NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

Preliminary Findings Regarding a
Significant Modification to a
Part 70 Operating Permit
for Arcosa LW HPB LLC in Morgan County

Significant Source Modification No.: 109-41865-00007
Significant Permit Modification No.: 109-41882-00007

The Indiana Department of Environmental Management (IDEM) has received an application from Arcosa LW HPB LLC, located at 6618 North Tidewater Road, Mooresville, Indiana 46158, for a significant modification of its Part 70 Operating Permit issued on February 21, 2019. If approved by IDEM’s Office of Air Quality (OAQ), this proposed modification would allow Arcosa LW HPB LLC to make certain changes at its existing source. Arcosa LW HPB LLC has applied to add unpermitted emissions units.

The applicant intends to construct and operate new equipment that will emit air pollutants; therefore, the permit contains new or different permit conditions. In addition, some conditions from previously issued permits/approvals have been corrected, changed, or removed. These corrections, changes, and removals may include Title I changes (e.g. changes that add or modify synthetic minor emission limits). IDEM has reviewed this application and has developed preliminary findings, consisting of a draft permit and several supporting documents, which would allow the applicant to make this change.

IDEM is aware that the emission units added in this modification have been constructed and operated prior to receipt of the proper permit. IDEM is reviewing this matter and will take appropriate action. This draft permit contains provisions to bring unpermitted equipment into compliance with construction and operation permit rules.

A copy of the permit application and IDEM’s preliminary findings are available at:

Morgan County Public Library
110 South Jefferson Street
Martinsville, Indiana 46151

A copy of the preliminary findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.

A copy of the preliminary findings is also available via IDEM’s Virtual File Cabinet (VFC.) Please go to: http://www.in.gov/idem/ and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria.

How can you participate in this process?

The date that this notice is posted on IDEM’s website (https://www.in.gov/idem/5474.htm) marks the beginning of a 30-day public comment period. If the 30th day of the comment period falls on a day when IDEM offices are closed for business, all comments must be postmarked or delivered in person on the next business day that IDEM is open.

You may request that IDEM hold a public hearing about this draft permit. If adverse comments concerning the air pollution impact of this draft permit are received, with a request for a public hearing,
IDEEM will decide whether or not to hold a public hearing. IDEEM could also decide to hold a public meeting instead of, or in addition to, a public hearing. If a public hearing or meeting is held, IDEEM will make a separate announcement of the date, time, and location of that hearing or meeting. At a hearing, you would have an opportunity to submit written comments and make verbal comments. At a meeting, you would have an opportunity to submit written comments, ask questions, and discuss any air pollution concerns with IDEEM staff.

Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEEM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added to IDEEM’s mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEEM at the address below. Please refer to permit number SSM 109-41865-00007 and SPM 109-41882-00007 in all correspondence.

Comments should be sent to:

Kelcy Tolliver
IDEEM, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(800) 451-6027, ask for Kelcy Tolliver or (317) 234-6679
Or dial directly: (317) 234-6679
Fax: (317) 232-6749 attn: Kelcy Tolliver
E-mail: KTollive@idem.IN.gov

All comments will be considered by IDEEM when we make a decision to issue or deny the permit. Comments that are most likely to affect final permit decisions are those based on the rules and laws governing this permitting process (326 IAC 2), air quality issues, and technical issues. IDEEM does not have legal authority to regulate zoning, odor, or noise. For such issues, please contact your local officials.

For additional information about air permits and how the public and interested parties can participate, refer to the IDEEM Air Permits page on the Internet at: http://www.in.gov/idem/airquality/2356.htm; and the Citizens’ Guide to IDEEM on the Internet at: http://www.in.gov/idem/6900.htm.

What will happen after IDEEM makes a decision?

Following the end of the public comment period, IDEEM will issue a Notice of Decision stating whether the permit has been issued or denied. If the permit is issued, it may be different than the draft permit because of comments that were received during the public comment period. If comments are received during the public notice period, the final decision will include a document that summarizes the comments and IDEEM’s response to those comments. If you have submitted comments or have asked to be added to the mailing list, you will receive a Notice of the Decision. The notice will provide details on how you may appeal IDEEM’s decision, if you disagree with that decision. The final decision will also be available on the Internet at the address indicated above, at the local library indicated above, and the IDEEM public file room on the 12th floor of the Indiana Government Center North, 100 N. Senate Avenue, Indianapolis, Indiana 46204-2251.

If you have any questions, please contact Kelcy Tolliver of my staff at the above address.

[Signature]
Josiah K. Balogun, Section Chief
Permits Branch
Office of Air Quality
Michael Ragsdale  
Arcosa LW HPB LLC  
1112 E Copeland Road, Suite 500  
Arlington, Texas 76011  

Re: 109-41882-00007  
Significant Permit Modification  

Dear Mr. Ragsdale:  

Arcosa LW HPB LLC was issued Part 70 Operating Permit Renewal No. T109-39783-00007 on February 21, 2019 for a stationary lightweight expanded shale processing plant located at 6618 North Tidewater Road, Mooresville, Indiana 46158. An application requesting changes to this permit was received on August 30, 2019. Pursuant to the provisions of 326 IAC 2-7-12, a Significant Permit Modification to this permit is hereby approved as described in the attached Technical Support Document.  

Please find attached the entire Part 70 Operating Permit as modified, including the following new attachment(s):  

Attachment B:  40 CFR 63, Subpart ZZZZ, Stationary Reciprocating Internal Combustion Engines  

The permit references the below listed attachment(s). Since this attachment has been provided in previously issued approvals for this source, IDEM OAQ has not included a copy of this attachment with this modification:  

Attachment A:  40 CFR 60, Subpart OOO, Nonmetallic Mineral Processing Plant  

Previously issued approvals for this source containing these attachments are available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/.  

Previously issued approvals for this source are also available via IDEM’s Virtual File Cabinet (VFC.) Please go to: http://www.in.gov/idem/ and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria.  


A copy of the permit is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/. A copy of the permit is also available via IDEM’s Virtual File Cabinet (VFC.) Please go to: http://www.in.gov/idem/ and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: http://www.in.gov/idem/airquality/2356.htm; and the Citizens’ Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.  

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5.
DRAFT

If you have any questions regarding this matter, please contact Kelcy Tolliver, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 234-6679 or (800) 451-6027, and ask for Kelcy Tolliver or (317) 234-6679.

Sincerely,

Josiah K. Balogun, Section Chief
Permits Branch
Office of Air Quality

Attachments: Modified Permit and Technical Support Document
cc: File - Morgan County
    Morgan County Health Department
    U.S. EPA, Region 5
    Compliance and Enforcement Branch
Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

Arcosa LW HPB LLC
6618 North Tidewater Road
Mooresville, Indiana 46158

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

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

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

Operation Permit No.: T109-39783-00007
Master Agency Interest ID.: 14596
Issued by: Josiah K. Balogun, Section Chief
Permits Branch, Office of Air Quality
Issuance Date: February 21, 2019
Expiration Date: February 21, 2024

Significant Permit Modification No.: 109-41882-00007
Issued by: Josiah K. Balogun, Section Chief
Permits Branch, Office of Air Quality
Issuance Date: February 21, 2019
Expiration Date: February 21, 2024
TABLE OF CONTENTS

SECTION A  SOURCE SUMMARY ......................................................................................................... 6
   A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(14)][326 IAC 2-7-1(22)]
   A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]
       [326 IAC 2-7-5(14)]
   A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)]
       [326 IAC 2-7-5(14)]
   A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

SECTION B  GENERAL CONDITIONS ................................................................................................. 10
   B.1 Definitions [326 IAC 2-7-1]
   B.2 Permit Term
       [326 IAC 2-7-5(2)][326 IAC 2-1.1-9.5][326 IAC 2-7-4(a)(1)(D)][IC 13-15-3-6(a)]
   B.3 Term of Conditions [326 IAC 2-1.1-9.5]
   B.4 Enforceability [326 IAC 2-7-7] [IC 13-17-12]
   B.5 Severability [326 IAC 2-7-5(5)]
   B.6 Duty to Provide Information [326 IAC 2-7-5(6)(E)]
   B.7 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]
   B.8 Annual Compliance Certification [326 IAC 2-7-6(5)]
   B.9 Preventive Maintenance Plan [326 IAC 2-7-5(12)][326 IAC 1-6-3]
   B.10 Permit Shield [326 IAC 2-7-10.5]
   B.11 Emergency Provisions [326 IAC 2-7-16]
   B.12 Permit Shield [326 IAC 2-7-15][326 IAC 2-7-20][326 IAC 2-7-12]
   B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5][326 IAC 2-7-10.5]
   B.14 Termination of Right to Operate [326 IAC 2-7-10][326 IAC 2-7-4(a)]
   B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination
       [326 IAC 2-7-5(6)(C)][326 IAC 2-7-8(a)][326 IAC 2-7-9]
   B.16 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]
   B.17 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12]
   B.18 Permit Revision Under Economic Incentives and Other Programs
       [326 IAC 2-7-5(8)][326 IAC 2-7-12(b)(2)]
   B.19 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]
   B.20 Source Modification Requirement [326 IAC 2-7-10.5]
   B.21 Inspection and Entry [326 IAC 2-7-6][IC 13-14-2-2][IC 13-30-3-1][IC 13-17-3-2]
   B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]
   B.23 Annual Fee Payment [326 IAC 2-7-19][326 IAC 2-7-5(7)][326 IAC 2-1.1-7]
   B.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314][326 IAC 1-1-6]

SECTION C  SOURCE OPERATION CONDITIONS ............................................................................. 21
   Emission Limitations and Standards [326 IAC 2-7-5(1)] ......................................................... 21
   C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less
       Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]
   C.2 opacity [326 IAC 5-1]
   C.3 Open Burning [326 IAC 4-1][IC 13-17-9]
   C.4 Incineration [326 IAC 4-2][326 IAC 9-1-2]
   C.5 Fugitive Dust Emissions [326 IAC 6-4]
   C.6 Stack Height [326 IAC 1-7]
   C.7 Asbestos Abatement Projects [326 IAC 14-10][326 IAC 18][40 CFR 61, Subpart M]

   Testing Requirements [326 IAC 2-7-6(1)] ............................................................................. 23
   C.8 Performance Testing [326 IAC 3-6]

   Compliance Requirements [326 IAC 2-1.1-11] ..................................................................... 23
   C.9 Compliance Requirements [326 IAC 2-1.1-11]
Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)] ......................... 23
C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)] [40 CFR 64] [326 IAC 3-8]
C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6] .................................. 24
C.12 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]
C.13 Risk Management Plan [326 IAC 2-7-5(11)] [40 CFR 68]
C.14 Response to Excursions or Exceedances [40 CFR 64] [326 IAC 3-8] [326 IAC 2-7-5]
[326 IAC 2-7-6]
C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19] ................. 27
C.16 Emission Statement [326 IAC 2-7-5(3)] [326 IAC 2-7-19(c)] [326 IAC 2-6]
C.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]
C.18 General Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-1.1-11]
[40 CFR 64] [326 IAC 3-8]

Stratospheric Ozone Protection ................................................................................................. 29
C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS ..................................................... 30

Emission Limitations and Standards [326 IAC 2-7-5(1)] ............................................................ 30
D.1.1 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]
D.1.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]
D.1.3 Sulfur Dioxide (SO2) Emission Limitations [326 IAC 7-1.1-2] [326 IAC 7-4-11.1]
D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

Compliance Determination Requirements [326 IAC 2-7-5(1)] .................................................. 31
D.1.5 Testing Requirements [326 IAC 2-7-(1),(6)] [326 IAC 2-7-5(1)] [326 IAC 2-1.1-11]
D.1.6 Particulate Control [326 IAC 2-7-5(1)]
D.1.7 Broken or Failed Bag or Scrubber Detection [326 IAC 2-7-5(1)] [40 CFR 64]
D.1.8 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 2-7-5(1)]
D.1.9 Sulfur Dioxide Control [326 IAC 2-7-5(1)]
D.1.10 Sulfur Content [326 IAC 2-7-5(1)]
D.1.11 Sorbent Injection Rate [326 IAC 2-7-5(1)]

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)] ........................... 35
D.1.12 Visible Emissions Notations [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)] [40 CFR 64]
D.1.13 Wet Scrubber Parametric Monitoring [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]
D.1.14 Sorbent Injection System Parametric Monitoring [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19] .................. 36
D.1.15 Record Keeping Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]
D.1.16 Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS ..................................................... 38

Emission Limitations and Standards [326 IAC 2-7-5(1)] ............................................................ 38
D.2.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]
D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

Compliance Determination Requirements [326 IAC 2-7-5(1)] .................................................. 38
D.2.3 Particulate Control
D.2.4 Multiclone Failure Detection

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)] .......................... 39
D.2.5 Visible Emission Notation
Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19] .......... 39
D.2.6 Record Keeping Requirement

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS ......................................................... 40
Emission Limitations and Standards [326 IAC 2-7-5(1)] ......................................................... 40
D.3.1 Prevention of Significant Deterioration (PSD) Minor Limit [326 IAC 2-2]
D.3.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]
D.3.3 Preventive Maintenance Plan [326 IAC 1-6-3]
Compliance Determination Requirements [326 IAC 2-7-5(1)] ............................................. 41
D.3.4 Particulate Control
D.3.5 Broken or Failed Bag Detection [40 CFR 64]
D.3.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]
Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)] ................. 42
D.3.7 Visible Emission Notation [40 CFR 64]
Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19] .......... 42
D.3.8 Record Keeping Requirement

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS ......................................................... 43
Emission Limitations and Standards [326 IAC 2-7-5(1)] ......................................................... 43
D.4.1 Prevention of Significant Deterioration (PSD) Minor Limit [326 IAC 2-2]
D.4.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]
D.4.3 Preventive Maintenance Plan [326 IAC 1-6-3]
Compliance Determination Requirements [326 IAC 2-7-5(1)] ............................................. 44
D.4.4 Moisture Content
Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)] ................. 44
D.4.5 Moisture Content Sampling and Analysis
Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19] ......... 45
D.4.6 Record Keeping Requirements
D.4.7 Reporting Requirements [326 IAC 2 7 5(3)] [326 IAC 2 7 19]

SECTION E.1 NSPS ........................................................................................................................... 46
New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)] ................. 46
E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]
E.1.2 NSPS for Nonmetallic Mineral Processing Plants [326 IAC 12] [40 CFR Part 60, Subpart OOO]

SECTION E.2 NESHAP .................................................................................................................... 48
National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-8-4(1)] ................................................................. 48
E.2.2 Stationary Reciprocating Internal Combustion Engines NESHAP [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

CERTIFICATION .............................................................................................................................. 49
EMERGENCY OCCURRENCE REPORT ..................................................................................... 50
Part 70 Quarterly Report ............................................................................................................ 52
Part 70 Quarterly Report ............................................................................................................ 53
Part 70 Quarterly Report ............................................................................................................ 54
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT ..........................................................55

Attachment A: 40 CFR Part 60, Subpart OOO (NSPS for Nonmetallic Mineral Processing Plant)

Attachment B: 40 CFR 63, Subpart ZZZZ (NESHAP for Stationary Reciprocating Internal Combustion Engines)
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 Permitee 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 Permitee 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

The Permitee owns and operates a stationary Lightweight Expanded Shale Processing Plant.

<table>
<thead>
<tr>
<th>Source Address</th>
<th>6618 N Tidewater Rd., Mooresville, Indiana 46258</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Source Phone Number</td>
<td>817-635-8556</td>
</tr>
<tr>
<td>SIC Code</td>
<td>3295 (Minerals and Earths, Ground or Otherwise Treated)</td>
</tr>
<tr>
<td>County Location</td>
<td>Morgan (Clay Township)</td>
</tr>
<tr>
<td>Source Location Status</td>
<td>Nonattainment for SO₂ standard</td>
</tr>
<tr>
<td>Source Status</td>
<td>Part 70 Operating Permit Program</td>
</tr>
<tr>
<td></td>
<td>Major Source, under PSD and Emission Offset Rules</td>
</tr>
<tr>
<td></td>
<td>Major Source, Section 112 of the Clean Air Act</td>
</tr>
<tr>
<td></td>
<td>Not 1 of 28 Source Categories</td>
</tr>
</tbody>
</table>

A.2 Emission Units and Pollution Control Equipment Summary

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

(a) One (1) pre-kiln shale processing operation, identified as pre-kiln, constructed in 1954, with a maximum capacity of 200 tons of raw shale per hour, using wet suppression of fugitive dust as control, and exhausting outside the building, and consisting of the following equipment:

(1) one (1) primary crusher, identified as PK1, with a maximum capacity of 200 tons of raw shale per hour,

(2) one (1) secondary crusher, identified as PK2, with a maximum capacity of 100 tons of raw shale per hour,

(3) six (6) conveyors, identified as PK3 through PK8, each with a maximum capacity of 200 tons of raw shale per hour;

(b) one (1) rotary kiln, identified as K4, constructed in 1962, with a maximum heat input of 100 million British Thermal Units (MMBtu) per hour burning natural gas or bituminous coal with a maximum capacity of 15 tons of raw shale per hour, using a Peabody wet scrubber as control, and exhausting to stack ST4;

(c) One (1) rotary kiln, identified as K5, constructed in 1966, with a maximum heat input of 100 MMBtu per hour burning natural gas or bituminous coal, with a maximum capacity of 30 tons of raw shale per hour, using a cloth baghouse as control, and exhausting to stack ST5;

(d) One (1) haydite crusher line, identified as HCR, constructed in 1962, with a maximum capacity of 100 tons of expanded shale per hour, using wet suppression of fugitive dust as control, exhausting outside the building, and consisting of the following equipment:
(1) one (1) primary haydite crusher, identified as HCR1, with a maximum capacity of 100 tons of expanded shale per hour,

(2) Two (2) conveyors, identified as HCR9 and HCR10, with a maximum capacity of 100 tons each of expanded shale per hour.

(e) One (1) reciprocating grate clinker cooler, identified as CLNKCOOL, constructed in 1966, with a maximum capacity of 40 tons of expanded shale per hour, using a multiclon as control, and exhausting to stack ST2;

(f) One (1) expanded shale aggregate crusher line, identified as ESA, constructed in 2000, with a maximum capacity of 30 tons of expanded shale per hour and consisting of the following equipment:

(1) one (1) expanded shale aggregate crusher, identified as ESA 1, utilizing a baghouse, identified as BH1, as particulate control, with a maximum capacity of 30 tons of expanded shale per hour and exhausting through stack ST6,

(2) one (1) screen, identified as ESA 2, utilizing a baghouse, identified as BH1, as particulate control, with a maximum capacity of 30 tons of expanded shale per hour and exhausting through stack ST6, and

(3) five (5) conveyors, identified as ESA 3 through ESA 7, each with a maximum capacity of 30 tons of expanded shale per hour, utilizing a water spray system on the feed conveyor as particulate control and exhausting fugitively.

[Under 40 CFR 60, Subpart OOO, the crusher, screen, and conveyors are considered affected facilities].

(g) One (1) sorbent injection system, identified as CE-K4, with maximum rated capacity of 4,000 pounds of sorbent per hour, constructed in 2016 to control SO2 emissions from the existing Kiln #4.

(h) One (1) sorbent injection system, identified as CE-K5 with maximum rated capacity of 4,000 pounds of sorbent per hour, constructed in 2016 to control SO2 emissions from the existing Kiln #5.

(i) Two (2) sorbent storage silos, #1 and #2, each with storage capacity of 120 tons, controlled by bin vent filters, constructed in 2016.

(j) One (1) portable screening plant approved in 2018 for construction consisting of the following:

(1) One (1) triple deck screen, identified as PS1 with a maximum capacity of 250 tons per hour

(2) Four (4) conveyors, identified as PS2 through PS5, each with a maximum capacity of 250 tons per hour.

(k) One (1) haydite screener, identified as HCR2, constructed in 2018, with a maximum capacity of 250 tons of expanded shale per hour, using wet suppression of fugitive dust as control, and exhausting outdoors.

Under 40 CFR 60, Subpart OOO, the screener is considered an affected facility.
(l) Three (3) shale aggregate storage silos, identified as Clinker Bin, Ax Bin, and B Bin, constructed prior to 2018, each with a maximum storage capacity of 120 tons, using wet suppression of fugitive dust as control, and exhausting outdoors.

Under 40 CFR 60, Subpart OOO, the silos are considered affected facilities.

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

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

(a) Paved and unpaved roads and parking lots with public access; [326 IAC 6-4]

(b) Other activities or categories with emissions below insignificant thresholds: [326 IAC 6-4]

(1) One coal silo, identified as silo 6, using no control and exhausting indoor

(2) One (1) coal unloading operation, with a maximum capacity of 280 tons of coal per hour, consisting of one (1) dump pit, one (1) hopper for coal unloading, and two (2) conveyors,

(3) Four (4) covered silos, identified as silos 3, 4, 5A, and 5B, each with a maximum capacity of 200 tons of raw shale,

(4) Three (3) hoppers, identified as HCR6 through HCR8, each with a maximum capacity of 100 tons of raw shale per hour,

(5) Two (2) chutes, identified as HCR16 and HCR17, each with a maximum capacity of 100 tons of expanded shale per hour.

(c) One (1) wash plant screener, identified as WP, constructed prior to 2018, with a maximum capacity of 30 tons per hour, using wet suppression of fugitive dust as control, and exhausting outdoors.

(d) Two (2) coal grinding mills, identified as CGM493 and CGM372, constructed prior to 2018, with a maximum capacity of 16,800 pounds per hour (CGM493) and 6,200 pounds per hour (CGM372), using no control, and exhausting outdoors.

(e) One (1) diesel-fired emergency pony engine, identified as Emergency Engine, constructed prior to 1996, with a maximum rating of 26 HP, using no control, and exhausting indoors.

Under 40 CFR 63, Subpart ZZZZ, the emergency engine is considered an affected facility.

(f) Three (3) storage tanks, constructed prior to 2018, and consisting of the following:

(i) One (1) gasoline storage tank, with a storage capacity of 250 gallons.

(ii) One (1) diesel storage tank, with a storage capacity of 2,500 gallons.

(iii) One (1) kerosene storage tank, with a storage capacity of 295 gallons.

(g) One (1) maintenance welding operation, constructed prior to 2018, with a maximum electrode consumption of 6.5 pounds per hour, using no control, and exhausting indoors.
A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).
SECTION B  GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

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 2-7-5(2)] [326 IAC 2-1.1-9.5] [326 IAC 2-7-4(a)(1)(D)] [IC 13-15-3-6(a)]

(a) This permit, T109-39783-00007, is issued for a fixed term of five (5) 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, including any permit shield provided in 326 IAC 2-7-15, 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 2-7-7] [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 2-7-5(5)]

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 2-7-5(6)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U.S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:
(1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(35), 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) A "responsible official" is defined at 326 IAC 2-7-1(35).

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

(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

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(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 2-7-5(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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)] [326 IAC 1-6-3]

(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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
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.11 Emergency Provisions [326 IAC 2-7-16]

(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.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a 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, 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
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 2-7-5(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.
(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 2-7-4(c)(8) 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 2-7 and any other applicable rules.

(g) 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.

B.12 Permit Shield [326 IAC 2-7-15][326 IAC 2-7-20][326 IAC 2-7-12]

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced 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 Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

(c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the
permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.

(d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

1. The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;

2. The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit’s issuance;

3. The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and

4. The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

(e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

(f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]

(g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5][326 IAC 2-7-10.5]

(a) All terms and conditions of permits established prior to T109-39783-00007 and issued pursuant to permitting programs approved into the state implementation plan have been either:

1. incorporated as originally stated,

2. revised under 326 IAC 2-7-10.5, or

3. deleted under 326 IAC 2-7-10.5.

(b) Provided that all terms and conditions are accurately reflected in this combined permit, all previous registrations and permits are superseded by this combined new source review and part 70 operating permit.

B.14 Termination of Right to Operate [326 IAC 2-7-10][326 IAC 2-7-4(a)]

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 2-7-3 and 326 IAC 2-7-4(a).

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)][326 IAC 2-7-8(a)][326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 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 2-7-5(6)(C)] The notification by the Permittee does require a certification that
meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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 2-7-9(a)(3)]

(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 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(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 2-7-9(c)]

B.16 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]

(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 2-7-4. 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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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 2-7 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 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.18 Permit Revision Under Economic Incentives and Other Programs
[326 IAC 2-7-5(8)][326 IAC 2-7-12(b)(2)]

(a) No Part 70 permit revision or notice shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.19 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b) or (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 preconstruction approval required by 326 IAC 2-7-10.5 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:
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 2-7-20(b)(1) and (c)(1). 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 2-7-20(b)(1) and (c)(1).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(37)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) Emission Trades [326 IAC 2-7-20(c)]
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 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
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 2-7-5(9). No prior notification of IDEM, OAQ or U.S. EPA is required.
(e) 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.20 Source Modification Requirement [326 IAC 2-7-10.5]

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

B.21 Inspection and Entry [326 IAC 2-7-6][IC 13-14-2-2][IC 13-30-3-1][IC 13-17-3-2]

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 Part 70 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 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 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 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.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]
B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][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.

(b) Except as provided in 326 IAC 2-7-19(e), 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.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][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 2-7-5(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 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.3 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.4 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.5 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). 326 IAC 6-4-2(4) is not federally enforceable.

**C.6 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. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

**C.7 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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.8 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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

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

C.10 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)][40 CFR 64][326 IAC 3-8]

(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
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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(c) For monitoring required by CAM, at all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(d) For monitoring required by CAM, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. 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.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(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 2-7-5][326 IAC 2-7-6]

C.12 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.13 Risk Management Plan [326 IAC 2-7-5(11)] [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.14 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5]
[326 IAC 2-7-6]

(I) Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, not subject to CAM, 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.

(II) CAM Response to excursions or exceedances.

(a) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the 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. 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). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized...
distribution control system), or 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.

(2) 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, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

(b) If the Permittee identifies a failure to achieve compliance with an emission limitation, subject to CAM, or standard, subject to CAM, for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the IDEM, OAQ and, if necessary, submit a proposed significant permit modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

(c) Based on the results of a determination made under paragraph (II)(a)(2) of this condition, the EPA or IDEM, OAQ may require the Permittee to develop and implement a Quality Improvement Plan (QIP). The Permittee shall develop and implement a QIP if notified to in writing by the EPA or IDEM, OAQ.

(d) Elements of a QIP:
The Permittee shall maintain a written QIP, if required, and have it available for inspection. The plan shall conform to 40 CFR 64.8 b (2).

(e) If a QIP is required, the Permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the IDEM, OAQ if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.

(f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(a)(2) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:

(1) Failed to address the cause of the control device performance problems; or

(2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(g) Implementation of a QIP shall not excuse the Permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.

(h) CAM recordkeeping requirements.

(1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality
improvement plan required pursuant to paragraph (II)(c) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.

C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

(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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

C.16 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit by July 1 of each year an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

(1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(33) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
C.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

(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 Part 70 permit.

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.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [40 CFR 64] [326 IAC 3-8]

(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 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

On and after the date by which the Permittee must use monitoring that meets the requirements of 40 CFR Part 64 and 326 IAC 3-8, the Permittee shall submit CAM reports to the IDEM, OAQ.

A report for monitoring under 40 CFR Part 64 and 326 IAC 3-8 shall include, at a minimum, the information required under paragraph (a) of this condition and the following information, as applicable:

1. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

2. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime
associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in Section C-Response to Excursions or Exceedances. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

The Permittee may combine the Quarterly Deviation and Compliance Monitoring Report and a report pursuant to 40 CFR 64 and 326 IAC 3-8.

(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.19 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:

(b) one (1) rotary kiln, identified as K4, constructed in 1962, with a maximum heat input of 100 million British Thermal Units (MMBtu) per hour burning natural gas or bituminous coal, with a maximum capacity of 15 tons of raw shale per hour, using a Peabody wet scrubber as control, and exhausting to stack ST4;

(c) One (1) rotary kiln, identified as K5, constructed in 1966, with a maximum heat input of 100 MMBtu per hour burning natural gas or bituminous coal, with a maximum capacity of 30 tons of raw shale per hour, using a cloth baghouse as control, and exhausting to stack ST5;

(g) One (1) sorbent injection system, identified as CE-K4, with maximum rated capacity of 4,000 pounds of sorbent per hour, approved in 2016 for construction to control SO2 emissions from the existing Kiln #4.

(h) One (1) sorbent injection system, identified as CE-K5 with maximum rated capacity of 4,000 pounds of sorbent per hour, approved in 2016 for construction to control SO2 emissions from the existing Kiln #5.

(i) Two (2) sorbent storage silos, #1 and #2, each with storage capacity of 120 tons, controlled by bin vent filters, approved in 2016 for construction.

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

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

D.1.1 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]

(a) In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the Permittee shall comply with the following:

(1) Sorbent throughput to the two (2) sorbent storage silos shall not exceed 24,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month period.

(2) The Particulate Matter (PM) emissions from the two (2) sorbent storage silos shall not exceed 1.4 pound per ton (lb/ton) of sorbent loaded.

(3) The PM10 emissions from the two (2) sorbent storage silos shall not exceed 0.60 pound per ton (lb/ton) of sorbent loaded.

(4) The PM2.5 emissions from the two (2) sorbent storage silos shall not exceed 0.20 pound per ton (lb/ton) of sorbent loaded.

Compliance with these limits from the two (2) sorbent storage silos shall ensure that PM emissions are less than 25 tons per year, PM10 are less than 15 tons per year and PM2.5 are less than 10 tons per year, which render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to the 2016 modification.
D.1.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e), the manufacturing processes listed in the table below shall be limited by the following:

<table>
<thead>
<tr>
<th>Process Description</th>
<th>Process Weight Rate (ton/hr)</th>
<th>326 IAC 6-3-2 Allowable (lb/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kiln K4</td>
<td>15</td>
<td>25.16</td>
</tr>
<tr>
<td>Kiln K5</td>
<td>30</td>
<td>40.04</td>
</tr>
<tr>
<td>Sorbent Silos #1 and #2</td>
<td>16.67 each</td>
<td>27.00 each</td>
</tr>
</tbody>
</table>

The pound per hour allowable was calculated with the following equation:

Interpolation and extrapolation 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
- \( P \) = process weight rate in tons per hour

D.1.3 Sulfur Dioxide (SO₂) Emission Limitations [326 IAC 7-1.1-2] [326 IAC 7-4-11.1]

Pursuant 326 IAC 7-4-11.1(a)(2), (Morgan County Sulfur Dioxide (SO₂) Emissions Limitations), the Permittee shall comply with the following:

1. The Sulfur dioxide emissions from kiln K4 shall be reduced by a minimum control efficiency of 50% or to 2.5 pounds per million British thermal units (lbs/MMBtu) of heat input, whichever is less stringent.

2. The Sulfur dioxide emissions from kiln K5 shall be reduced by a minimum control efficiency of 50% or to 2.5 lbs/MMBtu of heat input, whichever is less stringent.

3. The sulfur dioxide emissions from each of the two (2) rotary kilns (K4 and K5), shall not exceed six (6) pounds per MMBtu of heat input.

These emission limits apply to sulfur dioxide emissions from both the combustion of coal and the processing of shale.

D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.1.5 Testing Requirements [326 IAC 2-7-(1),(6)] [326 IAC 2-7-5(1)] [326 IAC 2-1.1-11]

(a) In order to determine compliance with Condition D.1.2, the Permittee shall perform PM testing on the two (2) rotary kilns (K4 and K5) when burning coal, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of a 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 obligations with regard to the performance testing required by this condition.
(b) In order to determine compliance with Condition D.1.3, the Permittee shall perform SO2 testing on the two (2) rotary kilns (K4 and K5) when burning coal, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of a 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 obligations with regard to the performance testing required by this condition.

(c) Compliance with the control efficiency limits in Condition D.1.3 shall be based on measured sulfur content in the shale and fuel compared to the outlet sulfur dioxide concentration measured during SO2 testing. The shale and fuel sulfur content measurements for this purpose shall reflect a representative sample of the material fed into each kiln during each run of the stack test.

D.1.6 Particulate Control [326 IAC 2-7-5(1)]

In order to comply with condition D.1.2:

(a) The wet scrubber for particulate control shall be in operation and control emissions from the rotary kiln K4 at all times that the rotary kiln K4 is in operation.

(b) The baghouse for particulate control shall be in operation and control emissions from the rotary kiln K5 at all times that the rotary kiln K5 is in operation.

(c) The bin vent filter for particulate control shall be in operation and control emissions from the two (2) sorbent storage silos all the time that sorbent is being loaded.

(d) 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, O AQ 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.1.7 Broken or Failed Bag or Scrubber Detection [326 IAC 2-7-5(1)] [40 CFR 64]

(a) For a single compartment unit controlling emissions from a process operated continuously, a failed unit and the associated process will 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 unit 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 shutdown no later than the completion of the processing of the material in the emission unit. Operations may continue only if the event qualifies as an emergency provisions of this permit (Section B - Emergency Provisions).

Compliance with the above monitoring conditions shall also satisfy the requirements of 40 CFR 64, Compliance Assurance Monitoring for the two (2) rotary kilns (K4 and K5).

D.1.8 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 2-7-5(1)]

Pursuant to 326 IAC 7-2, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed six (6.0) pounds per MMBtu when burning coal. Compliance shall be determined utilizing the following options:

(a) Sampling and analyzing the coal using one of the following procedures:
(1) Minimum Coal Sampling Requirements and Analysis Methods:

(A) The coal sample acquisition point shall be at a location where representative samples of the total coal flow to be combusted by the facility or facilities may be obtained. A single as-bunkered or as-burned sampling station may be used to represent the coal to be combusted by multiple facilities using the same stockpile feed system;

(B) Coal shall be sampled at least one (1) time per day;

(C) Minimum sample size shall be five hundred (500) grams;

(D) Samples shall be composited and analyzed at the end of each calendar month;

(E) Preparation of the coal sample, heat content analysis, and sulfur content analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d), (e); or

(2) Sample and analyze the coal pursuant to 326 IAC 3-7-3; or

(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the kiln, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, which is conducted with such frequency as to generate the amount of information required by (a) or (b) above. [326 IAC 7-2-1(b)]

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

D.1.9 Sulfur Dioxide Control [326 IAC 2-7-5(1)]

In order to demonstrate compliance with Condition D.1.3, the sorbent injection system for sulfur dioxide control shall be in operation and control emissions from the two (2) rotary kilns (K4 and K5) at all times that the two (2) rotary kilns (K4 and K5) are in operation unless the permittee can demonstrate that uncontrolled sulfur dioxide emissions (accounting for sulfur contained in the shale and sulfur contained in fuel burned in the kilns) is below 2.5 pounds per million Btu (MMBtu) of heat input.

D.1.10 Sulfur Content [326 IAC 2-7-5(1)]

Pursuant to 326 IAC 7-4.11.1, the Permittee shall perform monthly sampling and analysis according to 326 IAC 7-2-1 for the sulfur content of shale to be processed for each upcoming months. The sampling and analysis of shale shall be performed using one of the following procedures:

(a) Shale Sampling Requirements and Analysis Methods:

(1) A composite sample shall be collected of the shale derived from a gridded area of the mine where the extraction will take place over each calendar month.

(2) A minimum of six (6) evenly spaced samples shall be collected for each monthly sampling;

(3) Minimum sample size shall be five hundred (500) grams;

(4) Samples shall be composited and analyzed prior to processing the shale;
(5) Preparation of the shale sample and shale sulfur content analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d), (e); and

(b) Sample and analyze the shale pursuant to 326 IAC 3-7-3.

D.1.11 Sorbent Injection Rate [326 IAC 2-7-5(1)]

(a) In order to demonstrate compliance with the SO2 emissions limits in Condition D.1.3, the sorbent used to control sulfur dioxide (SO2) emissions from kilns K4 and K5 shall be injected into these kilns at a feed rate established during the latest stack test.

(b) In order to demonstrate compliance with the SO2 emissions limits in Condition D.1.3, the sorbent shall be injected at the feed rate established during the latest stack test until a sorbent feed rate is established, based on the monthly testing of the sulfur content of the shale to be processed and vendor data on fuel to be combusted. The sorbent injection rate shall be calculated using the following equation when complying with SO2 limit through 50% control allowed in Condition D.1.3(a):

\[
Lc = \left[ \frac{(Cs \times 38 \times Cfr)}{2000} + \left( \frac{Ss}{100 \times 2000 \times (64/32)} \right) \right] \times 0.5 \times Lr \times Sfr
\]

Where
- \( Lc \) = Calculated sorbent injection rate (lb/hour)
- \( Cs \) = Coal sulfur content (%)
- \( Cfr \) = Coal feed rate (lb coal/ton shale processed)
- \( Ss \) = Shale sulfur content (%)
- \( Lr \) = Sorbent injection rate (lb sorbent /lb SO2 removed based on compliance test)
- \( Sfr \) = Shale feed rate (tons per hour)

Note: 38S lb/ton coal (AP-42 Table 1.1-3)
- 64 lb/lb-mole (molecular weight of SO2)
- 32 lb/lb-mole (molecular weight of sulfur)
- 0.5 is for achieving SO2 limit through 50% control

(c) In order to demonstrate compliance with the SO2 emission limits in Condition D.1.3, the sorbent shall be injected at the feed rate established during the latest stack test until a sorbent feed rate is established, based on the monthly testing of the sulfur content of the shale to be processed and vendor data on fuel to be combusted. The sorbent injection rate shall be calculated using the following equation when complying with SO2 emission limit of less than 2.5 lb/MMBtu allowed in Condition D.1.3(a):

\[
Lc = \left[ \frac{(Cs \times 38 \times Cfr)}{2000} + \left( \frac{Ss}{100 \times 2000 \times (64/32)} \right) \right] \times \frac{(Rs-2.5)}{Rs} \times Lr \times Sfr
\]

Where
- \( Lc \) = Calculated sorbent injection rate (lb/hour)
- \( Cs \) = Coal sulfur content (%)
- \( Cfr \) = Coal feed rate (lb coal/ton shale processed)
- \( Ss \) = Shale sulfur content (%)
- \( Rs \) = Uncontrolled SO2 emission rate (lb/MMBtu)
- \( Lr \) = Sorbent injection rate (lb sorbent /lb SO2 removed based on compliance test)
- \( Sfr \) = Shale feed rate (tons per hour)

Note: 38S lb/ton coal (AP-42 Table 1.1-3)
- 64 lb/lb-mole (molecular weight of SO2)
- 32 lb/lb-mole (molecular weight of sulfur)
Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

D.1.12 Visible Emissions Notations [326 IAC 2 7 5(1)] [326 IAC 2 7 6(1)] [40 CFR 64]

(a) Visible emission notations of rotary kiln K5, baghouse stack ST5 and the two (2) sorbent storage silos stack exhausts 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 reasonable response steps. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

Compliance with the above monitoring conditions shall also satisfy the requirements of 40 CFR 64, Compliance Assurance Monitoring for rotary kiln K5.

D.1.13 Wet Scrubber Parametric Monitoring [326 IAC 2 7 5(1)] [326 IAC 2 7 6(1)] [40 CFR 64]

(a) The Permittee shall record the pressure drop across the wet scrubber and the liquid flow rate used in conjunction with the rotary kiln K4, at least once per day when the process is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the wet scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal range is 6.0 to 10.0 inches of water and the flow rate for scrubbing liquid is 100 gallons per minute, unless a different upper-bound or lower-bound value for a range and liquid flow rate are determined during the latest compliant stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

Compliance with the above monitoring conditions shall also satisfy the requirements of 40 CFR 64, Compliance Assurance Monitoring for rotary kiln K4.

D.1.14 Sorbent Injection System Parametric Monitoring [326 IAC 2 7 5(1)][326 IAC 2 7 6(1)] [40 CFR 64]

The Permittee shall record the shale process throughput rate, coal throughput rate and sorbent injection rate to the two (2) rotary kilns K4 and K5, continuously when the processes are in operation and sorbent injection is necessary to achieve the sulfur dioxide emission limits contained in Condition D.1.3. "Continuously" means one reading every fifteen (15) minutes. When for any one reading the sorbent injection rate is below the level determined necessary to comply with the sulfur dioxide emission limits contained in Condition D.1.3, pursuant to D.1.11,
the Permittee shall take reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

The instrument used for determining the feed rate shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once annually.

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

D.1.15 Record Keeping Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

<table>
<thead>
<tr>
<th>(a)</th>
<th>To document the compliance status with Conditions D.1.3 and D.1.8, the Permittee shall maintain records in accordance with (1) through (4) below when burning coal. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO2 emission limits established in Conditions D.1.3 and D.1.8.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>Calendar dates covered in the compliance determination period;</td>
</tr>
<tr>
<td>(2)</td>
<td>Actual coal usage since last compliance determination period;</td>
</tr>
<tr>
<td>(3)</td>
<td>Sulfur content, heat content, and ash content; and</td>
</tr>
<tr>
<td>(4)</td>
<td>Sulfur dioxide emission rates.</td>
</tr>
</tbody>
</table>

| (b) | Pursuant to 326 IAC 3-7-5(a) - Record Keeping Requirements, the owners or operators of sources with total coal-fired capacity greater than or equal one hundred (100) MMBtu per hour actual heat input shall develop a standard operating procedure (SOP) to be followed for sampling, handling, analysis, quality control, quality assurance, and data reporting of the information collected pursuant to 326 IAC 3-7-2 through 326 IAC 3-7-4. In addition any revision to the SOP shall be submitted to IDEM, OAQ. |

| (c) | To document the compliance status with Condition D.1.12- Visible Emission Notation, the Permittee shall maintain records of visible emission notations of the rotary kiln K5, baghouse, stack ST 5 and the two (2) sorbent silos stack exhausts once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day). |

| (d) | To document the compliance status with Condition D.1.13(a) - Wet Scrubber Parametric Monitoring, the Permittee shall maintain records once per day of the scrubber pressure drop and liquid flow rate. The Permittee shall include in its daily record when a pressure drop reading and liquid flow rate are not taken and the reason for the lack of a pressure drop and liquid flow rate readings (e.g. the process did not operate that day). |

<table>
<thead>
<tr>
<th>(e)</th>
<th>To document the compliance status with Conditions D.1.3 and D.1.14, the Permittee shall record the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>Maintain records in accordance with (A) through (C). Records maintained for (A) through (C) shall be taken continuously and sufficient to establish compliance with the SO2 emission limits established in Condition D.1.3(b).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(A)</th>
<th>Quantity of shale processed;</th>
</tr>
</thead>
<tbody>
<tr>
<td>(B)</td>
<td>Coal throughput rate; and</td>
</tr>
</tbody>
</table>
(C) Injection feed rate of sorbent in pounds per hour.

(2) Maintain monthly records of the following

(A) Quantity of coal burned;

(B) Monthly composite sample analyses of coal sulfur content and heat content; and

(C) Monthly composite sample analysis of shale sulfur content.

(f) To document the compliance status with Condition D.1.1(a)(1), the Permittee shall maintain monthly records of the sorbent loaded into the two (2) sorbent storage silos.

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

D.1.16 Reporting Requirements [326 IAC 2 7 5(3)] [326 IAC 2 7 19]

A quarterly report of the information to document the compliance status with Condition D.1.1(a)(1) shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.
SECTION D.2  EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(e) One (1) reciprocating grate clinker cooler, identified as CLNKCOOL, constructed in 1966, with a maximum capacity of 40 tons of expanded shale per hour, using a multiclone as control, and exhausting to stack ST2;

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

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

D.2.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the reciprocating grate clinker cooler, CLNKCOOL, shall not exceed 42.53 pounds per hour when operating at a process weight rate of 40 tons per hour (80,000 pounds per hour).

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of 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.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for this unit and its control device. Section B - Preventive Maintenance Plan contains the Permittee’s obligations with regard to the preventive maintenance plan required by this condition.

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

D.2.3 Particulate Control

In order to comply with condition D.2.1, the multiclone for particulate control shall be in operation and control emissions from the reciprocating grate clinker cooler at all times that the reciprocating grate clinker cooler is in operation.

D.2.4 Multiclone Failure Detection

In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a violation of this permit.
Compliance Monitoring Requirements  [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

D.2.5 Visible Emission Notation

(a) Once per day visible emission notations of the reciprocating grate clinker cooler stack exhaust shall be performed 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 reasonable response steps. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition.

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

D.2.6 Record Keeping Requirement

(a) To document compliance with Condition D.2.5, the Permittee shall maintain once per day records of visible emission notations of the reciprocating grate clinker cooler stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(b) Section C - General Record Keeping Requirements contains the Permittee’s obligations with regard to the record keeping required by this condition.
SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(f) One (1) expanded shale aggregate crusher line, identified as ESA, constructed in 2000, with a maximum capacity of 30 tons of expanded shale per hour and consisting of the following equipment:

(1) one (1) expanded shale aggregate crusher, identified as ESA 1, utilizing a baghouse as particulate control, with a maximum capacity of 30 tons of expanded shale per hour and exhausting through stack ST6,

(2) one (1) screen, identified as ESA 2, utilizing a baghouse as particulate control, with a maximum capacity of 30 tons of expanded shale per hour and exhausting through stack ST6, and

(3) five (5) conveyors, identified as ESA 3 through ESA 7, each with a maximum capacity of 30 tons of expanded shale per hour, utilizing a water spray system on the feed conveyor as particulate control and exhausting fugitively.

[Under 40 CFR 60, Subpart OOO, the crusher, screen, and conveyors are considered affected facilities].

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

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

D.3.1 Prevention of Significant Deterioration (PSD) Minor Limit [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) not applicable, the particulate emissions from the expanded shale aggregate crushing line ESA shall comply with the following:

<table>
<thead>
<tr>
<th>Process</th>
<th>Process ID</th>
<th>Stack ID</th>
<th>Emission Limitation (lb/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>PM</td>
</tr>
<tr>
<td>Crushing</td>
<td>ESA 1</td>
<td>ST6</td>
<td>2.70</td>
</tr>
<tr>
<td>Screening</td>
<td>ESA 2</td>
<td>ST6</td>
<td></td>
</tr>
<tr>
<td>Conveying</td>
<td>ESA 3 to ESA7</td>
<td>NA</td>
<td>1.20</td>
</tr>
</tbody>
</table>

Compliance with these limits will limit the potential to emit of PM and PM10 emissions from the expanded shale aggregate crusher processes (Screening, Crushing and Conveying) to less than 25 and 15 tons per year, respectively and render the requirements of 326 IAC 2-2 (PSD) not applicable to the April 1999 modification (SSM 109-10383-00007 issued on April 29, 1999).

D.3.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e), the manufacturing processes listed in the table below shall be limited by the following:
The pound per hour allowable was calculated with the following equation:

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

\[ E = 4.10 \times P^{0.67} \]

where \( E \) = rate of emission in pounds per hour; and
\( P \) = process weight rate in tons per hour

D.3.3 Preventive Maintenance Plan [326 IAC 1-6-3]

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

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

D.3.4 Particulate Control

In order to comply with conditions D.3.1, and D.3.2:

(a) The baghouse for particulate control shall be in operation and control emissions from the one (1) expanded shale aggregate crusher ESA 1 and one (1) screen ESA 2 at all times that the processes are in operation.

(b) The water spray system for particulate control shall be in operation and control emissions from the five (5) conveyors ESA 3 through ESA 7 at all times that the processes are in operation, except when the ambient temperature is at or below the freezing point or the shale is surface-saturated with moisture.

(c) 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.3.5 Broken or Failed Bag Detection [40 CFR 64]

(a) For a single compartment units controlling emissions from a process operated continuously, a failed unit and the associated process will 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 shutdown no later than the completion of the processing of the material in the emission unit. Operations may continue only if the event qualifies as an emergency provisions of this permit (Section B - Emergency Provisions).
D.3.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

In order to determine compliance with Conditions D.3.1 and D.3.2, the Permittee shall perform PM and \( \text{PM}_{10} \) testing on Stack ST6, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this 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 obligations with regard to the performance testing required by this condition.

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

D.3.7 Visible Emission Notation [40 CFR 64]

(a) Once per day visible emission notations of the expanded shale aggregate crusher line stack exhaust shall be performed 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 reasonable response steps. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition.

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

D.3.8 Record Keeping Requirement

(a) To document compliance with Condition D.3.7, the Permittee shall maintain once per day records of visible emission notations of the expanded shale aggregate crusher line stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

(b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.
SECTION D.4  EMISSIONS UNIT OPERATION CONDITIONS

---

Emissions Unit Description:

(k) One (1) haydite screener, identified as HCR2, constructed in 2018, with a maximum capacity of 100 tons of expanded shale per hour, using wet suppression of fugitive dust as control, and exhausting outdoors.

Under 40 CFR 60, Subpart OOO, the screener is considered an affected facility.

(l) Three (3) shale aggregate storage silos, identified as Clinker Bin, Ax Bin, and B Bin, constructed prior to 2018, each with a maximum storage capacity of 120 tons, using wet suppression of fugitive dust as control, and exhausting outdoors.

Under 40 CFR 60, Subpart OOO, the silos are considered affected facilities.

Insignificant Activities:

(c) One (1) wash plant screener, identified as WP, constructed prior to 2018, with a maximum capacity of 30 tons per hour, using wet suppression of fugitive dust as control, and exhausting outdoors.

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

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

D.4.1 Prevention of Significant Deterioration (PSD) Minor Limit [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) not applicable, the Permittee shall comply with the following:

(a) The combined throughput for the shale aggregate in the three (3) aggregate silos shall not exceed 788,400 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The throughput for the raw shale in the haydite screener shall not exceed 2,190,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(c) The particulate emissions from the haydite screener, identified as HCR2, and the three (3) shale aggregate silos shall comply with the following:

<table>
<thead>
<tr>
<th>Process</th>
<th>Process ID</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening</td>
<td>HCR2</td>
<td>0.0022</td>
<td>0.00074</td>
<td>0.00005</td>
</tr>
<tr>
<td>Storage</td>
<td>Clinker Bin</td>
<td>0.00099</td>
<td>0.00034</td>
<td>0.00034</td>
</tr>
<tr>
<td></td>
<td>Ax Bin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B Bin</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Compliance with these limits will limit the potential to emit of PM, PM$_{10}$, and PM$_{2.5}$ emissions from the haydite screener, identified as HCR2, and the three (3) storage silos to less than 25, 15, and 10 tons per year, respectively and render the requirements of 326 IAC 2-2 (PSD) not applicable to the 2019 modification.

D.4.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e), the manufacturing processes listed in the table below shall be limited by the following:

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>P (ton/hr)</th>
<th>E (lb/hr)</th>
<th>Equation Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCR2</td>
<td>250</td>
<td>60.95</td>
<td>(b)</td>
</tr>
<tr>
<td>WP</td>
<td>30</td>
<td>40.03</td>
<td>(a)</td>
</tr>
<tr>
<td>Clinker Bin</td>
<td>30</td>
<td>40.03</td>
<td>(a)</td>
</tr>
<tr>
<td>Ax Bin</td>
<td>30</td>
<td>40.03</td>
<td>(a)</td>
</tr>
<tr>
<td>B Bin</td>
<td>30</td>
<td>40.03</td>
<td>(a)</td>
</tr>
</tbody>
</table>

The pound per hour allowable was calculated with the following equations:

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

$$E = 4.10 \, P^{0.67}$$

where

- $E$ = rate of emission in pounds per hour; and
- $P$ = process weight rate in tons per hour

(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.4.3 Preventive Maintenance Plan [326 IAC 1-6-3]

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

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

D.4.4 Moisture Content

In order to comply with conditions D.4.1, the Permittee shall maintain a minimum moisture content of 2% in the shale aggregate.

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

D.4.5 Moisture Content Sampling and Analysis

In order to comply with Condition D.4.4, the Permittee shall perform sampling of the moisture content of the shale aggregate, utilizing American Society for Testing and Materials (ASTM) standards for sampling and analysis, or other approved sampling methods.
Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.4.6 Record Keeping Requirements

(a) To document compliance with condition D.4.4, the Permittee shall maintain records of the moisture analysis of the shale to demonstrate compliance.

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

D.4.7 Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

A quarterly report of the information to document the compliance status with Condition D.4.1(a) and (b) shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.
SECTION E.1  NSPS

Emissions Unit Description:

(f) One (1) expanded shale aggregate crusher line, identified as ESA, constructed in 2000, with a maximum capacity of 30 tons of expanded shale per hour and consisting of the following equipment:

(1) one (1) expanded shale aggregate crusher, identified as ESA 1, utilizing a baghouse as particulate control, with a maximum capacity of 30 tons of expanded shale per hour and exhausting through stack ST6,

(2) one (1) screen, identified as ESA 2, utilizing a baghouse as particulate control, with a maximum capacity of 30 tons of expanded shale per hour and exhausting through stack ST6, and

(3) five (5) conveyors, identified as ESA 3 through ESA 7, each with a maximum capacity of 30 tons of expanded shale per hour, utilizing a water spray system on the feed conveyor as particulate control and exhausting fugitively.

[Under 40 CFR 60, Subpart OOO, the crusher, screen, and conveyors are considered affected facilities].

(k) One (1) haydite screener, identified as HCR2, constructed in 2018, with a maximum capacity of 100 tons of expanded shale per hour, using wet suppression of fugitive dust as control, and exhausting outdoors.

Under 40 CFR 60, Subpart OOO, the screener is considered an affected facility.

(l) Three (3) shale aggregate storage silos, identified as Clinker Bin, Ax Bin, and B Bin, constructed prior to 2018, each with a maximum storage capacity of 120 tons, using wet suppression of fugitive dust as control, and exhausting outdoors.

Under 40 CFR 60, Subpart OOO, the silos are considered affected facilities.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 60, Subpart OOO.

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports 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
E.1.2 NSPS for Nonmetallic Mineral Processing Plants [326 IAC 12] [40 CFR Part 60, Subpart OOO]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart OOO (included as Attachment A to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above:

(1) 40 CFR 60.670
(2) 40 CFR 60.671
(3) 40 CFR 60.672(a)
(4) 40 CFR 60.673
(5) 40 CFR 60.675(a), and (b)
(6) 40 CFR 60.676(a), and (k)

Compliance Determination Requirements

E.1.3 Testing Requirements [326 IAC 2-1.1-11] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

In order to document the compliance status with Condition E.1.2, the Permittee shall perform the testing required under 40 CFR 60, Subpart OOO, utilizing methods as approved by the Commissioner. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.
SECTION E.2

NESHAP

Emissions Unit Description:

(e) One (1) diesel-fired emergency pony engine, identified as Emergency Engine, constructed prior to 1996, with a maximum rating of 26 HP, using no control, and exhausting indoors.

Under 40 CFR 63, Subpart ZZZZ, the emergency engine is considered an affected facility.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-8-4(1)]


(a) Pursuant to 40 CFR 63.1 the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart ZZZZ.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports 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

E.2.2 Stationary Reciprocating Internal Combustion Engines NESHAP [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment C to the operating permit), which are incorporated by reference as 326 IAC 20-82, for the emission unit(s) listed above:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585 (a)(b)
(3) 40 CFR 63.6590(a)(1)(ii) and (iv)
(4) 40 CFR 63.6595(a)(1) and (c)
(5) 40 CFR 63.6605
(6) 40 CFR 63.6625(e)(2), (f), and (h)
(7) 40 CFR 63.6640 (f)(1), (f)(2)(i), and (f)(3)
(8) 40 CFR 63.6645(a)(5)
(9) 40 CFR 63.6655
(10) 40 CFR 63.6660
(11) 40 CFR 63.6665
(12) 40 CFR 63.6670
(13) 40 CFR 63.6675
(14) Table 2c of 40 CFR 63, Subpart ZZZZ
(15) Table 6 of 40 CFR 63, Subpart ZZZZ
(16) Table 8 of 40 CFR 63, Subpart ZZZZ
This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

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

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

Signature: 
Printed Name: 
Title/Position: 
Phone: 
Date: 
PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Arcosa LW HPB, LLC
Source Address: 6618 N Tidewater Rd., Mooresville, Indiana 46258
Part 70 Permit No.: T109-39783-00007

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) daytime 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

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<thead>
<tr>
<th>Date/Time Emergency started:</th>
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<th>Date/Time Emergency was corrected:</th>
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<tr>
<th>Was the facility being properly operated at the time of the emergency? Y N</th>
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<tr>
<th>Type of Pollutants Emitted: TSP, PM-10, SO₂, VOC, NOₓ, CO, Pb, other:</th>
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<tr>
<th>Estimated amount of pollutant(s) emitted during emergency:</th>
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<th>Describe the steps taken to mitigate the problem:</th>
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<th>Describe the corrective actions/response steps taken:</th>
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<th>Describe the measures taken to minimize emissions:</th>
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<tr>
<th>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:</th>
</tr>
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Form Completed by: ________________________________

Title / Position: ________________________________

Date: ________________________________

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

Part 70 Quarterly Report

Source Name: Arcosa LW HPB, LLC  
Source Address: 6618 N Tidewater Rd., Mooresville, Indiana 46258  
Part 70 Permit No.: T109-39783-00007  
Facility: Sorbent Storage Silos #1 and #2  
Parameter: Sorbent throughput in tons  
Limit: The sorbent throughput to the sorbent silos #1 and #2 shall not exceed twenty-four thousand (24,000) tons per twelve (12) month consecutive period with compliance determined at the end of each month.

QUARTER: ____________ YEAR: ________________

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<tr>
<th>Month</th>
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<th>Column 2</th>
<th>Column 1 + Column 2</th>
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<tbody>
<tr>
<td></td>
<td>This Month tons</td>
<td>Previous 11 Months tons</td>
<td>12 Month Total tons</td>
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- □ No deviation occurred in this quarter.
- □ Deviation/s occurred in this quarter.  
  Deviation has been reported on:

Submitted by: ________________________________
Title / Position: ________________________________
Signature: ________________________________
Date: ________________________________
Phone: ________________________________
Part 70 Quarterly Report

Source Name: Arcosa LW HPB, LLC  
Source Address: 6618 N Tidewater Rd., Mooresville, Indiana 46258  
Part 70 Permit No.: T109-39783-00007  
Facility: Aggregate Silos (Clinker Bin, Ax Bin, and B Bin)  
Parameter: Aggregate throughput in tons  
Limit: The combined aggregate shale throughput to the silos Clinker Bin, Ax Bin, and B Bin shall not exceed seven hundred eighty-eight thousand, four hundred (788,400) tons per twelve (12) month consecutive period with compliance determined at the end of each month.

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<th>QUARTER :</th>
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- [ ] 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

Part 70 Quarterly Report

Source Name: Arcosa LW HPB, LLC  
Source Address: 6618 N Tidewater Rd., Mooresville, Indiana 46258  
Part 70 Permit No.: T109-39783-00007  
Facility: Haydite Screener HCR2  
Parameter: Raw shale throughput in tons  
Limit: The raw shale throughput to the haydite screener HCR2 shall not exceed two million, one hundred ninety thousand (2,190,000) tons per twelve (12) month consecutive period with compliance determined at the end of each month.

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<tr>
<th>QUARTER</th>
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<td>Previous 11 Months (tons)</td>
<td>12 Month Total (tons)</td>
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☐ 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
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Arcosa LW HPB, LLC
Source Address: 6618 N Tidewater Rd., Mooresville, Indiana 46258
Part 70 Permit No.: T109-39783-00007

Months: _______ to _________ Year: _______

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:
## Permit Requirement (specify permit condition #)

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## Permit Requirement (specify permit condition #)

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<tr>
<th>Response Steps Taken:</th>
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Form Completed by: __________________________

Title / Position: __________________________

Date: __________________________

Phone: __________________________
Attachment B

Part 70 Operating Permit No.: 109-41865-00007

[Downloaded from the eCFR on July 23, 2014]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

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.

What This Subpart Covers

§63.6580 What is the purpose of subpart ZZZZ?

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

[73 FR 3603, Jan. 18, 2008]

§63.6585 Am I subject to this subpart?

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

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

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

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

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

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.
(f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in §63.6675, which includes operating according to the provisions specified in §63.6640(f).

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

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

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


§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 equal to or less than 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.


§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.


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.


§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.

§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.
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 III 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.


§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)(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.

(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.


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.


§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.


§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 (CO2). If pollutant concentrations are to be corrected to 15 percent oxygen and CO2 concentration is measured in lieu of oxygen concentration measurement, a CO2 correction factor is needed. Calculate the CO2 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:

\[
F_o = \frac{0.209 \cdot F_d}{F_c} \quad (Eq. 2)
\]

Where:
$$F_0 = \text{Fuel factor based on the ratio of oxygen volume to the ultimate CO}_2\text{ volume produced by the fuel at zero percent excess air.}$$

$$0.209 = \text{Fraction of air that is oxygen, percent/100.}$$

$$F_d = \text{Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm}^3/J \text{ (dscf/106 Btu).}$$

$$F_c = \text{Ratio of the volume of CO}_2\text{ produced to the gross calorific value of the fuel from Method 19, dsm}^3/J \text{ (dscf/106 Btu).}$$

(ii) Calculate the CO$_2$ correction factor for correcting measurement data to 15 percent O$_2$, as follows:

$$X_{CO2} = \frac{5.9}{F_0} \quad (Eq. 3)$$

Where:

$$X_{CO2} = \text{CO}_2\text{ correction factor, percent.}$$

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:

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

Where:

$$C_{adj} = \text{Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O}_2.$$  

$$C_d = \text{Measured concentration of CO, THC, or formaldehyde, uncorrected.}$$

$$X_{CO2} = \text{CO}_2\text{ correction factor, percent.}$$

$$\%CO2 = \text{Measured CO}_2\text{ concentration measured, dry basis, percent.}$$

(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.


§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 O₂ or CO₂ 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 CO2 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.

§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 O₂ using one of the O₂ measurement methods specified in Table 4 of this subpart. Measurements to determine O₂ 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 O₂ emissions simultaneously at the inlet and outlet of the control device.


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 O₂ using one of the O₂ measurement methods specified in Table 4 of this subpart. Measurements to determine O₂ 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 O₂ 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 supply power 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.


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.


§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.


§63.6655 What records must I keep?

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (i.e., superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.
(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) through (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in §63.6640(f)(2)(ii) or (iii) or §63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

(1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.


§63.6660 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).


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 CO2.

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 CO₂.

**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 (NOx) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NOx, CO, and volatile organic compounds (VOC) into CO2, 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 C3H8.
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 NOx (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.


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:

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>You must meet the following emission limitation, except during periods of startup . . .</th>
<th>During periods of startup you must . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 4SRB stationary RICE</td>
<td>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</td>
<td>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</td>
</tr>
<tr>
<td></td>
<td>b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O₂</td>
<td></td>
</tr>
</tbody>
</table>

¹ Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

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:

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>You must meet the following operating limitation, except during periods of startup . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. existing, new and reconstructed 4SRB stationary RICE &gt;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 &gt;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\textsubscript{2} and using NSCR;</td>
<td>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</td>
</tr>
<tr>
<td>2. existing, new and reconstructed 4SRB stationary RICE &gt;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 existing, new and reconstructed 4SRB stationary RICE &gt;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\textsubscript{2} and not using NSCR.</td>
<td>Comply with any operating limitations approved by the Administrator.</td>
</tr>
</tbody>
</table>

¹Sources 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:

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>You must meet the following emission limitation, except during periods of startup . . .</th>
<th>During periods of startup you must . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 2SLB stationary RICE</td>
<td>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\textsubscript{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\textsubscript{2} until June 15, 2007</td>
<td>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</td>
</tr>
<tr>
<td>2. 4SLB stationary RICE</td>
<td>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\textsubscript{2}</td>
<td></td>
</tr>
</tbody>
</table>

¹Minimize 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.
For each . . . | You must meet the following emission limitation, except during periods of startup . . . | During periods of startup you must . . .
--- | --- | ---
3. CI stationary RICE | a. Reduce CO emissions by 70 percent or more; or |  
| b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O₂ | 

1Sources 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:

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>You must meet the following operating limitation, except during periods of startup . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. New and reconstructed 2SLB and CI stationary RICE &gt;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 &gt;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 and using an oxidation catalyst.</td>
<td>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</td>
</tr>
<tr>
<td>2. Existing CI stationary RICE &gt;500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst</td>
<td>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</td>
</tr>
<tr>
<td>3. New and reconstructed 2SLB and CI stationary RICE &gt;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 New and reconstructed 2SLB and CI stationary RICE &gt;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 and not using an oxidation catalyst; and</td>
<td>Comply with any operating limitations approved by the Administrator.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>You must meet the following requirement, except during periods of startup . . .</th>
<th>During periods of startup you must . . .</th>
</tr>
</thead>
</table>
| **1. Emergency stationary CI RICE and black start stationary CI RICE**<sup>1</sup> | a. Change oil and filter every 500 hours of operation or annually, whichever comes first.<sup>2</sup>  
b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;  
c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.<sup>3</sup> | Minimize the engine’s time spent at idle and minimize the engine’s startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.<sup>3</sup> |
| **2. Non-Emergency, non-black start stationary CI RICE <100 HP** | a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first.<sup>2</sup>  
b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;  
c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.<sup>3</sup> | |
<table>
<thead>
<tr>
<th>For each . . .</th>
<th>You must meet the following requirement, except during periods of startup . . .</th>
<th>During periods of startup you must . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Non-Emergency, non-black start CI stationary RICE 300&lt;HP≤500</td>
<td>a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O₂; or b. Reduce CO emissions by 70 percent or more.</td>
<td></td>
</tr>
<tr>
<td>5. Non-Emergency, non-black start stationary CI RICE &gt;500 HP</td>
<td>a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O₂; or b. Reduce CO emissions by 70 percent or more.</td>
<td></td>
</tr>
<tr>
<td>6. Emergency stationary SI RICE and black start stationary SI RICE.¹</td>
<td>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</td>
<td></td>
</tr>
<tr>
<td>7. Non-Emergency, non-black start stationary SI RICE &lt;100 HP that are not 2SLB stationary RICE</td>
<td>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</td>
<td></td>
</tr>
<tr>
<td>8. Non-Emergency, non-black start 2SLB stationary SI RICE &lt;100 HP</td>
<td>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</td>
<td></td>
</tr>
<tr>
<td>For each . . .</td>
<td>You must meet the following requirement, except during periods of startup . . .</td>
<td>During periods of startup you must . . .</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500</td>
<td>Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent O(_2).</td>
<td></td>
</tr>
<tr>
<td>10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500</td>
<td>Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O(_2).</td>
<td></td>
</tr>
<tr>
<td>11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500</td>
<td>Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O(_2).</td>
<td></td>
</tr>
<tr>
<td>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</td>
<td>Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O(_2).</td>
<td></td>
</tr>
</tbody>
</table>

1If 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.

2Sources 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.

3Sources 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:

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>You must meet the following requirement, except during periods of startup . . .</th>
<th>During periods of startup you must . . .</th>
</tr>
</thead>
</table>
| 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 O₂; 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 O₂; 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. | |
<table>
<thead>
<tr>
<th><strong>For each . . .</strong></th>
<th><strong>You must meet the following requirement, except during periods of startup . . .</strong></th>
<th><strong>During periods of startup you must . . .</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE &gt;500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE &gt;500 HP that operate 24 hours or less per calendar year.</td>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>6. Non-emergency, non-black start 2SLB stationary RICE</td>
<td>a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;¹</td>
<td></td>
</tr>
<tr>
<td>7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP</td>
<td>a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;¹</td>
<td></td>
</tr>
<tr>
<td>8. Non-emergency, non-black start 4SLB remote stationary RICE &gt;500 HP</td>
<td>a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;¹</td>
<td></td>
</tr>
<tr>
<td>For each . . .</td>
<td>You must meet the following requirement, except during periods of startup . . .</td>
<td>During periods of startup you must . . .</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td></td>
<td>c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.</td>
<td></td>
</tr>
<tr>
<td>9. Non-emergency, non-black start 4SLB stationary RICE &gt;500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year</td>
<td>Install an oxidation catalyst to reduce HAP emissions from the stationary RICE.</td>
<td></td>
</tr>
<tr>
<td>10. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP</td>
<td>a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;¹</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.</td>
<td></td>
</tr>
<tr>
<td>11. Non-emergency, non-black start 4SRB remote stationary RICE &gt;500 HP</td>
<td>a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;¹</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.</td>
<td></td>
</tr>
<tr>
<td>12. Non-emergency, non-black start 4SRB stationary RICE &gt;500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year</td>
<td>Install NSCR to reduce HAP emissions from the stationary RICE.</td>
<td></td>
</tr>
<tr>
<td>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</td>
<td>a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;¹</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and</td>
<td></td>
</tr>
</tbody>
</table>
You must meet the following requirement, except during periods of startup.

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>During periods of startup you must . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.</td>
<td></td>
</tr>
</tbody>
</table>

1Sources 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.

2If 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:

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>Complying with the requirement to . . .</th>
<th>You must . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. New or reconstructed 2SLB stationary RICE &gt;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 &gt;500 HP located at major sources</td>
<td>Reduce CO emissions and not using a CEMS</td>
<td>Conduct subsequent performance tests semiannually.¹</td>
</tr>
<tr>
<td>2. 4SRB stationary RICE ≥5,000 HP located at major sources</td>
<td>Reduce formaldehyde emissions</td>
<td>Conduct subsequent performance tests semiannually.¹</td>
</tr>
<tr>
<td>3. Stationary RICE &gt;500 HP located at major sources and new or reconstructed 4SLB stationary RICE 250≤HP≤500 located at major sources</td>
<td>Limit the concentration of formaldehyde in the stationary RICE exhaust</td>
<td>Conduct subsequent performance tests semiannually.¹</td>
</tr>
<tr>
<td>4. Existing non-emergency, non-black start CI stationary RICE &gt;500 HP that are not limited use stationary RICE</td>
<td>Limit or reduce CO emissions and not using a CEMS</td>
<td>Conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first.</td>
</tr>
<tr>
<td>5. Existing non-emergency, non-black start CI stationary RICE &gt;500 HP that are limited use stationary RICE</td>
<td>Limit or reduce CO emissions and not using a CEMS</td>
<td>Conduct subsequent performance tests every 8,760 hours or 5 years, whichever comes first.</td>
</tr>
</tbody>
</table>

¹After 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**

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>Complying with the requirement to . . .</th>
<th>You must . . .</th>
<th>Using . . .</th>
<th>According to the following requirements . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 2SLB, 4SLB, and CI stationary RICE</td>
<td>a. reduce CO emissions</td>
<td>i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and</td>
<td>(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)</td>
<td>(a) For CO and O₂ measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts &gt;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 &gt;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.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(b) Measurements to determine O₂ must be made at the same time as the measurements for CO concentration.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii. Measure the O₂ at the inlet and outlet of the control device; and</td>
<td>(1) ASTM D6522-00 (Reapproved 2005)abc (heated probe not necessary) or Method 10 of 40 CFR part 60, appendix A-4</td>
<td>(c) The CO concentration must be at 15 percent O₂, dry basis.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For each . . .</td>
<td>Complying with the requirement to . . .</td>
<td>You must . . .</td>
<td>Using . . .</td>
<td>According to the following requirements . . .</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------------------------------</td>
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<td>------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>2. 4SRB stationary RICE</td>
<td>a. reduce formaldehyde emissions</td>
<td>i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and</td>
<td>(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)¹ (heated probe not necessary)</td>
<td>(a) For formaldehyde, O₂, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts &gt;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 &gt;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.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(a) Measurements to determine O₂ concentration must be made at the same time as the measurements for formaldehyde or THC concentration.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii. Measure O₂ at the inlet and outlet of the control device; and</td>
<td>(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)¹ (heated probe not necessary)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or THC concentration.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>iii. Measure moisture content at the inlet and outlet of the control device; and</td>
<td>(1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03¹</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(a) Formaldehyde concentration must be at 15 percent O₂, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formaldehyde at the inlet and the outlet of the control device</td>
<td>(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03¹, 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</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(a) THC concentration must be at 15 percent O₂, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>v. If demonstrating compliance with the THC percent reduction requirement, measure THC at the inlet and the outlet of the control device</td>
<td>(1) Method 25A, reported as propane, of 40 CFR part 60, appendix A-7</td>
<td></td>
</tr>
<tr>
<td>For each</td>
<td>Complying with the requirement to</td>
<td>You must...</td>
<td>Using...</td>
<td>According to the following requirements...</td>
</tr>
<tr>
<td>-----------------</td>
<td>----------------------------------</td>
<td>-------------</td>
<td>----------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>3. Stationary RICE</td>
<td><a href="#">a. limit the concentration of formaldehyde or CO in the stationary RICE exhaust</a></td>
<td>i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary RICE; and</td>
<td>(a) For formaldehyde, CO, O₂, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts &gt;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 &gt;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.</td>
<td></td>
</tr>
</tbody>
</table>
| | | ii. Determine the O₂ 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)
(heated probe not necessary) | (a) Measurements to determine O₂ concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration. |
| | | iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and | (1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03
(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO concentration. |
| | | iv. Measure formaldehyde at the exhaust of the stationary RICE; or | (1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03, 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 O₂, dry basis. Results of this test consist of the average of the three 1-hour or longer runs. |
| | | v. measure CO at the exhaust of the stationary RICE | (1) Method 10 of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (2005); Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03 | (a) CO concentration must be at 15 percent O₂, dry basis. Results of this test consist of the average of the three 1-hour or longer runs. |
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.

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:

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>Complying with the requirement to . . .</th>
<th>You have demonstrated initial compliance if . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. New or reconstructed non-emergency 2SLB stationary RICE &gt;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 &gt;500 HP located at a major source of HAP and existing non-emergency stationary CI RICE &gt;500 HP located at an area source of HAP</td>
<td>a. Reduce CO emissions and using oxidation catalyst, and using a CPMS</td>
<td>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.</td>
</tr>
<tr>
<td>2. Non-emergency stationary CI RICE &gt;500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE &gt;500 HP located at an area source of HAP</td>
<td>a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS</td>
<td>i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.</td>
</tr>
<tr>
<td>3. New or reconstructed non-emergency 2SLB stationary RICE &gt;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 &gt;500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE &gt;500 HP located at an area source of HAP</td>
<td>a. Reduce CO emissions and not using oxidation catalyst</td>
<td>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.</td>
</tr>
<tr>
<td>For each . . .</td>
<td>Complying with the requirement to . . .</td>
<td>You have demonstrated initial compliance if . . .</td>
</tr>
<tr>
<td>----------------</td>
<td>----------------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>4. Non-emergency stationary CI RICE &gt;500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE &gt;500 HP located at an area source of HAP</td>
<td>a. Limit the concentration of CO, and not using oxidation catalyst</td>
<td>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.</td>
</tr>
<tr>
<td>5. New or reconstructed non-emergency 2SLB stationary RICE &gt;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 &gt;500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE &gt;500 HP located at an area source of HAP</td>
<td>a. Reduce CO emissions, and using a CEMS</td>
<td>i. You have installed a CEMS to continuously monitor CO and either O₂ or CO₂ 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.</td>
</tr>
<tr>
<td>6. Non-emergency stationary CI RICE &gt;500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE &gt;500 HP located at an area source of HAP</td>
<td>a. Limit the concentration of CO, and using a CEMS</td>
<td>i. You have installed a CEMS to continuously monitor CO and either O₂ or CO₂ at the outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and iii. The average concentration of CO calculated using §63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.</td>
</tr>
<tr>
<td>7. Non-emergency 4SRB stationary RICE &gt;500 HP located at a major source of HAP</td>
<td>a. Reduce formaldehyde emissions and using NSCR</td>
<td>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...</td>
</tr>
<tr>
<td>For each . . .</td>
<td>Complying with the requirement to . . .</td>
<td>You have demonstrated initial compliance if . . .</td>
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<td>---------------</td>
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<td>--------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>ii. You have installed a CPMS to</td>
<td>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</td>
</tr>
<tr>
<td></td>
<td>continuously monitor catalyst inlet</td>
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</tr>
<tr>
<td></td>
<td>temperature according to the requirements in §63.6625(b); and</td>
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<tr>
<td></td>
<td>iii. You have recorded the catalyst</td>
<td>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</td>
</tr>
<tr>
<td>8. Non-emergency 4SRB stationary RICE &gt;500 HP located at a major source of HAP</td>
<td>a. Reduce formaldehyde emissions and not using NSCR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>i. The average formaldehyde concentration, corrected to 15 percent O₂, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii. You have installed a CPMS to</td>
<td>i. The average formaldehyde concentration, corrected to 15 percent O₂, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and</td>
</tr>
<tr>
<td></td>
<td>continuously monitor catalyst inlet</td>
<td>ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and</td>
</tr>
<tr>
<td></td>
<td>temperature according to the requirements in §63.6625(b); and</td>
<td>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</td>
</tr>
<tr>
<td></td>
<td>iii. You have recorded the catalyst</td>
<td>iii. You have recorded the approved operating parameters (if any) during the initial performance test.</td>
</tr>
<tr>
<td></td>
<td>pressure drop and catalyst inlet</td>
<td></td>
</tr>
<tr>
<td></td>
<td>temperature during the initial</td>
<td></td>
</tr>
<tr>
<td></td>
<td>performance test.</td>
<td></td>
</tr>
<tr>
<td>9. New or reconstructed non-emergency stationary RICE &gt;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 &gt;500 HP located at a major source of HAP</td>
<td>a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>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</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii. You have installed a CPMS to</td>
<td>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</td>
</tr>
<tr>
<td></td>
<td>continuously monitor catalyst inlet</td>
<td>iii. You have recorded the approved operating parameters (if any) during the initial performance test.</td>
</tr>
<tr>
<td></td>
<td>temperature according to the requirements in §63.6625(b); and</td>
<td></td>
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<tr>
<td></td>
<td>iii. You have recorded the catalyst</td>
<td></td>
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<tr>
<td></td>
<td>pressure drop and catalyst inlet</td>
<td></td>
</tr>
<tr>
<td></td>
<td>temperature during the initial</td>
<td></td>
</tr>
<tr>
<td></td>
<td>performance test.</td>
<td></td>
</tr>
<tr>
<td>10. New or reconstructed non-emergency stationary RICE &gt;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 &gt;500 HP located at a major source of HAP</td>
<td>a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>i. The average formaldehyde concentration, corrected to 15 percent O₂, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii. You have installed a CPMS to</td>
<td>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</td>
</tr>
<tr>
<td></td>
<td>continuously monitor catalyst inlet</td>
<td>iii. You have recorded the approved operating parameters (if any) during the initial performance test.</td>
</tr>
<tr>
<td></td>
<td>temperature according to the requirements in §63.6625(b); and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>iii. You have recorded the catalyst</td>
<td></td>
</tr>
<tr>
<td></td>
<td>pressure drop and catalyst inlet</td>
<td></td>
</tr>
<tr>
<td></td>
<td>temperature during the initial</td>
<td></td>
</tr>
<tr>
<td></td>
<td>performance test.</td>
<td></td>
</tr>
<tr>
<td>11. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300&lt;HP≤500 located at an area source of HAP</td>
<td>a. Reduce CO emissions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>For each . . .</td>
<td>Complying with the requirement to . . .</td>
<td>You must have demonstrated initial compliance if . . .</td>
</tr>
<tr>
<td>----------------</td>
<td>----------------------------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>12. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP and existing non-emergency stationary CI RICE 300&lt;HP≤500 located at an area source of HAP</td>
<td>a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust</td>
<td>i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O₂, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.</td>
</tr>
<tr>
<td>13. Existing non-emergency 4SLB stationary RICE &gt;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</td>
<td>a. Install an oxidation catalyst</td>
<td>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.</td>
</tr>
<tr>
<td>14. Existing non-emergency 4SRB stationary RICE &gt;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</td>
<td>a. Install NSCR</td>
<td>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.</td>
</tr>
</tbody>
</table>

[78 FR 6712, Jan. 30, 2013]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements

As stated in §63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>Complying with the requirement to . . .</th>
<th>You must demonstrate continuous compliance by . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. New or reconstructed non-emergency 2SLB stationary RICE &gt;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 &gt;500 HP located at a major source of HAP</td>
<td>a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS</td>
<td>i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved; and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and</td>
</tr>
<tr>
<td>For each . . .</td>
<td>Complying with the requirement to . . .</td>
<td>You must demonstrate continuous compliance by . . .</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td>2. New or reconstructed non-emergency 2SLB stationary RICE &gt;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 &gt;500 HP located at a major source of HAP</td>
<td>a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS</td>
<td>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.</td>
</tr>
<tr>
<td>3. New or reconstructed non-emergency 2SLB stationary RICE &gt;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 &gt;500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE &gt;500 HP</td>
<td>a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS</td>
<td>i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved; 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</td>
</tr>
<tr>
<td>4. Non-emergency 4SRB stationary RICE &gt;500 HP located at a major source of HAP</td>
<td>a. Reduce formaldehyde emissions and using NSCR</td>
<td>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.</td>
</tr>
<tr>
<td>5. Non-emergency 4SRB stationary RICE &gt;500 HP located at a major source of HAP</td>
<td>a. Reduce formaldehyde emissions and not using NSCR</td>
<td>i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and</td>
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<tr>
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<tr>
<td></td>
<td></td>
<td>ii. Reducing these data to 4-hour rolling averages; and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.</td>
</tr>
<tr>
<td>6. Non-emergency 4SRB stationary RICE with a brake HP ≥5,000 located at a major source of HAP</td>
<td>a. Reduce formaldehyde emissions</td>
<td>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.</td>
</tr>
<tr>
<td>7. New or reconstructed non-emergency stationary RICE &gt;500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP</td>
<td>a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR</td>
<td>i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit; and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iii. Reducing these data to 4-hour rolling averages; and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>8. New or reconstructed non-emergency stationary RICE &gt;500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP</td>
<td>a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR</td>
<td>i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit; and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iii. Reducing these data to 4-hour rolling averages; and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.</td>
</tr>
<tr>
<td>For each . . .</td>
<td>Complying with the requirement to . . .</td>
<td>You must demonstrate continuous compliance by . . .</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>------------------------------------------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>9. Existing emergency and black start stationary RICE ≤500 HP located at a</td>
<td>a. Work or Management practices</td>
<td>i. Operating and maintaining the stationary RICE</td>
</tr>
<tr>
<td>major source of HAP, existing non-emergency stationary RICE &lt;100 HP located</td>
<td></td>
<td>according to the manufacturer's emission-related</td>
</tr>
<tr>
<td>at a major source of HAP, existing emergency and black start stationary</td>
<td></td>
<td>operation and maintenance instructions; or</td>
</tr>
<tr>
<td>RICE located at an area source of HAP, existing non-emergency stationary</td>
<td></td>
<td>ii. Develop and follow your own maintenance plan</td>
</tr>
<tr>
<td>CI RICE ≤300 HP located at an area source of HAP, existing non-emergency</td>
<td></td>
<td>which must provide to the extent practicable for the</td>
</tr>
<tr>
<td>emergency stationary SI RICE located at an area source of HAP which</td>
<td></td>
<td>maintenance and operation of the engine in a manner</td>
</tr>
<tr>
<td>combusts landfill or digester gas equivalent to 10 percent or more of the</td>
<td></td>
<td>consistent with good air pollution control practice</td>
</tr>
<tr>
<td>gross heat input on an annual basis, existing non-emergency 4SLB and 4SRB</td>
<td></td>
<td>for minimizing emissions.</td>
</tr>
<tr>
<td>stationary RICE ≤500 HP located at an area source of HAP, existing non-</td>
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<td></td>
</tr>
<tr>
<td>emergency 4SLB and 4SRB stationary RICE &gt;500 HP located at an area source</td>
<td></td>
<td></td>
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<tr>
<td>of HAP that operate 24 hours or less per calendar year, and existing non-</td>
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<td></td>
</tr>
<tr>
<td>emergency 4SLB and 4SRB stationary RICE &gt;500 HP located at an area source</td>
<td></td>
<td></td>
</tr>
<tr>
<td>of HAP that are remote stationary RICE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Existing stationary CI RICE &gt;500 HP that are not limited use stationary</td>
<td>a. Reduce CO emissions, or limit the</td>
<td>i. Conducting performance tests every 8,760 hours</td>
</tr>
<tr>
<td>RICE</td>
<td>concentration of CO in the stationary</td>
<td>or 3 years, whichever comes first, for CO or</td>
</tr>
<tr>
<td></td>
<td>RICE exhaust, and using oxidation</td>
<td>formaldehyde, as appropriate, to demonstrate that</td>
</tr>
<tr>
<td></td>
<td>catalyst</td>
<td>the required CO or formaldehyde, as appropriate,</td>
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<td></td>
<td></td>
<td>percent reduction is achieved or that your</td>
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<td></td>
<td></td>
<td>emissions remain at or below the CO or formaldehyde</td>
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<tr>
<td></td>
<td></td>
<td>concentration limit; and</td>
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<td></td>
<td></td>
<td>ii. Collecting the catalyst inlet temperature data</td>
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<tr>
<td></td>
<td></td>
<td>according to §63.6625(b); and</td>
</tr>
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<td></td>
<td></td>
<td>iii. Reducing these data to 4-hour rolling</td>
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<td></td>
<td></td>
<td>averages; and</td>
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<td></td>
<td></td>
<td>iv. Maintaining the 4-hour rolling averages</td>
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<tr>
<td></td>
<td></td>
<td>within the operating limitations for the catalyst</td>
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<tr>
<td></td>
<td></td>
<td>inlet temperature; and</td>
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<td></td>
<td></td>
<td>v. Measuring the pressure drop across the catalyst</td>
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<tr>
<td></td>
<td></td>
<td>once per month and demonstrating that the pressure</td>
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<td></td>
<td></td>
<td>drop across the catalyst is within the operating</td>
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<tr>
<td></td>
<td></td>
<td>limitation established during the performance test.</td>
</tr>
<tr>
<td>11. Existing stationary CI RICE &gt;500 HP that are not limited use stationary</td>
<td>a. Reduce CO emissions, or limit the</td>
<td>i. Conducting performance tests every 8,760 hours</td>
</tr>
<tr>
<td>RICE</td>
<td>concentration of CO in the stationary</td>
<td>or 3 years, whichever comes first, for CO or</td>
</tr>
<tr>
<td></td>
<td>RICE exhaust, and not using oxidation</td>
<td>formaldehyde, as appropriate, to demonstrate that</td>
</tr>
<tr>
<td></td>
<td>catalyst</td>
<td>the required CO or formaldehyde, as appropriate,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>percent reduction is achieved or that your emissions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>remain at or below the CO or formaldehyde</td>
</tr>
<tr>
<td></td>
<td></td>
<td>concentration limit; and</td>
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<tr>
<td></td>
<td></td>
<td>ii. Collecting the approved operating parameter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(if any) data according to §63.6625(b); and</td>
</tr>
<tr>
<td>For each . . .</td>
<td>Complying with the requirement to . . .</td>
<td>You must demonstrate continuous compliance by . . .</td>
</tr>
<tr>
<td>--------------</td>
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<td>--------------------------------------------------</td>
</tr>
<tr>
<td>12. Existing limited use CI stationary RICE &gt;500 HP</td>
<td>a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using an oxidation catalyst</td>
<td></td>
</tr>
</tbody>
</table>
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. |
| 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  
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. |
<table>
<thead>
<tr>
<th>For each . . .</th>
<th>Complying with the requirement to . . .</th>
<th>You must demonstrate continuous compliance by . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. Existing non-emergency 4SLB stationary RICE &gt;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</td>
<td>a. Install an oxidation catalyst</td>
<td>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 O₂; 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.</td>
</tr>
<tr>
<td>15. Existing non-emergency 4SRB stationary RICE &gt;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</td>
<td>a. Install NSCR</td>
<td>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 O₂, 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.</td>
</tr>
</tbody>
</table>

*aAfter you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[78 FR 6715, Jan. 30, 2013]
Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports

As stated in §63.6650, you must comply with the following requirements for reports:

<table>
<thead>
<tr>
<th>For each . . .</th>
<th>You must submit a . . .</th>
<th>The report must contain . . .</th>
<th>You must submit the report . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>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 &gt;500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE &gt;500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE &gt;300 HP located at an area source of HAP; new or reconstructed non-emergency stationary RICE &gt;500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP</td>
<td>Compliance report</td>
<td>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</td>
<td>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.</td>
</tr>
<tr>
<td>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</td>
<td>Report</td>
<td>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</td>
<td>i. Semiannually according to the requirements in §63.6650(b).</td>
</tr>
<tr>
<td>3. Existing non-emergency, non-black start 4SLB and 4SRB stationary RICE &gt;500 HP located at an area source of HAP that are not remote stationary RICE and that operate more than 24 hours per calendar year</td>
<td>Compliance report</td>
<td>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</td>
<td>i. Annually, according to the requirements in §63.6650.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and</td>
<td>i. See item 2.a.i.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c. Any problems or errors suspected with the meters.</td>
<td>i. See item 2.a.i.</td>
</tr>
</tbody>
</table>
For each . . . | You must submit a . . . | The report must contain . . . | You must submit the report . . .
---|---|---|---
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.

<table>
<thead>
<tr>
<th>General provisions citation</th>
<th>Subject of citation</th>
<th>Applies to subpart</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>§63.1</td>
<td>General applicability of the General Provisions</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.2</td>
<td>Definitions</td>
<td>Yes</td>
<td>Additional terms defined in §63.6675.</td>
</tr>
<tr>
<td>§63.3</td>
<td>Units and abbreviations</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.4</td>
<td>Prohibited activities and circumvention</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.5</td>
<td>Construction and reconstruction</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.6(a)</td>
<td>Applicability</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.6(b)(1)-(4)</td>
<td>Compliance dates for new and reconstructed sources</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.6(b)(5)</td>
<td>Notification</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.6(b)(6)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§63.6(b)(7)</td>
<td>Compliance dates for new and reconstructed area sources that become major sources</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.6(c)(1)-(2)</td>
<td>Compliance dates for existing sources</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.6(c)(3)-(4)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§63.6(c)(5)</td>
<td>Compliance dates for existing area sources that become major sources</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.6(d)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§63.6(e)</td>
<td>Operation and maintenance</td>
<td>No.</td>
<td></td>
</tr>
<tr>
<td>§63.6(f)(1)</td>
<td>Applicability of standards</td>
<td>No.</td>
<td></td>
</tr>
<tr>
<td>§63.6(f)(2)</td>
<td>Methods for determining compliance</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.6(f)(3)</td>
<td>Finding of compliance</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.6(g)(1)-(3)</td>
<td>Use of alternate standard</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.6(h)</td>
<td>Opacity and visible emission standards</td>
<td>No</td>
<td>Subpart ZZZZ does not contain opacity or visible emission standards.</td>
</tr>
<tr>
<td>§63.6(i)</td>
<td>Compliance extension procedures and criteria</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>General provisions citation</td>
<td>Subject of citation</td>
<td>Applies to subpart</td>
<td>Explanation</td>
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</tr>
<tr>
<td>§63.6(j)</td>
<td>Presidential compliance exemption</td>
<td>Yes</td>
<td>Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612.</td>
</tr>
<tr>
<td>§63.7(a)(1)-(2)</td>
<td>Performance test dates</td>
<td>Yes</td>
<td>Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620.</td>
</tr>
<tr>
<td>§63.7(a)(3)</td>
<td>CAA section 114 authority</td>
<td>Yes</td>
<td>Subpart ZZZZ specifies test methods at §63.6620.</td>
</tr>
<tr>
<td>§63.7(b)(1)</td>
<td>Notification of performance test</td>
<td>Yes</td>
<td>Except that §63.7(b)(1) only applies as specified in §63.6645.</td>
</tr>
<tr>
<td>§63.7(b)(2)</td>
<td>Notification of rescheduling</td>
<td>Yes</td>
<td>Except that §63.7(b)(2) only applies as specified in §63.6645.</td>
</tr>
<tr>
<td>§63.7(c)</td>
<td>Quality assurance/test plan</td>
<td>Yes</td>
<td>Except that §63.7(c) only applies as specified in §63.6645.</td>
</tr>
<tr>
<td>§63.7(d)</td>
<td>Testing facilities</td>
<td>Yes</td>
<td>Subpart ZZZZ contains specific requirements for monitoring at §63.6625.</td>
</tr>
<tr>
<td>§63.7(e)(1)</td>
<td>Conditions for conducting performance tests</td>
<td>No</td>
<td>Subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).</td>
</tr>
<tr>
<td>§63.7(e)(2)</td>
<td>Conduct of performance tests and reduction of data</td>
<td>Yes</td>
<td>Subpart ZZZZ specifies test methods at §63.6620.</td>
</tr>
<tr>
<td>§63.7(e)(3)</td>
<td>Test run duration</td>
<td>Yes</td>
<td>Subpart ZZZZ specifies test methods at §63.6620.</td>
</tr>
<tr>
<td>§63.7(e)(4)</td>
<td>Administrator may require other testing under section 114 of the CAA</td>
<td>Yes</td>
<td>Subpart ZZZZ does not require COMS.</td>
</tr>
<tr>
<td>§63.7(f)</td>
<td>Alternative test method provisions</td>
<td>Yes</td>
<td>Subpart ZZZZ contains specific requirements for monitoring at §63.6625.</td>
</tr>
<tr>
<td>§63.7(g)</td>
<td>Performance test data analysis, recordkeeping, and reporting</td>
<td>Yes</td>
<td>Subpart ZZZZ contains specific requirements for monitoring at §63.6625.</td>
</tr>
<tr>
<td>§63.7(h)</td>
<td>Waiver of tests</td>
<td>Yes</td>
<td>Subpart ZZZZ contains specific requirements for monitoring at §63.6625.</td>
</tr>
<tr>
<td>§63.8(a)(1)</td>
<td>Applicability of monitoring requirements</td>
<td>Yes</td>
<td>Subpart ZZZZ contains specific requirements for monitoring at §63.6625.</td>
</tr>
<tr>
<td>§63.8(a)(2)</td>
<td>Performance specifications</td>
<td>Yes</td>
<td>Subpart ZZZZ contains specific requirements for monitoring at §63.6625.</td>
</tr>
<tr>
<td>§63.8(a)(3)</td>
<td>[Reserved]</td>
<td></td>
<td>Subpart ZZZZ contains specific requirements for monitoring at §63.6625.</td>
</tr>
<tr>
<td>§63.8(a)(4)</td>
<td>Monitoring for control devices</td>
<td>No</td>
<td>Subpart ZZZZ contains specific requirements for monitoring at §63.6625.</td>
</tr>
<tr>
<td>§63.8(b)(1)</td>
<td>Monitoring</td>
<td>Yes</td>
<td>Subpart ZZZZ contains specific requirements for monitoring at §63.6625.</td>
</tr>
<tr>
<td>§63.8(b)(2)-(3)</td>
<td>Multiple effluents and multiple monitoring systems</td>
<td>Yes</td>
<td>Subpart ZZZZ contains specific requirements for monitoring at §63.6625.</td>
</tr>
<tr>
<td>§63.8(c)(1)</td>
<td>Monitoring system operation and maintenance</td>
<td>Yes</td>
<td>Subpart ZZZZ contains specific requirements for monitoring at §63.6625.</td>
</tr>
<tr>
<td>§63.8(c)(1)(i)</td>
<td>Routine and predictable SSM</td>
<td>No</td>
<td>Subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).</td>
</tr>
<tr>
<td>§63.8(c)(1)(ii)</td>
<td>SSM not in Startup Shutdown Malfunction Plan</td>
<td>Yes</td>
<td>Subpart ZZZZ does not require COMS.</td>
</tr>
<tr>
<td>§63.8(c)(1)(iii)</td>
<td>Compliance with operation and maintenance requirements</td>
<td>No</td>
<td>Subpart ZZZZ does not require COMS.</td>
</tr>
<tr>
<td>§63.8(c)(2)-(3)</td>
<td>Monitoring system installation</td>
<td>Yes</td>
<td>Subpart ZZZZ does not require COMS.</td>
</tr>
<tr>
<td>§63.8(c)(4)</td>
<td>Continuous monitoring system (CMS) requirements</td>
<td>Yes</td>
<td>Subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).</td>
</tr>
<tr>
<td>§63.8(c)(5)</td>
<td>COMS minimum procedures</td>
<td>No</td>
<td>Subpart ZZZZ does not require COMS.</td>
</tr>
<tr>
<td>§63.8(c)(6)-(8)</td>
<td>CMS requirements</td>
<td>Yes</td>
<td>Subpart ZZZZ does not require COMS.</td>
</tr>
<tr>
<td>General provisions citation</td>
<td>Subject of citation</td>
<td>Applies to subpart</td>
<td>Explanation</td>
</tr>
<tr>
<td>-----------------------------</td>
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</tr>
<tr>
<td>§63.8(d)</td>
<td>CMS quality control</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.8(e)</td>
<td>CMS performance evaluation</td>
<td>Yes</td>
<td>Except for §63.8(e)(5)(ii), which applies to COMS.</td>
</tr>
<tr>
<td>§63.8(f)(1)-(5)</td>
<td>Alternative monitoring method</td>
<td>Yes</td>
<td>Except that §63.8(f)(4) only applies as specified in §63.6645.</td>
</tr>
<tr>
<td>§63.8(f)(6)</td>
<td>Alternative to relative accuracy test</td>
<td>Yes</td>
<td>Except that §63.8(f)(6) only applies as specified in §63.6645.</td>
</tr>
<tr>
<td>§63.8(g)</td>
<td>Data reduction</td>
<td>Yes</td>
<td>Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.</td>
</tr>
<tr>
<td>§63.9(a)</td>
<td>Applicability and State delegation of notification requirements</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.9(b)(1)-(5)</td>
<td>Initial notifications</td>
<td>Yes</td>
<td>Except that §63.9(b)(3) is reserved.</td>
</tr>
<tr>
<td>§63.9(c)</td>
<td>Request for compliance extension</td>
<td>Yes</td>
<td>Except that §63.9(c) only applies as specified in §63.6645.</td>
</tr>
<tr>
<td>§63.9(d)</td>
<td>Notification of special compliance requirements for new sources</td>
<td>Yes</td>
<td>Except that §63.9(d) only applies as specified in §63.6645.</td>
</tr>
<tr>
<td>§63.9(e)</td>
<td>Notification of performance test</td>
<td>Yes</td>
<td>Except that §63.9(e) only applies as specified in §63.6645.</td>
</tr>
<tr>
<td>§63.9(f)</td>
<td>Notification of visible emission (VE)/opacity test</td>
<td>No</td>
<td>Subpart ZZZZ does not contain opacity or VE standards.</td>
</tr>
<tr>
<td>§63.9(g)(1)</td>
<td>Notification of performance evaluation</td>
<td>Yes</td>
<td>Except that §63.9(g) only applies as specified in §63.6645.</td>
</tr>
<tr>
<td>§63.9(g)(2)</td>
<td>Notification of use of COMS data</td>
<td>No</td>
<td>Subpart ZZZZ does not contain opacity or VE standards.</td>
</tr>
<tr>
<td>§63.9(g)(3)</td>
<td>Notification that criterion for alternative to RATA is exceeded</td>
<td>Yes</td>
<td>If alternative is in use.</td>
</tr>
<tr>
<td>§63.9(h)(1)-(6)</td>
<td>Notification of compliance status</td>
<td>Yes</td>
<td>Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.</td>
</tr>
<tr>
<td>§63.9(i)</td>
<td>Adjustment of submittal deadlines</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§63.9(j)</td>
<td>Change in previous information</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>General provisions citation</td>
<td>Subject of citation</td>
<td>Applies to subpart</td>
<td>Explanation</td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------------------------------------------------</td>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>§63.10(a)</td>
<td>Administrative provisions for recordkeeping/reporting</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.10(b)(1)</td>
<td>Record retention</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.10(b)(2)(i)-(v)</td>
<td>Records related to SSM</td>
<td>No.</td>
<td></td>
</tr>
<tr>
<td>§63.10(b)(2)(vi)-(xi)</td>
<td>Records</td>
<td>Yes.</td>
<td></td>
</tr>
<tr>
<td>§63.10(b)(2)(xii)</td>
<td>Record when under waiver</td>
<td>Yes.</td>
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<tr>
<td>§63.10(b)(2)(xiii)</td>
<td>Records when using alternative to RATA</td>
<td>Yes.</td>
<td>For CO standard if using RATA alternative.</td>
</tr>
<tr>
<td>§63.10(b)(2)(xiv)</td>
<td>Records of supporting documentation</td>
<td>Yes.</td>
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<td>§63.10(b)(3)</td>
<td>Records of applicability determination</td>
<td>Yes.</td>
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<tr>
<td>§63.10(c)</td>
<td>Additional records for sources using CEMS</td>
<td>Yes.</td>
<td>Except that §63.10(c)(2)-(4) and (9) are reserved.</td>
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<td>§63.10(d)(1)</td>
<td>General reporting requirements</td>
<td>Yes.</td>
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<tr>
<td>§63.10(d)(2)</td>
<td>Report of performance test results</td>
<td>Yes.</td>
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<tr>
<td>§63.10(d)(3)</td>
<td>Reporting opacity or VE observations</td>
<td>No.</td>
<td>Subpart ZZZZ does not contain opacity or VE standards.</td>
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<td>§63.10(d)(4)</td>
<td>Progress reports</td>
<td>Yes.</td>
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<td>§63.10(d)(5)</td>
<td>Startup, shutdown, and malfunction reports</td>
<td>No.</td>
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<td>§63.10(e)(1) and (2)(i)</td>
<td>Additional CMS Reports</td>
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<td>COMS-related report</td>
<td>No.</td>
<td>Subpart ZZZZ does not require COMS.</td>
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<tr>
<td>§63.10(e)(3)</td>
<td>Excess emission and parameter exceedances reports</td>
<td>Yes.</td>
<td>Except that §63.10(e)(3)(i) (C) is reserved.</td>
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<td>Reporting COMS data</td>
<td>No.</td>
<td>Subpart ZZZZ does not require COMS.</td>
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<td>Waiver for recordkeeping/reporting</td>
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<td>§63.11</td>
<td>Flares</td>
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<td>§63.12</td>
<td>State authority and delegations</td>
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<td>§63.13</td>
<td>Addresses</td>
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<td>§63.14</td>
<td>Incorporation by reference</td>
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<td>§63.15</td>
<td>Availability of information</td>
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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 (O2) 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 (O2).

<table>
<thead>
<tr>
<th>Analyte</th>
<th>CAS No.</th>
<th>Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon monoxide (CO)</td>
<td>630-08-0</td>
<td>Minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.</td>
</tr>
<tr>
<td>Oxygen (O2)</td>
<td>7782-44-7</td>
<td></td>
</tr>
</tbody>
</table>

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 O2, 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 O2 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 O2 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 O₂ and moisture in the electrolyte reserve and provides a mechanism to degas 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 NO₂ 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 O₂ 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 O₂; 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 O2. 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 O2) is acceptable for calibration of the O2 cell. If needed, any lower percentage O2 calibration gas must be a mixture of O2 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 O2 Calibration Gas Concentration.

Select an O2 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 O2. When the average exhaust gas O2 readings are above 6 percent, you may use dry ambient air (20.9 percent O2) for the up-scale O2 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., CO2).

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 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 O2 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 O₂ 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 O₂ for the O₂ 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 O₂, 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 O₂, 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 O₂ 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 NO₂ gas standards that are generally recognized as representative of diesel-fueled engine NO and NO₂ 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 NO₂ 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


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

Table 1: Appendix A—Sampling Run Data.

<table>
<thead>
<tr>
<th>Run Type:</th>
<th>Pre-Sample Calibration</th>
<th>Stack Gas Sample</th>
<th>Post-Sample Cal. Check</th>
<th>Repeatability Check</th>
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<tr>
<th>Run #</th>
<th>1 1</th>
<th>2 2</th>
<th>3 3</th>
<th>4 4</th>
<th>Time</th>
<th>Scrub. OK</th>
<th>Flow- Rate</th>
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<tr>
<td>Gas</td>
<td>O₂</td>
<td>CO</td>
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<table>
<thead>
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<table>
<thead>
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<th>Mean</th>
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[78 FR 6721, Jan. 30, 2013]
Indiana Department of Environmental Management  
Office of Air Quality

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

### Source Description and Location

<table>
<thead>
<tr>
<th>Source Name:</th>
<th>Arcosa LW HPB LLC</th>
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<tbody>
<tr>
<td>Source Location:</td>
<td>6618 North Tidewater Road, Mooresville, IN 46158</td>
</tr>
<tr>
<td>County:</td>
<td>Morgan (Clay Township)</td>
</tr>
<tr>
<td>SIC Code:</td>
<td>3295 (Minerals and Earths, Ground or Otherwise Treated)</td>
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<tr>
<td>Operation Permit No.:</td>
<td>T 109-39783-00007</td>
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<tr>
<td>Operation Permit Issuance Date:</td>
<td>February 21, 2019</td>
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<tr>
<td>Significant Source Modification No.:</td>
<td>109-41865-00007</td>
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<tr>
<td>Significant Permit Modification No.:</td>
<td>109-41882-00007</td>
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<tr>
<td>Permit Reviewer:</td>
<td>Kelcy Tolliver</td>
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### Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. 109-39783-00007 on February 21, 2019. There have been no subsequent approvals issued.

### County Attainment Status

The source is located in Morgan County.

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<th>Pollutant</th>
<th>Designation</th>
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<td>SO₂</td>
<td>Nonattainment effective October 4, 2013, for the 2010 SO₂ standard for Clay and Washington townships. Better than national standards for the remainder of the county.</td>
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<tr>
<td>CO</td>
<td>Unclassifiable or attainment effective November 15, 1990.</td>
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<tr>
<td>O₃</td>
<td>Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard.¹</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Unclassifiable or attainment effective April 15, 2015, for the 2012 annual PM₂.₅ standard.</td>
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<td>PM₂.₅</td>
<td>Unclassifiable or attainment effective December 13, 2009, for the 2006 24-hour PM₂.₅ standard.</td>
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<tr>
<td>PM₁₀</td>
<td>Unclassifiable effective November 15, 1990.</td>
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<tr>
<td>NO₂</td>
<td>Unclassifiable or attainment effective January 29, 2012, for the 2010 NO₂ standard.</td>
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<tr>
<td>Pb</td>
<td>Unclassifiable or attainment effective December 31, 2011, for the 2008 lead standard.</td>
</tr>
</tbody>
</table>

¹Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NOₓ) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOₓ emissions are considered when evaluating the rule applicability relating to ozone. Morgan County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOₓ emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) PM₂.₅
Morgan County has been classified as attainment for PM₂.₅. Therefore, direct PM₂.₅, SO₂, and NOₓ emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
(c) SO₂
U.S. EPA, in the Federal Register Notice 78 FR 47191 dated August 5, 2013, designated Morgan County, (Clay Township) as nonattainment for SO₂. Therefore, SO₂ emissions were reviewed pursuant to the requirements of Emission Offset, 326 IAC 2-3.

(d) Other Criteria Pollutants
Morgan County has been classified as attainment or unclassifiable in Indiana for all the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this type of operation is not one (1) of the twenty-eight (28) listed source categories under 326 IAC 2-2-1(ff)(1), 326 IAC 2-3-2(g), or 326 IAC 2-7-1(22)(B), and there is no applicable New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants 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.

The fugitive emissions of hazardous air pollutants (HAP) are counted toward the determination of Part 70 Permit applicability and source status under Section 112 of the Clean Air Act (CAA).

Greenhouse Gas (GHG) Emissions

On June 23, 2014, in the case of Utility Air Regulatory Group v. EPA, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court’s decision. U.S. EPA’s guidance states that U.S. EPA will no longer require PSD or Title V permits for sources “previously classified as ‘Major’ based solely on greenhouse gas emissions.”

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHG emissions to determine operating permit applicability or PSD applicability to a source or modification.
Source Status - Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

<table>
<thead>
<tr>
<th>Source-Wide Emissions Prior to Modification (ton/year)</th>
<th>PM¹</th>
<th>PM₁₀¹</th>
<th>PM₂.₅¹.²</th>
<th>SO₂</th>
<th>NOₓ</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP³</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PTE of Entire Source Excluding Fugitive Emissions*</td>
<td>883.89</td>
<td>160.69</td>
<td>154.44</td>
<td>4778.08</td>
<td>769.41</td>
<td>158.46</td>
<td>188.43</td>
<td>43.08</td>
<td>43.08</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>10</td>
<td>25</td>
</tr>
<tr>
<td>PSD Major Source Thresholds</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Emission Offset Major Source Thresholds</td>
<td>---</td>
<td>NA</td>
<td>NA</td>
<td>100</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>--</td>
</tr>
</tbody>
</table>

¹Under the Part 70 Permit program (40 CFR 70), PM₁₀ and PM₂.₅, not particulate matter (PM), are each considered as a "regulated air pollutant."
²PM₂.₅ listed is direct PM₂.₅.
³Single highest source-wide HAP is HCL.
*Fugitive HAP emissions are always included in the source-wide emissions.

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a PSD regulated pollutant(s), PM, SO₂, and NOₓ, are 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 a major stationary source, under Emission Offset (326 IAC 2-3), because SO₂, a nonattainment regulated pollutant(s), is emitted at a rate of 100 tons per year or more.

(c) This existing source is a major source of HAP, as defined in 40 CFR 63.2, because HAP emissions are equal to or greater than ten (10) tons per year for a single HAP and equal to or greater than twenty-five (25) tons per year for a combination of HAPs.

(d) These emissions are based on the TSD of TV Renewal No. 109-39783-00007, issued on February 21, 2019.

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed an application, submitted by Arcosa LW HPB LLC on August 30, 2019, relating to the addition of unpermitted emission units. The emission calculations for Kiln 4, Kiln 5, and all crushing, screening, and conveying processes were revised to include updated emission factors from AP-42 and stack testing results. There were no revisions to previous limits established in the permit due to the new emission factors in this modification.

The following emission units were constructed and/or operated without a permit:

(a) One (1) haydite screener, identified as HCR2, constructed in 2018, with a maximum capacity of 250 tons of expanded shale per hour, using wet suppression of fugitive dust as control, and exhausting outdoors.

Under 40 CFR 60, Subpart OOO, the screener is considered an affected facility.
(b) One (1) wash plant screener, identified as WP, constructed prior to 2018, with a maximum capacity of 30 tons per hour, using wet suppression of fugitive dust as control, and exhausting outdoors.

(c) Three (3) shale aggregate storage silos, identified as Clinker Bin, Ax Bin, and B Bin, constructed prior to 2018, each with a maximum storage capacity of 120 tons, using wet suppression of fugitive dust as control, and exhausting outdoors.

Under 40 CFR 60, Subpart OOO, the silos are considered affected facilities.

(d) Two (2) coal grinding mills, identified as CGM493 and CGM372, constructed prior to 2018, with a maximum capacity of 16,800 pounds per hour (CGM493) and 6,200 pounds per hour (CGM372), using no control, and exhausting outdoors.

(e) One (1) diesel-fired emergency pony engine, identified as Emergency Engine, constructed prior to 1996, with a maximum rating of 26 HP, using no control, and exhausting indoors.

Under 40 CFR 63, Subpart ZZZZ, the emergency engine is considered an affected facility.

(f) Three (3) storage tanks, constructed prior to 2018, and consisting of the following:

(i) One (1) gasoline storage tank, with a storage capacity of 250 gallons.

(ii) One (1) diesel storage tank, with a storage capacity of 2,500 gallons.

(iii) One (1) kerosene storage tank, with a storage capacity of 295 gallons.

(g) One (1) maintenance welding operation, constructed prior to 2018, with a maximum electrode consumption of 6.5 pounds per hour, using no control, and exhausting indoors.

### Enforcement Issues

IDEM is aware that equipment has been constructed and/or operated prior to receipt of the proper permit. IDEM is reviewing this matter and will take the appropriate action. This proposed approval is intended to satisfy the requirements of the construction permit and/or operating rules.

### Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.
Permit Level Determination – Part 70 Modification to an Existing Source

Pursuant to 326 IAC 2-1.1-1(12), Potential to Emit is defined as “the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency.”

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM</th>
<th>PM_{10}</th>
<th>PM_{2.5}\textsuperscript{1}</th>
<th>SO_{2}</th>
<th>NO\textsubscript{x}</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP\textsuperscript{2}</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCR2</td>
<td>27.38</td>
<td>9.53</td>
<td>9.53</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>WP Screener</td>
<td>3.29</td>
<td>1.14</td>
<td>1.14</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Coal Grinding Mill</td>
<td>1.01</td>
<td>0.30</td>
<td>0.30</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Diesel-fired Emergency Pony Engine</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.20</td>
<td>0.02</td>
<td>0.04</td>
<td>-</td>
<td>1.8E-4</td>
</tr>
<tr>
<td>Three (3) Aggregate Silos</td>
<td>287.77</td>
<td>185.27</td>
<td>185.27</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Maintenance Welding</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.02</td>
<td>0.02</td>
<td>-</td>
</tr>
<tr>
<td>Three (3) Storage Tanks</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>&lt;1.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total PTE Before Controls of the New Emission Units:</td>
<td>319.64</td>
<td>196.45</td>
<td>196.45</td>
<td>0.01</td>
<td>1.02</td>
<td>0.04</td>
<td>0.02</td>
<td>0.02</td>
<td></td>
</tr>
</tbody>
</table>

\textsuperscript{1}PM\textsubscript{2.5} listed is direct PM\textsubscript{2.5}.

Appendix A of this TSD reflects the detailed potential emissions of the modification.

Pursuant to 326 IAC 2-7-10.5(g)(4), a Significant Source Modification is required because this modification has the potential to emit PM, PM\textsubscript{10}, and PM\textsubscript{2.5} at equal to or greater than twenty-five (25) tons per year.

Pursuant to 326 IAC 2-7-12(d)(1), this change to the permit is being made through a Significant Permit Modification because this modification does not qualify as a Minor Permit Modification or as an Administrative Amendment.

Pursuant to 326 IAC 2-7-12(d)(1), this change to the permit is being made through a Significant Permit Modification because this modification makes a significant change to existing monitoring conditions.

Permit Level Determination – PSD Emissions Increase

(a) Actual to Potential (ATP) Applicability Test
Since this project only involves the construction of new emissions units and/or emissions units considered new for this evaluation, an Actual to Potential (ATP) applicability test, specified in 326 IAC 2-2-2(d)(4), is used to determine if the project results in a Significant Emissions Increase.

(b) Baseline Actual Emissions
For a new emissions unit, the baseline actual emissions for purposes of determining the Emissions Increase that will result from the initial construction and operation of the unit shall equal zero (0) and thereafter, for all other purposes, shall equal the unit’s potential to emit.
Although these units were constructed and operated prior to this approval, the emissions units will be considered new for this evaluation.

(c) **Actual to Potential (ATP) Summary**

The Emissions Increase of the project is the sum of the difference between the potential to emit (PTE) from each new emissions unit following completion of the project and the baseline actual emissions of these units before the project.

\[
\text{ATP}_{\text{new unit}} = \text{PTE}_{\text{new unit}} - \text{Baseline Emissions}_{\text{new unit}}
\]

See Appendix A of this Technical Support Document for detailed emission calculations.

<table>
<thead>
<tr>
<th>Process/Emissions Unit</th>
<th>PM</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}^*$</th>
<th>SO$_2$</th>
<th>NO$_x$</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCR2$^2$ (ATP)</td>
<td>2.41</td>
<td>0.81</td>
<td>0.05</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>WP Screener$^2$ (ATP)</td>
<td>3.29</td>
<td>1.14</td>
<td>1.14</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Coal Grinding Mill (ATP)</td>
<td>1.01</td>
<td>0.30</td>
<td>0.30</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Diesel-fired Emergency Pony Engine (ATP)</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.20</td>
<td>0.02</td>
<td>0.04</td>
</tr>
<tr>
<td>Three (3) Aggregate Silos$^2$ (ATP)</td>
<td>0.39</td>
<td>0.13</td>
<td>0.13</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Maintenance Welding (ATP)</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Three (3) Storage Tanks (ATP)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>&lt;1.0</td>
<td>-</td>
</tr>
</tbody>
</table>

**Project Emissions Increase (tons/year)**

<table>
<thead>
<tr>
<th></th>
<th>PM</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}^*$</th>
<th>SO$_2$</th>
<th>NO$_x$</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Emissions Increase</strong></td>
<td>7.30</td>
<td>2.59</td>
<td>1.84</td>
<td>0.01</td>
<td>0.20</td>
<td>1.02</td>
<td>0.04</td>
</tr>
<tr>
<td>Significant Levels</td>
<td>25</td>
<td>15</td>
<td>10</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

*PM2.5 listed is direct PM2.5.

The source has opted to take limits in order to render the requirements of 326 IAC 2-2 not applicable to this modification.

See Technical Support Document (TSD) State Rule Applicability - Entire Source section, 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) applicability determination for more information regarding the limits.

(e) **Conclusion**

The Permittee has provided information as part of the application for this approval that based on Actual to Projected Actual test in 326 IAC 2-2-2 that this modification to an existing major PSD stationary source will not be major because the Emissions Increase of each PSD regulated pollutant is less than the PSD significant levels levels (i.e., the modification does not cause a Significant Emissions Increase). The applicant will be required to keep records and report in accordance with 326 IAC 2-2-8 (Prevention of Significant Deterioration (PSD) Requirements: Source Obligation).
The table below summarizes the after issuance source-wide potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of the Part 70 source and/or permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

<table>
<thead>
<tr>
<th>Source-Wide Emissions After Issuance (ton/year)</th>
<th>PM¹</th>
<th>PM₁₀¹</th>
<th>PM₂.₅¹,₂</th>
<th>SO₂</th>
<th>NOₓ</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP³</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Kiln Processing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary Crushing, PK1</td>
<td>4.73</td>
<td>2.10</td>
<td>2.10</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Secondary Crushing, PK2</td>
<td>4.73</td>
<td>2.10</td>
<td>2.10</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Conveyor Transfer, PK3-PK8</td>
<td>15.77</td>
<td>5.78</td>
<td>5.78</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Haydite Crusher Line HCR</td>
<td></td>
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<td></td>
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<tr>
<td>Primary Crushing, HCR1</td>
<td>5.91</td>
<td>2.63</td>
<td>2.63</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Conveyor Transfer, HCR9-HCR10</td>
<td>6.57</td>
<td>2.41</td>
<td>2.41</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Portable Screening</td>
<td></td>
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<td></td>
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<tr>
<td>Triple-deck Screening</td>
<td>27.38</td>
<td>9.53</td>
<td>9.53</td>
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<td>-</td>
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<tr>
<td>Shaker Screen, HCR2</td>
<td>2.41</td>
<td>0.81</td>
<td>0.05</td>
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<tr>
<td>WP Screener</td>
<td>3.29</td>
<td>1.14</td>
<td>1.14</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>4 Conveyors, PS2-PS5</td>
<td>13.14</td>
<td>4.82</td>
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<td>Rotary Kilns</td>
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<tr>
<td>Rotary Kiln, K4</td>
<td>3947.28</td>
<td>1452.90</td>
<td>1452.90</td>
<td>2438.22</td>
<td>322.29</td>
<td>53.61</td>
<td>74.83</td>
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<td>Rotary Kiln, K5</td>
<td>7364.06</td>
<td>2694.63</td>
<td>2694.63</td>
<td>3779.81</td>
<td>447.12</td>
<td>104.85</td>
<td>113.60</td>
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<td>21.54</td>
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<tr>
<td>Clinker Cooler, CLNKCOOL</td>
<td>52.56</td>
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<td>-</td>
<td>-</td>
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<tr>
<td>Expanded Shale Crusher ESA</td>
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<tr>
<td>Expanded Shale Crusher, ESA1</td>
<td>0.39</td>
<td>0.16</td>
<td>0.01</td>
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<tr>
<td>Expanded Shale Screen, ESA2</td>
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<td>0.29</td>
<td>0.29</td>
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<tr>
<td>5 Conveyors, ESA3-ESA7</td>
<td>0.09</td>
<td>0.03</td>
<td>0.01</td>
<td>-</td>
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<tr>
<td>Sorbent Handling</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Sorbent Silos #1 &amp; #2</td>
<td>16.80</td>
<td>7.20</td>
<td>2.40</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
</tbody>
</table>
### Source-Wide Emissions After Issuance (ton/year)

<table>
<thead>
<tr>
<th>Source</th>
<th>PM¹</th>
<th>PM₁₀¹</th>
<th>PM₂⁻ℹ️,²</th>
<th>SO₂</th>
<th>NOₓ</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP³</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coal Handling</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coal Gridding Mill</td>
<td>1.01</td>
<td>0.30</td>
<td>0.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coal Unloading</td>
<td>0.60</td>
<td>0.21</td>
<td>0.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Diesel-Fired Emergency Pony Engine</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.20</td>
<td>0.02</td>
<td>0.04</td>
<td>1.76E⁻⁰⁴</td>
<td></td>
</tr>
<tr>
<td>Aggregate Silos</td>
<td>0.39</td>
<td>0.13</td>
<td>0.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Three (3) Storage Tanks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Maintenance Welding</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.02</td>
<td></td>
</tr>
<tr>
<td><strong>Total PTE of Entire Source Excluding Fugitives</strong></td>
<td>11467.79</td>
<td>4208.41</td>
<td>4202.50</td>
<td>6218.05</td>
<td>769.61</td>
<td>158.47</td>
<td>188.47</td>
<td>43.08</td>
<td>43.10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>Title V Major Source Thresholds</th>
<th>PSD Major Source Thresholds</th>
<th>Emission Offset Major Source Thresholds</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>100</td>
<td>250</td>
<td>---</td>
</tr>
<tr>
<td>100</td>
<td>250</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>100</td>
<td>250</td>
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</tr>
<tr>
<td>100</td>
<td>250</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>100</td>
<td>250</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>100</td>
<td>250</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

¹Under the Part 70 Permit program (40 CFR 70), PM₁₀ and PM₂⁻, not particulate matter (PM), are each considered as a "regulated air pollutant."
²PM₂⁻ listed is direct PM₂⁻.
³Single highest source-wide HAP is HCL.
*Fugitive HAP emissions are always included in the source-wide emissions.

(a) This existing major PSD stationary source will continue to be major under 326 IAC 2-2 because at least one pollutant, PM, PM₁₀, PM₂⁻, SO₂, and NOₓ, has emissions equal to or greater than the PSD major source threshold.

(b) This existing major Emission Offset stationary source will continue to be major under 326 IAC 2-3 because the emissions of the nonattainment pollutant(s), SO₂, will continue to be equal to or greater than the Emission Offset threshold.

(c) This existing major source of HAP will continue to be a major source of HAP, as defined in 40 CFR 63.2, because HAP emissions will continue to be equal to or greater than ten (10) tons per year for any single HAP and/or equal to or greater than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

### Federal Rule Applicability Determination

Due to the modification at this source, federal rule applicability has been reviewed as follows:
New Source Performance Standards (NSPS):

(a) The requirements of the New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart III and 326 IAC 12, are not included in the permit for the diesel-fired emergency pony engine, because the engine was constructed prior to April 1, 2006.

(b) The haydite screener, identified as HCR2, and the three (3) aggregate silos, identified as Clinker Bin, Ax Bin, and B Bin, are subject to the New Source Performance Standards for Nonmetallic Mineral Processing Plants because it was constructed after the applicability date of August 31, 1983 and it has the required components in processing nonmetallic minerals. The units subject to this rule include the following:

1. One (1) haydite screener, identified as HCR2, constructed in 2018 but permitted in 2019, with a maximum capacity of 100 tons of expanded shale per hour, using wet suppression of fugitive dust as control, and exhausting outdoors.

   Under 40 CFR 60, Subpart OOO, the screener is considered an affected facility.

2. Three (3) shale aggregate storage silos, identified as Clinker Bin, Ax Bin, and B Bin, constructed prior to 2018 but permitted in 2019, each with a maximum storage capacity of 120 tons, using wet suppression of fugitive dust as control, and exhausting outdoors.

   Under 40 CFR 60, Subpart OOO, the silos are considered affected facilities.

These units are subject to the following portions of 40 CFR 60, Subpart OOO:

1. 40 CFR 60.670
2. 40 CFR 60.671
3. 40 CFR 60.672(a)
4. 40 CFR 60.673
5. 40 CFR 60.675(a), and (b)
6. 40 CFR 60.676(a), and (k)

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the emergency engine except as otherwise specified in 40 CFR 60, Subpart OOO.

(c) There are no other New Source Performance Standards (40 CFR Part 60) and 326 IAC 12 included in the permit for this proposed modification.

National Emission Standards for Hazardous Air Pollutants (NESHAP):

(d) The diesel-fired emergency pony engine, identified as Emergency Engine, is subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ, which is incorporated by reference as 326 IAC 20-82., because it is considered a new (construction commenced on or after June 12, 2006) stationary reciprocating internal combustion engine (RICE) at an area source of hazardous air pollutants (HAP). The unit subject to this rule include the following:

1. One (1) diesel-fired emergency pony engine, identified as Emergency Engine, constructed prior to 2018 but permitted in 2019, with a maximum rating of 26 HP, using no control, and exhausting indoors.

   Under 40 CFR 60, Subpart III, the emergency engine is considered an affected facility.
Under 40 CFR 63, Subpart ZZZZ, the emergency engine is considered an affected facility.

The diesel-fired emergency pony engine is subject to the following portions of 40 CFR 63, Subpart ZZZZ:

1. 40 CFR 63.6580
2. 40 CFR 63.6585 (a)(b)
3. 40 CFR 63.6590(a)(1)(ii) and (iv)
4. 40 CFR 63.6595(a)(1) and (c)
5. 40 CFR 63.6605
6. 40 CFR 63.6625(e)(2), (f), and (h)
7. 40 CFR 63.6640 (f)(1), (f)(2)(i), and (f)(3)
8. 40 CFR 63.6645(a)(5)
9. 40 CFR 63.6650
10. 40 CFR 63.6660
11. 40 CFR 63.6665
12. 40 CFR 63.6670
13. 40 CFR 63.6675
14. Table 2c of 40 CFR 63, Subpart ZZZZ
15. Table 6 of 40 CFR 63, Subpart ZZZZ
16. Table 8 of 40 CFR 63, Subpart ZZZZ

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the emergency engine except as otherwise specified in 40 CFR 63, Subpart ZZZZ.

(e) There are no other National Emission Standards for Hazardous Air Pollutants under 40 CFR 63, 326 IAC 14 and 326 IAC 20 included for this proposed modification.

Compliance Assurance Monitoring (CAM):

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each pollutant-specific emission unit that meets the following criteria:

1. has a potential to emit before controls equal to or greater than the major source threshold for the regulated pollutant involved;
2. is subject to an emission limitation or standard for that pollutant (or a surrogate thereof); and
3. uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

(b) Pursuant to 40 CFR 64.2(b)(1)(i), emission limitations or standards proposed after November 15, 1990 pursuant to a NSPS or NESHAP under Section 111 or 112 of the Clean Air Act are exempt from the requirements of CAM. Therefore, an evaluation was not conducted for any emission limitations or standards proposed after November 15, 1990 pursuant to a NSPS or NESHAP under Section 111 or 112 of the Clean Air Act.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM, are not applicable to any of the new units as part of this modification. The wet suppression for fugitive dust on the crushing and screening processes are considered passive control as defined in 40 CFR 64.1.
Due to this modification, state rule applicability has been reviewed as follows:

### State Rule Applicability - Entire Source

#### 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset)

The source has been in operation prior to the promulgation of the PSD Rules (326 IAC 2-2) on August 7, 1977. Arcosa LW HPB, LLC is not one of the twenty-eight (28) listed source categories. The emission of one of the regulated attainment pollutants is greater than 250 tons per year. Therefore, the source is an existing major source under PSD (326 IAC 2-2).

#### 2019 Modification

**a)** The aggregate silos, identified as Clinker Bin, Ax Bin, and B Bin, constructed prior to 2018 and permitted in 2019, have uncontrolled PM, PM10, and PM2.5 emissions greater than 25, 15, and 10 tons per year, respectively. Pursuant to 326 IAC 2-2, the PM and PM10/PM2.5 emissions from the three (3) aggregate silos shall not exceed 0.00099 and 0.00034 pounds per ton after control, respectively.

The combined throughput for the shale aggregate in the three (3) aggregate silos shall not exceed 788,400 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

**b)** The haydite screener, identified as HCR2, constructed in 2018 and permitted in 2019, has uncontrolled PM, PM10 and PM2.5 emissions greater than 25, 15 and 10 tons per year, respectively. Pursuant to 326 IAC 2-2, the PM, PM10, and PM2.5 emissions from the haydite screener shall not exceed 0.0022, 0.00074, and 0.00005 pounds per ton after control, respectively.

The throughput for the raw shale in the haydite screener shall not exceed 2,190,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits, shall limit the potential to emit of PM, PM10, and PM2.5 to less than 25, 15, and 10 tons per year, respectively and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2019 Modification.

#### 326 IAC 2-7-6(5) (Annual Compliance Certification)

The U.S. EPA Federal Register 79 FR 54978 notice does not exempt Title V Permittees from the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D), but the submittal of the Title V annual compliance certification to IDEM satisfies the requirement to submit the Title V annual compliance certifications to EPA. IDEM does not intend to revise any permits since the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D) still apply, but Permittees can note on their Title V annual compliance certifications that submission to IDEM has satisfied reporting to EPA per Federal Register 79 FR 54978. This only applies to Title V Permittees and Title V compliance certifications.

### State Rule Applicability – Individual Facilities

Due to this modification, state rule applicability has been reviewed as follows:

#### Screening HCR2 and WP

#### 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-1(a), the requirements of 326 IAC 6-3-2 are applicable to the HCR2 and WP screeners, since they are a manufacturing process not exempted from this rule under 326 IAC 6-3-1(b) and not subject to a particulate matter limitation that is as stringent as or more stringent than the particulate limitation established in this rule as specified in 326 IAC 6-3-1(c).
Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the WP shall not exceed 40.03 pounds per hour when operating at a process weight rate of 30 tons per hour. The pound per hour limitation was calculated with the following equation:

(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

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the HCR2 shall not exceed 60.95 pounds per hour when operating at a process weight rate of 250 tons per hour. The pound per hour limitation was calculated with the following equation:

(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

### Summary of Process Weight Rate Limits

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>( P ) (ton/hr)</th>
<th>( E ) (lb/hr)</th>
<th>Equation Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCR2</td>
<td>250</td>
<td>60.95</td>
<td>(b)</td>
</tr>
<tr>
<td>WP</td>
<td>30</td>
<td>40.03</td>
<td>(a)</td>
</tr>
</tbody>
</table>

Based on calculations, the control equipment is not needed to comply with this limit.

Aggregate Silos (Clinker Bin, Ax Bin, and B Bin)

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(a), the requirements of 326 IAC 6-3-2 are applicable to the aggregate silos, since they are a manufacturing process not exempted from this rule under 326 IAC 6-3-1(b) and not subject to a particulate matter limitation that is as stringent as or more stringent than the particulate limitation established in this rule as specified in 326 IAC 6-3-1(c).

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the each of the aggregate silos shall not exceed 40.03 pounds per hour when operating at a process weight rate of 30 tons per hour. The pound per hour limitation was calculated with the following equation:

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

### Summary of Process Weight Rate Limits

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>( P ) (ton/hr)</th>
<th>( E ) (lb/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinker Bin</td>
<td>30</td>
<td>40.03</td>
</tr>
<tr>
<td>Ax Bin</td>
<td>30</td>
<td>40.03</td>
</tr>
<tr>
<td>B Bin</td>
<td>30</td>
<td>40.03</td>
</tr>
</tbody>
</table>

Based on calculations, the control equipment is not needed to comply with this limit.
Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to assure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source’s failure to take the appropriate corrective actions within a specific time period.

The Compliance Determination and Monitoring Requirements applicable to this modification are as follows:

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Frequency</th>
<th>Range or Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate Silos (Clinker Bin, Ax Bin, and B Bin)</td>
<td>Continuous</td>
<td>2% Moisture Content in aggregate</td>
</tr>
<tr>
<td>Haydite Screener (HCR2)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These monitoring conditions are necessary because the wet suppression system for the Clinker Bin, Ax Bin, B Bin, and HCR2 must operate properly to assure compliance with 326 IAC 2-2 and 326 IAC 6-3-2.

Water is introduced into the aggregate operating during the crushing and screening operations. The remainder of the process right after the start of the crushing operation has lesser emissions due to the presence of moisture. Controlled emission factors are utilized to evaluate the emissions during the wet processes. These controlled emission factors can be used only when the moisture content of the particles are within 0.55 to 2.88% as per AP42 Table 11.19.2-1.

Proposed Changes

As part of this permit approval, the permit may contain new or different permit conditions and some conditions from previously issued permits/approvals may have been corrected, changed, or removed. These corrections, changes, and removals may include Title I changes.

The following changes listed below are due to the proposed modification. Deleted language appears as strikethrough text and new language appears as bold text (these changes may include Title I changes):

(1) A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]
[326 IAC 2-7-5(14)]

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

**********

(k) One (1) haydite screener, identified as HCR2, constructed in 2018, with a maximum capacity of 250 tons of expanded shale per hour, using wet suppression of fugitive dust as control, and exhausting outdoors.

Under 40 CFR 60, Subpart OOO, the screener is considered an affected facility.
(l) Three (3) shale aggregate storage silos, identified as Clinker Bin, Ax Bin, and B Bin, constructed prior to 2018, each with a maximum storage capacity of 120 tons, using wet suppression of fugitive dust as control, and exhausting outdoors.

Under 40 CFR 60, Subpart OOO, the silos are considered affected facilities.

(2) A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(14)]

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

******

(c) One (1) wash plant screener, identified as WP, constructed prior to 2018, with a maximum capacity of 30 tons per hour, using wet suppression of fugitive dust as control, and exhausting outdoors.

(d) Two (2) coal grinding mills, identified as CGM493 and CGM372, constructed prior to 2018, with a maximum capacity of 16,800 pounds per hour (CGM493) and 6,200 pounds per hour (CGM372), using no control, and exhausting outdoors.

(e) One (1) diesel-fired emergency pony engine, identified as Emergency Engine, constructed prior to 1996, with a maximum rating of 26 HP, using no control, and exhausting indoors.

Under 40 CFR 63, Subpart ZZZZ, the emergency engine is considered an affected facility.

(f) Three (3) storage tanks, constructed prior to 2018, and consisting of the following:

(i) One (1) gasoline storage tank, with a storage capacity of 250 gallons.

(ii) One (1) diesel storage tank, with a storage capacity of 2,500 gallons.

(iii) One (1) kerosene storage tank, with a storage capacity of 295 gallons.

(g) One (1) maintenance welding operation, constructed prior to 2018, with a maximum electrode consumption of 6.5 pounds per hour, using no control, and exhausting indoors.

(3) SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

<table>
<thead>
<tr>
<th>Emissions Unit Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(k) One (1) haydite screener, identified as HCR2, constructed in 2018, with a maximum capacity of 100 tons of expanded shale per hour, using wet suppression of fugitive dust as control, and exhausting outdoors.</td>
</tr>
<tr>
<td>Under 40 CFR 60, Subpart OOO, the screener is considered an affected facility.</td>
</tr>
<tr>
<td>(l) Three (3) shale aggregate storage silos, identified as Clinker Bin, Ax Bin, and B Bin, constructed prior to 2018, each with a maximum storage capacity of 120 tons, using wet suppression of fugitive dust as control, and exhausting outdoors.</td>
</tr>
<tr>
<td>Under 40 CFR 60, Subpart OOO, the silos are considered affected facilities.</td>
</tr>
</tbody>
</table>
Insignificant Activities:

(c) One (1) wash plant screener, identified as WP, constructed prior to 2018, with a maximum capacity of 30 tons per hour, using wet suppression of fugitive dust as control, and exhausting outdoors.

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

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

D.4.1 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) not applicable, the Permittee shall comply with the following:

(a) The combined throughput for the shale aggregate in the three (3) aggregate silos shall not exceed 788,400 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The throughput for the raw shale in the haydite screener shall not exceed 2,190,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(c) The particulate emissions from the haydite screener, identified as HCR2, and the three (3) shale aggregate silos shall comply with the following:

<table>
<thead>
<tr>
<th>Process</th>
<th>Process ID</th>
<th>Emission Limitation (lb/ton)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>PM</td>
</tr>
<tr>
<td>Screening</td>
<td>HCR2</td>
<td>0.0022</td>
</tr>
<tr>
<td>Storage</td>
<td>Clinker Bin</td>
<td>0.00099</td>
</tr>
<tr>
<td></td>
<td>Ax Bin</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B Bin</td>
<td></td>
</tr>
</tbody>
</table>

Compliance with these limits will limit the potential to emit of PM, PM10, and PM2.5 emissions from the haydite screener, identified as HCR2, and the three (3) storage silos to less than 25, 15, and 10 tons per year, respectively and render the requirements of 326 IAC 2-2 (PSD) not applicable to the 2019 modification.

D.4.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e), the manufacturing processes listed in the table below shall be limited by the following:

<table>
<thead>
<tr>
<th>Summary of Process Weight Rate Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process / Emission Unit</td>
</tr>
<tr>
<td>-------------------------</td>
</tr>
<tr>
<td>HCR2</td>
</tr>
<tr>
<td>WP</td>
</tr>
<tr>
<td>Clinker Bin</td>
</tr>
<tr>
<td>Ax Bin</td>
</tr>
<tr>
<td>B Bin</td>
</tr>
</tbody>
</table>
The pound per hour allowable was calculated with the following equations:

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

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

(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.4.3 Preventive Maintenance Plan [326 IAC 1-6-3]

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

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

D.4.4 Moisture Content

In order to comply with conditions D.4.1, the Permittee shall maintain a minimum moisture content of 2% in the shale aggregate.

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

D.4.5 Moisture Content Sampling and Analysis

In order to comply with Condition D.4.4, the Permittee shall perform sampling of the moisture content of the shale aggregate, utilizing American Society for Testing and Materials (ASTM) standards for sampling and analysis, or other approved sampling methods.

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

D.4.6 Record Keeping Requirements

(a) To document compliance with condition D.4.4, the Permittee shall maintain records of the moisture analysis of the shale to demonstrate compliance.

(b) Section C - General Record Keeping Requirements contains the Permittee’s obligations with regard to the record keeping required by this condition.

D.4.7 Reporting Requirements [326 IAC 2 7 5(3)] [326 IAC 2 7 19]

A quarterly report of the information to document the compliance status with Condition D.4.1(a) and (b) shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official” as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

(4) The new emissions units, identified as HCR2, Clinker Bin, Ax Bin, and B Bin, are subject to NSPS Subpart OOO requirements because they were constructed after the applicability date of August 31, 1983 and have the required components in processing nonmetallic minerals. The source has existing units subject to these requirements in addition to the new emission units.
SECTION E.1 NSPS

Emissions Unit Description:

******

(k) One (1) haydite screener, identified as HCR2, constructed in 2018, with a maximum capacity of 100 tons of expanded shale per hour, using wet suppression of fugitive dust as control, and exhausting outdoors.

Under 40 CFR 60, Subpart OOO, the screener is considered an affected facility.

(l) Three (3) shale aggregate storage silos, identified as Clinker Bin, Ax Bin, and B Bin, constructed prior to 2018, each with a maximum storage capacity of 120 tons, using wet suppression of fugitive dust as control, and exhausting outdoors.

Under 40 CFR 60, Subpart OOO, the silos are considered affected facilities.

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

(5) The new emergency pony engine, identified as Emergency Engine, is subject to NESHAP Subpart ZZZZ. These requirements are being added to Sections E.2 of the permit.

SECTION E.2 NESHAP

Emissions Unit Description:

(e) One (1) diesel-fired emergency pony engine, identified as Emergency Engine, constructed prior to 1996, with a maximum rating of 26 HP, using no control, and exhausting indoors.

Under 40 CFR 63, Subpart ZZZZ, the emergency engine is considered an affected facility.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-8-4(1)]


(a) Pursuant to 40 CFR 63.1 the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart ZZZZ.
(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports 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

E.2.2 Stationary Reciprocating Internal Combustion Engines NESHAP [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment C to the operating permit), which are incorporated by reference as 326 IAC 20-82, for the emission unit(s) listed above:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585 (a)(b)
(3) 40 CFR 63.6590(a)(1)(ii) and (iv)
(4) 40 CFR 63.6595(a)(1) and (c)
(5) 40 CFR 63.6605
(6) 40 CFR 63.6625(e)(2), (f), and (h)
(7) 40 CFR 63.6640 (f)(1), (f)(2)(i), and (f)(3)
(8) 40 CFR 63.6645(a)(5)
(9) 40 CFR 63.6655
(10) 40 CFR 63.6660
(11) 40 CFR 63.6665
(12) 40 CFR 63.6670
(13) 40 CFR 63.6675
(14) Table 2c of 40 CFR 63, Subpart ZZZZ
(15) Table 6 of 40 CFR 63, Subpart ZZZZ
(16) Table 8 of 40 CFR 63, Subpart ZZZZ

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

Part 70 Quarterly Report

Source Name: Arcosa LW HPB, LLC
Source Address: 6618 N Tidewater Rd., Mooresville, Indiana 46258
Part 70 Permit No.: T109-39783-00007
Facility: Aggregate Silos (Clinker Bin, Ax Bin, and B Bin)
Parameter: Aggregate throughput in tons
Limit: The combined aggregate shale throughput to the silos Clinker Bin, Ax Bin, and B Bin shall not exceed seven hundred eighty-eight thousand, four hundred (788,400) tons per twelve (12) month consecutive period with compliance determined at the end of each month.

<table>
<thead>
<tr>
<th>QUARTER:</th>
<th>YEAR:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 1 + Column 2</th>
</tr>
</thead>
</table>
This Month
(tons) | Previous 11 Months
(tons) | 12 Month Total
(tons)

☐ 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**

**Part 70 Quarterly Report**

**Source Name:** Arcosa LW HPB, LLC  
**Source Address:** 6618 N Tidewater Rd., Mooresville, Indiana 46258  
**Part 70 Permit No.:** T109-39783-00007  
**Facility:** Haydite Screener HCR2  
**Parameter:** Raw shale throughput in tons  
**Limit:** The raw shale throughput to the haydite screener HCR2 shall not exceed two million, one hundred ninety thousand (2,190,000) tons per twelve (12) month consecutive period with compliance determined at the end of each month.

<table>
<thead>
<tr>
<th>QUARTER</th>
<th>YEAR</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 1 + Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This Month (tons)</td>
<td>Previous 11 Months (tons)</td>
<td>12 Month Total (tons)</td>
</tr>
<tr>
<td>This Month (tons)</td>
<td>Previous 11 Months (tons)</td>
<td>12 Month Total (tons)</td>
<td></td>
</tr>
</tbody>
</table>

- □ No deviation occurred in this quarter.
- □ Deviation/s occurred in this quarter.  
  Deviation has been reported on:

Submitted by:  
**Title / Position:**  
**Signature:**  
**Date:**  
**Phone:**
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 August 30, 2019.

The proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 109-41865-00007. The operation of this proposed modification shall be subject to the conditions of the attached proposed Significant Permit Modification No. 109-41882-00007.

The staff recommends to the Commissioner that the Part 70 Significant Source Modification and Significant Permit Modification be approved.

IDEM Contact

(a) If you have any questions regarding this permit, please contact Kelcy Tolliver, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 234-6679 or (800) 451-6027, and ask for Kelcy Tolliver or (317) 234-6679.

(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 Air Permits page on the Internet at: http://www.in.gov/idem/airquality/2356.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.
## Emission Units

| Source | Emission Units | PM | PM10 | PM2.5 | SO2 | NOx | VOC | CO | Total HAP | Single HAP *
|--------|----------------|----|------|-------|-----|-----|-----|----|-----------|-------------
| PRE-KILN PROCESSING | Primary Crushing, PK1 | 4.73 | 2.10 | 2.10 | - | - | - | - | - | - |
| | Secondary Crushing, PK2 | 4.73 | 2.10 | 2.10 | - | - | - | - | - | - |
| | Conveyor Transfer, PK3-PK6 | 15.77 | 5.78 | 5.78 | - | - | - | - | - | - |
| | Primary Crushing, HCR1 | 5.91 | 2.63 | 2.63 | - | - | - | - | - | - |
| | Conveyor Transfer, HCR9-HCR10 | 6.57 | 2.41 | 2.41 | - | - | - | - | - | - |
| HAYDITE CRUSHER LINE, HCR | Primary Crushing, HCR1 | 5.91 | 2.63 | 2.63 | - | - | - | - | - | - |
| | Conveyor Transfer, HCR9-HCR10 | 6.57 | 2.41 | 2.41 | - | - | - | - | - | - |
| PORTABLE SCREENING | Tri-deck Screening | 27.38 | 9.53 | 9.53 | - | - | - | - | - | - |
| | WP Screener | 3.29 | 1.14 | 1.14 | - | - | - | - | - | - |
| | 4 Conveyors, PS2-PS5 | 13.14 | 4.82 | 4.82 | - | - | - | - | - | - |

## Rotary Kilns

- **Rotary Kiln, K4:**
  - 3947.28 PM10
  - 1452.90 PM2.5
  - 1452.90 SO2
  - 2438.22 NOx
  - 322.28 VOC
  - 53.81 CO
  - 74.63 Total HAP
  - 21.54 Single HAP

- **Rotary Kiln, K5:**
  - 7364.06 PM10
  - 2694.63 PM2.5
  - 2694.63 SO2
  - 3779.81 NOx
  - 447.12 VOC
  - 104.65 CO
  - 113.60 Total HAP
  - 21.54 Single HAP

## Clinker Cooler, CLNKCOOL

- 52.56 PM10
- 21.02 PM2.5
- 21.02 SO2
- 74.63 Total HAP
- 21.54 Single HAP

## Expanded Shale Crusher, ESA

- **Expanded Shale Crusher, ESA1:**
  - 5.12 PM10
  - 1.97 PM2.5
  - 1.97 SO2
  - 74.63 Total HAP
  - 21.54 Single HAP

- **Expanded Shale Screen, ESA2:**
  - 39.42 PM10
  - 9.46 PM2.5
  - 9.46 SO2
  - 74.63 Total HAP
  - 21.54 Single HAP

- **5 Conveyors, ESA3-ESA7:**
  - 0.09 PM10
  - 0.03 PM2.5
  - 0.01 SO2
  - 74.63 Total HAP
  - 21.54 Single HAP

## Sorbent Handling

- **Sorbent Silos #1 & #2:**
  - 16.80 PM10
  - 7.20 PM2.5
  - 2.40 SO2
  - 74.63 Total HAP
  - 21.54 Single HAP

## Coal Handling

- **Coal Grinding Mill:**
  - 1.01 PM10
  - 0.30 PM2.5
  - 0.30 SO2
  - 74.63 Total HAP
  - 21.54 Single HAP

## Diesel-Fired Emergency Pony Engine

- 0.01 PM10
- 0.01 PM2.5
- 0.01 SO2
- 0.20 VOC
- 0.02 CO
- 0.04 Total HAP
- 1.76E-04 Single HAP

## Aggregate Silos

- 287.77 PM10
- 185.27 PM2.5
- 185.27 SO2
- 74.63 Total HAP
- 21.54 Single HAP

## Three (3) Storage Tanks

- - PM10
- - PM2.5
- - SO2
- - Total HAP
- - Single HAP

## Maintenance Welding

- 0.19 PM10
- 0.19 PM2.5
- 0.19 SO2
- - Total HAP
- 0.02 Single HAP

## Stockpile

- 11.93 PM10
- 5.97 PM2.5
- 0.90 SO2
- 74.63 Total HAP
- 21.54 Single HAP

## Loading/Unloading

- 3.28 PM10
- 1.55 PM2.5
- 0.24 SO2
- 74.63 Total HAP
- 21.54 Single HAP

## Unpaved Roads

- 7.54 PM10
- 1.92 PM2.5
- 0.19 SO2
- 74.63 Total HAP
- 21.54 Single HAP

## Total Fugitive Emissions

- 22.75 PM10
- 9.44 PM2.5
- 1.33 SO2
- 74.63 Total HAP
- 21.54 Single HAP

## Total (Excluding Fugitives)

- 11467.79 PM10
- 4208.41 PM2.5
- 4202.50 SO2
- 6218.05 NOx
- 769.61 VOC
- 158.48 CO
- 188.47 Total HAP
- 43.10 Single HAP

## Total (Including Fugitives)

- 12289.98 PM10
- 4576.63 PM2.5
- 4568.34 SO2
- 6218.05 NOx
- 769.61 VOC
- 158.48 CO
- 188.47 Total HAP
- 43.10 Single HAP

---

*There is no enforceable limit and condition for the controls to limit the HAPs to less than 10 tpy for single HAP and 25 tpy for total HAP.

1A conservative estimate of 1 ton of VOC per year is assumed for the three (3) storage tanks.

Changes in emissions of existing units is a result of updated emission factors and corrections to calculations in the 2019 modification.
## Emissions Calculations

### 41865 Modification

**Company Name:** Arcosa LW HPB, LLC  
**Source Address:** 6618 N Tidewater Road, Mooresville, Indiana 46158  
**Permit Number:** 109-41865-00007/109-41882-00007  
**Reviewer:** Kelcy Tolliver

### Unlimited Potential to Emit of New Units (tons/year)

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>PM</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}$</th>
<th>SO$_{2}$</th>
<th>NO$_{x}$</th>
<th>VOC</th>
<th>CO</th>
<th>Combined HAPs</th>
<th>Single HAP (Manganese)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCR2</td>
<td>27.38</td>
<td>9.53</td>
<td>9.53</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>WP Screener</td>
<td>3.29</td>
<td>1.14</td>
<td>1.14</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Coal Grinding Mill</td>
<td>1.01</td>
<td>0.30</td>
<td>0.30</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Diesel-fired Emergency Pony Engine</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.20</td>
<td>0.02</td>
<td>0.04</td>
<td>1.8E-04</td>
<td>-</td>
</tr>
<tr>
<td>Three (3) Aggregate Silos</td>
<td>287.77</td>
<td>185.27</td>
<td>185.27</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Maintenance Welding</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.02</td>
<td>0.02</td>
</tr>
<tr>
<td>Three (3) Storage Tanks$^1$</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>&lt;1.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total (tons/year):</strong></td>
<td>319.64</td>
<td>196.45</td>
<td>196.45</td>
<td>0.01</td>
<td>0.20</td>
<td>1.02</td>
<td>0.04</td>
<td>0.02</td>
<td>0.02</td>
</tr>
</tbody>
</table>

### Limited Potential to Emit (tons/year)

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>PM</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}$</th>
<th>SO$_{2}$</th>
<th>NO$_{x}$</th>
<th>VOC</th>
<th>CO</th>
<th>Combined HAPs</th>
<th>Single HAP (Manganese)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCR2$^2$</td>
<td>7.4E-04</td>
<td>5.0E-05</td>
<td>2.41</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>WP Screener</td>
<td>3.29</td>
<td>1.14</td>
<td>1.14</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Coal Grinding Mill</td>
<td>1.01</td>
<td>0.30</td>
<td>0.30</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Diesel-fired Emergency Pony Engine</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.20</td>
<td>0.02</td>
<td>0.04</td>
<td>1.8E-04</td>
<td>-</td>
</tr>
<tr>
<td>Three (3) Aggregate Silos$^*$</td>
<td>0.39</td>
<td>0.13</td>
<td>0.13</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.02</td>
<td>0.02</td>
</tr>
<tr>
<td>Maintenance Welding</td>
<td>0.19</td>
<td>0.19</td>
<td>0.19</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.02</td>
<td>0.02</td>
</tr>
<tr>
<td>Three (3) Storage Tanks$^1$</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>&lt;1.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total (tons/year):</strong></td>
<td>4.89</td>
<td>1.78</td>
<td>4.19</td>
<td>0.01</td>
<td>0.20</td>
<td>0.02</td>
<td>0.04</td>
<td>0.02</td>
<td>0.02</td>
</tr>
</tbody>
</table>

$^1$Limited to render the 2019 modification minor under 326 IAC 2-2 (PSD).  
$^2$A conservative estimate of 1 ton of VOC per year is assumed for the three (3) storage tanks.
## Appendix A: Emissions Calculations

**Updated Material Handling Summary**

**Company Name:** Arcosa LW HPB, LLC  
**Address City IN Zip:** 6618 N Tidewater Road, Mooresville, Indiana 46158  
**TV SSM/SPM No:** 109-41865-00007/109-41882-00007  
**Reviewer:** Kelcy Tolliver

### Emissions Before Controls

<table>
<thead>
<tr>
<th>Unit ID</th>
<th>Unit ID</th>
<th>No. of Units</th>
<th>Maximum Capacity</th>
<th>Emission Factor</th>
<th>Emission Factor</th>
<th>Emission Factor</th>
<th>Emissions</th>
<th>Emissions</th>
<th>Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM2.5</td>
<td>207.96</td>
<td>PM10</td>
<td>73.22</td>
<td>73.22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Emissions After Controls

<table>
<thead>
<tr>
<th>Unit ID</th>
<th>Unit ID</th>
<th>No. of Units</th>
<th>Maximum Capacity</th>
<th>Emission Factor</th>
<th>Emission Factor</th>
<th>Emission Factor</th>
<th>Emissions</th>
<th>Emissions</th>
<th>Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM2.5</td>
<td>63.70</td>
<td>PM10</td>
<td>25.35</td>
<td>21.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

AP-42 emission factors were updated in 2019 modification  
Emission Factors for the crushing, screening and conveyor transfer are from AP-42 Ch. 11.19.2, Table 11.19.2-2  
1Emission Factors for the Clinker Cooler are from AP-42 Ch. 11.20.2, Table 11.20-2
Appendix A: Emissions Calculations

Storage

Company Name: Arcosa LW HPB, LLC
Address City IN Zip: 6618 N Tidewater Road, Mooresville, Indiana 46158
TV SSM/SPM No: 109-41865-00007/109-41882-00007
Reviewer: Kelcy Tolliver

PM/PM-10/PM-2.5 Emissions from Aggregate Stockpile Storage

<table>
<thead>
<tr>
<th>Stockpile Area (acres)</th>
<th>7.38</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Factor</td>
<td>1</td>
</tr>
<tr>
<td>Number of active days per year</td>
<td>365</td>
</tr>
<tr>
<td>Days w/ &lt;0.01 of precipitation</td>
<td>245</td>
</tr>
<tr>
<td>PM inactive emissions (ton/yr)</td>
<td>0.00</td>
</tr>
<tr>
<td>PM10 inactive emissions (ton/yr)</td>
<td>0.00</td>
</tr>
<tr>
<td>PM2.5 inactive emissions (ton/yr)</td>
<td>0.00</td>
</tr>
<tr>
<td>PM active emissions (ton/yr)</td>
<td>11.93</td>
</tr>
<tr>
<td>PM10 active emissions (ton/yr)</td>
<td>5.97</td>
</tr>
<tr>
<td>PM2.5 active emissions (ton/yr)</td>
<td>0.90</td>
</tr>
<tr>
<td><strong>Total PM emissions (ton/yr)</strong></td>
<td><strong>11.93</strong></td>
</tr>
<tr>
<td><strong>Total PM10 emissions (ton/yr)</strong></td>
<td><strong>5.97</strong></td>
</tr>
<tr>
<td><strong>Total PM2.5 emissions (ton/yr)</strong></td>
<td><strong>0.90</strong></td>
</tr>
</tbody>
</table>

Emission Factors for the stockpiles have the following units: lb of pollutant per acre per day

The PM active and inactive emission factors are from "Cowherd, Jr., C. Development Of Emission Factors For Fugitive Dust Sources. EPA document Number. EPA-450/3-74-037. Research Triangle Park: U. S. Environmental Protection, 1974"

PM10 is estimated as 50% of PM based on the "k" factors listed in Aggregate Handling and Storage Piles AP-42 Ch. 13.2.4.

The PM2.5 factor is derived from a ratio listed in the Background Document for Revisions to Fine Fraction Ratios Used for AP-42 Fugitive Dust Emission Factors (Ch. 13.2) and "k" factors listed in Aggregate Handling and Storage Piles AP-42 Ch. 13.2.4.
### Limestone Storage Silos

**Company Name:** Arcosa LW HPB, LLC  
**Address City IN Zip:** 6618 N Tidewater Road, Mooresville, Indiana 46158  
**TV SSM/SPM No:** 109-41865-00007/109-41882-00007  
**Reviewer:** Kelcy Tolliver

- **Silo Capacity:** 120 tons each (two identical silos)  
- **Silo Loading Rate:** 16.67 tons/hr

**Limestone Unloading Into Silos PTE**

<table>
<thead>
<tr>
<th>Facility/ID</th>
<th>PM Emissions Factors (lb/ton)</th>
<th>PM10 Emissions Factors (lb/ton)</th>
<th>Throughput</th>
<th>Unloading Time</th>
<th>Uncontrolled Emissions</th>
<th>Controlled Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone Silo 1</td>
<td>3.14</td>
<td>0.0089</td>
<td>1.1</td>
<td>0.0049</td>
<td>16.67</td>
<td>8760</td>
</tr>
<tr>
<td>Limestone Silo 2</td>
<td>3.14</td>
<td>0.0089</td>
<td>1.1</td>
<td>0.0049</td>
<td>16.67</td>
<td>8760</td>
</tr>
</tbody>
</table>

**TOTAL PTE**  
458.53 160.63 1.30 0.72

**Limestone Silos**  
(expected throughput of 9,183 t/yr)

- **Uncontrolled Emissions:**  
  - Limestone Silo 1: 3.14 0.0089 1.1 0.0049 16.67 8760 229.27 80.32 0.65 0.36
  - Limestone Silo 2: 3.14 0.0089 1.1 0.0049 16.67 8760 229.27 80.32 0.65 0.36

Projected Annual Limestone Throughput:  
- November 2014 pilot testing required 2250 lb/hr to control SO2 emissions from shale at 21 t/hr  
- Pilot testing equates to 107 lb limestone per ton of shale fed  
- Average shale production over 2010-2014 = 167,498 t/yr for Kiln #5 and 3924 t/yr for Kiln #4  
- Total throughput = 171,422 tons per year, which would require 9,183 tons per year of limestone

Limestone unloading assumed comparable to cement unloading to storage silo (pneumatic), SCC 3-05-011-17  
Emission factors are from AP-42, Table 11.12-2

**Limited PTE - Limestone Unloading Into Silos**

<table>
<thead>
<tr>
<th>Facility / ID</th>
<th>Throughput (tons/year)</th>
<th>PM Emissions Limit (lb/ton)</th>
<th>PM10 Emissions Limit (lb/ton)</th>
<th>PM2.5 Emissions Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone Silo 1</td>
<td>24,000</td>
<td>1.40</td>
<td>16.80</td>
<td>0.60</td>
</tr>
<tr>
<td>Limestone Silo 2</td>
<td>24,000</td>
<td>1.40</td>
<td>16.80</td>
<td>0.60</td>
</tr>
</tbody>
</table>

**Limited PTE**  
16.8 7.2 2.4

---

#### Emission Factors

- **PM Emissions Limit**
- **PM10 Emissions Limit**
- **PM2.5 Emissions Limit**
## Aggregate Silos

### Company Name: Arcosa LW HPB, LLC
Address City IN Zip: 6618 N Tidewater Road, Mooresville, Indiana 46158
Permit No.: 109-41865-00007/109-41882-00007
Reviewer: Kelcy Tolliver

### Throughput Unloading Time

<table>
<thead>
<tr>
<th>Facility/ID</th>
<th>Throughput</th>
<th>Unloading Time</th>
<th>Uncontrolled Emissions</th>
<th>Controlled Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate AX Bin</td>
<td>0.73</td>
<td>9.9E-04</td>
<td>0.47</td>
<td>3.4E-04</td>
</tr>
<tr>
<td>Aggregate B Bin</td>
<td>0.73</td>
<td>9.9E-04</td>
<td>0.47</td>
<td>3.4E-04</td>
</tr>
<tr>
<td>Aggregate Clinker Bin</td>
<td>0.73</td>
<td>9.9E-04</td>
<td>0.47</td>
<td>3.4E-04</td>
</tr>
</tbody>
</table>

Total (tons/yr): 287.77 185.27 0.39 0.13

---

Aggregate loading assumed comparable to cement loading to storage silo (pneumatic), SCC 3-05-011-17
Cement unloading to elevated storage silo emission factors are from AP-42, Table 11.11-2

---
Appendix A: Emission Calculations
Kiln Process

Kiln #4

Company Name: Arcosa LW HPB, LLC
Source Address: 6618 N Tidewater Road, Mooresville, Indiana 46158
Permit Number: 109-41865-00007/109-41882-00007
Reviewer: Kelcy Tolliver

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Maximum SO2 Control</th>
<th>Scrubber Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Throughput, tpy</td>
<td>Efficiency</td>
</tr>
<tr>
<td></td>
<td>15.0</td>
<td>131400</td>
</tr>
<tr>
<td>PM</td>
<td>58.7</td>
<td>50.00%</td>
</tr>
<tr>
<td>PM10*</td>
<td>21.8</td>
<td>99.50%</td>
</tr>
<tr>
<td>direct PM2.5*</td>
<td>21.8</td>
<td></td>
</tr>
<tr>
<td>SO2</td>
<td>5.9</td>
<td></td>
</tr>
<tr>
<td>NOx**</td>
<td>1.9</td>
<td></td>
</tr>
<tr>
<td>VOC**</td>
<td>0.78</td>
<td></td>
</tr>
<tr>
<td>CO**</td>
<td>0.59</td>
<td></td>
</tr>
</tbody>
</table>

Potential Emission in tons/yr:
- PM: 3857.53
- PM10: 1432.26
- direct PM2.5: 1432.26
- SO2: 385.01
- NOx: 124.83
- VOC: 51.25
- CO: 38.76

Controlled Emissions in tons/yr:
- PM: 19.29
- PM10: 7.16
- direct PM2.5: 7.16
- SO2: 192.50
- NOx: 124.83
- VOC: 51.25
- CO: 38.76

The particulate & SO2 emission factors are taken from the stack tests (December 16, 2016).
*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.
PM2.5 emission factor is condensable and filterable PM2.5 combined.
**Emission Factors are taken from AP-42 Tables 11.20-4 & 11.20-5 (Lightweight Aggregate Manufacturing)

December 15, 2016 Stacke Test Results using Coal as fuel:
Kiln 4
Pollutants tested: PM, SO2 and Opacity

Average Operating Rates:
- 14 tons of raw shale per hour
- 1.2 tons coal per hour
- 28.29 MMBtu/hr heat input
- 200 lb/hr sorbent injection

Emission Rates:
- PM Emission Rate = 4.11 lb/hr
- SO2 Emission Rate = 1.45 lb/MMBtu
- Opacity = 0%

SO2 Emission Factor:
- (Emission Rate*28.29 MMBtu/hr/0.5)/Throughput

PM Emission Factor:
- (Emission Rate/0.005)/Throughput

For Kiln 4, the ration of 0.97 lb. sorbent/lb SO2 removed was established.
Appendix A: Emission Calculations
Kiln Process

Kiln #5

Company Name: Arcosa LW HPB, LLC
Source Address: 6618 N Tidewater Road, Mooresville, Indiana 46158
Permit Number: 109-41865-00007/109-41882-00007
Reviewer: Kelcy Tolliver

Maximum Capacity

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/ton</th>
<th>Potential Emission in tons/yr</th>
<th>Controlled Emissions in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM*</td>
<td>55.36</td>
<td>7274.30</td>
<td>1.45</td>
</tr>
<tr>
<td>PM10*</td>
<td>20.35</td>
<td>2673.99</td>
<td>0.53</td>
</tr>
<tr>
<td>SO2</td>
<td>13.14</td>
<td>1726.60</td>
<td>863.30</td>
</tr>
<tr>
<td>NOx**</td>
<td>1.90</td>
<td>249.66</td>
<td>102.49</td>
</tr>
<tr>
<td>VOC**</td>
<td>0.78</td>
<td>77.53</td>
<td>77.53</td>
</tr>
<tr>
<td>CO2</td>
<td>0.59</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The particulate and SO2 emission factors are taken from the stack tests
*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.
PM2.5 emission factor is condensable and filterable PM2.5 combined.
**Emission Factors are taken from AP-42 Tables 11.20-4 & 11.20-5 (Lightweight Aggregate Manufacturing)

December 15, 2016 Stack Test Results using Coal as fuel:
Kiln 5

Pollutants tested: PM, SO2 and Opacity

Average Operating Rates:
- 28 tons of raw shale per hour
- 2.0 tons coal per hour
- 46.82 MMBtu/hr heat input
- 300 lb/hr sorbent injection

Emission Rates:
- PM Emission Rate = 0.31 lb/hr
- SO2 Emission Rate = 3.93 lb/MMBtu
- Opacity = 0%

SO2 Emission Factor: (Emission Rate*46.82 MMBtu/hr/0.5)/Throughput
PM Emission Factor: (Emission Rate/0.0002)/Throughput

For Kiln 5, the ration of 1.04 lb sorbent/lb SO2 was established.
Appendix A: Emission Calculations
Natural Gas Combustion Only for K4 & K5

<table>
<thead>
<tr>
<th>MMBTU/hr</th>
<th>mMBTU</th>
<th>MMBTU/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>100.0</td>
<td>1020</td>
<td>858.8</td>
</tr>
</tbody>
</table>

**Company Name:** Arcosa LW HPB, LLC
**Source Address:** 6618 N Tidewater Road, Mooresville, Indiana 46158
**Permit Number:** 109-41855-00007/109-41882-00007
**Reviewer:** Kelcy Tolliver

**SO2 Control**
- **HHV**
- **Heat Input Capacity**
- **Scrubber Control Efficiency** 99.50%
- **Filter Control Efficiency** 99.98%

**Pollutant**
- **PM**
- **PM10**
- **Direct PM2.5**
- **SO2**
- **NOx**
- **VOC**
- **CO**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM</th>
<th>PM10</th>
<th>Direct PM2.5</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</td>
<td>1.9</td>
<td>7.6</td>
<td>7.6</td>
<td>0.6</td>
<td>280.0</td>
<td>5.5</td>
<td>84.0</td>
</tr>
<tr>
<td>Potential emission in tons/yr</td>
<td>0.82</td>
<td>3.26</td>
<td>3.26</td>
<td>0.26</td>
<td>120.24</td>
<td>2.36</td>
<td>35.07</td>
</tr>
<tr>
<td>Controlled emissions in tons/yr - K4</td>
<td>0.004</td>
<td>0.08</td>
<td>0.08</td>
<td>0.08</td>
<td>0.13</td>
<td>120.24</td>
<td>2.36</td>
</tr>
<tr>
<td>Controlled emissions in tons/yr - K5</td>
<td>0.0002</td>
<td>0.001</td>
<td>0.001</td>
<td>0.001</td>
<td>0.001</td>
<td>0.13</td>
<td>120.24</td>
</tr>
</tbody>
</table>

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM2.5 combined.

**NOx**
- **Emission Factors**
  - Uncontrolled = 280 (pre-NSPS) or 190 (post-NSPS)
  - Low NOx Burner = 140
  - Flue gas recirculation = 100

**Methodology**
- All emission factors are based on normal firing.
- MMBtu = 1,000,000 Btu
- MMCF = 1,000,000 Cubic Feet of Gas
- Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

**Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton**

**Methodology**
- The five highest organic and metal HAPs emission factors are provided above.
- Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**HAPs - Organics**
- Benzene
- Dichlorobenzene
- Formaldehyde
- Hexane
- Toluene

<table>
<thead>
<tr>
<th>HAPs - Organics</th>
<th>Benzene</th>
<th>Dichlorobenzene</th>
<th>Formaldehyde</th>
<th>Hexane</th>
<th>Toluene</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</td>
<td>2.1E-04</td>
<td>1.6E-03</td>
<td>7.6E-02</td>
<td>7.6E-06</td>
<td>3.4E-03</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>9.02E-04</td>
<td>5.10E-04</td>
<td>3.22E-02</td>
<td>7.73E-01</td>
<td>1.46E-03</td>
</tr>
</tbody>
</table>

**HAPs - Metals**
- Lead
- Cadmium
- Chromium
- Manganese
- Nickel

<table>
<thead>
<tr>
<th>HAPs - Metals</th>
<th>Lead</th>
<th>Cadmium</th>
<th>Chromium</th>
<th>Manganese</th>
<th>Nickel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMCF</td>
<td>5.0E-04</td>
<td>1.1E-03</td>
<td>1.4E-03</td>
<td>3.8E-04</td>
<td>2.1E-03</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>2.10E-04</td>
<td>4.72E-04</td>
<td>6.01E-04</td>
<td>1.03E-04</td>
<td>9.02E-04</td>
</tr>
</tbody>
</table>

**Total HAPs** 2.7E+00
Appendix A: Emissions Calculations
Coal Combustion: Bituminous Coal for Boilers (Pulverized Dry Bottom)
K4 & K5

Company Name: Arcosa LW HPB, LLC
Source Address: 6618 N Tidewater Road, Mooresville, Indiana 46158
Permit Number: 109-41865-00007/109-41882-00007
Reviewer: Kelcy Tolliver

<table>
<thead>
<tr>
<th>Heat Input Capacity MMBtu/hr</th>
<th>Heat Content of Coal Blt/lb of Coal</th>
<th>Potential Throughput of Coal tons/year</th>
<th>Weight % Sulfur in Fuel</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>#4</td>
<td>12200</td>
<td>35901.83934</td>
</tr>
<tr>
<td></td>
<td>#5</td>
<td>12200</td>
<td>35901.83934</td>
</tr>
</tbody>
</table>

Scrubber Control Efficiency: 99.50%
Filter Control Efficiency: 99.98%

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM2.5</th>
<th>PM10*</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>HCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/ton</td>
<td>5.0</td>
<td>1.5</td>
<td>114.4</td>
<td>11.0</td>
<td>0.05</td>
<td>0.05</td>
<td>1.2</td>
</tr>
<tr>
<td>Potential Emission in tons/yr #4</td>
<td>89.75409636</td>
<td>20.64344262</td>
<td>2053.2148</td>
<td>197.4590164</td>
<td>0.897540984</td>
<td>0.897541</td>
<td>21.540989</td>
</tr>
<tr>
<td>Potential Emission in tons/yr #5</td>
<td>89.75409636</td>
<td>20.64344262</td>
<td>2053.2148</td>
<td>197.4590164</td>
<td>0.897540984</td>
<td>0.897541</td>
<td>21.540989</td>
</tr>
<tr>
<td>Total Potential Emission in tons/yr</td>
<td>179.51</td>
<td>41.29</td>
<td>4106.43</td>
<td>394.92</td>
<td>1.80</td>
<td>1.80</td>
<td>43.08</td>
</tr>
<tr>
<td>Controlled Emission in tons/year #4</td>
<td>0.448770492</td>
<td>0.103217213</td>
<td>1026.6074</td>
<td>197.4590164</td>
<td>0.897540984</td>
<td>0.897541</td>
<td>0.107705</td>
</tr>
<tr>
<td>Controlled Emission in tons/year #5</td>
<td>0.01795082</td>
<td>0.004128689</td>
<td>1026.6074</td>
<td>197.4590164</td>
<td>0.897540984</td>
<td>0.897541</td>
<td>0.004308</td>
</tr>
<tr>
<td>Total Controlled Emission in tons/yr</td>
<td>0.467</td>
<td>0.11</td>
<td>2953.21</td>
<td>394.92</td>
<td>1.80</td>
<td>1.80</td>
<td>0.11</td>
</tr>
<tr>
<td>Equivalent Controlled Emissions in lb/MMBtu</td>
<td>0.001065574</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PM10=PM2.5

Methodology
Emission Factors are from AP 42 (Update 9/98), Tables 1.1-4 and 1.1-3 (SCC 1-01-002-02/22, 1-02-002-02/22-06/2).
Potential Throughput (tons/year) = Heat Input Capacity (MMBtu/hr) x 10^6 Btu/MMBtu / Heat Content of Coal (Btu/lb) / 2,000 lb/ton x 8,760 hrs/yr.
Heat Content of the Coal is taken from the application.
Additional emission factors for commercial/institutional and electric generation boilers are available in AP-42, Chapter 1.1.
Emission (tons/year) = Throughput tons per year x Emission Factor (lb/ton) / 2,000 lb/ton.
Emissions (lb/MMBtu) = 10^6 Btu/MMBtu / Heat Content of Coal (Btu/lb) / 2,000 lb/ton x Emission Factor (lb/ton).
### Appendix A: Emissions Calculations

#### SO2 Emissions from Kilns

**Company Name:** Arcosa LW HPB, LLC  
**Source Address:** 6618 Tidewater Road, Mooresville, Indiana 46158  
**TV SSM/SPM No:** 109-41865-00007/109-41882-00007  
**Reviewer:** Kelcy Tolliver

#### Kilns SO2 Potential to Emit

<table>
<thead>
<tr>
<th>Unit</th>
<th>Uncontrolled SO2 Emission Rate (lb/hour)*</th>
<th>Uncontrolled SO2 Emission Rate (tons/year)</th>
<th>Uncontrolled SO2 Emission Rate (lb/mmBtu)*</th>
<th>Control Efficiency Required (%) Control</th>
<th>Alternative Emission Limit (lb/mmBtu)</th>
<th>Control Efficiency Needed to Meet Alternative Limit (%) Control</th>
<th>Least Stringent Control Efficiency (%) Control</th>
<th>Controlled SO2 Emissions (lb/hr)</th>
<th>Potential Controlled Emissions (lbs/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kiln #4</td>
<td>250</td>
<td>1,095.0</td>
<td>9.21</td>
<td>50%</td>
<td>2.5</td>
<td>72.86%</td>
<td>50%</td>
<td>125</td>
<td>547.50</td>
</tr>
<tr>
<td>Kiln #5</td>
<td>593</td>
<td>2,597.3</td>
<td>9.21</td>
<td>50%</td>
<td>2.5</td>
<td>72.86%</td>
<td>50%</td>
<td>297</td>
<td>1298.67</td>
</tr>
</tbody>
</table>

* Based on June 2014 Stack Test at shale feed rate of 22 tons/hr for both kilns (Kiln #4 was not tested but assumed 22 tons/hr shale feed rate)
Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)
Maximum Input Rate (<=4.2 MMBtu/hr)

Company Name: Arcosa LW HPB, LLC
Source Address: 6618 N Tidewater Road, Mooresville, Indiana 46158
Permit Number: 109-41865-00007/109-41882-00007
Reviewer: Kelcy Tolliver

Emissions calculated based on output rating (hp)

<table>
<thead>
<tr>
<th>Output Horsepower Rating (hp)</th>
<th>26.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Hours Operated per Year</td>
<td>500</td>
</tr>
<tr>
<td>Potential Throughput (hp-hr/yr)</td>
<td>13,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM*</th>
<th>PM10*</th>
<th>PM2.5*</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/hp-hr</td>
<td>0.0022</td>
<td>0.0022</td>
<td>0.0022</td>
<td>0.00205</td>
<td>0.0310</td>
<td>0.0025</td>
<td>0.00668</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.20</td>
<td>0.02</td>
<td>0.04</td>
<td></td>
</tr>
</tbody>
</table>

*PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Benzene</th>
<th>Toluene</th>
<th>Xylene</th>
<th>1,3-Butadiene</th>
<th>Formaldehyde</th>
<th>Acetaldehyde</th>
<th>Acrolein</th>
<th>Total PAH HAPs***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/hp-hr****</td>
<td>6.53E-06</td>
<td>2.86E-06</td>
<td>2.05E-06</td>
<td>2.74E-07</td>
<td>8.26E-06</td>
<td>5.37E-06</td>
<td>8.48E-07</td>
<td>1.18E-06</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>4.25E-05</td>
<td>1.86E-05</td>
<td>1.30E-05</td>
<td>1.78E-06</td>
<td>5.37E-05</td>
<td>3.49E-05</td>
<td>4.21E-06</td>
<td>7.64E-06</td>
</tr>
</tbody>
</table>

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)
****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission of Total HAPs (tons/yr) 1.76E-04

Methodology
Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.3-1 and 3.3-2.
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Green House Gas Emissions (GHG)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/hp-hr</td>
<td>1.15E+00</td>
<td>4.63E-05</td>
<td>9.26E-06</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>7.48E+00</td>
<td>3.01E-04</td>
<td>6.02E-05</td>
</tr>
</tbody>
</table>

Summed Potential Emissions in tons/yr 7.48E+00
CO2e Total in tons/yr 7.50E+00

Methodology
CO2 Emission Factor is from AP42 (Supplement B 10/96), Tables 3.3-1.
CH4 and N2O Emission Factors are from 40 CFR 98 Subpart C Table C-2.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).
Appendix A: Emissions Calculations
Coal Unloading

One (1) coal unloading operation, with a maximum capacity of 280 tons of coal per hour, consisting of one (1) dump pit, one (1) hopper for coal unloading, and two (2) conveyors. The maximum coal usage is 119,455 tons per year, or 13.64 tons per hour. Therefore, potential emissions for the coal operation were based on a maximum capacity of 119,455 tons of coal per year because of bottlenecks.

Potential emissions were calculated using AP-42, Section 13.2.4 for Aggregate Handling and Storage Piles based on the following formula:

\[ E = k(0.0032)\left(\frac{U}{5}\right)^{1.3}\left(\frac{M}{2}\right)^{1.4} \]

where:
- \( E \) = emission factor, pound per ton (lb/ton)
- \( k \) = particulate size multiplier (dimensionless) This value is 1.0 for total particulate matter, 0.35 for particulate matter less than 10 and 0.053 for less than 2.5.
- \( U \) = mean wind speed, miles per hour (mph), (assumed to be 10 mph)
- \( M \) = material moisture content (%), (This value is assumed to be 4.5 based on typical moisture content data provided in Table 13.2.4-1 of AP-42)

Uncontrolled Potential to Emit:

- **PM**
  \[ E = 1.00(0.0032)\left(\frac{10}{5}\right)^{1.3}\left(\frac{4.5}{2}\right)^{1.4} \]  
  \[ 0.00253\times119,455\times4(\text{transfer points})/2000 = 0.604 \text{ tons/yr} \]

- **PM10**
  \[ E = 0.35(0.0032)\left(\frac{10}{5}\right)^{1.3}\left(\frac{4.5}{2}\right)^{1.4} \]  
  \[ 0.000886\times119,455\times4(\text{transfer points})/2000 = 0.211 \text{ tons/yr} \]

- **PM2.5**
  \[ E = 0.053(0.0032)\left(\frac{10}{5}\right)^{1.3}\left(\frac{4.5}{2}\right)^{1.4} \]  
  \[ 0.00013\times119,455\times4(\text{transfer points})/2000 = 0.031 \text{ tons/yr} \]
## Appendix A: Emissions Calculations

### Coal Grinding Mills

**Company Name:** Arcosa LW HPB, LLC  
**Address City IN Zip:** 6618 N Tidewater Road, Mooresville, Indiana 46158  
**Permit No:** 109-41865-00007/109-41882-00007  
**Reviewer:** Kelcy Tolliver

<table>
<thead>
<tr>
<th>Mill ID</th>
<th>Maximum Throughput (lb/hr)</th>
<th>Max Throughput (ton/hr)</th>
<th>PM EF (lb/ton)</th>
<th>PM10 EF (lb/ton)</th>
<th>PM Emissions (lb/hr)</th>
<th>PM10 Emissions (lb/hr)</th>
<th>PM Emissions (ton/yr)</th>
<th>PM10 Emissions (ton/yr)</th>
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</thead>
<tbody>
<tr>
<td>493</td>
<td>16800</td>
<td>8.4</td>
<td>0.02</td>
<td>0.006</td>
<td>0.17</td>
<td>0.05</td>
<td>0.74</td>
<td>0.22</td>
</tr>
<tr>
<td>372</td>
<td>6200</td>
<td>3.1</td>
<td>0.02</td>
<td>0.006</td>
<td>0.06</td>
<td>0.02</td>
<td>0.27</td>
<td>0.08</td>
</tr>
</tbody>
</table>

**Total (tons/yr):** 1.01 0.30

**Notes:**
PM and PM10 Emission Factors from EPA's Airs Facility Subsystem SCC 3-05-010-10 Coal Crushing. Assumed PM10=PM2.5.

**Methodology:**
PM Emissions (tons/yr) = Max Througput (ton/hr) x EF (lb/ton) x 8760 hours/yr x 1 ton/2000 lbs
Appendix A: Emissions Calculations
Welding and Thermal Cutting

Company Name: Arcosa LW HPB, LLC
Address City IN Zip: 6618 N Tidewater Road, Mooresville, Indiana 46158
Permit Number: 109-41865-00007/109-41882-00007
Reviewer: Kelcy Tolliver

<table>
<thead>
<tr>
<th>PROCESS</th>
<th>Number of Stations</th>
<th>Max. electrode consumption per station (lbs/hr)</th>
<th>Max. electrode consumption per station (lbs/day)</th>
<th>Max. electrode consumption per station (lbs/year)</th>
<th>EMISSION FACTORS* (lb pollutant/lb electrode)</th>
<th>EMISSIONS (lbs/hr)</th>
<th>HAPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELDING</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PM = PM10 Mn Ni Cr</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metal Inert Gas (MIG)</td>
<td>1</td>
<td>6.00</td>
<td>144.00</td>
<td>5260.00</td>
<td>0.0055</td>
<td>0.0005</td>
<td>0.03</td>
</tr>
<tr>
<td>Stick</td>
<td>1</td>
<td>0.50</td>
<td>12.00</td>
<td>4380.00</td>
<td>0.0211</td>
<td>0.0009</td>
<td>0.01</td>
</tr>
</tbody>
</table>

Total (tons/yr): 0.19 0.02 - - 0.02

Methodology:

Hours of operation and electrode consumption for 2013 provided by the source.

*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column.

**Emission Factor for plasma cutting from American Welding Society (AWS). Trials reported for wet cutting of 8 mm thick mild steel with 3.5 min/min cutting speed (at 0.2 g/min emitted). Therefore, the emission factor for plasma cutting is for 8 mm thick rather than 1 inch, and the maximum metal thickness is not used in calculating the emissions.

Using AWS average values: (0.25 gm/min)/(3.6 m/min) x (0.0022 lb/g)/(0.3937 in/m) x (1.000 in.) = 0.0039 lb/1,000 in. cut, 8 mm thick

Plasma cutting emissions, lb/hr: (# of stations)(max. cutting rate, in./min)(60 min./hr)(emission factor, lb pollutant/1,000 in. cut, 8 mm thick)

Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min)(60 min./hr)(emission factor, lb pollutant/1,000 in. cut, 8 mm thick)

Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr)(station)(emission factor, lb pollutant/lb. of electrode used)

Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day

Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs.
Appendix A: Emissions Calculations
Transport Loading & Unloading

Company Name: Arcosa LW HPB, LLC
Address City IN Zip: 6618 N Tidewater Road, Mooresville, Indiana 46158
TV SSM/SPM No: 109-41865-00007/109-41882-00007
Reviewer: Kelcy Tolliver

Unpaved Roads

The following calculations determine the amount of emissions created by unpaved roads, based on 8760 hours of use and AP-42, Ch 13.2.2 (1a)

\[
\text{4 trip/hr} \times 0.075758 \text{ mile/trip} \times 2 \text{ (round trip)} \times 8760 \text{ hr/yr} = 5309.086 \text{ miles per year}
\]

\[
\text{Ef} = k[(s/12)^a][((W/3)^b)[(365-p)/365)] (\text{lb/Mile})
\]

\[
= 2.83933 \text{ (PM)}
\]

\[
= 0.723641 \text{ (PM10)}
\]

\[
= 0.072364 \text{ (PM2.5)}
\]

where \(k\) = 4.9 (size multiplier-PM) 1.5 (PM10) 0.15 (PM2.5)
\(s\) = 4.8 % silt content of unpaved roads
\(p\) = 120 days of rain greater than or equal to 0.01 inches
\(b\) = 0.45 constant for PM from Table 13.2.2-2 AP42
\(W\) = 9 tons average vehicle weight
\(w\) = 6 wheels
\(a\) = 0.7 (PM) 0.9 (PM10/PM2.5)

Loading/Unloading

\[
\text{Ef} = k*(0.0032)*(U/5)^{1.3}/(M/2)^{1.4} \text{ AP-42 Ch 13.2.4 (1b)}
\]

\[
= 0.001874 \text{ lb/ton(PM)}
\]

\[
= 0.000886 \text{ lb/ton(PM10)}
\]

\[
= 0.000134 \text{ lb/ton(PM2.5)}
\]

where \(k\) = 0.74 (multiplier-PM) 0.35 (PM10) 0.053 (PM2.5)
\(U\) = 10 mile/hr mean wind speed
\(M\) = 4.5 % material moisture content

<table>
<thead>
<tr>
<th>Pollutants</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unpaved Road Emissions</td>
<td>7.537123</td>
<td>1.920935</td>
<td>0.192094</td>
</tr>
<tr>
<td>Loading/Unloading Emissions</td>
<td>3.282459</td>
<td>1.552514</td>
<td>0.235095</td>
</tr>
</tbody>
</table>
December 9, 2019

Mr. Michael Ragsdale
Arcosa LW HPB, LLC
1112 E. Copeland Road
Suite. 500
Arlington, TX 76011

Re: Public Notice
Arcosa LW HPB, LLC
Permit Level: Title V Significant Source Modification
Permit Number: 109-41865-00007
Permit Level: Title V Significant Permit Modification
Permit Number: 109-41882-00007

Dear Mr. Michael Ragsdale:

Enclosed is a copy of your draft Title V – Significant Source Modification and Significant Permit Modification, Technical Support Document, emission calculations, and the Public Notice.

The Public Notice period will begin the date the Notice is published on the IDEM Official Public Notice website. Publication has been requested and is expected within 2-3 business days. You may check the exact Public Notice begins and ends date here: https://www.in.gov/idem/5474.htm

Please note that as of April 17, 2019, IDEM is no longer required to publish the notice in a newspaper.

OAQ has submitted the draft permit package to the Morgan County Public Library, 110 S. Jefferson St. in Martinsville, IN. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.

Please review the enclosed documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Kelcy Tolliver, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451-6027, and ask for extension 4-6679 or dial (317) 234-6679.

Sincerely,

Vicki Biddle

Vicki Biddle
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover Letter 4/12/19
December 9, 2019

To: Morgan County Public Library

From: Jenny Acker, Branch Chief
Permits Branch
Office of Air Quality

Subject: Important Information to Display Regarding a Public Notice for an Air Permit

Applicant Name: Arcosa LW HPB, LLC
Permit Number: 109-41865-00007 AND 109-41882-00007

Enclosed is a copy of important information to make available to the public. This proposed project is regarding a source that may have the potential to significantly impact air quality. Librarians are encouraged to educate the public to make them aware of the availability of this information. The following information is enclosed for public reference at your library:

- Notice of a 30-day Period for Public Comment
- Draft Permit and Technical Support Document

You will not be responsible for collecting any comments from the citizens. Please refer all questions and request for the copies of any pertinent information to the person named below.

Members of your community could be very concerned in how these projects might affect them and their families. Please make this information readily available until you receive a copy of the final package.

If you have any questions concerning this public review process, please contact Joanne Smiddle-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185. Questions pertaining to the permit itself should be directed to the contact listed on the notice.

Enclosures
PN Library updated 4/2019
Notice of Public Comment

December 9, 2019
Arcosa LW HPB, LLC
109-41865-00007 and 109-41882-00007

Dear Concerned Citizen(s):

You have been identified as someone who could potentially be affected by this proposed air permit. The Indiana Department of Environmental Management, in our ongoing efforts to better communicate with concerned citizens, invites your comment on the draft permit.

Enclosed is a Notice of Public Comment, which has posted on IDEM’s Public Notice website at https://www.in.gov/idem/5474.htm.

The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

If you would like to comment on this draft permit, please contact the person named in the enclosed Public Notice. Thank you for your interest in the Indiana’s Air Permitting Program.

Please Note: If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.
AFFECTED STATE NOTIFICATION OF PUBLIC COMMENT PERIOD
DRAFT INDIANA AIR PERMIT

December 9, 2019

A 30-day public comment period has been initiated for:

Permit Number: 109-41865-00007 and 109-41882-00007
Applicant Name: Arcosa LW HPB, LLC
Location: Morrisville, Morgan County, Indiana

The public notice, draft permit and technical support documents can be accessed via the IDEM Air Permits Online site at: http://www.in.gov/ai/appfiles/idem-caats/

Questions or comments on this draft permit should be directed to the person identified in the public notice by telephone or in writing to:

Indiana Department of Environmental Management
Office of Air Quality, Permits Branch
100 North Senate Avenue
Indianapolis, IN 46204

Questions or comments regarding this email notification or access to this information from the EPA Internet site can be directed to Chris Hammack at chammack@idem.IN.gov or (317) 233-2414.

Affected States Notification 1/9/2017
**Mail Code 61-53**

**Name and address of Sender**

1. Michael Ragsdale  
   Arcosa LW HPB LLC  
   1112 E Copeland Rd Arlington TX 76011 (Source CAATS)
2. Matthew Hallmark  
   Vice President Arcosa LW HPB LLC  
   1112 E Copeland Road, Suite 500 Arlington TX 76011 (RO CAATS)
3. Morgan County Commissioners  
   180 South Main Street Martinsville IN 46151 (Local Official)
4. Morgan County Public Library  
   110 S Jefferson St Martinsville IN 46151-1999 (Library)
5. Mooresville Town Council  
   4 E Harrison Street Mooresville IN 46158 (Local Official)
6. Brooklyn Town Council  
   P.O. Box 159 Brooklyn IN 46111 (Local Official)
7. Clayton D. & Patricia A. Arthur  
   5178 Brenda Boulevard Greenwood IN 46143 (Affected Party)
8. Morgan County Health Department  
   180 S Main Street, Suite 252 Martinsville IN 46151-1988 (Health Department)
9. David Jones  
   7977 N. Taylors Rd. Mooresville IN 46158 (Affected Party)
10. Claudia Parker  
    6761 Centenary Rd. Mooresville IN 46158 (Affected Party)
11. Cheryl Wise B-WISE Consulting, LLC  
    272 Suncrest Drive Greenwood IN 46143 (Consultant)

**Type of Mail:**  
CERTIFICATE OF MAILING ONLY

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<th>Article Number</th>
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<th>S.H. Fee</th>
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</table>
| 1    |                | Michael Ragsdale  
   Arcosa LW HPB LLC  
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| 5    |                | Mooresville Town Council  
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| 11   |                | Cheryl Wise B-WISE Consulting, LLC  
   272 Suncrest Drive Greenwood IN 46143 (Consultant) |         |                 |                            |               |                 |          |         |         |                |         |

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