before control are reduced to a level below fifteen (15) pounds per day.

(2) The permit or document issued under (1) above requires the owner or operator to maintain records to demonstrate compliance with the permit or document restrictions.

(3) All permits, renewed permits, and other enforceable documents issued under (1) above are submitted to the U.S. EPA as SIP revisions.

Each blow still and the shingle machine have potential VOC emissions in excess of twenty-five (25) tons per year, and are subject to 326 IAC 8-1-6 (BACT). None of the asphalt storage tanks have VOC emissions in excess of twenty-five tons per year and are not subject to the requirements of 326 IAC 8-1-6.

VOC emissions from the blowing still are straight forward. Emissions are not combined with other emission sources and are controlled by a thermal oxidizer. The shingle machine is a more complex emission unit. Fiberglass sheet is fed to a coater pan at a rate of 4,000 lb fiberglass per hour and an asphalt coating with mineral stabilizer is applied. Asphalt in the coating process is at approximately 400 °F. There are VOC, particulate, CO, H_2S, and HAP emissions from this portion of the shingle manufacturing process and the Permittee intends to control VOC, particulate, and HAP emission with the proposed fiber bed filter. After the coater, the shingle material has a granule applied to the top side and sand applied to the bottom side. This process will produce VOC and particulate matter emissions. The Permittee will vent these emissions to a baghouse where particulate is controlled and the VOC escapes uncontrolled. IDEM, OAQ estimated VOC emissions from this process at less than one ton per year. Following granule application, a self-seal strip consisting of an asphaltic-based, heat sensitive adhesive is applied at a rate of 4,048 pounds per hour. The self-seal strip bonds the finished shingle together after they are exposed to several days of sunlight on the roof. Bonding is required to prevent the shingles from lifting and blowing off the roof. The self-seal must be activated by heat so the shingles do not bond together during packaging and shipping. Next, the shingles are cooled and air dried in the cooling section. Finally, the shingle machine can produce architectural shingles by laminating an additional layer to the bottom of the shingle. Laminate adhesive is applied at a rate of 1,289 pounds per hour. The self-seal, cooling section and laminate adhesive process produce VOC emissions. The Permittee intends to control these emissions with the proposed fiber bed filter.

BACT Review – Subject Units

The emission units subject to 326 IAC 8-1-6 BACT are shown below:

(a) Two (2) asphalt blow stills (asphalt conditioners), identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B, each installed in 1999, each exhausting to thermal oxidizer (TO-1 / TO-1200) for VOC control, capacity: 30,000 pounds of asphalt per hour, each.
[40 CFR 60, Subpart UU] [40 CFR 63, Subpart AAAAAAA]

(b) One (1) shingle machine, identified as SM-1 / RL1-01, installed in 1999, (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 63, Subpart AAAAAAA] consisting of the following:

    (1) One (1) coating dip tank, containing asphalt and limestone filler, venting to coalescing filter CECO-1 for VOC control, capacity: 25 tons of asphalt per hour; and

    (2) One (1) aggregate (limestone, sand, granules, etc.) and adhesives application, equipped with a baghouse (BHA Collector) for particulate control, identified as Dust Collector V-10 / DC-9210, exhausting to Stack V-14, capacity: 50.0 tons of aggregate per hour.

Summary of the Best Available Control Technology (BACT) Process

BACT is an emission limitation based on the maximum degree of pollution reduction of emissions, which is achievable on a case-by-case basis. These reductions may be determined through the application of available control techniques, process design, work practices, and operational limitations. The five (5) basic steps of a top-down BACT analysis used by the Office of Air Quality (OAQ) to make BACT determinations are listed below:

Step 1: Identify Potential Control Technologies
The first step is to identify potentially "available" VOC control options for each emission unit. Available options should consist of a comprehensive list of those technologies with a potentially practical application to the emissions unit in question. The list should include controls applied to similar source categories.

Step 2: Eliminate Technically Infeasible Options
The second step is to eliminate technically infeasible options from further consideration. To be considered feasible, a technology must be both available and applicable. It is important in this step that any presentation of a technical argument for eliminating a technology from further consideration be clearly documented based on physical, chemical, engineering, and source specific factors related to safe and successful use of the controls. A control technology is considered available when there are sufficient data indicating that the technology results in a reduction in emissions of VOC.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness
The third step is to rank the technologies not eliminated in Step 2 in order of descending control effectiveness. The ranked alternatives are reviewed in terms of control effectiveness (percent pollutant removed). If the highest ranked technology is proposed as BACT, it is not necessary to perform any further technical or economic evaluation, except, any more stringent limits established from other RBLC Permits.

Step 4: Evaluate the Most Effective Controls and Document the Results
The fourth step begins with an evaluation of the remaining technologies under consideration. If the analysis determines that the highest ranked control is not appropriate as BACT, then the next most effective control is evaluated. The evaluation continues until a technology under consideration cannot be eliminated. If the highest ranked technology is proposed as BACT, it is not necessary to perform any further analysis.

Step 5: Select BACT
The fifth and final step is to select as BACT the most effective of the remaining technologies under consideration. For the technologies determined to be feasible, there may be several different limits that have been set as BACT for the same control technology. The permitting agency has to choose the most stringent limit as BACT unless the applicant demonstrates in a convincing manner why that limit is not feasible. The final BACT determination would be the technology with the most stringent corresponding limit that is economically feasible.

BACT Analysis – Shingle Machine SM-1 / RL1-01

Emission Unit Description

One (1) shingle machine, identified as SM-1 / RL1-01, installed in 1999, (Under NSPS 40 CFR 60 Subpart UU, this facility is part of an affected asphalt processing and asphalt roof manufacturing source.) [40 CFR 63, Subpart AAAAAAA] consisting of the following:

(1) One (1) coating dip tank, containing asphalt and limestone filler, venting to coalescing filter CECO-1 for VOC control, capacity: 25 tons of asphalt per hour; and

(2) One (1) aggregate (limestone, sand, granules, etc.) and adhesives application, equipped with a baghouse (BHA Collector) for particulate control, identified as Dust Collector V-10 / DC-9210, exhausting to Stack V-14, capacity: 50.0 tons of aggregate per hour.

Step 1: Identify Potential Control Technologies

IDEM, OAQ has identified the following VOC control technologies for the shingle machine identified as SM-1 / RL1-01:

(a) Thermal Oxidizer;

(b) Catalytic Oxidizer;

(c) Fiber Bed Filter (Wet Scrubber);

(d) Flare;

(e) Thermal Oxidation in a Boiler or Process Heater;

(f) High Energy Air Filter; and

(g) Two-Stage Electrostatic Precipitator (Electronic Air Filter).

Each of these control technologies is discussed in Step 2 below.

Step 2: Eliminate Technically Infeasible Options

(a) **Thermal Oxidizer**

This type of incinerator is also referred to as a direct flame incinerator, thermal incinerator, or afterburner. The term afterburner is usually reserved to describe a thermal oxidizer used to control gases coming from a process where combustion is incomplete. Thermal oxidizers are used primarily to destroy volatile organic compounds by raising the temperature of the material above its auto-ignition point in the presence of oxygen for a period long enough for complete combustion to occur.

Thermal oxidizers contain a nozzle-stabilized flame maintained by mixing the waste gas with supplemental fuel and excess air to achieve complete combustion. Performance of the thermal oxidizer is determined by the following factors: time, temperature, turbulence, inlet VOC concentration and type of compound. The residence time and temperature required to achieve complete combustion of a specific VOC varies for different compounds and is usually determined empirically. Thermal oxidizers are designed for the worst case, highest auto-ignition temperature and longest residence time VOC to be controlled. Most thermal units are designed with a residence time of a second or less and operate at temperatures of 1,100 °F to 2,200 °F.

Thermal oxidizers are highly effective at destroying VOC, with efficiencies in excess of 99.9999% possible. Thermal oxidizers are usually selected when high destruction efficiencies are required and the waste gas is above 20% and below 25% of the lower explosive limit (LEL). Waste gases with high heating values require less supplemental fuel and are more cost effective to operate. High flow organic vapor streams with low VOC concentration are not found to be cost effective. Waste gas streams above 25% of the LEL are not recommended because they present an explosion hazard and special control equipment is required by the national fire code. Thermal oxidizers are not recommended for waste streams with highly variable flow rates, because of poor mixing and incomplete combustion. Thermal oxidizers are not recommended for controlling waste gases containing halogens or sulfur compounds. Sulfur and halogen compounds can form acid gases that are highly corrosive and may require the addition of an acid gas treatment system.

In this application, the control device will be required to reduce VOC emissions from a shingle machine, several asphalt storage tanks, and two asphalt unloading racks. VOC will be collected by a combined vapor capture system operating at 30,000 ACFM and 130 °F. VOC emissions sent to the control device will include 40.47 TPY from the storage tanks, 85.61 TPY from the shingle machine, and 5.98 TPY from the asphalt unloading racks for a total of 132.06 TPY of VOC. Assuming the lower explosive limit is 45 mg/liter as referenced in "Estimates of Air Emissions from Asphalt Storage Tanks and Truck Loading," by David Trumbore, this waste gas stream will operate at 0.5% of the lower explosive limit. This is well below the recommended minimum of 20% of the LEL and significant supplemental fuel will be required.

The source currently controls VOC emissions from the shingle machine asphalt coater, asphalt storage tanks, and the asphalt loading racks with a thermal oxidizer. Therefore, this is a feasible control technology for this application.

Control device performance characteristics listed in this section are based on the U.S EPA Air Pollution Control Fact Sheet, Thermal Incinerator, EPA-452/F-03-022.

(b) **Catalytic Oxidizer**
A catalytic oxidizer is also referred to as a catalytic incinerator or a catalytic reactor and destroys VOC by oxidation in the presence of a catalyst. Catalytic oxidizers are similar to thermal oxidizers in that they raise the temperature of the waste gas stream in a nozzle-stabilized flame maintained by mixing the waste gas with supplemental fuel and excess air. The main difference is after passing through the flame area, a catalytic oxidizer uses a catalyst bed to complete oxidation. The catalyst increases the oxidation reaction rate, allowing for lower temperatures and smaller incinerators.

Inside the catalyst bed, VOC migrates onto the catalyst surface where gas diffusion initiates adsorption onto the active catalyst sites. The catalyst does require regeneration where the reaction products are desorbed from the catalyst. Typically, the catalyst is either regenerated on-site on a regular basis or is replaced after reaching the end of its useful life and regenerated off-site. Particulate matter or other contaminates can rapidly coat the active sites on the catalyst and blind the catalyst to VOC. The waste gas may require pretreatment to prevent fouling of the catalyst bed prematurely.

Catalytic oxidizers are highly effective in destroying VOC, with efficiencies in excess of 99.9999% possible. As with thermal oxidizers, performance is determined by time, temperature, turbulence and the composition of the waste gas. In addition, catalyst volume and characteristics are very important. The catalyst is chosen for the individual process conditions and destruction efficiency is determined by how long the waste gas stays in contact with the catalyst and the temperature of the catalyst. Longer residence times and higher temperatures produce higher destruction efficiencies. Control efficiencies over 98% can be achieved but large catalyst volumes and/or high temperatures are required. Catalytic oxidizers are best suited to control low volumes of waste gas, with little variation in flow or composition. Catalytic oxidizers typically operate on gas volumes of 700 to 50,000 SCFM and temperatures between 600 °F and 1,200 °F. Catalytic oxidizers have been shown effective on pollutant loadings of as low as 1 ppmv up to 25% of the LEL of the gas stream.

In this application, the waste gas will have a relatively high but constant flow rate of 30,000 ACFM, a low pollutant loading of 0.5% of the LEL, and an inlet temperature of 130 °F. The waste gas contains fine liquid aerosols that will condense below 130 °F and leave behind a sticky black tar. The active sites on the catalyst bed may quickly foul rendering the control device ineffective and hard to maintain. Finally, excessive supplemental fuel would be required due to the low heating value of the waste gas.

Catalytic oxidation is not a feasible control technology for this application.

Control device performance characteristics listed in this section are based on the U.S EPA Air Pollution Control Fact Sheet, Catalytic Incinerator, EPA-452/F-03-018.

(c) **Fiber Bed Filter (Wet Scrubber)**
A fiber bed filter is also called a wetted-filter scrubber, mist eliminator, or a coalescing filter. This control technology removes air pollutants by inertial or diffusional interception and impaction. Typically, this scrubber is used to remove fine and/or soluble particulate matter and liquid aerosols. Coarse particulate matter will tend to clog the bed. The fiber bed scrubber removes fine aerosols from waste gases when they pass through beds or mats of packed fibers. The size of the fiber used in the scrubber is determined by the application. A fine fiber is used to collect mists and a coarse fiber is used to collect particulate matter. Once the particles are trapped on the filter fiber, they are coalesced into droplets and drain by gravity into a liquid pool at the bottom of the filter bed. The waste gas containing aerosols may be cooled prior to the fiber bed or mat to condense as much of the liquid as possible and to increase the size of aerosols droplets that remain.

VOC emission reduction can range from 70% to 99.5% depending on the waste gas characteristics, the size of the aerosols to be collected and the design of the filter bed or mat and the scrubber chamber. These units can operate from 1,000 to 100,000 SCFM, at temperatures below 140 °F. For liquid aerosol recovery, the liquid collected must be treated to remove the pollutant. For particulate control, there will be a need for waste water treatment and solid waste disposal.

The use of a coalescing filter is a feasible control technology for this application.

Control device performance characteristics listed in this section are based on the U.S EPA Air Pollution Control Fact Sheet, Fiber Bed Scrubber, EPA-452/F-03-011 and a technical information sheet on fiber bed filters from CECO Filters, Inc.

(d) **Flare**
A flare is used to control VOC emissions by thermal oxidation. However, halogenated compounds are usually not controlled by flares because they are hard to combust and incomplete combustion can form corrosive acid gases such as hydrochloric or hydrofluoric acid. Flares take many shapes and designs including: elevated flares, steam-assisted flares, air-assisted flares, non-assisted flares, pressure-assisted flares, and enclosed ground flares. “Smokeless flares” use steam injection or air assist and are the primary type of flare installed today. Non-assisted flares are used where supplemental mixing is not required due to low carbon content in the waste gas.

Flares control waste gas streams by piping them to an engineered burner tip where the waste gas, auxiliary fuel, steam or air are mixed and combusted in an open flame. The level of destruction is a function of flame temperature, residence time, and the completeness of mixing. If complete combustion is achieved, all of the VOC compounds are converted to carbon dioxide and water vapor. Liquids must be removed from waste gas streams before combustion in the flare tip with a knock-out drum. Liquids are removed because they can extinguish the flame, cause irregular combustion, or cause a spray of burning liquid that could reach the ground causing a safety hazard.

A properly designed and operated flare can achieve a VOC destruction efficiency of 98% or greater. Flares can be used on almost any VOC stream including continuous, batch and highly variable flow waste streams. Flares are available commercially from near zero flow to over 1,000,000 SCFM, with flame temperatures between 1,000 °F and 2,000 °F. The main operating restriction is the heat content of the waste gas. A minimum of 300 Btu/SCF is required for proper combustion. The minimum heat content can be achieved by supplying supplemental fuel. Flares are typically used when the waste gas is above the lower explosive limit and supplemental fuel is not required.

In this application, the waste gas has a continuous flow rate and consistent VOC content. However, it contains aerosols which are a safety hazard and has a low heat content which would require excessive amounts of supplemental fuel. Therefore, flares are not a technically feasible control technology.

Control device performance characteristics listed in this section are based on the U.S EPA Air Pollution Control Fact Sheet, Flares, EPA-452/F-03-019.

(e) **Thermal Oxidation in a Boiler or Process Heater**

Industrial boilers are commonly used to control VOC emissions in the chemical and refining industries. The waste gas is combined with the fuel or fed through a separate burner in the boiler. Boilers used in industry are usually a water-tube design where hot combustion gases contact the outside of a series of tubes containing steam and water. Burner design is important. When the waste gas is mixed with the fuel, burner design is controlled by fuel characteristics. When the waste gas is fed with a separate burner, burner design is controlled by the vent stream alone. Burner design is critical when the waste gas has a low heating value. Typically, high intensity burners are used for low heating value streams to create a strong mixing environment to aid combustion. As with thermal oxidizers, boiler destruction efficiency is controlled by time, turbulence, temperature, fuel type, heat input and excess air levels. U.S. EPA indicates boilers with a heat input of 44 MW (150 MMBtu/hr) or greater can achieve 98% control of VOC on a regular basis. Boilers operate at temperatures between 2,200 °F and 2,800 °F.

Process heaters are similar to boilers in that the heat produced by combustion is transferred by radiation and/or convection to a process fluid contained in tubular coils. Most process heaters contain a radiant section and a convective section. The radiant section contains the burners, the firebox and a row of tubes containing the process fluid to be heated. Process heaters also contain a convective section where heat is recovered from the combustion gases and is transferred to the process fluid by convective heat transfer. As with boilers, process heaters can achieve overall VOC destruction efficiencies of 98%.

This method of control is usually cost effective where a boiler is existing or proposed and can be modified to function as a control device. Variation in flow rates, heat content, and the presence of corrosive compounds may require operational changes in the use of the boiler but do not exclude its use as a control device. These variations can change the heat transfer characteristics of the boiler or process heater and could result in additional fuel usage.

The use of a boiler or process heater is a feasible control technology for the asphalt coater.

Control device performance characteristics were taken from “Control Techniques for Volatile Organic Compound Emissions from Stationary Sources,” U.S EPA, EPA 453/R-92-018, December 1992.

(f) **High Energy Air Filter (HEAF)**

High energy air filters are used to remove fine particulate and aerosols from waste gas streams that operate in the high energy region of 300 to 4,000 feet per minute and filter medium pressure drops of 7 to 60 inches of water. The filter media can remove solid particles and liquid droplets using a mat of a reticulated elastomeric foam, or glass fibers of 1 to 10 microns in diameter. Commercially available systems can achieve 80% removal or better of particulate matter. Typically, these units are not installed to control VOC emissions. However, some reduction in VOC can be achieved if the liquid droplets suspended in the waste gas are condensing VOC. The downside to these units is cleaning of the filter media can be difficult. In addition, the glass fiber mats can only be cleaned and reused once or twice before being replaced. Therefore, ongoing maintenance can be expensive.

IDEM, OAQ reviewed emission factors presented in AP-42, Chapter 11.2, Table 11.2-4 to determine the effectiveness of HEAF in the control of VOC for asphalt dip coaters. Uncontrolled total organic carbon (TOC) for coater operation, SCC 3-05-001-16, indicates an emission rate of 0.091 lb TOC per ton of shingle produced. The coater controlled by a HEAF, SCC 3-05-001-18, indicates a TOC emission rate of 0.094 lb/ton. Both emission factors are rated "D." In this application, HEAF does not provide any measurable VOC reduction. Therefore, HEAF is not a feasible VOC control technology for this application.

(g) **Two-Stage Electrostatic Precipitator (ESP) or Electronic Air Filter**
As with the high energy air filter, the two stage electrostatic precipitator is typically used for particulate control and the removal of finely divided liquid particles and not VOC control. However, some reduction in VOC can be achieved if the liquid droplets suspended in the waste gas are condensing VOC. A two-stage ESP differs from a single stage ESP in that the two stage unit has separate charging and collection stages. The charging stage contains equally spaced, positively charged wires perpendicular to the flow of waste gas suspended by grounded tubes. A corona discharge between the wire and grounded tube ionizes the suspended particles as they pass. The second stage contains negatively charges plates that are parallel to the flow of the waste gas. The positively charged particles and droplets are attracted to the plates and fall to the bottom of the unit where they are collected in a pan. Controlling sticky materials are usually difficult because they physically attach to the plates and must be manually removed. The two stage ESP is used almost exclusively to collect liquid aerosols and are common in controlling emissions from meat smokehouses, pipe-coating machines, asphalt paper saturators, high speed grinding machines, welding machines, and metal-coating operations.

IDEM, OAQ reviewed emission factors presented in AP-42, Chapter 11.2, Table 11.2-4 to determine the effectiveness of two-stage electrostatic precipitators in the control of VOC for asphalt coaters. Uncontrolled total organic compounds (TOC) for coater operations, SCC 3-05-001-16, indicates an emission rate of 0.091 lb TOC per ton of shingle produced. The coater controlled by the two-stage ESP, SCC 3-05-001-16, indicates a TOC emission rate of 0.098 lb/ton. Both emission factors are rated "D." In this application, the two-stage ESP does not provide any measurable VOC reduction. Therefore, the two-stage ESP is not a feasible VOC control technology for this application.

<u>Step 3: Rank the Remaining Control Technologies by Control Effectiveness</u>
IDEM, OAQ has identified two control technologies for VOC control from the shingle machine. They are ranked below:

(a) Fiber Bed Scrubber (Coalescing Filter) – 95% control effectiveness
(b) Thermal Oxidizer – 95% control effectiveness
(c) Thermal Oxidation in a Process Heater or Boiler – 95%

The U.S EPA published a document in April 1976 titled, "Control Technology for Asphalt Roofing Industry," EPA-600/2-76-120 to report on particulate matter and VOC control from the roofing industry. For thermal oxidizers, the report indicated only 62% of units were able to achieve VOC control efficiencies over 95%. While 94% of the units could achieve a 90% reduction in VOC. The background document for the National Emission Standards for Hazardous Air Pollutants: Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63, Subpart LLLLL, published by U.S. EPA in February 2003 (EPA-453/R-03-005) discussed achieving emission reductions above 95% for saturators, wet loopers, and coaters. U.S. EPA determined no beyond-the-floor standards were appropriate or even feasible. This indicates VOC control in excess of 95% is difficult to achieve at all times over the life of the coater using thermal oxidation.

Finally, thermal oxidation will result in significant energy inputs to raise the temperature of the waste gas from 140 °F to its auto-ignition temperature. The combustion of supplemental fuel will result in additional PM, PM_{10}, $PM_{2.5}$, NO_x, CO, and small amounts of SO_2 emissions. No other adverse environmental or energy impacts are anticipated for thermal oxidation.

The coalescing filter can achieve similar reductions in VOC without the additional combustion products or increased energy inputs. Little if any additional energy inputs are required because the filter does not contain any moving parts. The condensed VOC will pool in the bottom of the filter housing and will require removal and disposal. No other adverse environmental or energy impacts are anticipated for the fiber bed filter. The applicant has selected the use of a fiber bed filter. This represents top BACT. No additional analyses is required.

Step 4: Evaluate the Most Effective Controls and Document the Results

The following table lists the proposed BACT determination for this facility along with the existing BACT determinations for similar emission units. All data in the table is based on the information obtained from the permit application submitted by the Applicant, the U.S. EPA RACT/BACT/LAER Clearinghouse (RBLC), Indiana issued permits, and electronic versions of permits available at the websites of other permitting agencies.

RACT/BACT/LEAR CLEARINGHOUSE DATA
Shingle Machine (Coater / Cooling) – VOC and Total Hydrocarbon

RBLC ID Permit #	Facility	Issued Date	Process Description	Capacity	Limitation	Control Method
091-32963-00051	**Building Material Manufacturing Corporation**	**proposed**	**Shingle Machine Asphalt Coater**	**25 ton asphalt per hour**	**THC** **20 ppmv dry @ 3% O_2 or 95% reduction by mass** **VOC** **0.013 lb/ton shingles** **657,000 ton shingles/12 month rolling**	**Coalescing Filter**
OH-0288 16-02347	Owens Corning, Medina OH	Issued 06/14/04 Updated 08/23/06	Asphalt Coater / Surge Tank #1	15.2 tons asphalt per hour	96,911.2 ton asphalt and 492,080 ton shingles per 12 month rolling VOC 4.62 lb/hr 14.57 TPY THC 20 ppmv dry @ 3% O_2 or 95% reduction	VOC None Total Hydrocarbon None PM/H_2S/VE Fiber Bed Filter

RACT/BACT/LEAR CLEARINGHOUSE DATA Shingle Machine (Coater / Cooling) – VOC and Total Hydrocarbon						
RBLC ID Permit #	**Facility**	**Issued Date**	**Process Description**	**Capacity**	**Limitation**	**Control Method**
OH-0288 16-02347	Owens Corning, Medina OH	Issued 06/14/04 Updated 08/23/06	Asphalt Coater / Surge Tank #2	21.6 tons asphalt per hour	165,325 ton asphalt and 797,115 ton shingles per 12 month rolling VOC 6.59 lb/hr 25.16 TPY THC 20 ppmv dry @ 3% O_2	VOC None Total Hydrocarbon None PM/H_2S/VE Fiber Bed Filter

NSPS and NESHAP Standards

(a) 40 CFR 60, Subpart UU (Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture)

There are no applicable standards for VOC or total hydrocarbon for asphalt coaters contained in this subpart.

(b) 40 CFR 63.8680, Subpart LLLLL (National Emission Standards for Hazardous Air Pollutants: Asphalt Processing and Asphalt Roofing Manufacturing)

The following emission limitations apply to asphalt coaters:

(1) Reduce total hydrocarbon mass emissions by 95%, or to a concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen;

(2) Route the emissions to a combustion device achieving a combustion efficiency of 99.5 percent;

(3) Route the emissions to a combustion device that does not use auxiliary fuel achieving a total hydrocarbon (THC) destruction efficiency of 95.8%;

(4) Route the emissions to a boiler or process heater with a design heat input capacity of 44 megawatts or greater;

(5) Introduce the emissions into the flame zone of a boiler or process heater; or

(6) Route emissions to a flare meeting the requirements of 40 CFR 63.11(b).

(c) 40 CFR 63.11559, Subpart AAAAAAA (National Emission Standards for Hazardous Air Pollutants for Area Sources: Asphalt Processing and Asphalt Roofing Manufacture)

The following emission limitations apply to the asphalt coaters:

(1) Limit Polycyclic Alaphatic Hydrocarbons (PAH) to 0.0002 lb/ton of roofing asphalt product manufactured.

RBLC and NSPS/NESHAP Review
A review of the RBLC entries for similar units produced a single permit for an asphalt coater. The coater is installed in an Owens-Corning plant in Medina, OH. VOC emissions for both of the coaters indicates a VOC emission rate of 0.07 and 0.08 lb VOC per ton of shingles and both emit at

0.3 lb VOC per ton asphalt. Building Materials Manufacturing Corporation will emit at 0.013 lb VOC per ton of shingles and 0.04 pound VOC per ton asphalt. The entries from Owens-Corning also reflect the emission rates specified in 40 CFR 63, Subpart LLLLL of a 95% reduction in total hydrocarbon or to a concentration of 20 ppmv, on a dry basis, corrected to 3 percent oxygen. Since Subpart LLLLL provides six options for VOC or total hydrocarbon control, IDEM, OAQ considers all six options equally effective. IDEM, OAQ considers the use of the reduction in total hydrocarbon mass emissions by 95% as an acceptable option for non-combustion control devices used on asphalt shingle coaters.

Applicant Proposal
The applicant proposed the following for VOC BACT for the shingle machine identified as SM-1 / RL1-01:

(1) VOC emissions from the shingle machine shall be controlled by a coalescing filter at all times.

(2) Total hydrocarbon emissions from the shingle machine shall be reduced by 95% on a mass basis, or to a concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen.

(3) VOC emissions from the shingle machine shall not exceed 0.013 lb VOC/ton shingles produced.

Step 5: Select BACT
Pursuant to 326 IAC 8-1-6 (General Reduction Requirements), IDEM, OAQ has established VOC BACT as:

(1) VOC emissions from the shingle machine, including the coater, self-seal, and laminate adhesive processes, shall be controlled by a coalescing filter at all times the emission unit is in operation and generating VOC emissions.

(2) Total hydrocarbon emissions to the coalescing filter, identified as CECO-1 shall be reduced by 95% on a mass basis, or to a concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen.

(3) VOC emissions from the shingle machine shall not exceed 0.013 lb VOC/ton shingles produced.

(4) Shingle production shall not exceed 657,000 tons of shingles per twelve consecutive month period with compliance determined at the end of each month.

BACT Analysis – Blow Still West BS-1 / HT-1020A and Blow Still East BS-2 / HT-1020B

Emission Unit Description

(a) Two (2) asphalt blow stills (asphalt conditioners), identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B, each installed in 1999, each exhausting to thermal oxidizer (TO-1 / TO-1200) for VOC control, capacity: 30,000 pounds of asphalt per hour, each.
[40 CFR 60, Subpart UU] [40 CFR 63, Subpart AAAAAAA]

Step 1: Identify Potential Control Technologies
IDEM, OAQ has identified the following VOC control technologies for the blow stills, identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B:

(a) Thermal Oxidizer; and

(b) Catalytic Oxidizer.

Each of these control technologies is discussed in Step 2 below.

Step 2: Eliminate Technically Infeasible Options

(a) **Thermal Oxidizer**
The theory of operation of the thermal oxidizer was discussed in detail under the VOC BACT determination for the shingle machine asphalt coater and it will not be repeated in this discussion. This source currently controls VOC emissions from the blowing stills with a thermal oxidizer. Therefore, this is a feasible control technology.

(b) **Catalytic Oxidizer**
The theory of operation of the catalytic oxidizer was discussed in detail under the VOC BACT determination for the shingle machine asphalt coater and it will not be repeated in this discussion. For the blowing stills, the use of a catalytic oxidizer is not considered a feasible control technology due to the physical properties of the asphalt material and the potential to foul the active catalyst sites.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness
IDEM, OAQ has identified one control technologies for VOC control from the blow stills as shown below:

(a) Thermal Oxidizer – 95% control effectiveness

The applicant has selected the only technically feasible VOC control option for the blow stills.

Step 4: Evaluate the Most Effective Controls and Document the Results
The following table lists the proposed BACT determination for this facility along with the existing BACT determinations for similar emission units. All data in the table is based on the information obtained from the permit application submitted by the Applicant, the U.S. EPA RACT/BACT/LAER Clearinghouse (RBLC), Indiana issued permits, and electronic versions of permits available at the websites of other permitting agencies.

RACT/BACT/LEAR CLEARINGHOUSE DATA Blowing Stills – VOC and Total Hydrocarbon						
RBLC ID Permit #	**Facility**	**Issued Date**	**Process Description**	**Capacity**	**Limitation**	**Control Method**
091-32963-00051	Building Materials Manufacturing Corp, Michigan City, Indiana	Proposed	Two Blowing Stills	2 @ 15 ton asphalt/hr	VOC 0.127 lb/ton asphalt 262,800 ton asphalt/12 month rolling, both stills THC 20 ppmv dry @ 3% O_2 or 95% reduction by mass	VOC Thermal Oxidizer

RACT/BACT/LEAR CLEARINGHOUSE DATA Blowing Stills – VOC and Total Hydrocarbon						
RBLC ID Permit #	**Facility**	**Issued Date**	**Process Description**	**Capacity**	**Limitation**	**Control Method**
OH-0288 16-02347	Owens Corning, Medina OH	Issued 06/14/04 Updated 08/23/06	Three Blowing Stills	2 @ 17.9 ton/hr 1 @ 15.4 ton/hr	All three combined 395,312 ton asphalt per 12 month rolling 95% Destruction VOC VOC 2.02 lb/hr, 8.85 ton/12 month, each 17.9 TPH still 1.74 lb/hr, 7.61 ton/12 month, each 15.4 TPH still THC 20 ppmv dry @ 3% O_2 or 95% reduction	VOC/THC Thermal Oxidizer

NSPS and NESHAP Standards

(a) 40 CFR 60, Subpart UU (Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture)

There are no applicable standards for VOC or total hydrocarbon for asphalt blowing stills contained in this subpart.

(b) 40 CFR 63.8680, Subpart LLLLL (National Emission Standards for Hazardous Air Pollutants: Asphalt Processing and Asphalt Roofing Manufacturing)

The following emission limitations apply to asphalt blowing stills:

(1) Reduce total hydrocarbon mass emissions by 95%, or to a concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen;

(2) Route the emissions to a combustion device achieving a combustion efficiency of 99.5 percent;

(3) Route the emissions to a combustion device that does not use auxiliary fuel achieving a total hydrocarbon (THC) destruction efficiency of 95.8%;

(4) Route the emissions to a boiler or process heater with a design heat input capacity of 44 megawatts or greater;

(5) Introduce the emissions into the flame zone of a boiler or process heater; or

(6) Route emissions to a flare meeting the requirements of 40 CFR 63.11(b).

(c) 40 CFR 63.11559, Subpart AAAAAAA (National Emission Standards for Hazardous Air Pollutants for Area Sources: Asphalt Processing and Asphalt Roofing Manufacture)

The following emission limitations apply to the blowing stills:

(1) Limit Polycyclic Alaphatic Hydrocarbons (PAH) to 0.003 lb/ton of asphalt charged to the blowing stills.

RBLC, NSPS, and NESHAP Review
A review of the RBLC entries for similar units produced a single entry for asphalt blowing stills. The Owens-Corning facility in Medina, OH emits VOC at a rate of 0.113 lb VOC per ton of asphalt blown. Building Materials Manufacturing Corporation is proposing an emission rate of 0.127 lb VOC per ton of asphalt blown. Both emission rates anticipate a 95% reduction in mass emissions. Therefore, the emission rates are similar. In addition to the VOC emission limitations, the Owens-Corning Facility included a total hydrocarbon limit requiring a reduction of 95% by mass or to 20 ppmv dry at 3% oxygen. This limit is consistent with the limitations contained in 40 CFR 63, Subpart LLLLL.

Applicant Proposal
The applicant proposed the following as BACT for the asphalt blowing stills:

(a) VOC emissions from the asphalt blowing stills, identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B shall be controlled by a thermal oxidizer at all times the emission units are in operation.

(b) VOC emissions from each of the asphalt blowing stills, identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B shall not exceed 0.127 lb VOC per ton of asphalt blown.

Step 5: Select BACT
Pursuant to 326 IAC 8-1-6 (General Reduction Requirements), IDEM, OAQ has established VOC BACT for each asphalt blowing still as:

(a) VOC emissions from the asphalt blowing stills, identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B shall be controlled by a thermal oxidizer at all times the emission units are in operation and generating VOC emissions.

(b) VOC emissions from each of the asphalt blowing stills, identified as West BS-1 / HT-1020A and East BS-2 / HT-1020B shall not exceed 0.127 lb VOC per ton of asphalt blown.

(c) Combined asphalt throughput shall not exceed 262,800 tons per twelve consecutive month period with compliance determined at the end of each month.

(d) Total hydrocarbon emissions to the thermal oxidizer, identified as TO-1/TO-1200 shall be reduced by 95% on a mass basis, or to a concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
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(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Don Bulyar
Building Materials Manufacturing Corporation
505 N Roeske Ave
Michigan City, IN 46360

DATE: July 7, 2014

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

SUBJECT: Final Decision
FESOP - Significant Permit Revision
091 - 32963 - 00051

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:
Denby Snell, Plant Mgr
Henry D Leonhardt II Leonhardt Environmental
OAQ Permits Branch Interested Parties List

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

Final Applicant Cover letter.dot 6/13/2013

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

July 7, 2014

TO: Laporte County Public Library-Michigan City Branch

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Building Materials Manufacturing Corporation
Permit Number: 091 - 32963 - 00051

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	LPOGOST 7/7/2014 Building Materials Manufacturing Corporation 091 - 32963 - 00051 /final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Don Bulyar Building Materials Manufacturing Corporation 505 N Roeske Ave Michigan City IN 46360 (Source CAATS) Via confirmed delivery									
2		Denby Snell Plant Mgr Building Materials Manufacturing Corporation 505 N Roeske Ave Michigan City IN 46360 *(RO CAATS)*									
3		Laporte County Public Library-Michigan City Branch 100 East 4th Street Michigan City IN 46360-3393 *(Library)*									
4		LaPorte County Commissioners 555 Michigan Avenue # 202 LaPorte IN 46350 *(Local Official)*									
5		Mr. Chris Hernandez Pipefitters Association, Local Union 597 8762 Louisiana St., Suite G Merrillville IN 46410 *(Affected Party)*									
6		Michigan City-City Council and Mayors Office 100 E. Michigan Blvd. Michigan City IN 46360 *(Local Official)*									
7		LaPorte County Health Department County Complex, 4th Floor, 809 State St. LaPorte IN 46350-3329 *(Health Department)*									
8		Mr. Dick Paulen Barnes & Thornburg 121 W Franklin Street Elkhart IN 46216 *(Affected Party)*									
9		Henry D Leonhardt II Leonhardt Environmental, PC 8392 Six Forks Road, Suite 101 Raleigh NC 27615 *(Consultant)*									
10											
11											
12											
13											
14											
15											

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