NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

Preliminary Findings Regarding a
Significant Modification and the Renewal of a
Part 70 Operating Permit

for Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant in Wells County

Part 70 Operating Permit Renewal No.: T179-41632-00033
Significant Source Modification No.: 179-41817-00033

The Indiana Department of Environmental Management (IDEM) has received an application from Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant, located at 1441 South Adams St., Bluffton, Indiana 46714, for a significant source modification and renewal of its Part 70 Operating Permit issued on April 8, 2015. If approved by IDEM’s Office of Air Quality (OAQ), this proposed permit would allow Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant to make certain changes at its existing source. Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant has applied to expand production capacity. To facilitate this increase, the fermentation scrubber will be upgraded to increase efficiency (i.e., less demand for fresh water and chemical additives) while providing equivalent or better emission control under the increased production scenario. This upgrade will be accommodated with a recirculation pump that is designed to recover scrubber bottoms and inject it back into the feed header from the beer well to the scrubber. The recirculation pump will allow for variation in scrubber operation, increasing the operational capacity of the fermentation system and allowing for an increase in the overall production rate of denatured ethanol.

This draft permit does not contain any new equipment that would emit air pollutants; however, 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). This notice fulfills the public notice procedures to which those conditions are subject. IDEM has reviewed this application and has developed preliminary findings, consisting of a draft permit and several supporting documents, which would allow for these changes.

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

Wells County Public Library
200 W. Washington Street
Bluffton, IN 46714

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, IDEM will decide whether or not to hold a public hearing. IDEM 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, IDEM 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 IDEM staff.

Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEM 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 IDEM’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 IDEM at the address below. Please refer to permit number T179-41632-00033 and SSM 179-41817-00033 in all correspondence.

Comments should be sent to:

Andrew Belt  
IDEM, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
(800) 451-6027, ask for Andrew Belt or (317) 232-3217  
Or dial directly: (317) 232-3217  
Fax: (317) 232-6749 attn: Andrew Belt  
E-mail: abelt@idem.IN.gov

All comments will be considered by IDEM 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. IDEM 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 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.

What will happen after IDEM makes a decision?

Following the end of the public comment period, IDEM 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 IDEM’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 IDEM’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 IDEM 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 Andrew Belt of my staff at the above address.

Brian Williams, Section Chief
Permits Branch
Office of Air Quality
Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
1441 South Adams St.
Bluffton, Indiana 46714

(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. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5, applicable to those conditions.

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<tr>
<th>Operation Permit No.: T179-41632-00033</th>
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<td>Master Agency Interest ID: 57466</td>
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<tbody>
<tr>
<td>Brian Williams, Section Chief</td>
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<tr>
<td>Permits Branch</td>
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<td>Office of Air Quality</td>
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# TABLE OF CONTENTS

## SECTION A  SOURCE SUMMARY ................................................................. 7

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 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(14)]
A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

## SECTION B  GENERAL CONDITIONS ......................................................... 14

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 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]
B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]
B.8 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]
B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]
B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)][326 IAC 1-6-3]
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 ....................................... 25

Emission Limitations and Standards [326 IAC 2-7-5(1)] ........................................... 25
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 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]
C.7 Stack Height [326 IAC 1-7]
C.8 Asbestos Abatement Projects [326 IAC 14-10][326 IAC 18][40 CFR 61, Subpart M]

Testing Requirements [326 IAC 2-7-6(1)] ............................................................. 27
C.9 Performance Testing [326 IAC 3-6]
Compliance Requirements [326 IAC 2-1.1-11] .................................................................................. 27
C.10 Compliance Requirements [326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)] .................................... 27
C.11 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]
C.12 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] ....................................... 28
C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]
C.14 Risk Management Plan [326 IAC 2-7-5(11)][40 CFR 68]
C.15 Response to Excursions or Exceedances [326 IAC 2-7-5][326 IAC 2-7-6]
C.16 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] ..................... 29
C.17 Emission Statement
[326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-19(c)][326 IAC 2-6]
C.18 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]
C.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)][326 IAC 2-1.1-11]

Stratospheric Ozone Protection ........................................................................................................... 31
C.20 Compliance with 40 CFR 82 and 326 IAC 22-1

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS ................................................................... 32

Emission Limitations and Standards [326 IAC 2-7-5(1)] ................................................................. 33
D.1.1 PSD Minor Limits [326 IAC 2-2]
D.1.2 Particulate [326 IAC 6-3-2]
D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

Compliance Determination Requirements [326 IAC 2-7-5(1)] ....................................................... 34
D.1.4 Particulate Matter and Particulate Matter Control
D.1.5 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)] ............................... 35
D.1.6 Visible Emissions Notations [40 CFR 64]
D.1.7 Broken or Failed Bag Detection

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19] .................... 36
D.1.8 Record Keeping Requirements
D.1.9 Reporting Requirements

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS ................................................................. 37

Emission Limitations and Standards [326 IAC 2-7-5(1)] ................................................................. 37
D.2.1 PSD Minor Limits [326 IAC 2-2]
D.2.2 Hazardous Air Pollutant (HAP) Minor Limit [326 IAC 2-4.1]
D.2.3 VOC Emissions (Fuel Grade Ethanol at Dry Mills) [326 IAC 8-5-6]
D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

Compliance Determination Requirements [326 IAC 2-7-5(1)] ....................................................... 38
D.2.5 VOC and HAP Control
D.2.6 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)] ............................... 39
D.2.7 Parametric Monitoring [326 IAC 8-5-6][40 CFR 64]
D.2.8 Scrubber Water Flow Rate [326 IAC 8-5-6][40 CFR 64]
D.2.9 HAP Control Additive Flow Rate Monitoring [40 CFR 64]
D.2.10 Scrubber Failure Detection

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-19] .................... 40
D.2.11 Record Keeping Requirements [326 IAC 8-5-6]
SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS .............................................................. 42

Emission Limitations and Standards [326 IAC 2-7-5(1)] .............................................................. 42

D.3.1 PSD Minor Limits [326 IAC 2-2]
D.3.2 Hazardous Air Pollutant (HAP) Minor Limit [326 IAC 2-4.1]
D.3.3 VOC Emissions (Fuel Grade Ethanol at Dry Mills) [326 IAC 8-5-6]
D.3.4 Particulate Emissions [326 IAC 6-2-4]
D.3.5 Particulate Emission Limitations [326 IAC 6-3-2]
D.3.6 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

Compliance Determination Requirements [326 IAC 2-7-5(1)] .............................................................. 44

D.3.7 VOC and HAP Control
D.3.8 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 3-5][326 IAC 2-7-6(1),(6)][40 CFR 60, Subpart Db]
D.3.9 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)] .............................................................. 45

D.3.10 NOx Continuous Emissions Monitoring (CEMS) Equipment Downtime
D.3.11 Visible Emissions Notations [40 CFR 64]
D.3.12 Thermal Oxidizer Temperature [326 IAC 8-5-6][40 CFR 64]
D.3.13 Thermal Oxidizer Parametric Monitoring [326 IAC 8-5-6][40 CFR 64]

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19] .............................................................. 46

D.3.14 Record Keeping Requirements [326 IAC 8-5-6]
D.3.15 Record Keeping Requirements for CEMS [326 IAC 2-7-5(3)(A)(iii)][326 IAC 3-5]
D.3.16 Reporting Requirements [326 IAC 2-7-5(3)(A)(iii)][326 IAC 3-5]

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS .............................................................. 48

Emission Limitations and Standards [326 IAC 2-7-5(1)] .............................................................. 48

D.4.1 PSD Minor Limits [326 IAC 2-2]
D.4.2 Particulate Emission Limitations [326 IAC 6-3-2]
D.4.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

Compliance Determination Requirements [326 IAC 2-7-5(1)] .............................................................. 49

D.4.4 Particulate Control
D.4.5 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)] .............................................................. 49

D.4.6 Visible Emissions Notations [40 CFR 64]
D.4.7 Broken or Failed Bag Detection

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19] .............................................................. 50

D.4.8 Record Keeping Requirements
D.4.9 Reporting Requirements

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS .............................................................. 51

Emission Limitations and Standards [326 IAC 2-7-5(1)] .............................................................. 51

D.5.1 PSD Minor Limits [326 IAC 2-2]
D.5.2 Hazardous Air Pollutant (HAP) Minor Limit [326 IAC 2-4.1]
D.5.3 VOC Emissions (Fuel Grade Ethanol at Dry Mills) [326 IAC 8-5-6]
D.5.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

Compliance Determination Requirements [326 IAC 2-7-5(1)] .............................................................. 52

D.5.5 VOC and HAP Control
D.5.6 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)] .............................................................. 52

D.5.7 VCU Flame [326 IAC 8-5-6][40 CFR 64]
Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19] .......... 53
D.5.8 Record Keeping Requirements [326 IAC 8-5-6]
D.5.9 Reporting Requirements

SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS ......................................................... 54
Emission Limitations and Standards [326 IAC 2-7-5(1)] ................................................................ 54
D.6.1 Particulate Emissions Limitation [326 IAC 6-2-4]
D.6.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS ......................................................... 55
Emission Limitations and Standards [326 IAC 2-7-5(1)] ................................................................ 55
D.7.1 Volatile Organic Compounds (VOC) [326 IAC 8-4-3]
D.7.2 Volatile Organic Compounds (VOC) [326 IAC 8-4-3(d)]
D.7.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]
Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19] .......... 56
D.7.4 Record Keeping Requirements

SECTION E.1 NSPS ......................................................................................................................... 57
New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]......................... 57
E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1]
[40 CFR Part 60, Subpart A]
E.1.2 Industrial-Commercial-Institutional Steam Generating Units NSPS [326 IAC 12]
[40 CFR Part 60, Subpart Db]

SECTION E.2 NSPS ......................................................................................................................... 58
New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]......................... 58
E.2.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1]
[40 CFR Part 60, Subpart A]
E.2.2 Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984 NSPS [326 IAC 12] [40 CFR Part 60, Subpart Kb]
Emission Limitations and Standards [326 IAC 2-7-5(1)] ................................................................. 59
E.2.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

SECTION E.3 NSPS ......................................................................................................................... 60
New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]......................... 61
E.3.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1]
[40 CFR Part 60, Subpart A]
E.3.2 Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 NSPS [326 IAC 12] [40 CFR Part 60, Subpart VVa]

SECTION E.4 NSPS ......................................................................................................................... 63
New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]......................... 63
E.4.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1]
[40 CFR Part 60, Subpart A]
E.4.2 Stationary Compression Ignition Internal Combustion Engines NSPS [326 IAC 12]
[40 CFR Part 60, Subpart III]
Emission Limitations and Standards [326 IAC 2-7-5(1)] ................................................................. 64
E.4.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]
SECTION E.5  NESHAP ........................................................................................................................... 65

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements
[326 IAC 2-7-5(1)] ........................................................................................................................... 65

E.5.2 Stationary Reciprocating Internal Combustion Engines NESHAP [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

SECTION E.6  NESHAP ........................................................................................................................... 66

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements
[326 IAC 2-7-5(1)] ........................................................................................................................... 66

E.6.2 Gasoline-Dispensing Facilities NESHAP [40 CFR Part 63, Subpart CCCCC]

Emission Limitations and Standards [326 IAC 2-7-5(1)] ................................................................. 67
E.6.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

CERTIFICATION ........................................................................................................................................ 68

EMERGENCY OCCURRENCE REPORT .................................................................................................. 69

Part 70 Quarterly Report ........................................................................................................................... 71
Part 70 Quarterly Report ........................................................................................................................... 72
Part 70 Quarterly Report ........................................................................................................................... 73

QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT .............................................. 74

Attachment A: Fugitive Dust Control Plan
Attachment C: Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units [40 CFR 60, Subpart Db]
Attachment D: Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 [40 CFR 60, Subpart Kb]
Attachment E: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [40 CFR 60, Subpart Ill]
SECTION A SOURCE SUMMARY

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

A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5(14)][326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary grain elevator and ethanol production plant.

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<td>(260) 846-0011</td>
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<tr>
<td>SIC Code:</td>
<td>2869 (Industrial Organic Chemicals, Not Elsewhere Classified)</td>
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<td>County Location:</td>
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<td>Source Location Status:</td>
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<td>Source Status:</td>
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<td>Minor Source, under PSD and Emission Offset Rules</td>
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<td>Not 1 of 28 Source Categories</td>
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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:

(a) One (1) grain receiving and handling operation, constructed in 2007, using baghouse C20 as control, exhausting to stack S20, and consisting of the following:

(1) Three (3) grain receiving pits, identified as EU001, each with a maximum throughput rate of 20,000 bushels of corn per hour.

(2) Two (2) grain legs and conveying system, identified as EU002, modified in 2013, each with a maximum throughput rate of 20,000 bushels of corn per hour, with the conveying system.

(3) Two (2) grain silos, identified as EU003, each with a total maximum capacity of 500,000 bushels, and each with a maximum throughput rate of 40,000 bushels of corn per hour.

(b) One (1) permanent grain storage bin, identified as EU003a, constructed in 2013, with a maximum capacity of 576,222 bushels of corn and a maximum throughput rate of 40,000 bushels of corn per hour, with emissions uncontrolled.

(c) Two (2) corn scalpers, identified as EU004, each with a maximum throughput rate of 140 tons per hour, using baghouse C20 as control, constructed in 2007 and permitted in 2015, and exhausting to stack S20.

(d) One (1) day storage/surge bin, with a total maximum capacity of 47,871 bushels, identified as EU005, with a capacity of 171 tons per hour, using baghouse C20 as control, constructed in 2007 and permitted in 2015, and exhausting to stack S20.
(e) Four (4) hammermills, identified as EU006, EU007, EU008, and EU009, constructed in 2007 and modified in 2010, each with a maximum throughput rate of 42 tons of corn per hour, using baghouse C30 as control, and exhausting through stack S30.

(f) One (1) fermentation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with an equivalent hourly throughput rate of 18,738 gallons per hour of 200 proof ethanol, using wet scrubber C40 as control, and exhausting to stack S40. This process consists of the following:

1. Seven (7) fermenters, identified as EU012 through EU018.
2. One (1) beer well, identified as EU021.
3. One (1) wet scrubber, identified as C40, constructed in 2007 and modified in 2010, and exhausting to stack S40. Stack S40 is equipped with a high plume exhaust system, operated when necessary, to increase the CO2 exhaust stream discharge height. The scrubber is approved for modification in 2019 to include a recirculation pump to recover a portion of the scrubber bottoms and inject it back into the feed header from the beer well to the scrubber.

The following scenarios are approved:

<table>
<thead>
<tr>
<th>Scenario ID</th>
<th>Operating Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Maximum beer feed rate with recirculation pump on</td>
</tr>
<tr>
<td>AOS1</td>
<td>Maximum beer feed rate with recirculation pump off</td>
</tr>
<tr>
<td>AOS2</td>
<td>Reduced beer feed rate with recirculation pump on</td>
</tr>
<tr>
<td>AOS3</td>
<td>Reduced beer feed rate with recirculation pump off</td>
</tr>
<tr>
<td>AOS4</td>
<td>Scrubber cleaning (per preventative maintenance plan procedure)</td>
</tr>
</tbody>
</table>

Under 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered affected facilities.

(g) Two (2) thermal oxidizers with heat recovery steam generator (TO/HRSG) systems, identified as C9203 and C9303, constructed in 2007 and modified in 2010, with a maximum heat input capacity of 143 MMBtu/hr, each, using natural gas as fuel, and exhausting to stack S10.

Under 40 CFR 60, Subpart Db, the TO/HRSG systems are considered affected facilities.

(h) One (1) distillation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with a maximum throughput rate of 18,735 gallons of 200 proof ethanol per hour, using thermal oxidizers C9203 and C9303 as control, and exhausting to stack S10. This process consists of the following:

1. Two (2) slurry tanks, identified as EU010 and EU011.
2. Two (2) yeast propagation tanks, identified as EU019 and EU020.
3. One (1) beer column, identified as EU022.
4. One (1) rectifier column, identified as EU023.
5. One (1) side stripper, identified as EU024.
(6) Three (3) sets of three (3) molecular sieves, identified as EU025.

(7) Two (2) sets of four (4) evaporators, identified as EU026.

Under 40 CFR 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered affected facilities.

(i) Two (2) sets of three (3) centrifuges, identified as EU027 and EU028, constructed in 2007, and using thermal oxidizers C9203 and C9303 as control.

(j) Four (4) natural gas-fired DDGS dryers, identified as EU029 through EU032, constructed in 2007 and modified in 2010, each with a maximum heat input rate of 45 MMBtu/hr, with a total maximum throughput rate of 56 tons of DDGS per hour, using multicyclones C029 through C032 as control, with emissions venting to thermal oxidizers C9203 and C9303, and exhausting to stack S10.

(k) One (1) DDGS cooling drum, identified as EU033, constructed in 2007, permitted in 2015, and approved in 2019 for modification, with a maximum throughput rate of 66 tons/hr of DDGS, using baghouse C70 and the TO/HRSG systems as control, and exhausting to stack S70.

Note: A portion of the emission stream is continuously exhausted to stack S70.

(l) One (1) DDGS handling and storage operation, constructed in 2007, with a maximum throughput rate of 220 tons/hr of DDGS, and consisting of the following:

   (1) Two (2) DDGS storage silos, identified as EU034, using baghouse C90 as control, and exhausting to stack S90.

   (2) One (1) DDGS storage building, identified as EU035, with emissions uncontrolled.

(m) One (1) DDGS loadout operation, identified as EU036, constructed in 2007 and modified in 2010, using baghouse C90 as control, exhausting to stack S90, and consisting of the following:

   (1) One (1) DDGS conveyor with a maximum throughput rate of 550 tons/hr of DDGS.

   (2) Two (2) DDGS truck/rail loadout spouts, each with a maximum throughput rate of 550 tons/hr of DDGS (only a single spout is able to operate at a time).

(n) One (1) ethanol loading system, identified as EU037, constructed in 2007, modified in 2010, and approved in 2019 for modification, consisting of two (2) rail loading spouts and two (2) truck loading spouts, with a combined limited throughput rate 165,000,000 gallons per twelve (12) consecutive month period for truck and railcar loading, using enclosed vapor combustion unit (VCU) C50 as control, which is fueled by natural gas, has a maximum heat input capacity of 12.4 MMBtu/hr, and exhausting to stack S50.

Under 40 CFR 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered affected facilities.
A.3 Specifically Regulated Insignificant Activities

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

(a) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

(1) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) British thermal units per hour and firing fuel containing equal to or less than five-tenths percent (0.5%) sulfur by weight, as follows:

(A) Three (3) kerosene-fired space heaters, constructed in 2007, each with a maximum rated capacity of 0.165 MMBtu/hr.

(b) One (1) diesel-fired fire pump, identified as EU038, constructed in 2007, with a maximum power output rate of 300 HP, and exhausting to stack S100.

Under 40 CFR 60, Subpart IIII, the diesel-fired fire pump EU038 is considered an affected facility.

Under 40 CFR 63, Subpart ZZZZ, the diesel-fired fire pump EU038 is considered an affected source.

(c) Fuel dispensing activities as follows:

(1) A gasoline fuel transfer dispensing operation handling less than or equal to one thousand three hundred (1,300) gallons per day and filling storage tanks having a capacity equal to or less than ten thousand five hundred (10,500) gallons, as follows:

Under 40 CFR 63, Subpart CCCCCC, the gasoline fuel transfer dispensing operation is considered as an affected facility.

(A) One (1) gasoline tank, constructed in 2008, identified as C10 with a maximum storage capacity of 560 gallons and a maximum throughput of less than 10,000 gallons per year.

(d) Paved roads and parking lots with limited public access.

(e) Ethanol and denaturant storage tanks, including the following:

(1) One (1) off spec tank for 190-proof ethanol, identified as T65, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons.

(2) One (1) tank for 200-proof ethanol, identified as T63, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons of 200-proof ethanol.

(3) One (1) denatured ethanol tank, identified as T61, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 1,500,000 gallons of denatured ethanol, and permitted in 2014 to receive imported denatured ethanol via tanker truck.

(4) One (1) denatured ethanol tank, identified as T62, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 1,500,000 gallons.
of denatured ethanol, and permitted in 2014 to receive imported denatured ethanol via tanker truck.

(5) One (1) denaturant tank, identified as T64, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons of natural gasoline.

Under 40 CFR 60, Subpart Kb, storage tanks T61 through T65 are considered affected facilities.

A.4 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, as defined in 326 IAC 2-7-1(21):

(a) Solvent recycling systems with batch capacity less than or equal to 100 gallons.

(b) Forced and induced draft cooling tower system not regulated under a NESHAP, identified as C80, with a maximum capacity of 3 MM gallons per year, constructed in 2007, and exhausting to stack S80.

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

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

(e) Other emission units, not regulated by a NESHAP, with PM10, NOx, and SO2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(1) One (1) corrosion inhibitor tank, identified as CI, constructed in 2007, with a maximum capacity of 3,000 gallons of corrosion inhibitor.

(2) One (1) diesel storage tank, identified as C2, constructed in 2007, with a maximum storage capacity less than 2,000 gallons of diesel fuel.

(3) One (1) thin stillage tank with vent, identified as C3, constructed in 2007, with a maximum storage capacity of 374,000 gallons of thin stillage.

(4) One (1) syrup tank with vent, identified as C4, constructed in 2007, with a maximum storage capacity of 180,000 gallons of syrup.

(5) One (1) cook water tank with vent, identified as C5 constructed in 2007, with a maximum storage capacity of 374,000 gallons of cook water.

(6) Two (2) liquefaction tanks with one (1) vent, identified as C6/C7, constructed in 2007, with a maximum storage capacity of 128,400 gallons each of liquefied corn slurry.
(7) One (1) methanator feed tank, identified as C8, constructed in 2007, with a maximum storage capacity of 180,000 gallons of methanator feed water.

(8) One (1) whole stillage tank with vent, identified as C9, constructed in 2007, with a maximum storage capacity of 374,000 gallons of whole stillage.

(9) One (1) syrup feed tank, constructed in 2010, identified as TS-6851, with a maximum storage capacity of 3,500 gallons.

(10) Four (4) corn oil storage tanks, constructed in 2010, identified as TS-8901 through TS-8904, each with a maximum storage capacity of 9,200 gallons.

(11) One (1) corn oil storage tank, constructed in 2014, identified as TS-8905, with a maximum storage capacity of 30,000 gallons.

(12) One (1) syrup receiver tank, constructed in 2010, identified as TS-6852, with a maximum storage capacity of 560 gallons.

(13) One (1) corn oil receiver tank, constructed in 2010, identified as TS-6853, with a maximum storage capacity of 300 gallons.

(14) One (1) corn oil receiver tank, constructed in 2010, identified as TS-6854, with a maximum storage capacity of 200 gallons.

(15) One (1) corn oil loadout station, constructed in 2010 and approved in 2019 for modification, identified as corn oil loadout, with a maximum throughput rate of 2,500,000 gallons per year.

(16) One (1) corn storage pile, constructed in 2012, with a maximum capacity of 1,000,000 bushels of corn and a maximum throughput rate of 28,000 tons per year, with emissions uncontrolled.

(17) One (1) corn storage area, containing a maximum of two (2) piles, constructed in 2013, with a maximum capacity of 2,000,000 bushels of corn and a maximum throughput rate of 560 tons per hour, with emissions uncontrolled.

(f) Fuel dispensing activities as follows:

(1) A petroleum fuel other than gasoline dispensing facility, having a storage tank capacity less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per day or less, as follows:

(A) One (1) diesel storage tank, identified as C2, with a maximum capacity of 360 gallons.

(B) One (1) diesel storage tank, constructed in 2008, identified as C11, with a maximum capacity of 1,050 gallons.

A.5 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, T179-41632-00033, 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).

(d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.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.

The notification which shall be 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).

(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 T179-41632-00033 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

(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.

(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.

(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.

(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.

B.16 Permit Renewal

(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).

(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;
DRAFT

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

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

and

United States Environmental Protection Agency, Region 5
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

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

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(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 OPERATIONS 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 Fugitive Particulate Matter Emission Limitations  [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the attached plan as in Attachment A. The provisions of 326 IAC 6-5 are not federally enforceable.

C.7 Stack Height  [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. 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.8 Asbestos Abatement Projects  [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

1. When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

2. If there is a change in the following:
   (A) Asbestos removal or demolition start date;
   (B) Removal or demolition contractor; or
   (C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(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.9 Performance Testing [326 IAC 3-6]

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(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.10 Compliance Requirements [326 IAC 2-1.1-11]

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

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

C.11 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

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

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

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

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

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

C.12 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.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]
Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

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

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

C.14 Risk Management Plan [326 IAC 2-7-5(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.15 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]
Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][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.17 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]

In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), starting in 2004 and every three (3) years thereafter, the Permittee shall submit by July 1 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.18 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.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring
Report shall include a certification that meets the requirements of 326 IAC 2-7-6(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.

(b) The address for report submittal is:

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

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

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

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

(a) One (1) grain receiving and handling operation, constructed in 2007, using baghouse C20 as control, exhausting to stack S20, and consisting of the following:

(1) Three (3) grain receiving pits, identified as EU001, each with a maximum throughput rate of 20,000 bushels of corn per hour.

(2) Two (2) grain legs and conveying system, identified as EU002, modified in 2013, each with a maximum throughput rate of 20,000 bushels of corn per hour, with the conveying system.

(3) Two (2) grain silos, identified as EU003, each with a total maximum capacity of 500,000 bushels, and each with a maximum throughput rate of 40,000 bushels of corn per hour.

(b) One (1) permanent grain storage bin, identified as EU003a, constructed in 2013, with a maximum capacity of 576,222 bushels of corn and a maximum throughput rate of 40,000 bushels of corn per hour, with emissions uncontrolled.

(c) Two (2) corn scalpers, identified as EU004, each with a maximum throughput rate of 140 tons per hour, using baghouse C20 as control, constructed in 2007 and permitted in 2015, and exhausting to stack S20.

(d) One (1) day storage/surge bin, with a total maximum capacity of 47,871 bushels, identified as EU005, with a capacity of 171 tons per hour, using baghouse C20 as control, constructed in 2007 and permitted in 2015, and exhausting to stack S20.

(e) Four (4) hammermills, identified as EU006, EU007, EU008, and EU009, constructed in 2007 and modified in 2010, each with a maximum throughput rate of 42 tons of corn per hour, using baghouse C30 as control, and exhausting through stack S30.

(l) One (1) DDGS handling and storage operation, constructed in 2007, with a maximum throughput rate of 220 tons/hr of DDGS, and consisting of the following:

(1) Two (2) DDGS storage silos, identified as EU034, using baghouse C90 as control, and exhausting to stack S90.

(2) One (1) DDGS storage building, identified as EU035, with emissions uncontrolled.

(m) One (1) DDGS loadout operation, identified as EU036, constructed in 2007 and modified in 2010, using baghouse C90 as control, exhausting to stack S90, and consisting of the following:

(1) One (1) DDGS conveyor with a maximum throughput rate of 550 tons/hr of DDGS.

(2) Two (2) DDGS truck/rail loadout spouts, each with a maximum throughput rate of 550 tons/hr of DDGS (only a single spout is able to operate at a time).

(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 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 PM, PM10, and PM2.5 emissions from the following emission units shall be less than the following emission limits:

<table>
<thead>
<tr>
<th>Unit ID</th>
<th>Unit Description</th>
<th>Baghouse ID</th>
<th>PM Emission Limit (lbs/hr)</th>
<th>PM10 Emission Limit (lbs/hr)</th>
<th>PM2.5 Emission Limit (lbs/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU001, EU002, EU003, EU004, EU005</td>
<td>Grain Receiving and Handling (Conveyors, Storage Bins, Corn Scalpers, and Surge Bin)</td>
<td>C20</td>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
</tr>
<tr>
<td>EU006, EU007, EU008, EU009</td>
<td>Hammermills #1- #4</td>
<td>C30</td>
<td>1.44</td>
<td>1.44</td>
<td>1.44</td>
</tr>
<tr>
<td>EU034, EU036</td>
<td>DDGS storage silo, DDGS loadout operations</td>
<td>C90</td>
<td>9.3</td>
<td>9.3</td>
<td>9.3</td>
</tr>
</tbody>
</table>

Note: PM10 = PM2.5

(b) The total grain received shall be less than 1,622,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The Permittee shall use a choked flow system during grain receiving and handling.

Compliance with these limits, in combination with the potential to emit PM, PM10, and PM2.5 from other emission units at the source, shall limit the PM, PM10, and PM2.5 emissions from the entire source to less 250 tons per twelve (12) consecutive month period and render the requirements of 326 IAC 2-2 Prevention of Significant Deterioration (PSD) not applicable.

D.1.2 Particulate [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from each process shall be limited by the following:

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
<table>
<thead>
<tr>
<th>Unit ID</th>
<th>Unit Description</th>
<th>Max. Throughput Rate (tons/hr)</th>
<th>Particulate Emission Limit (lbs/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU001, EU002, EU003</td>
<td>Grain Receiving and Handling (Conveyors, and Storage Bins)</td>
<td>560</td>
<td>70.32</td>
</tr>
<tr>
<td>EU004, EU005</td>
<td>Corn Scalpers (each)</td>
<td>140</td>
<td>54.72</td>
</tr>
<tr>
<td>EU005</td>
<td>Surge Bin</td>
<td>171</td>
<td>56.83</td>
</tr>
<tr>
<td>EU006</td>
<td>Hammermill #1</td>
<td>42</td>
<td>42.97</td>
</tr>
<tr>
<td>EU007</td>
<td>Hammermill #2</td>
<td>42</td>
<td>42.97</td>
</tr>
<tr>
<td>EU008</td>
<td>Hammermill #3</td>
<td>42</td>
<td>42.97</td>
</tr>
<tr>
<td>EU009</td>
<td>Hammermill #4</td>
<td>42</td>
<td>42.97</td>
</tr>
<tr>
<td>EU034</td>
<td>DDGS storage silos</td>
<td>220</td>
<td>59.55</td>
</tr>
<tr>
<td>EU036</td>
<td>DDGS loadout operation</td>
<td>550</td>
<td>70.10</td>
</tr>
<tr>
<td>EU035</td>
<td>DDGS storage building</td>
<td>220</td>
<td>59.55</td>
</tr>
<tr>
<td>EU003a</td>
<td>Grain Bin</td>
<td>1,120</td>
<td>79.06</td>
</tr>
</tbody>
</table>

(b) Pursuant to 326 IAC 6-3-2(e)(3), when the process weight exceeds 200 tons per hour, the maximum allowable emission may exceed the emission limits shown in the table above, provided the concentration of particulate matter in the gas discharged to the atmosphere is less than 0.10 pounds per 1,000 pounds of gases.

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their 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.1.4 Particulate Matter and Particulate Matter Control

(a) In order to comply with Conditions D.1.1 and D.1.2, each of the following emission units shall be controlled by the associated baghouse, as listed in the table below, at all times these units are in operation:

<table>
<thead>
<tr>
<th>Emission Unit ID</th>
<th>Emission Unit Description</th>
<th>Baghouse ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU001, EU002, EU003, EU004, EU005</td>
<td>Grain Receiving and Handling (Conveyors, Storage Bins, Corn Scalpers, and Surge Bin)</td>
<td>C20</td>
</tr>
<tr>
<td>EU006, EU007, EU008, EU009</td>
<td>Hammermills #1- #4</td>
<td>C30</td>
</tr>
<tr>
<td>EU034, EU036</td>
<td>DDGS storage silo, DDGS Loadout</td>
<td>C90</td>
</tr>
</tbody>
</table>

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

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

In order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM, PM10, and PM2.5 testing on baghouses C20, C30, and C90, utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable PM.

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

D.1.6 Visible Emissions Notations [40 CFR 64]

(a) Visible emission notations of the grain receiving and handling, hammermills, and DDGS handling and loadout operation stack exhausts (Stacks S20, S30, and S90, respectively) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, “normal” means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C – Response to Excursions and 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.

D.1.7 Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse’s pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.
Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.8 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.1(b), the Permittee shall maintain monthly records of the amount of grain received at this plant.

(b) To document the compliance status with Condition D.1.6 the Permittee shall maintain daily records of the visible emission notations of the grain receiving and handling operations (EU001 through EU005), the hammermills (EU006 through EU009), and the DDGS handling and loadout operations (EU034 through EU036) stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation (e.g., the process did not operate that day).

(c) Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

D.1.9 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.1.1(b) shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The reports submitted by the Permittee 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).
SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(f) One (1) fermentation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with an equivalent throughput rate of 18,738 gallons per hour of 200 proof ethanol, using wet scrubber C40 as control, and exhausting to stack S40. This process consists of the following:

(1) Seven (7) fermenters, identified as EU012 through EU018.

(2) One (1) beer well, identified as EU021.

(3) One (1) wet scrubber, identified as C40, constructed in 2007 and modified in 2010, and exhausting to stack S40. Stack S40 is equipped with a high plume exhaust system, operated when necessary, to increase the CO2 exhaust stream discharge height. The scrubber is approved for modification in 2019 to include a recirculation pump to recover a portion of the scrubber bottoms and inject it back into the feed header from the beer well to the scrubber.

The following scenarios are approved:

<table>
<thead>
<tr>
<th>Scenario ID</th>
<th>Operating Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Maximum beer feed rate with recirculation pump on</td>
</tr>
<tr>
<td>AOS1</td>
<td>Maximum beer feed rate with recirculation pump off</td>
</tr>
<tr>
<td>AOS2</td>
<td>Reduced beer feed rate with recirculation pump on</td>
</tr>
<tr>
<td>AOS3</td>
<td>Reduced beer feed rate with recirculation pump off</td>
</tr>
<tr>
<td>AOS4</td>
<td>Scrubber cleaning (per preventative maintenance plan procedure)</td>
</tr>
</tbody>
</table>

Under 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process 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.2.1 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) VOC emissions from the fermentation process shall not exceed 23.4 pounds per hour.

Compliance with the VOC limit, in combination with the potential to emit VOC from other units, shall limit the VOC emissions from the entire source to less than 250 tons per twelve (12) consecutive month period and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.
D.2.2 Hazardous Air Pollutant (HAP) Minor Limit [326 IAC 2-4.1]

In order to render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable, the Permittee shall comply with the following:

(a) Acetaldehyde emissions from the fermentation process shall not exceed 1.37 lbs/hr.

Compliance with the HAP limit, in combination with the potential to emit HAP from other units, shall limit the HAP emissions from the entire source to less than ten (10) tons for any single HAP and less than twenty-five (25) for total HAPs per twelve (12) consecutive month period and render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable and shall render the source minor under Section 112 of the Clean Air Act (CAA).

D.2.3 VOC Emissions (Fuel Grade Ethanol at Dry Mills) [326 IAC 8-5-6]

Pursuant to 326 IAC 8-5-6, the Permittee shall comply with the following:

(a) The VOC emissions from the fermentation process shall be controlled by wet scrubber (C40).

(b) The wet scrubber (C40) shall operate with an overall VOC control efficiency of not less than ninety-eight percent (98%) or in a manner resulting in a VOC concentration of not more than twenty (20) parts per million (ppm).

D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their 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.2.5 VOC and HAP Control

(a) In order to comply with Conditions D.2.1, D.2.2, and D.2.3, wet scrubber (C40) shall be in operation and control emissions from the fermentation process at all times the fermentation process is in operation.

(b) If compliance is demonstrated using the twenty (20) parts per million (ppm) VOC limit specified in Condition D.2.3(b), all VOC emissions from the fermentation process shall be routed to the wet scrubber, and that there are no open vents to the atmosphere between the fermentation process and the wet scrubber.

(c) Scrubber cleaning will be conducted only as prescribed in the preventative maintenance plan required under D.2.4.

D.2.6 Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]

No later than 120 days after startup of the recirculation pump or not later than five (5) years from the most recent compliant stack test, whichever occurs first, in order to demonstrate compliance with Conditions D.2.1, D.2.2, and D.2.3, the Permittee shall perform VOC and acetaldehyde testing, for each of the five (5) operating scenarios, for scrubber C40 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.
**Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]**

**D.2.7 Parametric Monitoring [326 IAC 8-5-6][40 CFR 64]**

(a) The Permittee shall monitor and record the pressure drop of wet scrubber C40 at least once per day when the associated processes are in operation. The range for the normal, AOS1, AOS2, and AOS3 scenarios for this unit is a pressure drop between 1.0 and 20.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test.

(b) When for any one reading, the pressure drop across the scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit, per operating scenario, will be established via stack testing. 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.

(c) The instruments used for determining the pressure drop and flow 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 every six (6) months.

**D.2.8 Scrubber Water Flow Rate [326 IAC 8-5-6][40 CFR 64]**

(a) The Permittee shall monitor and record the flow rate of the scrubber C40 at least once per day when the associated processes are in operation. From the date of startup of the recirculation pump until the stack test results are available, the Permittee shall maintain the flow rate at or above the minimums in the following table:

<table>
<thead>
<tr>
<th>Scenario ID</th>
<th>Operating Scenario</th>
<th>Beer Feed Rate (gal/min)</th>
<th>Minimum Scrubber Flow Rate (gpm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Maximum beer feed rate with recirculation pump off</td>
<td>greater than 1,200</td>
<td>84.7</td>
</tr>
<tr>
<td>AOS1</td>
<td>Maximum beer feed rate with recirculation pump on</td>
<td>greater than 1,200</td>
<td>84.7</td>
</tr>
<tr>
<td>AOS2</td>
<td>Reduced beer feed rate with recirculation pump off</td>
<td>less than or equal to 1,200</td>
<td>84.7</td>
</tr>
<tr>
<td>AOS3</td>
<td>Reduced beer feed rate with recirculation pump on</td>
<td>less than or equal to 1,200</td>
<td>84.7</td>
</tr>
</tbody>
</table>

(b) The Permittee shall determine the minimum flow rate, chemical additive injection rate, and type of additive for each operating scenario from the latest valid stack test that demonstrates compliance with the limits in Condition D.2.1 and D.2.2, and the requirements of 326 IAC 8-5-6 in Condition D.2.3.

(c) On and after the date the stack test results are available, the Permittee shall maintain a flow rate at or above the minimum rate applicable to the operating scenario as observed during the latest compliant stack test. When for any one reading, the flow rate is below the above mentioned minimum, the Permittee shall take a reasonable response.

**D.2.9 HAP Control Additive Flow Rate Monitoring [40 CFR 64]**

(a) The Permittee shall monitor and record the HAP control additive flow rate at wet scrubber C40 at least once per day when the associated processes are in operation. From the
date of startup of the recirculation pump until the stack test results are available, the Permittee shall maintain the flow rate at or above the minimums in the following table:

<table>
<thead>
<tr>
<th>Scenario ID</th>
<th>Operating Scenario</th>
<th>Beer Feed Rate (gal/min)</th>
<th>Minimum Scrubber Flow Rate (mL/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Maximum beer feed rate with recirculation pump off</td>
<td>greater than 1,200</td>
<td>504 mL/min</td>
</tr>
<tr>
<td>AOS1</td>
<td>Maximum beer feed rate with recirculation pump on</td>
<td>greater than 1,200</td>
<td>504 mL/min</td>
</tr>
<tr>
<td>AOS2</td>
<td>Reduced beer feed rate with recirculation pump off</td>
<td>less than or equal to 1,200</td>
<td>504 mL/min</td>
</tr>
<tr>
<td>AOS3</td>
<td>Reduced beer feed rate with recirculation pump on</td>
<td>less than or equal to 1,200</td>
<td>504 mL/min</td>
</tr>
</tbody>
</table>

(b) When for any one reading, the HAP control additive flow rate at wet scrubber C40 is outside the normal range for the applicable operating scenario, the Permittee shall take a reasonable response. The normal range for this unit, per operating scenario, will be established via stack testing. Section C – Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. A HAP control additive flow rate reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.2.10 Scrubber Failure Detection

In the event that a scrubber malfunction has been observed:

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

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

D.2.11 Record Keeping Requirements [326 IAC 8-5-6]

(a) To document the compliance status with Conditions D.2.7 and D.2.8, and pursuant to 326 IAC 8-5-6, the Permittee shall maintain daily records of pressure drop and flow rate for scrubber C40 and the operating scenario. The Permittee shall include in its daily record when a pressure drop and flow rate reading is not taken and the reason for the lack of the reading (e.g. the process did not operate that day).
(b) To document the compliance status with Condition D.2.7(c), the Permittee shall maintain records of when the instruments used for determining the pressure drop and flow rate are calibrated or replaced.

(c) To document the compliance status with Condition D.2.9, the Permittee shall maintain records of the one-hour average injection rate of HAP control additive that is being injected into scrubber C40. The Permittee shall include in its daily record the operating scenario being employed.

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

Emissions Unit Description:

(g) Two (2) thermal oxidizers with heat recovery steam generator (TO/HRSG) systems, identified as C9203 and C9303, constructed in 2007 and modified in 2010, with a maximum heat input capacity of 143 MMBtu/hr, each, using natural gas as fuel, and exhausting to stack S10. Under 40 CFR 60, Subpart Db, the TO/HRSG systems are considered affected facilities.

(h) One (1) distillation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with a maximum throughput rate of 18,735 gallons of 200 proof ethanol per hour, using thermal oxidizers C9203 and C9303 as control, and exhausting to stack S10. This process consists of the following:
   (1) Two (2) slurry tanks, identified as EU010 and EU011.
   (2) Two (2) yeast propagation tanks, identified as EU019 and EU020.
   (3) One (1) beer column, identified as EU022.
   (4) One (1) rectifier column, identified as EU023.
   (5) One (1) side stripper, identified as EU024.
   (6) Three (3) sets of three (3) molecular sieves, identified as EU025.
   (7) Two (2) sets of four (4) evaporators, identified as EU026.

Under 40 CFR 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered affected facilities.

(j) Four (4) natural gas-fired DDGS dryers, identified as EU029 through EU032, constructed in 2007 and modified in 2010, each with a maximum heat input rate of 45 MMBtu/hr, with a total maximum throughput rate of 56 tons of DDGS per hour, using multicyclones C029 through C032 as control, with emissions venting to thermal oxidizers C9203 and C9303, and exhausting to stack S10.

(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 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) PM emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 16.5 lbs/hr.

(b) PM10 emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 16.5 lbs/hr.
(c) PM2.5 emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 16.5 lbs/hr.

(d) VOC emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 13.0 lbs/hr.

(e) CO emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 38.7 lbs/hr.

(f) The total DDGS produced shall be less than 490,560 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits, in combination with the potential to emit PM, PM10, PM2.5, VOC, and CO from other units at the source, shall limit the PM, PM10, PM2.5, VOC, and CO emissions from the entire source to less than 250 tons per twelve (12) consecutive month period each and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.3.2 Hazardous Air Pollutant (HAP) Minor Limit [326 IAC 2-4.1]
In order to render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable, the Permittee shall comply with the following:

(a) Acetaldehyde emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 0.38 lbs/hr.

(b) Acrolein emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 0.33 lb/hr.

(c) Formaldehyde emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 0.52 lbs/hr.

(d) Methanol emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 0.33 lb/hr.

(e) Total HAP emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 1.56 lbs/hr.

Compliance with the HAP limit, in combination with the potential to emit HAP from other units, shall limit the HAP emissions from the entire source to less than ten (10) tons for any single HAP and less than twenty-five (25) for total HAPs per twelve (12) consecutive month period and render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable and shall render the source minor under Section 112 of the Clean Air Act (CAA).

D.3.3 VOC Emissions (Fuel Grade Ethanol at Dry Mills) [326 IAC 8-5-6]
Pursuant to 326 IAC 8-5-6, the Permittee shall comply with the following:

(a) The VOC emissions from the DDGS Dryers and distillation process shall be controlled by thermal oxidizers (C9203 and C9303).

(b) A thermal oxidizer (C9203 and C9303) with an overall control efficiency of not less than ninety-eight percent (98%) or resulting in a volatile organic compound concentration of not more than ten (10) parts per million (ppm).
D.3.4 Particulate Emissions [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emissions for Source of Indirect Heating), particulate emissions from the TO/HRSG systems shall be limited to 0.25 pounds per million British thermal units (lb/MMBtu) heat input, each.

D.3.5 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, particulate emissions from each of the DDGS dryers (EU029 through EU032) shall be less than 45.64 pounds per hour when operating at a maximum throughput rate of 56 tons per hour.

The pounds per hour limitations were calculated using the following 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.3.6 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their 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.3.7 VOC and HAP Control

(a) In order to comply with Conditions D.3.1, D.3.2 and D.3.3, at least one of the two (2) thermal oxidizers (C9203 and C9303) shall be in operation and control emissions from the DDGS dryers (EU029 through EU032) and the distillation process at all times of operation.

(b) If compliance is demonstrated with the 10 ppmv VOC outlet concentration specified in Condition D.3.3(d):

(1) all VOC emissions from the emission units in these processes shall be routed to the TO/HRSG systems,

(2) that there are no open vents to the atmosphere between the mashing, cooking, liquefaction, distillation and dehydration processes and the TO/HRSG systems, and

(3) that the DDGS dryers shall maintain negative pressure.

D.3.8 Maintenance of Continuous Emission Monitoring Equipment [326 IAC 3-5][326 IAC 2-7-6(1),(6)][40 CFR 60, Subpart Db]

(a) Pursuant to 326 IAC 3-5 (Continuous Monitoring of Emissions), continuous emission monitoring systems for thermal oxidizers C9203 and C9303 shall be calibrated, maintained, and operated for measuring NOx, which meet all applicable performance specifications of 326 IAC 3-5-2.

(b) All continuous emissions monitoring systems are subject to monitor system certification requirements pursuant to 326 IAC 3-5-3.

(c) Nothing in this permit shall excuse the Permittee from complying with the requirements to operate a CEMS pursuant to 326 IAC 3-5 and 40 CFR 60.
D.3.9 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.3.1, D.3.2, D.3.3, D.3.4 and D.3.5, the Permittee shall perform PM, PM10, PM2.5, VOC, CO, acetaldehyde, acrolein, formaldehyde, and methanol testing on stack (S10), utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable PM.

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

D.3.10 NOx Continuous Emissions Monitoring (CEMS) Equipment Downtime

In the event that a breakdown of a NOx continuous emissions monitoring system (CEMS) occurs, a record shall be made of the time and reason of the breakdown and efforts made to correct the problem.

D.3.11 Visible Emissions Notations [40 CFR 64]

(a) Visible emission notations of the stack exhaust from the thermal oxidizers (C9203 and C9303) stack (S10) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.3.12 Thermal Oxidizer Temperature [326 IAC 8-5-6][40 CFR 64]

(a) A continuous monitoring system shall be calibrated, maintained, and operated on each of the two (2) thermal oxidizers (C9203 and C9303) for measuring operating temperature. For the purpose of this condition, continuous means no less often than once per fifteen (15) minutes.

(b) The Permittee shall determine the 3-hour average temperature from the most recent valid stack test that demonstrates compliance with limits in Conditions D.3.1, D.3.2, D.3.3, D.3.4, and D.3.5.

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

(d) If the 3-hour average temperature falls below the above mentioned 3-hour average temperature, the Permittee shall take a reasonable response. Section C - Response to
Excursions or Exceedances contains the Permittee's obligation with regard to the response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.3.13 Thermal Oxidizer Parametric Monitoring [326 IAC 8-5-6][40 CFR 64]

(a) The Permittee shall determine the appropriate duct pressure or fan amperage from the latest valid stack test that demonstrates the compliance status with limits in Conditions D.3.1, D.3.2, D.3.3, D.3.4, and D.3.5.

(b) On and after the date the stack tests are available, the duct pressure or fan amperage shall be maintained within the respective normal range as established during the latest compliance stack test.

(c) The Permittee shall monitor and record the duct pressure or fan amperage at least once per day when either thermal oxidizer is in operation.

(d) When, for any one reading, the duct pressure or fan amperage is outside the above mentioned range, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response shall be considered a deviation from this permit.

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

D.3.14 Record Keeping Requirements [326 IAC 8-5-6]

(a) To document the compliance status with Condition D.3.11, the Permittee shall maintain records of daily visible emission notations of the stack S10. 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) To document the compliance status with Condition D.3.12, and pursuant to 326 IAC 8-5-6, the Permittee shall maintain continuous temperature records for the thermal oxidizer and the 3-hour average temperature used to demonstrate compliance during the most recent compliant stack test.

(c) To document the compliance status with Condition D.3.13, and pursuant to 326 IAC 8-5-6, the Permittee shall maintain daily records of the duct pressure or fan amperage for the thermal oxidizers (C9203 and C9303). The Permittee shall include in its daily record when a pressure or fan amperage reading is not taken and the reason for the lack of the reading (e.g. the process did not operate that day).

(d) Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

D.3.15 Record Keeping Requirements for CEMS [326 IAC 2-7-5(3)(A)(iii)][326 IAC 3-5]

(a) The Permittee shall record the output of the continuous monitoring system(s) pounds per hour and shall perform the required record keeping pursuant to 326 IAC 3-5-6 and 326 IAC 3-5-7.

(b) In the event that a breakdown of the NOx continuous emission monitoring systems (CEMS) occurs, the Permittee shall maintain records of all CEMS malfunctions, out of control periods, calibration and adjustment activities, and repair or maintenance activities.

(c) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.
D.3.16 Reporting Requirements [326 IAC 2-7-5(3)(A)(iii)][326 IAC 3-5]

(a) Pursuant to 326 IAC 3-5-5(f)(1), the Permittee shall prepare and submit to IDEM, OAQ a written report for performance audits as follows:

(1) Owners or operators of emissions units required to conduct a:

   (A) cylinder gas audit;
   (B) relative accuracy test audit; or
   (C) continuous opacity monitor calibration error audit;

on continuous emission monitors shall prepare a written report of the results of the performance audit for each calendar quarter, or for other periods required by the department. The owner or operator shall submit quarterly reports to the department within thirty (30) calendar days after the end of each quarter for cylinder gas audits and continuous opacity monitor calibration error audits and within forty-five (45) calendar days after the completion of the test for relative accuracy test audits.

(2) The report must contain the information required by 326 IAC 3-5-5(f)(2).

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).

(b) Pursuant to 326 IAC 3-5-7(5), reporting of continuous monitoring system instrument downtime, except for zero (0) and span checks, which shall be reported separately, shall include the following:

(1) date of downtime;
(2) time of commencement;
(3) duration of each downtime;
(4) reasons for each downtime; and
(5) nature of system repairs and adjustments.

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 D.4 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(k) One (1) DDGS cooling drum, identified as EU033, constructed in 2007, permitted in 2015, and approved in 2019 for modification, with a maximum throughput rate of 66 tons/hr of DDGS, using baghouse C70 and the TO/HRSG systems as control, and exhausting to stack S70.</td>
</tr>
<tr>
<td>Note: A portion of the emission stream is continuously exhausted to stack S70.</td>
</tr>
</tbody>
</table>

(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 PSD Minor Limits [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following for the DDGS cooling drum (EU033):

<table>
<thead>
<tr>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) PM emissions shall be less than 2.6 lbs/hr.</td>
</tr>
<tr>
<td>(b) PM&lt;br&gt; emissions shall be less than 2.6 lbs/hr.</td>
</tr>
<tr>
<td>(c) PM&lt;br&gt; emissions shall be less than 2.6 lb/hr.</td>
</tr>
<tr>
<td>(d) The VOC emissions from baghouse stack S70 shall be less than 0.1 pounds per ton of DDGS produced in the DDGS cooling drum (EU033).</td>
</tr>
<tr>
<td>(e) The total DDGS produced shall be less than 490,560 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.</td>
</tr>
</tbody>
</table>

Compliance with the above limits, in combination with the potential to emit PM, PM10, PM2.5, and VOC from other units at the source, shall limit the PM, PM10, PM2.5, and VOC emissions from the entire source to less than 250 tons per twelve consecutive month period each and render the requirements of 326 IAC 2-2 Prevention of Significant Deterioration (PSD) not applicable.

#### D.4.2 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, particulate emissions from the one (1) DDGS cooling drum, identified as EU033, shall be less than 47.20 pounds per hour when operating at the maximum process throughput rate of 66 per hour.

The pound per hour limitation was calculated using the following equation:

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 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their 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 Particulate Control

(a) In order to comply with Conditions D.4.1(a), D.4.1(b), D.4.1(c), and D.4.2, Baghouse C70 shall be in operation and control emissions from the DDGS cooling drum (EU033) at all times that this unit is in operation.

(b) 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.4.5 Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.4.1 and D.4.2, the Permittee shall perform PM, PM10, PM2.5, and VOC testing for baghouse C70, utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable PM.

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

D.4.6 Visible Emissions Notations [40 CFR 64]

(a) Visible emission notations of the DDGS cooling drum stack exhaust (S70) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C – Response to Excursions and 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.

D.4.7 Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or
replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

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

**D.4.8 Record Keeping Requirements**

(a) To document the compliance status with Condition D.4.1(e), the Permittee shall maintain monthly records of the amount of DDGS produced.

(b) To document the compliance status with Condition D.4.6, the Permittee shall maintain daily records of the visible emission notations of the DDGS cooling drum 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 a visible emission notation (e.g., the process did not operate that day).

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

**D.4.9 Reporting Requirements**

A quarterly summary of the information to document the compliance status with Condition D.4.1(e) shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The reports submitted by the Permittee 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).
SECTION D.5  EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(n) One (1) ethanol loading system, identified as EU037, constructed in 2007, modified in 2010, and approved in 2019 for modification, consisting of two (2) rail loading spouts and two (2) truck loading spouts, with a combined limited throughput rate 165,000,000 gallons per twelve (12) consecutive month period for truck and railcar loading, using enclosed vapor combustion unit (VCU) C50 as control, which is fueled by natural gas, has a maximum heat input capacity of 12.4 MMBtu/hr, and exhausting to stack S50.

Under 40 CFR 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process 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.5.1 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 denatured ethanol load-out from the ethanol loading system (EU037) shall not exceed 165,000,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) VOC emissions from VCU CE009 shall not exceed 0.061 lbs/kgal of denatured ethanol loaded.

Compliance with these limits, combined with the potential to emit VOC from all other emission units at this source, shall limit the source-wide total potential to emit of VOC to less than 250 tons per twelve (12) consecutive month and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.5.2 Hazardous Air Pollutant (HAP) Minor Limit [326 IAC 2-4.1]

In order to render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable, the Permittee shall comply with the following:

(a) Hexane emissions from VCU CE009 shall not exceed 0.00303 lbs/kgal of denatured ethanol loaded.

(b) Toluene emissions from VCU CE009 shall not exceed 0.000363 lbs/kgal of denatured ethanol loaded.

(c) Total HAPs emissions from VCU CE009 shall not exceed 0.00355 lbs/kgal of denatured ethanol loaded.

Compliance with the HAP limit, in combination with the potential to emit HAP from other units, shall limit the HAP emissions from the entire source to less than ten (10) tons for any single HAP and less than twenty-five (25) for total HAPs per twelve (12) consecutive month period and render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable and shall render the source minor under Section 112 of the Clean Air Act (CAA).
D.5.3 VOC Emissions (Fuel Grade Ethanol at Dry Mills) [326 IAC 8-5-6]

Pursuant to 326 IAC 8-5-6, the Permittee shall comply with the following:

(a) The VOC emissions from the ethanol loadout shall be collected and controlled by an enclosed vapor combustion unit (VCU) (C50) when loading denatured ethanol.

(b) An enclosed vapor combustion unit (VCU) (C50) with an overall control efficiency of not less than ninety-eight percent (98%).

D.5.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

D.5.5 VOC and HAP Control

In order to comply with Conditions D.5.1 and D.5.2, enclosed vapor combustion unit (VCU) (C50) shall be in operation and control emissions from the ethanol loading rack (EU037) at all times when this rack is in operation.

D.5.6 Testing Requirements [326 IAC 2-7-6(1), (6)][326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.5.1 and D.5.3, the Permittee shall perform VOC testing for the enclosed vapor combustion unit (VCU) (C50), utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

(b) Not later than 120 days after issuance of this permit, SSM No. 179-41817-00033, in order to demonstrate compliance with Conditions D.5.2, the Permittee shall perform hexane and toluene testing for the enclosed vapor combustion unit (VCU) (C50), utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.5.7 VCU Flame [326 IAC 8-5-6][40 CFR 64]

In order to comply with Conditions D.5.1 and D.5.3, and pursuant to 326 IAC 8-5-6, the Permittee shall:

(a) Maintain an enclosed vapor combustion unit (VCU) pilot flame when the associated emission unit is in operation and continuously monitor the presence of an enclosed vapor combustion unit (VCU) pilot flame using a thermocouple or any other equivalent device to detect the presence of a flame when the associated emission unit is in operation.

(b) Maintain records of temperature or other parameters sufficient to demonstrate the presence of a pilot flame when the loading rack (EU037) is in operation.
**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

D.5.8 Record Keeping Requirements [326 IAC 8-5-6]

(a) To document the compliance status with Condition D.5.1, the Permittee shall maintain monthly records of the total amount of denatured ethanol loaded out from loading rack EU037.

(b) To document the compliance status with Condition D.5.7, the Permittee shall maintain records of temperature or other parameters sufficient to demonstrate the presence of a pilot flame when loading rack EU037 is in operation.

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

D.5.9 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.5.1 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The reports submitted by the Permittee 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).
SECTION D.6  EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Insignificant Activities:

(a) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

(1) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) British thermal units per hour and firing fuel containing equal to or less than five-tenths percent (0.5%) sulfur by weight, as follows:

(A) Three (3) kerosene-fired space heaters, constructed in 2007, each with a maximum rated capacity of 0.165 MMBtu/hr.

(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.6.1 Particulate Emissions Limitation [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate emissions from the three (3) kerosene-fired space heaters shall be limited to 0.25 pounds per MMBtu heat input, total.

D.6.2 Preventive Maintenance Plan  [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.
**SECTION D.7  EMISSIONS UNIT OPERATION CONDITIONS**

### Emissions Unit Description:

#### Insignificant Activities:

(e) Other emission units, not regulated by a NESHAP, with PM10, NOx, and SO2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

5) One (1) denaturant tank, identified as T64, constructed in 2007, with a maximum capacity of 200,000 gallons of natural gasoline.

Under 40 CFR 60, Subpart Kb, storage tanks T61 through T65 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.7.1 Volatile Organic Compounds (VOC) [326 IAC 8-4-3]

Pursuant to 326 IAC 8-4-3(b)(1) (Petroleum Liquid Storage Facilities), tank 64 is subject to the following:

(a) The facility must be retrofitted with an internal floating roof equipped with a closure seal, or seals, to close the space between the roof edge and tank wall unless the source has been retrofitted with equally effective alternative control which has been approved.

(b) The facility is maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials.

(c) All openings, except stub drains, are equipped with covers, lids, or seals such that:

(1) the cover, lid, or seal is in the closed position at all times except when in actual use;

(2) automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports; and

(3) rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.

#### D.7.2 Volatile Organic Compounds (VOC) [326 IAC 8-4-3(d)]

Pursuant to 326 IAC 8-4-3(d) (Petroleum Liquid Storage Facilities), the Permittee shall maintain the following records for a period of two (2) years for tank T64:

(a) The types of volatile petroleum liquid stored;
(b) The maximum true vapor pressure of the liquids as stored; and
(c) The results of the inspections performed on the storage vessels.

The above records shall be made available to the IDEM, OAQ upon written request.

D.7.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.7.4 Record Keeping Requirements

(a) To document the compliance status with Condition D.7.2, the Permittee shall maintain the following records for a period of two (2) years for tank T64:

(1) The types of volatile petroleum liquid stored;
(2) The maximum true vapor pressure of the liquids as stored; and
(3) The results of the inspections performed on the storage vessels.

(b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.
SECTION E.1 NSPS

Emissions Unit Description:

(g) Two (2) thermal oxidizers with heat recovery steam generator (TO/HRSG) systems, identified as C9203 and C9303, constructed in 2007 and modified in 2010, with a maximum heat input capacity of 143 MMBtu/hr, each, using natural gas as fuel, and exhausting to stack S10.

Under 40 CFR 60, Subpart Db, the TO/HRSG systems 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 Db.

(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 Industrial-Commercial-Institutional Steam Generating Units NSPS [326 IAC 12] [40 CFR Part 60, Subpart Db]

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

(1) 40 CFR 60.40b(a), (g), and (j)
(2) 40 CFR 60.41b
(3) 40 CFR 60.42b(e), (g), and (k)
(4) 40 CFR 60.44b(a), (e), (f), (h), (l), (l)(1), and (l)(2)
(5) 40 CFR 60.45b(a), (b), (c)(1), (f), (g), and (h)
(6) 40 CFR 60.46b(a), (c), (e)(1), and (e)(4)
(7) 40 CFR 60.47b
(8) 40 CFR 60.48b(b)(1), (c), (d), (e)(2), (e)(3), (f), and (g)
(9) 40 CFR 60.49b(a), (a)(1) through (a)(3), (b) through (d), (g), (h)(2), (h)(4), (i), (j), (k), (o), (v), and (w)
SECTION E.2 NSPS

Emissions Unit Description:

Insignificant Activities:

(e) Ethanol and denaturant storage tanks, including the following:

(1) One (1) off spec tank for 190-proof ethanol, identified as T65, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons.

(2) One (1) tank for 200-proof ethanol, identified as T63, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons of 200-proof ethanol.

(3) One (1) denatured ethanol tank, identified as T61, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 1,500,000 gallons of denatured ethanol, and permitted in 2014 to receive imported denatured ethanol via tanker truck.

(4) One (1) denatured ethanol tank, identified as T62, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 1,500,000 gallons of denatured ethanol, and permitted in 2014 to receive imported denatured ethanol via tanker truck.

(5) One (1) denaturant tank, identified as T64, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons of natural gasoline.

Under 40 CFR 60, Subpart Kb, storage tanks T61 through T65 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.2.1 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 K.

(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.2.2 Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984 NSPS [326 IAC 12] [40 CFR Part 60, Subpart Kb]

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

1. 40 CFR 60.110b
2. 40 CFR 60.111b
3. 40 CFR 60.112b(a)(1)
4. 40 CFR 60.113b(a)
5. 40 CFR 60.115b(a)
6. 40 CFR 60.116b(a) through (e)
7. 40 CFR 60.117b

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

E.2.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.
Emissions Unit Description:

(f) One (1) fermentation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with an equivalent hourly throughput rate of 18,738 gallons per hour of 200 proof ethanol, using wet scrubber C40 as control, and exhausting to stack S40. This process consists of the following:

1. Seven (7) fermenters, identified as EU012 through EU018.
2. One (1) beer well, identified as EU021.
3. One (1) wet scrubber, identified as C40, constructed in 2007 and modified in 2010, and exhausting to stack S40. Stack S40 is equipped with a high plume exhaust system, operated when necessary, to increase the CO2 exhaust stream discharge height. The scrubber is approved for modification in 2019 to include a recirculation pump to recover a portion of the scrubber bottoms and inject it back into the feed header from the beer well to the scrubber.

The following scenarios are approved:

<table>
<thead>
<tr>
<th>Scenario ID</th>
<th>Operating Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Maximum beer feed rate with recirculation pump on</td>
</tr>
<tr>
<td>AOS1</td>
<td>Maximum beer feed rate with recirculation pump off</td>
</tr>
<tr>
<td>AOS2</td>
<td>Reduced beer feed rate with recirculation pump on</td>
</tr>
<tr>
<td>AOS3</td>
<td>Reduced beer feed rate with recirculation pump off</td>
</tr>
<tr>
<td>AOS4</td>
<td>Scrubber cleaning (per preventative maintenance plan procedure)</td>
</tr>
</tbody>
</table>

Under 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered affected facilities.

(h) One (1) distillation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with a maximum throughput rate of 18,735 gallons of 200 proof ethanol per hour, using thermal oxidizers C9203 and C9303 as control, and exhausting to stack S10. This process consists of the following:

1. Two (2) slurry tanks, identified as EU010 and EU011.
2. Two (2) yeast propagation tanks, identified as EU019 and EU020.
3. One (1) beer column, identified as EU022.
4. One (1) rectifier column, identified as EU023.
5. One (1) side stripper, identified as EU024.
6. Three (3) sets of three (3) molecular sieves, identified as EU025.
7. Two (2) sets of four (4) evaporators, identified as EU026.

Under 40 CFR 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered affected facilities.
are considered affected facilities.

(n) One (1) ethanol loading system, identified as EU037, constructed in 2007 and modified in
2010, consisting of two (2) rail loading spouts and two (2) truck loading spouts, with a
combined limited throughput rate 165,000,000 gallons per twelve (12) consecutive month
period for truck and railcar loading, using enclosed vapor combustion unit (VCU) C50 as
control, which is fueled by natural gas, has a maximum heat input capacity of 12.4 MMBtu/hr,
and exhausting to stack S50.

Under 40 CFR 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor
service, sampling connection systems, open-ended valves or lines, and valves of this process
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.3.1 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 VVa.

(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.3.2 Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which
Construction, Reconstruction, or Modification Commenced After November 7, 2006 NSPS
[326 IAC 12] [40 CFR Part 60, Subpart VVa]

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

(1) 40 CFR 60.480a
(2) 40 CFR 60.481a
(3) 40 CFR 60.482-1a
(4) 40 CFR 60.482-2a
(5) 40 CFR 60.482-3a
(6) 40 CFR 60.482-4a
(7) 40 CFR 60.482-5a
(8) 40 CFR 60.482-6a
(9) 40 CFR 60.482-7a
(10) 40 CFR 60.482-8a
(11) 40 CFR 60.482-9a
(12) 40 CFR 60.482-10a
(13) 40 CFR 60.482-11a
(14) 40 CFR 60.483-1a
(15)  40 CFR 60.483-2a
(16)  40 CFR 60.484a
(17)  40 CFR 60.485a
(18)  40 CFR 60.486a
(19)  40 CFR 60.487a
(20)  40 CFR 60.488a
(21)  40 CFR 60.489a
SECTION E.4 NSPS

Emissions Unit Description:

Insignificant Activities:

(b) One (1) diesel-fired fire pump, identified as EU038, constructed in 2007, with a maximum power output rate of 300 HP, and exhausting to stack S100.

Under 40 CFR 60, Subpart IIII, the diesel-fired fire pump EU038 is considered an affected facility.
Under 40 CFR 63, Subpart ZZZZ, the diesel-fired fire pump EU038 is considered an affected source.

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

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

E.4.1 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 III.

(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.4.2 Stationary Compression Ignition Internal Combustion Engines NSPS [326 IAC 12] [40 CFR Part 60, Subpart III]

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

(1) 40 CFR 60.4200(a)(1)(ii), (a)(2)(ii), and (a)(3)
(2) 40 CFR 60.4201(a)
(3) 40 CFR 60.4204(b)
(4) 40 CFR 60.4205(c)
(5) 40 CFR 60.4206
(6) 40 CFR 60.4207(a), (b) and (c)
(7) 40 CFR 60.4208
(8) 40 CFR 60.4209
(9) 40 CFR 60.4211(a) and (c)
(10) 40 CFR 60.4212(a), (b) and (c)
(11) 40 CFR 60.4214(b) and (c)
(12) 40 CFR 60.4218
(13) 40 CFR 60.4219
(14) Table 3 to Subpart III
(15) Table 4 to Subpart IIII
(16) Table 5 to Subpart IIII
(17) Table 6 to Subpart IIII
(18) Table 8 to Subpart IIII

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

E.4.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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.
SECTION E.5  

Emissions Unit Description:

Insignificant Activities:

(b) One (1) diesel-fired fire pump, identified as EU038, constructed in 2007, with a maximum power output rate of 300 HP, and exhausting to stack S100.

Under 40 CFR 60, Subpart III, the diesel-fired fire pump EU038 is considered an affected facility.
Under 40 CFR 63, Subpart ZZZZ, the diesel-fired fire pump EU038 is considered an affected source.

(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 2-7-5(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.5.2 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 F 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
(3) 40 CFR 63.6590(a)(2)(iii) and (c)(1)
(4) 40 CFR 63.6595(a)(6)
(5) 40 CFR 63.6665
(6) 40 CFR 63.6670
(7) 40 CFR 63.6675
**SECTION E.6  NESHAP**

**Emissions Unit Description:**

**Insignificant Activities:**

(c) Fuel dispensing activities as follows:

1. A gasoline fuel transfer dispensing operation handling less than or equal to one thousand three hundred (1,300) gallons per day and filling storage tanks having a capacity equal to or less than ten thousand five hundred (10,500) gallons, as follows:

Under 40 CFR 63, Subpart CCCCCC, the gasoline fuel transfer dispensing operation is considered as 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 2-7-5(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 CCCCCC.

(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.6.2 Gasoline-Dispensing Facilities NESHAP [40 CFR Part 63, Subpart CCCCCC]**

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart CCCCCC (included as Attachment G to the operating permit), for the emission unit(s) listed above:

1. 40 CFR 63.11110
2. 40 CFR 63.11111(a), (b), (e), (h), (i), and (j)
3. 40 CFR 63.11112(a) and (b)
4. 40 CFR 63.11113(a)(2)
5. 40 CFR 63.11115
6. 40 CFR 63.11116
7. 40 CFR 63.11125(d)
8. 40 CFR 63.11130
9. 40 CFR 63.11131
10. Table 3 to Subpart CCCCCC
Emission Limitations and Standards  [326 IAC 2-7-5(1)]

E.6.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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.
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: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, Indiana 46714
Part 70 Permit No.: T179-41632-00033

This form consists of 2 pages

☐ 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

| Date/Time Emergency started: |  |
| Date/Time Emergency was corrected: |  |

| Was the facility being properly operated at the time of the emergency? | Y | N |
| Type of Pollutants Emitted: TSP, PM-10, SO₂, VOC, NOₓ, CO, Pb, other: |  |
| Estimated amount of pollutant(s) emitted during emergency: |  |

| Describe the steps taken to mitigate the problem: |  |
| Describe the corrective actions/response steps taken: |  |

| Describe the measures taken to minimize emissions: |  |
| If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value: |  |

Form Completed by:____________________________

Title / Position: ______________________________

Date:_______________________________________

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

Part 70 Quarterly Report

Source Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
Source Address: 1441 South Adams St., Bluffton, Indiana 46714  
Part 70 Permit No.: T179-41632-00033  
Facility: Grain Receiving and Handling  
Parameter: The total grain received  
Limit: Shall be less than 1,622,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

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<th>YEAR</th>
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</thead>
</table>

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<td>Previous 11 Months</td>
<td>12 Month Total</td>
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</tbody>
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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: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, Indiana 46714
Part 70 Permit No.: T179-41632-00033
Facility: DDGS Dryers (EU029 through EU032)
Parameter: The total DDGS produced
Limit: Shall be less than 490,560 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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<tbody>
<tr>
<td>Month</td>
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</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: ________________________________
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

Part 70 Quarterly Report

Source Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, Indiana 46714
Part 70 Permit No.: T179-41632-00033
Facility: Ethanol Loading System (EU037)
Parameter: The denatured ethanol load-out
Limit: Shall not exceed 165,000,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: ____________________  YEAR: ____________________

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<th>Column 1 + Column 2</th>
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<tr>
<td>This Month</td>
<td>Previous 11 Months</td>
<td>12 Month Total</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: ____________________________________________
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

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<th>Permit Requirement (specify permit condition #)</th>
<th>Date of Deviation:</th>
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Title / Position: ____________________________
Date: ____________________________
Phone: ____________________________
Fugitive Dust Control Plan

1.0 Introduction and Background

Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant is an existing fuel ethanol production facility located in Bluffton, Indiana. The plant manufactures fuel grade ethanol at a rate of 150 million gallons per year (150 MMgal/yr). Pursuant to Title 326 of the Indiana Administrative Code (IAC) Article 6 Rule 5, the Fugitive Dust Control Plan has been prepared to identify all potential particulate matter (PM) fugitive emission sources and to summarize proposed control measures for each source.

There are several potential sources of fugitive PM emissions associated with the operation of Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant. Emission sources may include the transport, unloading, handling and storage of grain; the scalping and milling of corn; the transport, handling, storage, and loading of dried distiller's grain and soluble (DDGS); and vehicular traffic on paved haul roads. The plant utilizes state-of-the-art air emission control equipment to reduce facility-wide air emissions, including fugitive PM emissions.

2.0 Emission Sources

There are three main potential sources of fugitive PM emissions associated with the operation of the ethanol plant. Emission sources will include the following:

- Grain Receiving unloading and handling
- DDGS Loading and handling
- Paved haul roads - vehicular traffic

Grain Processing:

Grain (corn) is delivered to the facility via truck and railcar. The unloading of the grain is conducted within a building, which is enclosed except for entry/exit doors for the trucks and/or railcars. The grain is mechanically conveyed to silos and bins for storage. The grain is then mechanically conveyed to a scalping/milling area where four (4) hammermills are used to mill the grain into flour, which is used as feedstock for ethanol production. Potential fugitive PM emission sources associated with the grain processing include:

- Grain transporting (truck and rail)
- Grain unloading
- Grain conveying
- Grain storage
- Grain milling

DDGS Processing:

The facility's distillation process removes the non-fermentable corn solids from the process stream. The residue mash leaving distillation, called whole stillage, is transferred from the base of the distillation column to the stillage processing area via pipe. The whole stillage passes through a centrifuge to remove the majority of water. The underflow from the centrifuge is called wet distillers grain with soluble (WDGS) or wet cake. The facility will have the option to handle the WDGS in three ways at this point in the process:
1) The WDGS is high quality feed (about 65% moisture) and can be loaded directly to trucks via a front-end loader and transported to customers. The WDGS will be stored on a covered pad, typically 2-3 days until transport.

2) The WDGS can be partially dried to create a product known as modified wet distillers grain with soluble (MWDGS) or modified wet cake, this product is typically 50% moisture. This product has a slightly longer shelf life in storage than the WDGS.

3) The WDGS can be further dried to create a product known as dried distillers grains with soluble (DDGS). The DDGS are about 10% moisture and can be stored for long periods of time. Upon leaving the drying system, the DDGS must be cooled prior to storage or loadout. The DDGS storage and loadout system is ventilated to a high efficiency baghouse or the thermal oxidizers emission control.

Potential fugitive PM emission sources associated with DDGS processing include:

- DDGS conveying
- DDGS dump pit
- DDGS storage
- DDGS loading
- DDGS transport

Paved Haul Roads:

Fugitive PM emissions from the paved haul roads are associated with truck traffic hauling grain, denaturant, denatured ethanol, WDGS and DDGS onto and off of the site. Other vehicular traffic from employees and visitors will also generate fugitive PM emissions from the paved haul roads.

3.0 Fugitive PM Control Measures

Fugitive PM control measures at Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant vary from the use of control equipment to good housekeeping practices. Each potential fugitive PM emission source, as identified above, has been listed with the control measure(s) that Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant has implemented during plant operations.

Grain Processing:

a) Grain Transporting - Fugitive emissions are only associated with the transport of grain via truck since there will be no fugitive emissions associated with an enclosed railcar. Grain is delivered by hopper truck trailer, all truck trailers are covered by a tarp or similar cover until they are ready to be scaled and released for unloading.

b) Grain Unloading - Grain is unloaded from a truck or railcar within an enclosed building, except for the entry/exit doors for the trucks and railcars. PM emissions from the building are controlled with an aspirated (choked-flow) ventilation system coupled with a high efficiency fabric filter baghouse (Grain Receiving baghouse (C20)).

c) Grain Conveying - All grain conveyors are enclosed and are vented to a high efficiency fabric filter baghouse (C20).

d) Grain Storage - Grain is stored in two (2) large silos, one (1) day bins, and one (1) surge bin. All silos and bins are vented to high efficiency fabric filter baghouse (C20). There is also one uncontrolled permanent metal grain storage bin.
e) **Grain Milling** - Grain is milled by four (4) hammermills which turn grain into flour. PM emissions from the hammermilling operation are controlled with an aspirated (choked-flow) ventilation system coupled with a high efficiency fabric filter baghouse (Hammermill baghouse (C30)).

**DDGS Processing:**

a) **DDGS Conveying** - All DDGS conveyors are enclosed and are vented to a high efficiency fabric filter baghouse (DDGS Storage and Loading Baghouse (C90)).

b) **DDGS Dump Pit** - PM emissions from the DDGS dump pit are controlled by an aspirated (choked-flow) ventilation system coupled with a high efficiency fabric filter baghouse (C90).

c) **DDGS Storage** - DDGS are stored in two (2) storage silos and in an enclosed DDGS storage building. PM emissions from the silos are controlled by an aspirated (choked-flow) ventilation system coupled with a high efficiency fabric filter baghouse (C90).

d) **DDGS Loading** - DDGS's are loaded into trucks and railcars in the same enclosed building that grain is received. DDGS's are loaded into trucks and railcars by a high efficiency dustless spout. These spouts are lowered into the truck or railcar compartment and hover slightly above the loaded product. As the DDGS fills the compartment, the spout slowly rises up creating a vacuum on the emissions using a high efficiency fabric filter baghouse (C90). Therefore, no fugitive emissions are generated since there is no gap from the drop location of the DDGS into the compartment.

e) **DDGS Transport** - Similar to grain transport, trucks transporting DDGS will be covered by a tarp or similar cover from the loading area to the site egress.

**Paved Haul Roads:**

a) Maximum vehicle speeds along the roadways will be limited to 10 mph.

b) Mud, dirt, and other debris will be removed from roadways by using brooms as necessary. A mechanical sweeper will be utilized as needed in order to show compliance with 326 IAC 6-4 and 326 IAC 6-5.
Attachment B

Part 70 Operating Permit Renewal No: T179-41632-00033

[Downloaded from the eCFR on May 13, 2013]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES


SOURCE: 72 FR 64883, Nov. 16, 2007, unless otherwise noted.

§ 60.480a  Applicability and designation of affected facility.

(a)(1) The provisions of this subpart apply to affected facilities in the synthetic organic chemicals manufacturing industry.

(2) The group of all equipment (defined in § 60.481a) within a process unit is an affected facility.

(b) Any affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after November 7, 2006, shall be subject to the requirements of this subpart.

(c) Addition or replacement of equipment for the purpose of process improvement which is accomplished without a capital expenditure shall not by itself be considered a modification under this subpart.

(d)(1) If an owner or operator applies for one or more of the exemptions in this paragraph, then the owner or operator shall maintain records as required in § 60.486a(i).

(2) Any affected facility that has the design capacity to produce less than 1,000 Mg/yr (1,102 ton/yr) of a chemical listed in § 60.489 is exempt from §§ 60.482-1a through 60.482-11a.

(3) If an affected facility produces heavy liquid chemicals only from heavy liquid feed or raw materials, then it is exempt from §§ 60.482-1a through 60.482-11a.

(4) Any affected facility that produces beverage alcohol is exempt from §§ 60.482-1a through 60.482-11a.

(5) Any affected facility that has no equipment in volatile organic compounds (VOC) service is exempt from §§ 60.482-1a through 60.482-11a.

(e) Alternative means of compliance — (1) Option to comply with part 65. (i) Owners or operators may choose to comply with the provisions of 40 CFR part 65, subpart F, to satisfy the requirements of §§ 60.482-1a through 60.487a for an affected facility. When choosing to comply with 40 CFR part 65, subpart F, the requirements of §§ 60.485a(d), (e), and (f), and 60.486a(i) and (j) still apply. Other provisions applying to an owner or operator who chooses to comply with 40 CFR part 65 are provided in 40 CFR 65.1.

(ii) Part 60, subpart A. Owners or operators who choose to comply with 40 CFR part 65, subpart F must also comply with §§ 60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for that equipment. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(1)(ii) do not apply to owners or operators of equipment subject to this subpart complying with 40 CFR part 65, subpart F, except that provisions
required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart F, must comply with 40 CFR part 65, subpart A.

(2) Part 63, subpart H. (i) Owners or operators may choose to comply with the provisions of 40 CFR part 63, subpart H, to satisfy the requirements of §§ 60.482-1a through 60.487a for an affected facility. When choosing to comply with 40 CFR part 63, subpart H, the requirements of § 60.485a(d), (e), and (f), and § 60.486a(i) and (j) still apply.

(ii) Part 60, subpart A. Owners or operators who choose to comply with 40 CFR part 63, subpart H must also comply with §§ 60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for that equipment. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(2)(ii) do not apply to owners or operators of equipment subject to this subpart complying with 40 CFR part 63, subpart H, except that provisions required to be met prior to implementing 40 CFR part 63 still apply. Owners and operators who choose to comply with 40 CFR part 63, subpart H, must comply with 40 CFR part 63, subpart A.

(f) Stay of standards. (1) Owners or operators that start a new, reconstructed, or modified affected source prior to November 16, 2007 are not required to comply with the requirements in this paragraph until EPA takes final action to require compliance and publishes a document in the FEDERAL REGISTER.

(i) The definition of “capital expenditure” in § 60.481a of this subpart. While the definition of “capital expenditure” is stayed, owners or operators should use the definition found in § 60.481 of subpart VV of this part.

(ii) [Reserved]

(2) Owners or operators are not required to comply with the requirements in this paragraph until EPA takes final action to require compliance and publishes a document in the FEDERAL REGISTER.

(i) The definition of “process unit” in § 60.481a of this subpart. While the definition of “process unit” is stayed, owners or operators should use the following definition:

Process unit means components assembled to produce, as intermediate or final products, one or more of the chemicals listed in § 60.489 of this part. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product.

(ii) The method of allocation of shared storage vessels in § 60.482-1a(g) of this subpart.

(iii) The standards for connectors in gas/vapor service and in light liquid service in § 60.482-11a of this subpart.

[72 FR 64883, Nov. 16, 2007, as amended at 73 FR 31375, June 2, 2008]

§ 60.481a Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act (CAA) or in subpart A of part 60, and the following terms shall have the specific meanings given them.

Capital expenditure means, in addition to the definition in 40 CFR 60.2, an expenditure for a physical or operational change to an existing facility that:

(a) Exceeds P, the product of the facility’s replacement cost, R, and an adjusted annual asset guideline repair allowance, A, as reflected by the following equation: P = R × A, where:

(1) The adjusted annual asset guideline repair allowance, A, is the product of the percent of the replacement cost, Y, and the applicable basic annual asset guideline repair allowance, B, divided by 100 as reflected by the following equation:

A = Y × (B ÷ 100);
(2) The percent $Y$ is determined from the following equation: $Y = 1.0 - 0.575 \log X$, where $X$ is 2006 minus the year of construction; and

(3) The applicable basic annual asset guideline repair allowance, $B$, is selected from the following table consistent with the applicable subpart:

Table for Determining Applicable Value for $B$

<table>
<thead>
<tr>
<th>Subpart applicable to facility</th>
<th>Value of $B$ to be used in equation</th>
</tr>
</thead>
<tbody>
<tr>
<td>VVa</td>
<td>12.5</td>
</tr>
<tr>
<td>GGGa</td>
<td>7.0</td>
</tr>
</tbody>
</table>

*Closed-loop system* means an enclosed system that returns process fluid to the process.

*Closed-purge system* means a system or combination of systems and portable containers to capture purged liquids. Containers for purged liquids must be covered or closed when not being filled or emptied.

*Closed vent system* means a system that is not open to the atmosphere and that is composed of hard-piping, ductwork, connections, and, if necessary, flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device or back to a process.

*Connector* means flanged, screwed, or other joined fittings used to connect two pipe lines or a pipe line and a piece of process equipment or that close an opening in a pipe that could be connected to another pipe. Joined fittings welded completely around the circumference of the interface are not considered connectors for the purpose of this regulation.

*Control device* means an enclosed combustion device, vapor recovery system, or flare.

*Distance piece* means an open or enclosed casing through which the piston rod travels, separating the compressor cylinder from the crankcase.

*Double block and bleed system* means two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

*Duct work* means a conveyance system such as those commonly used for heating and ventilation systems. It is often made of sheet metal and often has sections connected by screws or crimping. Hard-piping is not ductwork.

*Equipment* means each pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, and flange or other connector in VOC service and any devices or systems required by this subpart.

*First attempt at repair* means to take action for the purpose of stopping or reducing leakage of organic material to the atmosphere using best practices.

*Fuel gas* means gases that are combusted to derive useful work or heat.

*Fuel gas system* means the offsite and onsite piping and flow and pressure control system that gathers gaseous stream(s) generated by onsite operations, may blend them with other sources of gas, and transports the gaseous stream for use as fuel gas in combustion devices or in-process combustion equipment, such as furnaces and gas turbines, either singly or in combination.

*Hard-piping* means pipe or tubing that is manufactured and properly installed using good engineering judgment and standards such as ASME B31.3, Process Piping (available from the American Society of Mechanical Engineers, P.O. Box 2300, Fairfield, NJ 07007-2300).
**In gas/vapor service** means that the piece of equipment contains process fluid that is in the gaseous state at operating conditions.

**In heavy liquid service** means that the piece of equipment is not in gas/vapor service or in light liquid service.

**In light liquid service** means that the piece of equipment contains a liquid that meets the conditions specified in § 60.485a(e).

**In-situ sampling systems** means nonextractive samplers or in-line samplers.

**In vacuum service** means that equipment is operating at an internal pressure which is at least 5 kilopascals (kPa) (0.7 psia) below ambient pressure.

**In VOC service** means that the piece of equipment contains or contacts a process fluid that is at least 10 percent VOC by weight. (The provisions of § 60.485a(d) specify how to determine that a piece of equipment is not in VOC service.)

**Initial calibration value** means the concentration measured during the initial calibration at the beginning of each day required in § 60.485a(b)(1), or the most recent calibration if the instrument is recalibrated during the day (i.e., the calibration is adjusted) after a calibration drift assessment.

**Liquids dripping** means any visible leakage from the seal including spraying, misting, clouding, and ice formation.

**Open-ended valve or line** means any valve, except safety relief valves, having one side of the valve seat in contact with process fluid and one side open to the atmosphere, either directly or through open piping.

**Pressure release** means the emission of materials resulting from system pressure being greater than set pressure of the pressure relief device.

**Process improvement** means routine changes made for safety and occupational health requirements, for energy savings, for better utility, for ease of maintenance and operation, for correction of design deficiencies, for bottleneck removal, for changing product requirements, or for environmental control.

**Process unit** means the components assembled and connected by pipes or ducts to process raw materials and to produce, as intermediate or final products, one or more of the chemicals listed in § 60.489. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the product. For the purpose of this subpart, process unit includes any feed, intermediate and final product storage vessels (except as specified in § 60.482-1a(g)), product transfer racks, and connected ducts and piping. A process unit includes all equipment as defined in this subpart.

**Process unit shutdown** means a work practice or operational procedure that stops production from a process unit or part of a process unit during which it is technically feasible to clear process material from a process unit or part of a process unit consistent with safety constraints and during which repairs can be accomplished. The following are not considered process unit shutdowns:

1. An unscheduled work practice or operational procedure that stops production from a process unit or part of a process unit for less than 24 hours.

2. An unscheduled work practice or operational procedure that would stop production from a process unit or part of a process unit for a shorter period of time than would be required to clear the process unit or part of the process unit of materials and start up the unit, and would result in greater emissions than delay of repair of leaking components until the next scheduled process unit shutdown.

3. The use of spare equipment and technically feasible bypassing of equipment without stopping production.
Quarter means a 3-month period; the first quarter concludes on the last day of the last full month during the 180 days following initial startup.

Repaired means that equipment is adjusted, or otherwise altered, in order to eliminate a leak as defined in the applicable sections of this subpart and, except for leaks identified in accordance with §§ 60.482-2a(b)(2)(ii) and (d)(6)(ii) and (d)(6)(iii), 60.482-3a(f), and 60.482-10a(f)(1)(ii), is re-monitored as specified in § 60.485a(b) to verify that emissions from the equipment are below the applicable leak definition.

Replacement cost means the capital needed to purchase all the depreciable components in a facility.

Sampling connection system means an assembly of equipment within a process unit used during periods of representative operation to take samples of the process fluid. Equipment used to take nonroutine grab samples is not considered a sampling connection system.

Sensor means a device that measures a physical quantity or the change in a physical quantity such as temperature, pressure, flow rate, pH, or liquid level.

Storage vessel means a tank or other vessel that is used to store organic liquids that are used in the process as raw material feedstocks, produced as intermediates or final products, or generated as wastes. Storage vessel does not include vessels permanently attached to motor vehicles, such as trucks, railcars, barges or ships.

Synthetic organic chemicals manufacturing industry means the industry that produces, as intermediates or final products, one or more of the chemicals listed in § 60.489.

Transfer rack means the collection of loading arms and loading hoses, at a single loading rack, that are used to fill tank trucks and/or railcars with organic liquids.

Volatile organic compounds or VOC means, for the purposes of this subpart, any reactive organic compounds as defined in § 60.2 Definitions.

EFFECTIVE DATE NOTE: At 73 FR 31376, June 2, 2008, in § 60.481a, the definitions of “capital expenditure” and “process unit” were stayed until further notice.

§ 60.482-1a Standards: General.

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

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

(c)(1) An owner or operator may request a determination of equivalence of a means of emission limitation to the requirements of §§ 60.482-2a, 60.482-3a, 60.482-5a, 60.482-6a, 60.482-7a, 60.482-8a, and 60.482-10a as provided in § 60.484a.

(2) If the Administrator makes a determination that a means of emission limitation is at least equivalent to the requirements of §§ 60.482-2a, 60.482-3a, 60.482-5a, 60.482-6a, 60.482-7a, 60.482-8a, or 60.482-10a, an owner or operator shall comply with the requirements of that determination.

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

(e) Equipment that an owner or operator designates as being in VOC service less than 300 hr/yr is excluded from the requirements of §§ 60.482-2a through 60.482-11a if it is identified as required in § 60.486a(e)(6) and it meets any of the conditions specified in paragraphs (e)(1) through (3) of this section.
(1) The equipment is in VOC service only during startup and shutdown, excluding startup and shutdown between batches of the same campaign for a batch process.

(2) The equipment is in VOC service only during process malfunctions or other emergencies.

(3) The equipment is backup equipment that is in VOC service only when the primary equipment is out of service.

(f)(1) If a dedicated batch process unit operates less than 365 days during a year, an owner or operator may monitor to detect leaks from pumps, valves, and open-ended valves or lines at the frequency specified in the following table instead of monitoring as specified in §§ 60.482-2a, 60.482-7a, and 60.483.2a:

<table>
<thead>
<tr>
<th>Operating time (percent of hours during year)</th>
<th>Equivalent monitoring frequency time in use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly</td>
<td>Quarterly, Quarterly, Semiannually</td>
</tr>
<tr>
<td>0 to &lt;25</td>
<td>Quarterly, Annually</td>
</tr>
<tr>
<td>25 to &lt;50</td>
<td>Quarterly, Semiannually, Annually</td>
</tr>
<tr>
<td>50 to &lt;75</td>
<td>Bimonthly, Three quarters, Semiannually</td>
</tr>
<tr>
<td>75 to 100</td>
<td>Monthly, Quarterly, Semiannually</td>
</tr>
</tbody>
</table>

(2) Pumps and valves that are shared among two or more batch process units that are subject to this subpart may be monitored at the frequencies specified in paragraph (f)(1) of this section, provided the operating time of all such process units is considered.

(iii) When monitoring is conducted monthly, monitoring events must be separated by at least 30 calendar days.

(ii) When monitoring is conducted quarterly, monitoring events must be separated by at least 60 calendar days.

(iv) When monitoring is conducted semiannually, monitoring events must be separated by at least 90 calendar days.

(iv) When monitoring is conducted annually, monitoring events must be separated by at least 120 calendar days.

(g) If the storage vessel is shared with multiple process units, the process unit with the greatest annual amount of stored materials (predominant use) is the process unit the storage vessel is assigned to. If the storage vessel is shared equally among process units, and one of the process units has equipment subject to this subpart, the storage vessel is assigned to that process unit. If the storage vessel is shared equally among process units, none of which have equipment subject to this subpart of this part, the storage vessel is assigned to the process unit subject to subpart VV of this part. If the predominant use of the storage vessel varies from year to year, then the owner or operator must estimate the predominant use initially and reassess every 3 years. The owner or operator must keep records of the information and supporting calculations that show how predominant use is determined. All equipment on the storage vessel must be monitored when in VOC service.

EFFECTIVE DATE NOTE: At 73 FR 31376, June 2, 2008, in § 60.482-1a, paragraph (g) was stayed until further notice.

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

(a)(1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in § 60.485a(b), except as provided in § 60.482-1a(c) and (f) and paragraphs (d), (e), and (f) of this section. A pump that begins operation in light liquid service after the initial startup date for the process unit must be monitored for the first
time within 30 days after the end of its startup period, except for a pump that replaces a leaking pump and except as provided in § 60.482-1a(c) and paragraphs (d), (e), and (f) of this section.

(2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal, except as provided in § 60.482-1a(f).

(b)(1) The instrument reading that defines a leak is specified in paragraphs (b)(1)(i) and (ii) of this section.

(i) 5,000 parts per million (ppm) or greater for pumps handling polymerizing monomers;

(ii) 2,000 ppm or greater for all other pumps.

(2) If there are indications of liquids dripping from the pump seal, the owner or operator shall follow the procedure specified in either paragraph (b)(2)(i) or (ii) of this section. This requirement does not apply to a pump that was monitored after a previous weekly inspection and the instrument reading was less than the concentration specified in paragraph (b)(1)(i) or (ii) of this section, whichever is applicable.

(i) Monitor the pump within 5 days as specified in § 60.485a(b). A leak is detected if the instrument reading measured during monitoring indicates a leak as specified in paragraph (b)(1)(i) or (ii) of this section, whichever is applicable. The leak shall be repaired using the procedures in paragraph (c) of this section.

(ii) Designate the visual indications of liquids dripping as a leak, and repair the leak using either the procedures in paragraph (c) of this section or by eliminating the visual indications of liquids dripping.

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

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected. First attempts at repair include, but are not limited to, the practices described in paragraphs (c)(2)(i) and (ii) of this section, where practicable.

(i) Tightening the packing gland nuts;

(ii) Ensuring that the seal flush is operating at design pressure and temperature.

(d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (a) of this section, provided the requirements specified in paragraphs (d)(1) through (6) of this section are met.

(1) Each dual mechanical seal system is:

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

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

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

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

(3) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.
(4)(i) Each pump is checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

(ii) If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the owner or operator shall follow the procedure specified in either paragraph (d)(4)(ii)(A) or (B) of this section prior to the next required inspection.

(A) Monitor the pump within 5 days as specified in § 60.485a(b) to determine if there is a leak of VOC in the barrier fluid. If an instrument reading of 2,000 ppm or greater is measured, a leak is detected.

(B) Designate the visual indications of liquids dripping as a leak.

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

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

(iii) If the sensor indicates failure of the seal system, the barrier fluid system, or both, based on the criterion established in paragraph (d)(5)(ii) of this section, a leak is detected.

(6)(i) When a leak is detected pursuant to paragraph (d)(4)(ii)(A) of this section, it shall be repaired as specified in paragraph (c) of this section.

(ii) A leak detected pursuant to paragraph (d)(5)(iii) of this section shall be repaired within 15 days of detection by eliminating the conditions that activated the sensor.

(iii) A designated leak pursuant to paragraph (d)(4)(ii)(B) of this section shall be repaired within 15 days of detection by eliminating visual indications of liquids dripping.

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

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

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

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

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

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

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

(2) The owner or operator of the pump has a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in paragraph (c) of this section if a leak is detected.
(h) Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (a)(2) and (d)(4) of this section, and the daily requirements of paragraph (d)(5) of this section, provided that each pump is visually inspected as often as practicable and at least monthly.

§ 60.482-3a Standards: Compressors.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(c) Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in § 60.482-10a is exempted from the requirements of paragraphs (a) and (b) of this section.

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

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

§ 60.482-5a Standards: Sampling connection systems.

(a) Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system, except as provided in § 60.482-1a(c) and paragraph (c) of this section.

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

(1) Gases displaced during filling of the sample container are not required to be collected or captured.

(2) Containers that are part of a closed-purge system must be covered or closed when not being filled or emptied.

(3) Gases remaining in the tubing or piping between the closed-purge system valve(s) and sample container valve(s) after the valves are closed and the sample container is disconnected are not required to be collected or captured.

(4) Each closed-purge, closed-loop, or closed-vent system shall be designed and operated to meet requirements in either paragraph (b)(4)(i), (ii), (iii), or (iv) of this section.

(i) Return the purged process fluid directly to the process line.

(ii) Collect and recycle the purged process fluid to a process.

(iii) Capture and transport all the purged process fluid to a control device that complies with the requirements of § 60.482-10a.

(iv) Collect, store, and transport the purged process fluid to any of the following systems or facilities:
(A) A waste management unit as defined in 40 CFR 63.111, if the waste management unit is subject to and operated in compliance with the provisions of 40 CFR part 63, subpart G, applicable to Group 1 wastewater streams;

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

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

(D) A waste management unit subject to and operated in compliance with the treatment requirements of 40 CFR 61.348(a), provided all waste management units that collect, store, or transport the purged process fluid to the treatment unit are subject to and operated in compliance with the management requirements of 40 CFR 61.343 through 40 CFR 61.347; or

(E) A device used to burn off-specification used oil for energy recovery in accordance with 40 CFR part 279, subpart G, provided the purged process fluid is not hazardous waste as defined in 40 CFR part 261.

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

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

(a)(1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in § 60.482-1a(c) and paragraphs (d) and (e) of this section.

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

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

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

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

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

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

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

(2) A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit must be monitored according to paragraphs (a)(2)(i) or (ii), except for a valve that replaces a leaking valve and except as provided in paragraphs (f), (g), and (h) of this section, § 60.482-1a(c), and §§ 60.483-1a and 60.483-2a.

(i) Monitor the valve as in paragraph (a)(1) of this section. The valve must be monitored for the first time within 30 days after the end of its startup period to ensure proper installation.
(ii) If the existing valves in the process unit are monitored in accordance with § 60.483-1a or § 60.483-2a, count the new valve as leaking when calculating the percentage of valves leaking as described in § 60.483-2a(b)(5). If less than 2.0 percent of the valves are leaking for that process unit, the valve must be monitored for the first time during the next scheduled monitoring event for existing valves in the process unit or within 90 days, whichever comes first.

(b) If an instrument reading of 500 ppm or greater is measured, a leak is detected.

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

(ii) As an alternative to monitoring all of the valves in the first month of a quarter, an owner or operator may elect to divide the process unit into two or three subgroups of valves and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every 3 months. The owner or operator must keep records of the valves assigned to each subgroup.

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

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

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

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

(1) Tightening of bonnet bolts;

(2) Replacement of bonnet bolts;

(3) Tightening of packing gland nuts;

(4) Injection of lubricant into lubricated packing.

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

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

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

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

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

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

(2) The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.
(h) Any valve that is designated, as described in § 60.486a(f)(2), as a difficult-to-monitor valve is exempt from the requirements of paragraph (a) of this section if:

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

2. The process unit within which the valve is located either:

   i. Becomes an affected facility through § 60.14 or § 60.15 and was constructed on or before January 5, 1981; or

   ii. Has less than 3.0 percent of its total number of valves designated as difficult-to-monitor by the owner or operator.

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

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

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

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

2. The owner or operator shall eliminate the visual, audible, olfactory, or other indication of a potential leak within 5 calendar days of detection.

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

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

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

(d) First attempts at repair include, but are not limited to, the best practices described under §§ 60.482-2a(c)(2) and 60.482-7a(e).

§ 60.482-9a Standards: Delay of repair.

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

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

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

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

2. When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with § 60.482-10a.
(d) Delay of repair for pumps will be allowed if:

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

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

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

(f) When delay of repair is allowed for a leaking pump, valve, or connector that remains in service, the pump, valve, or connector may be considered to be repaired and no longer subject to delay of repair requirements if two consecutive monthly monitoring instrument readings are below the leak definition.

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

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

(b) Vapor recovery systems (for example, condensers and absorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 parts per million by volume (ppmv), whichever is less stringent.

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

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

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

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

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

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

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

(2) If the vapor collection system or closed vent system is constructed of ductwork, the owner or operator shall:

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

(ii) Conduct annual inspections according to the procedures in § 60.485a(b).

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

(1) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.
(2) Repair shall be completed no later than 15 calendar days after the leak is detected.

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

(i) If a vapor collection system or closed vent system is operated under a vacuum, it is exempt from the inspection requirements of paragraphs (f)(1)(i) and (f)(2) of this section.

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

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

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

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

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

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

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

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

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

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

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

(4) For each inspection conducted in accordance with § 60.485a(b) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

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

(m) Closed vent systems and control devices used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.
§ 60.482-11a Standards: Connectors in gas/vapor service and in light liquid service.

(a) The owner or operator shall initially monitor all connectors in the process unit for leaks by the later of either 12 months after the compliance date or 12 months after initial startup. If all connectors in the process unit have been monitored for leaks prior to the compliance date, no initial monitoring is required provided either no process changes have been made since the monitoring or the owner or operator can determine that the results of the monitoring, with or without adjustments, reliably demonstrate compliance despite process changes. If required to monitor because of a process change, the owner or operator is required to monitor only those connectors involved in the process change.

(b) Except as allowed in § 60.482-1a(c), § 60.482-10a, or as specified in paragraph (e) of this section, the owner or operator shall monitor all connectors in gas and vapor and light liquid service as specified in paragraphs (a) and (b)(3) of this section.

1. The connectors shall be monitored to detect leaks by the method specified in § 60.485a(b) and, as applicable, § 60.485a(c).

2. If an instrument reading greater than or equal to 500 ppm is measured, a leak is detected.

3. The owner or operator shall perform monitoring, subsequent to the initial monitoring required in paragraph (a) of this section, as specified in paragraphs (b)(3)(i) through (iii) of this section, and shall comply with the requirements of paragraphs (b)(3)(iv) and (v) of this section. The required period in which monitoring must be conducted shall be determined from paragraphs (b)(3)(i) through (iii) of this section using the monitoring results from the preceding monitoring period. The percent leaking connectors shall be calculated as specified in paragraph (c) of this section.

(i) If the percent leaking connectors in the process unit was greater than or equal to 0.5 percent, then monitor within 12 months (1 year).

(ii) If the percent leaking connectors in the process unit was greater than or equal to 0.25 percent but less than 0.5 percent, then monitor within 4 years. An owner or operator may comply with the requirements of this paragraph by monitoring at least 40 percent of the connectors within 2 years of the start of the monitoring period, provided all connectors have been monitored by the end of the 4-year monitoring period.

(iii) If the percent leaking connectors in the process unit was less than 0.25 percent, then monitor as provided in paragraph (b)(3)(iii)(A) of this section and either paragraph (b)(3)(iii)(B) or (b)(3)(iii)(C) of this section, as appropriate.

(A) An owner or operator shall monitor at least 50 percent of the connectors within 4 years of the start of the monitoring period.

(B) If the percent of leaking connectors calculated from the monitoring results in paragraph (b)(3)(iii)(A) of this section is greater than or equal to 0.35 percent of the monitored connectors, the owner or operator shall monitor as soon as practical, but within the next 6 months, all connectors that have not yet been monitored during the monitoring period. At the conclusion of monitoring, a new monitoring period shall be started pursuant to paragraph (b)(3) of this section, based on the percent of leaking connectors within the total monitored connectors.

(C) If the percent of leaking connectors calculated from the monitoring results in paragraph (b)(3)(iii)(A) of this section is less than 0.35 percent of the monitored connectors, the owner or operator shall monitor all connectors that have not yet been monitored within 8 years of the start of the monitoring period.

(iv) If, during the monitoring conducted pursuant to paragraphs (b)(3)(i) through (iii) of this section, a connector is found to be leaking, it shall be re-monitored once within 90 days after repair to confirm that it is not leaking.

(v) The owner or operator shall keep a record of the start date and end date of each monitoring period under this section for each process unit.

(c) For use in determining the monitoring frequency, as specified in paragraphs (a) and (b)(3) of this section, the percent leaking connectors as used in paragraphs (a) and (b)(3) of this section shall be calculated by using the following equation:
\[
\%C_L = \frac{C_L}{C_t} \times 100
\]

Where:

\%C_L = \text{Percent of leaking connectors as determined through periodic monitoring required in paragraphs (a) and (b)(3)(i) through (iii) of this section.}

\[C_L = \text{Number of connectors measured at 500 ppm or greater, by the method specified in § 60.485a(b).}\]

\[C_t = \text{Total number of monitored connectors in the process unit or affected facility.}\]

(d) When a leak is detected pursuant to paragraphs (a) and (b) of this section, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in § 60.482-9a. A first attempt at repair as defined in this subpart shall be made no later than 5 calendar days after the leak is detected.

(e) Any connector that is designated, as described in § 60.486a(f)(1), as an unsafe-to-monitor connector is exempt from the requirements of paragraphs (a) and (b) of this section if:

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

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

(f) \textit{Inaccessible, ceramic, or ceramic-lined connectors}. (1) Any connector that is inaccessible or that is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined), is exempt from the monitoring requirements of paragraphs (a) and (b) of this section, from the leak repair requirements of paragraph (d) of this section, and from the recordkeeping and reporting requirements of §§ 63.1038 and 63.1039. An inaccessible connector is one that meets any of the provisions specified in paragraphs (f)(1)(i) through (vi) of this section, as applicable:

(i) Buried;

(ii) Insulated in a manner that prevents access to the connector by a monitor probe;

(iii) Obstructed by equipment or piping that prevents access to the connector by a monitor probe;

(iv) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold that would allow access to connectors up to 7.6 meters (25 feet) above the ground;

(v) Inaccessible because it would require elevating the monitoring personnel more than 2 meters (7 feet) above a permanent support surface or would require the erection of scaffold; or

(vi) Not able to be accessed at any time in a safe manner to perform monitoring. Unsafe access includes, but is not limited to, the use of a wheeled scissor-lift on unstable or uneven terrain, the use of a motorized man-lift basket in areas where an ignition potential exists, or access would require near proximity to hazards such as electrical lines, or would risk damage to equipment.

(2) If any inaccessible, ceramic, or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the visual, audible, olfactory, or other indications of a leak to the atmosphere shall be eliminated as soon as practical.

(g) Except for instrumentation systems and inaccessible, ceramic, or ceramic-lined connectors meeting the provisions of paragraph (f) of this section, identify the connectors subject to the requirements of this subpart. Connectors need
not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of this subpart are identified as a group, and the number of connectors subject is indicated.

EFFECTIVE DATE NOTE: At 73 FR 31376, June 2, 2008, § 60.482-11a was stayed until further notice.

§ 60.483-1a Alternative standards for valves—allowable percentage of valves leaking.

(a) An owner or operator may elect to comply with an allowable percentage of valves leaking of equal to or less than 2.0 percent.

(b) The following requirements shall be met if an owner or operator wishes to comply with an allowable percentage of valves leaking:

(1) An owner or operator must notify the Administrator that the owner or operator has elected to comply with the allowable percentage of valves leaking before implementing this alternative standard, as specified in § 60.487a(d).

(2) A performance test as specified in paragraph (c) of this section shall be conducted initially upon designation, annually, and at other times requested by the Administrator.

(3) If a valve leak is detected, it shall be repaired in accordance with § 60.482-7a(d) and (e).

(c) Performance tests shall be conducted in the following manner:

(1) All valves in gas/vapor and light liquid service within the affected facility shall be monitored within 1 week by the methods specified in § 60.485a(b).

(2) If an instrument reading of 500 ppm or greater is measured, a leak is detected.

(3) The leak percentage shall be determined by dividing the number of valves for which leaks are detected by the number of valves in gas/vapor and light liquid service within the affected facility.

(d) Owners and operators who elect to comply with this alternative standard shall not have an affected facility with a leak percentage greater than 2.0 percent, determined as described in § 60.485a(h).

§ 60.483-2a Alternative standards for valves—skip period leak detection and repair.

(a)(1) An owner or operator may elect to comply with one of the alternative work practices specified in paragraphs (b)(2) and (3) of this section.

(2) An owner or operator must notify the Administrator before implementing one of the alternative work practices, as specified in § 60.487(d)a.

(b)(1) An owner or operator shall comply initially with the requirements for valves in gas/vapor service and valves in light liquid service, as described in § 60.482-7a.

(2) After 2 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, an owner or operator may begin to skip 1 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

(3) After 5 consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0, an owner or operator may begin to skip 3 of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

(4) If the percent of valves leaking is greater than 2.0, the owner or operator shall comply with the requirements as described in § 60.482-7a but can again elect to use this section.
(5) The percent of valves leaking shall be determined as described in § 60.485a(h).

(6) An owner or operator must keep a record of the percent of valves found leaking during each leak detection period.

(7) A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for a process unit following one of the alternative standards in this section must be monitored in accordance with § 60.482-7a(a)(2)(i) or (ii) before the provisions of this section can be applied to that valve.

§ 60.484a Equivalence of means of emission limitation.

(a) Each owner or operator subject to the provisions of this subpart may apply to the Administrator for determination of equivalence for any means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to the reduction in emissions of VOC achieved by the controls required in this subpart.

(b) Determination of equivalence to the equipment, design, and operational requirements of this subpart will be evaluated by the following guidelines:

(1) Each owner or operator applying for an equivalence determination shall be responsible for collecting and verifying test data to demonstrate equivalence of means of emission limitation.

(2) The Administrator will compare test data for demonstrating equivalence of the means of emission limitation to test data for the equipment, design, and operational requirements.

(3) The Administrator may condition the approval of equivalence on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the equipment, design, and operational requirements.

(c) Determination of equivalence to the required work practices in this subpart will be evaluated by the following guidelines:

(1) Each owner or operator applying for a determination of equivalence shall be responsible for collecting and verifying test data to demonstrate equivalence of an equivalent means of emission limitation.

(2) For each affected facility for which a determination of equivalence is requested, the emission reduction achieved by the required work practice shall be demonstrated.

(3) For each affected facility, for which a determination of equivalence is requested, the emission reduction achieved by the equivalent means of emission limitation shall be demonstrated.

(4) Each owner or operator applying for a determination of equivalence shall commit in writing to work practice(s) that provide for emission reductions equal to or greater than the emission reductions achieved by the required work practice.

(5) The Administrator will compare the demonstrated emission reduction for the equivalent means of emission limitation to the demonstrated emission reduction for the required work practices and will consider the commitment in paragraph (c)(4) of this section.

(6) The Administrator may condition the approval of equivalence on requirements that may be necessary to assure operation and maintenance to achieve the same emission reduction as the required work practice.

(d) An owner or operator may offer a unique approach to demonstrate the equivalence of any equivalent means of emission limitation.

(e)(1) After a request for determination of equivalence is received, the Administrator will publish a notice in the FEDERAL REGISTER and provide the opportunity for public hearing if the Administrator judges that the request may be approved.
(2) After notice and opportunity for public hearing, the Administrator will determine the equivalence of a means of emission limitation and will publish the determination in the **FEDERAL REGISTER**.

(3) Any equivalent means of emission limitations approved under this section shall constitute a required work practice, equipment, design, or operational standard within the meaning of section 111(h)(1) of the CAA.

(f)(1) Manufacturers of equipment used to control equipment leaks of VOC may apply to the Administrator for determination of equivalence for any equivalent means of emission limitation that achieves a reduction in emissions of VOC achieved by the equipment, design, and operational requirements of this subpart.

(2) The Administrator will make an equivalence determination according to the provisions of paragraphs (b), (c), (d), and (e) of this section.

§ 60.485a Test methods and procedures.

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

(b) The owner or operator shall determine compliance with the standards in §§ 60.482-1a through 60.482-11a, 60.483a, and 60.484a as follows:

(1) Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 of appendix A-7 of this part. The following calibration gases shall be used:

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

   (ii) A mixture of methane or n-hexane and air at a concentration no more than 2,000 ppm greater than the leak definition concentration of the equipment monitored. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 ppm above the concentration specified as a leak, and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 ppm. If only one scale on an instrument will be used during monitoring, the owner or operator need not calibrate the scales that will not be used during that day's monitoring.

(2) A calibration drift assessment shall be performed, at a minimum, at the end of each monitoring day. Check the instrument using the same calibration gas(es) that were used to calibrate the instrument before use. Follow the procedures specified in Method 21 of appendix A-7 of this part, Section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. Record the instrument reading for each scale used as specified in § 60.486a(e)(7). Calculate the average algebraic difference between the three meter readings and the most recent calibration value. Divide this algebraic difference by the initial calibration value and multiply by 100 to express the calibration drift as a percentage. If any calibration drift assessment shows a negative drift of more than 10 percent from the initial calibration value, then all equipment monitored since the last calibration with instrument readings below the appropriate leak definition and above the leak definition multiplied by (100 minus the percent of negative drift/divided by 100) must be re-monitored. If any calibration drift assessment shows a positive drift of more than 10 percent from the initial calibration value, then, at the owner/operator's discretion, all equipment since the last calibration with instrument readings above the appropriate leak definition and below the leak definition multiplied by (100 plus the percent of positive drift/divided by 100) may be re-monitored.

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

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

(2) Method 21 of appendix A-7 of this part shall be used to determine the background level. All potential leak interfaces shall be traversed as close to the interface as possible. The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.
(d) The owner or operator shall test each piece of equipment unless he demonstrates that a process unit is not in VOC service, i.e., that the VOC content would never be reasonably expected to exceed 10 percent by weight. For purposes of this demonstration, the following methods and procedures shall be used:

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

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

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

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

1. The vapor pressure of one or more of the organic components is greater than 0.3 kPa at 20 °C (1.2 in. H₂O at 68 °F). Standard reference texts or ASTM D2879-83, 96, or 97 (incorporated by reference—see § 60.17) shall be used to determine the vapor pressures.

2. The total concentration of the pure organic components having a vapor pressure greater than 0.3 kPa at 20 °C (1.2 in. H₂O at 68 °F) is equal to or greater than 20 percent by weight.

3. The fluid is a liquid at operating conditions.

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

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

1. Method 22 of appendix A-7 of this part shall be used to determine visible emissions.

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

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

   \[ V_{\text{max}} = K_1 + K_2 H_T \]

   Where:

   \[ V_{\text{max}} = \text{Maximum permitted velocity, m/sec (ft/sec).} \]

   \[ H_T = \text{Net heating value of the gas being combusted, MJ/scm (Btu/scf).} \]

   \[ K_1 = 8.706 \text{ m/sec (metric units) = 28.56 ft/sec (English units).} \]

   \[ K_2 = 0.7084 \text{ m}^4/(\text{MJ-sec}) \text{ (metric units) = 0.087 ft}^4/(\text{Btu-sec}) \text{ (English units).} \]

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

   \[ H_T = \sum_{i=1}^{n} C_i H_i \]
Where:

\[ K = \text{Conversion constant, } 1.740 \times 10^{-7} \text{ (g-mole)(MJ)/(ppm-scm-kcal) (metric units)} = 4.674 \times 10^{-6} \text{ [(g-mole)(Btu)/(ppm-scf-kcal)] (English units).} \]

\[ C_i = \text{Concentration of sample component \textquoteleft i\textquoteright, ppm} \]

\[ H_i = \text{net heat of combustion of sample component \textquoteleft i\textquoteright at 25 °C and 760 mm Hg (77 °F and 14.7 psi), kcal/g-mole.} \]

(5) Method 18 of appendix A-6 of this part or ASTM D6420-99 (2004) (where the target compound(s) are those listed in Section 1.1 of ASTM D6420-99, and the target concentration is between 150 parts per billion by volume and 100 ppmv) and ASTM D2504-67, 77, or 88 (Reapproved 1993) (incorporated by reference—see § 60.17) shall be used to determine the concentration of sample component \textquoteleft i\textquoteright.

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

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

(h) The owner or operator shall determine compliance with § 60.483-1a or § 60.483-2a as follows:

(1) The percent of valves leaking shall be determined using the following equation:

\[ \% V_l = (V_l / V_T) \times 100 \]

Where:

\[ \% V_l = \text{Percent leaking valves.} \]

\[ V_l = \text{Number of valves found leaking.} \]

\[ V_T = \text{The sum of the total number of valves monitored.} \]

(2) The total number of valves monitored shall include difficult-to-monitor and unsafe-to-monitor valves only during the monitoring period in which those valves are monitored.

(3) The number of valves leaking shall include valves for which repair has been delayed.

(4) Any new valve that is not monitored within 30 days of being placed in service shall be included in the number of valves leaking and the total number of valves monitored for the monitoring period in which the valve is placed in service.

(5) If the process unit has been subdivided in accordance with § 60.482-7a(c)(1)(ii), the sum of valves found leaking during a monitoring period includes all subgroups.

(6) The total number of valves monitored does not include a valve monitored to verify repair.

§ 60.486a Recordkeeping requirements.

(a) (1) Each owner or operator subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section.
(2) An owner or operator of more than one affected facility subject to the provisions of this subpart may comply with the recordkeeping requirements for these facilities in one recordkeeping system if the system identifies each record by each facility.

(3) The owner or operator shall record the information specified in paragraphs (a)(3)(i) through (v) of this section for each monitoring event required by §§ 60.482-2a, 60.482-3a, 60.482-7a, 60.482-8a, 60.482-11a, and 60.483-2a.

(i) Monitoring instrument identification.

(ii) Operator identification.

(iii) Equipment identification.

(iv) Date of monitoring.

(v) Instrument reading.

(b) When each leak is detected as specified in §§ 60.482-2a, 60.482-3a, 60.482-7a, 60.482-8a, 60.482-11a, and 60.483-2a, the following requirements apply:

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

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

3. The identification on a connector may be removed after it has been monitored as specified in § 60.482-11a(b)(3)(iv) and no leak has been detected during that monitoring.

4. The identification on equipment, except on a valve or connector, may be removed after it has been repaired.

(c) When each leak is detected as specified in §§ 60.482-2a, 60.482-3a, 60.482-7a, 60.482-8a, 60.482-11a, and 60.483-2a, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:

1. The instrument and operator identification numbers and the equipment identification number, except when indications of liquids dripping from a pump are designated as a leak.

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

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

4. Maximum instrument reading measured by Method 21 of appendix A-7 of this part at the time the leak is successfully repaired or determined to be nonrepairable, except when a pump is repaired by eliminating indications of liquids dripping.

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

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

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

8. Dates of process unit shutdowns that occur while the equipment is unrepaired.
(9) The date of successful repair of the leak.

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

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

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

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

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

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

(e) The following information pertaining to all equipment subject to the requirements in §§ 60.482-1a to 60.482-11a shall be recorded in a log that is kept in a readily accessible location:

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

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

(ii) The designation of equipment as subject to the requirements of § 60.482-2a(e), § 60.482-3a(i), or § 60.482-7a(f) shall be signed by the owner or operator. Alternatively, the owner or operator may establish a mechanism with their permitting authority that satisfies this requirement.

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

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

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

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

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

(6) A list of identification numbers for equipment that the owner or operator designates as operating in VOC service less than 300 hr/yr in accordance with § 60.482-1a(e), a description of the conditions under which the equipment is in VOC service, and rationale supporting the designation that it is in VOC service less than 300 hr/yr.

(7) The date and results of the weekly visual inspection for indications of liquids dripping from pumps in light liquid service.

(8) Records of the information specified in paragraphs (e)(8)(i) through (vi) of this section for monitoring instrument calibrations conducted according to sections 8.1.2 and 10 of Method 21 of appendix A-7 of this part and § 60.485a(b).

(i) Date of calibration and initials of operator performing the calibration.

(ii) Calibration gas cylinder identification, certification date, and certified concentration.
(iii) Instrument scale(s) used.

(iv) A description of any corrective action taken if the meter readout could not be adjusted to correspond to the calibration gas value in accordance with section 10.1 of Method 21 of appendix A-7 of this part.

(v) Results of each calibration drift assessment required by § 60.485a(b)(2) (i.e., instrument reading for calibration at end of monitoring day and the calculated percent difference from the initial calibration value).

(vi) If an owner or operator makes their own calibration gas, a description of the procedure used.

(9) The connector monitoring schedule for each process unit as specified in § 60.482-11a(b)(3)(v).

(10) Records of each release from a pressure relief device subject to § 60.482-4a.

(f) The following information pertaining to all valves subject to the requirements of § 60.482-7a(g) and (h), all pumps subject to the requirements of § 60.482-2a(g), and all connectors subject to the requirements of § 60.482-11a(e) shall be recorded in a log that is kept in a readily accessible location:

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

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

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

(1) A schedule of monitoring.

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

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

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

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

(i) The following information shall be recorded in a log that is kept in a readily accessible location for use in determining exemptions as provided in § 60.480a(d):

(1) An analysis demonstrating the design capacity of the affected facility,

(2) A statement listing the feed or raw materials and products from the affected facilities and an analysis demonstrating whether these chemicals are heavy liquids or beverage alcohol, and

(3) An analysis demonstrating that equipment is not in VOC service.

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

(k) The provisions of § 60.7(b) and (d) do not apply to affected facilities subject to this subpart.
§ 60.487a Reporting requirements.

(a) Each owner or operator subject to the provisions of this subpart shall submit semiannual reports to the Administrator beginning 6 months after the initial startup date.

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

1) Process unit identification.

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

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

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

5) Number of connectors subject to the requirements of § 60.482-11a.

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

1) Process unit identification.

2) For each month during the semiannual reporting period,

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

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

   iii) Number of pumps for which leaks were detected as described in § 60.482-2a(b), (d)(4)(ii)(A) or (B), or (d)(5)(iii),

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

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

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

   vii) Number of connectors for which leaks were detected as described in § 60.482-11a(b)

   viii) Number of connectors for which leaks were not repaired as required in § 60.482-11a(d), and

   ix)-(x) [Reserved]

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

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

4) Revisions to items reported according to paragraph (b) of this section if changes have occurred since the initial report or subsequent revisions to the initial report.
(d) An owner or operator electing to comply with the provisions of §§ 60.483-1a or 60.483-2a shall notify the Administrator of the alternative standard selected 90 days before implementing either of the provisions.

(e) An owner or operator shall report the results of all performance tests in accordance with § 60.8 of the General Provisions. The provisions of § 60.8(d) do not apply to affected facilities subject to the provisions of this subpart except that an owner or operator must notify the Administrator of the schedule for the initial performance tests at least 30 days before the initial performance tests.

(f) The requirements of paragraphs (a) through (c) of this section remain in force until and unless EPA, in delegating enforcement authority to a state under section 111(c) of the CAA, approves reporting requirements or an alternative means of compliance surveillance adopted by such state. In that event, affected sources within the state will be relieved of the obligation to comply with the requirements of paragraphs (a) through (c) of this section, provided that they comply with the requirements established by the state.

§ 60.488a Reconstruction.

For the purposes of this subpart:

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

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

§ 60.489a List of chemicals produced by affected facilities.

Process units that produce, as intermediates or final products, chemicals listed in § 60.489 are covered under this subpart. The applicability date for process units producing one or more of these chemicals is November 8, 2006.
PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart Db—Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

Source: 72 FR 32742, June 13, 2007, unless otherwise noted.

§60.40b Applicability and delegation of authority.

(a) The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)).

(b) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1984, but on or before June 19, 1986, is subject to the following standards:

1. Coal-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 MMBtu/hr), inclusive, are subject to the particulate matter (PM) and nitrogen oxides (NOx) standards under this subpart.

2. Coal-fired affected facilities having a heat input capacity greater than 73 MW (250 MMBtu/hr) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; §60.40) are subject to the PM and NOx standards under this subpart and to the sulfur dioxide (SO2) standards under subpart D (§60.43).

3. Oil-fired affected facilities having a heat input capacity between 29 and 73 MW (100 and 250 MMBtu/hr), inclusive, are subject to the NOx standards under this subpart.

4. Oil-fired affected facilities having a heat input capacity greater than 73 MW (250 MMBtu/hr) and meeting the applicability requirements under subpart D (Standards of performance for fossil-fuel-fired steam generators; §60.40) are also subject to the NOx standards under this subpart and the PM and SO2 standards under subpart D (§60.42 and §60.43).

(c) Affected facilities that also meet the applicability requirements under subpart J or subpart Ja of this part are subject to the PM and NOx standards under this subpart and the SO2 standards under subpart D of this part, as applicable.

(d) Affected facilities that also meet the applicability requirements under subpart E (Standards of performance for incinerators; §60.50) are subject to the NOx and PM standards under this subpart.

(e) Steam generating units meeting the applicability requirements under subpart Da (Standards of performance for electric utility steam generating units; §60.40Da) are not subject to this subpart.

(f) Any change to an existing steam generating unit for the sole purpose of combusting gases containing total reduced sulfur (TRS) as defined under §60.281 is not considered a modification under §60.14 and the steam generating unit is not subject to this subpart.
(g) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, the following authorities shall be retained by the Administrator and not transferred to a State.

(1) Section 60.44b(f).

(2) Section 60.44b(g).

(3) Section 60.49b(a)(4).

(h) Any affected facility that meets the applicability requirements and is subject to subpart Ea, subpart Eb, subpart AAAA, or subpart CCCC of this part is not subject to this subpart.

(i) Affected facilities (i.e., heat recovery steam generators) that are associated with stationary combustion turbines and that meet the applicability requirements of subpart KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other affected facilities (i.e., heat recovery steam generators with duct burners) that are capable of combusting more than 29 MW (100 MMBtu/h) heat input of fossil fuel. If the affected facility (i.e., heat recovery steam generator) is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The stationary combustion turbine emissions are subject to subpart GG or KKKK, as applicable, of this part.)

(j) Any affected facility meeting the applicability requirements under paragraph (a) of this section and commencing construction, modification, or reconstruction after June 19, 1986 is not subject to subpart D (Standards of Performance for Fossil-Fuel-Fired Steam Generators, §60.40).

(k) Any affected facility that meets the applicability requirements and is subject to an EPA approved State or Federal section 111(d)/129 plan implementing subpart Cb or subpart BBBB of this part is not covered by this subpart.

(l) Affected facilities that also meet the applicability requirements under subpart BB of this part (Standards of Performance for Kraft Pulp Mills) are subject to the SO2 and NOx standards under this subpart and the PM standards under subpart BB.

(m) Temporary boilers are not subject to this subpart.


§60.41b Definitions.

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

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from the fuels listed in §60.42b(a), §60.43b(a), or §60.44b(a), as applicable, during a calendar year and the potential heat input to the steam generating unit had it been operated for 8,760 hours during a calendar year at the maximum steady state design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility in a calendar year.

Byproduct/waste means any liquid or gaseous substance produced at chemical manufacturing plants, petroleum refineries, or pulp and paper mills (except natural gas, distillate oil, or residual oil) and combusted in a steam generating unit for heat recovery or for disposal. Gaseous substances with carbon dioxide (CO2) levels greater than 50 percent or carbon monoxide levels greater than 10 percent are not byproduct/waste for the purpose of this subpart.

Chemical manufacturing plants mean industrial plants that are classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 28.
Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels, including but not limited to solvent refined coal, gasified coal not meeting the definition of natural gas, coal-oil mixtures, coke oven gas, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

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

Cogeneration, also known as combined heat and power, means a facility that simultaneously produces both electric (or mechanical) and useful thermal energy from the same primary energy source.

Coke oven gas means the volatile constituents generated in the gaseous exhaust during the carbonization of bituminous coal to form coke.

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

Conventional technology means wet flue gas desulfurization (FGD) technology, dry FGD technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see §60.17), diesel fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see §60.17), kerosine, as defined by the American Society of Testing and Materials in ASTM D3699 (incorporated by reference, see §60.17), biodiesel as defined by the American Society of Testing and Materials in ASTM D6751 (incorporated by reference, see §60.17), or biodiesel blends as defined by the American Society of Testing and Materials in ASTM D7467 (incorporated by reference, see §60.17).

Dry flue gas desulfurization technology means a SO2 control system that is located downstream of the steam generating unit and removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline slurries or solutions used in dry flue gas desulfurization technology include but are not limited to lime and sodium.

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

Emerging technology means any SO2 control system that is not defined as a conventional technology under this section, and for which the owner or operator of the facility has applied to the Administrator and received approval to operate as an emerging technology under §60.49b(a)(4).

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

Fluidized bed combustion technology means combustion of fuel in a bed or series of beds (including but not limited to bubbling bed units and circulating bed units) of limestone aggregate (or other sorbent materials) in which these materials are forced upward by the flow of combustion air and the gaseous products of combustion.

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

Full capacity means operation of the steam generating unit at 90 percent or more of the maximum steady-state design heat input capacity.
Gaseous fuel means any fuel that is a gas at ISO conditions. This includes, but is not limited to, natural gas and
gasified coal (including coke oven gas).

Gross output means the gross useful work performed by the steam generated. For units generating only electricity,
the gross useful work performed is the gross electrical output from the turbine/generator set. For cogeneration units,
the gross useful work performed is the gross electrical or mechanical output plus 75 percent of the useful thermal
output measured relative to ISO conditions that is not used to generate additional electrical or mechanical output or to
enhance the performance of the unit (i.e., steam delivered to an industrial process).

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

Heat release rate means the steam generating unit design heat input capacity (in MW or Btu/hr) divided by the
furnace volume (in cubic meters or cubic feet); the furnace volume is that volume bounded by the front furnace wall
where the burner is located, the furnace side waterwall, and extending to the level just below or in front of the first row
of convection pass tubes.

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

High heat release rate means a heat release rate greater than 730,000 J/sec-m³ (70,000 Btu/hr-ft³).

ISO Conditions means a temperature of 288 Kelvin, a relative humidity of 60 percent, and a pressure of 101.3
kilopascals.

Lignite means a type of coal classified as lignite A or lignite B by the American Society of Testing and Materials in
ASTM D388 (incorporated by reference, see §60.17).

Low heat release rate means a heat release rate of 730,000 J/sec-m³ (70,000 Btu/hr-ft³) or less.

Mass-feed stoker steam generating unit means a steam generating unit where solid fuel is introduced directly into a
retort or is fed directly onto a grate where it is combusted.

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

Municipal-type solid waste means refuse, more than 50 percent of which is waste consisting of a mixture of paper,
wood, yard wastes, food wastes, plastics, leather, rubber, and other combustible materials, and noncombustible
materials such as glass and rock.

Natural gas means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the
earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum gas, as defined by the American Society for Testing and Materials in ASTM D1835
(incorporated by reference, see §60.17); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either
be composed of at least 70 percent methane by volume or have a gross calorific value between 34 and 43
megajoules (MJ) per dry standard cubic meter (910 and 1,150 Btu per dry standard cubic foot).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of
Puerto Rico, or the Northern Mariana Islands.
Oil means crude oil or petroleum or a liquid fuel derived from crude oil or petroleum, including distillate and residual oil.

Petroleum refinery means industrial plants as classified by the Department of Commerce under Standard Industrial Classification (SIC) Code 29.

Potential sulfur dioxide emission rate means the theoretical SO2 emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems. For gasified coal or oil that is desulfurized prior to combustion, the Potential sulfur dioxide emission rate is the theoretical SO2 emissions (ng/J or lb/MMBtu heat input) that would result from combusting fuel in a cleaned state without using any post combustion emission control systems.

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

Pulp and paper mills means industrial plants that are classified by the Department of Commerce under North American Industry Classification System (NAICS) Code 322 or Standard Industrial Classification (SIC) Code 26.

Pulverized coal-fired steam generating unit means a steam generating unit in which pulverized coal is introduced into an air stream that carries the coal to the combustion chamber of the steam generating unit where it is fired in suspension. This includes both conventional pulverized coal-fired and micropulverized coal-fired steam generating units. Residual oil means crude oil, fuel oil numbers 1 and 2 that have a nitrogen content greater than 0.05 weight percent, and all fuel oil numbers 4, 5 and 6, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Spreader stoker steam generating unit means a steam generating unit in which solid fuel is introduced to the combustion zone by a mechanism that throws the fuel onto a grate from above. Combustion takes place both in suspension and on the grate.

Steam generating unit means a device that combusts any fuel or byproduct/waste and produces steam or heats water or heats any heat transfer medium. This term includes any municipal-type solid waste incinerator with a heat recovery steam generating unit or any steam generating unit that combusts fuel and is part of a cogeneration system or a combined cycle system. This term does not include process heaters as they are defined in this subpart.

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

Temporary boiler means any gaseous or liquid fuel-fired steam generating unit that is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A steam generating unit is not a temporary boiler if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) The steam generating unit or a replacement remains at a location for more than 180 consecutive days. Any temporary boiler that replaces a temporary boiler at a location and performs the same or similar function will be included in calculating the consecutive time period.

(3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

(4) The equipment is moved from one location to another in an attempt to circumvent the residence time requirements of this definition.
Very low sulfur oil means for units constructed, reconstructed, or modified on or before February 28, 2005, oil that contains no more than 0.5 weight percent sulfur or that, when combusted without SO2 emission control, has a SO2 emission rate equal to or less than 215 ng/J (0.5 lb/MMBtu) heat input. For units constructed, reconstructed, or modified after February 28, 2005 and not located in a noncontinental area, very low sulfur oil means oil that contains no more than 0.30 weight percent sulfur or that, when combusted without SO2 emission control, has a SO2 emission rate equal to or less than 140 ng/J (0.32 lb/MMBtu) heat input. For units constructed, reconstructed, or modified after February 28, 2005 and located in a noncontinental area, very low sulfur oil means oil that contains no more than 0.5 weight percent sulfur or that, when combusted without SO2 emission control, has a SO2 emission rate equal to or less than 215 ng/J (0.50 lb/MMBtu) heat input.

Wet flue gas desulfurization technology means a SO2 control system that is located downstream of the steam generating unit and removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gas with an alkaline slurry or solution and forming a liquid material. This definition applies to devices where the aqueous liquid material product of this contact is subsequently converted to other forms. Alkaline reagents used in wet flue gas desulfurization technology include, but are not limited to, lime, limestone, and sodium.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or SO2.

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


§60.42b Standard for sulfur dioxide (SO2).

(a) Except as provided in paragraphs (b), (c), (d), or (j) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or oil shall cause to be discharged into the atmosphere any gases that contain SO2 in excess of 87 ng/J (0.20 lb/MMBtu) or 10 percent (0.10) of the potential SO2 emission rate (90 percent reduction) and the emission limit determined according to the following formula:

\[ E_s = \frac{K_a H_a + K_b H_b}{H_a + H_b} \]

Where:

- \( E_s \) = SO2 emission limit, in ng/J or lb/MMBtu heat input;
- \( K_a = 520 \) ng/J (or 1.2 lb/MMBtu);
- \( K_b = 340 \) ng/J (or 0.80 lb/MMBtu);
- \( H_a = \) Heat input from the combustion of coal, in J (MMBtu); and
- \( H_b = \) Heat input from the combustion of oil, in J (MMBtu).

For facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(b) On and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction,
or modification on or before February 28, 2005, that combusts coal refuse alone in a fluidized bed combustion steam generating unit shall cause to be discharged into the atmosphere any gases that contain SO2 in excess of 87 ng/J (0.20 lb/MMBtu) or 20 percent (0.20) of the potential SO2 emission rate (80 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input. If coal or oil is fired with coal refuse, the affected facility is subject to paragraph (a) or (d) of this section, as applicable. For facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(c) On and after the date on which the performance test is completed or is required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that combusts coal or oil, either alone or in combination with any other fuel, and that uses an emerging technology for the control of SO2 emissions, shall cause to be discharged into the atmosphere any gases that contain SO2 in excess of 50 percent of the potential SO2 emission rate (50 percent reduction) and that contain SO2 in excess of the emission limit determined according to the following formula:

\[
E_s = \frac{(K_c H_c + K_d H_d)}{(H_c + H_d)}
\]

Where:

\( E_s \) = SO2 emission limit, in ng/J or lb/MM Btu heat input; 

\( K_c = 260 \text{ ng/J or 0.60 lb/MMBtu}; \)

\( K_d = 170 \text{ ng/J or 0.40 lb/MMBtu}; \)

\( H_c = \text{Heat input from the combustion of coal, in J (MMBtu)}; \) and

\( H_d = \text{Heat input from the combustion of oil, in J (MMBtu)}. \)

For facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels, or from the heat input derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(d) On and after the date on which the performance test is completed or required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005 and listed in paragraphs (d)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere any gases that contain SO2 in excess of 50 percent of the potential SO2 emission rate (50 percent reduction) and that contain SO2 in excess of the emission limit determined according to the following formula:

\[
E_s = \frac{(K_c H_c + K_d H_d)}{(H_c + H_d)}
\]

Where:

\( E_s \) = SO2 emission limit, in ng/J or lb/MM Btu heat input; 

\( K_c = 260 \text{ ng/J or 0.60 lb/MMBtu}; \)

\( K_d = 170 \text{ ng/J or 0.40 lb/MMBtu}; \)

\( H_c = \text{Heat input from the combustion of coal, in J (MMBtu)}; \) and

\( H_d = \text{Heat input from the combustion of oil, in J (MMBtu)}. \)

For facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in this paragraph. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels, or from the heat input derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(1) Affected facilities that have an annual capacity factor for coal and oil of 30 percent (0.30) or less and are subject to a federally enforceable permit limiting the operation of the affected facility to an annual capacity factor for coal and oil of 30 percent (0.30) or less;

(2) Affected facilities located in a noncontinental area; or

(3) Affected facilities combusting coal or oil, alone or in combination with any fuel, in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from
combustion of coal and oil in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from the exhaust gases entering the duct burner; or

(4) The affected facility burns coke oven gas alone or in combination with natural gas or very low sulfur distillate oil.

(e) Except as provided in paragraph (f) of this section, compliance with the emission limits, fuel oil sulfur limits, and/or percent reduction requirements under this section are determined on a 30-day rolling average basis.

(f) Except as provided in paragraph (j)(2) of this section, compliance with the emission limits or fuel oil sulfur limits under this section is determined on a 24-hour average basis for affected facilities that (1) have a federally enforceable permit limiting the annual capacity factor for oil to 10 percent or less, (2) combust only very low sulfur oil, and (3) do not combust any other fuel.

(g) Except as provided in paragraph (i) of this section and §60.45b(a), the SO2 emission limits and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(h) Reductions in the potential SO2 emission rate through fuel pretreatment are not credited toward the percent reduction requirement under paragraph (c) of this section unless:

(1) Fuel pretreatment results in a 50 percent or greater reduction in potential SO2 emissions and

(2) Emissions from the pretreated fuel (without combustion or post-combustion SO2 control) are equal to or less than the emission limits specified in paragraph (c) of this section.

(i) An affected facility subject to paragraph (a), (b), or (c) of this section may combust very low sulfur oil or natural gas when the SO2 control system is not being operated because of malfunction or maintenance of the SO2 control system.

(j) Percent reduction requirements are not applicable to affected facilities combusting only very low sulfur oil. The owner or operator of an affected facility combusting very low sulfur oil shall demonstrate that the oil meets the definition of very low sulfur oil by: (1) Following the performance testing procedures as described in §60.45b(c) or §60.45b(d), and following the monitoring procedures as described in §60.47b(a) or §60.47b(b) to determine SO2 emission rate or fuel oil sulfur content; or (2) maintaining fuel records as described in §60.49b(r).

(k)(1) Except as provided in paragraphs (k)(2), (k)(3), and (k)(4) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, natural gas, a mixture of these fuels, or a mixture of these fuels with any other fuels shall cause to be discharged into the atmosphere any gases that contain SO2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 8 percent (0.08) of the potential SO2 emission rate (92 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input. For facilities complying with the percent reduction standard and paragraph (k)(3) of this section, only the heat input supplied to the affected facility from the combustion of coal and oil is counted in paragraph (k) of this section. No credit is provided for the heat input to the affected facility from the combustion of natural gas, wood, municipal-type solid waste, or other fuels or heat derived from exhaust gases from other sources, such as gas turbines, internal combustion engines, kilns, etc.

(k)(2) Units firing only very low sulfur oil, gaseous fuel, a mixture of these fuels, or a mixture of these fuels with a potential SO2 emission rate of 140 ng/J (0.32 lb/MMBtu) heat input or less are exempt from the SO2 emissions limit in paragraph (k)(1) of this section.

(k)(3) Units that are located in a noncontinental area and that combust coal, oil, or natural gas shall not discharge any gases that contain SO2 in excess of 520 ng/J (1.2 lb/MMBtu) heat input if the affected facility combusts coal, or 215 ng/J (0.50 lb/MMBtu) heat input if the affected facility combusts oil or natural gas.

(k)(4) As an alternative to meeting the requirements under paragraph (k)(1) of this section, modified facilities that combust coal or a mixture of coal with other fuels shall not cause to be discharged into the atmosphere any gases that contain SO2 in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO2 emission rate (90 percent reduction) and 520 ng/J (1.2 lb/MMBtu) heat input.
§60.43b Standard for particulate matter (PM).

(a) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005 that combusts coal or combusts mixtures of coal with other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

1. 22 ng/J (0.051 lb/MMBtu) heat input, (i) If the affected facility combusts only coal, or

   (ii) If the affected facility combusts coal and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

2. 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal and other fuels and has an annual capacity factor for the other fuels greater than 10 percent (0.10) and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

3. 86 ng/J (0.20 lb/MMBtu) heat input if the affected facility combusts coal or coal and other fuels and

   (i) Has an annual capacity factor for coal or coal and other fuels of 30 percent (0.30) or less,

   (ii) Has a maximum heat input capacity of 73 MW (250 MMBtu/hr) or less,

   (iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for coal or coal and other solid fuels, and


4. An affected facility burning coke oven gas alone or in combination with other fuels not subject to a PM standard under §60.43b and not using a post-combustion technology (except a wet scrubber) for reducing PM or SO2 emissions is not subject to the PM limits under §60.43b(a).

(b) On and after the date on which the performance test is completed or required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, and that combusts oil (or mixtures of oil with other fuels) and uses a conventional or emerging technology to reduce SO2 emissions shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(c) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, and that combusts wood, or wood with other fuels, except coal, shall cause to be discharged from that affected facility any gases that contain PM in excess of the following emission limits:

1. 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor greater than 30 percent (0.30) for wood.

2. 86 ng/J (0.20 lb/MMBtu) heat input if (i) The affected facility has an annual capacity factor of 30 percent (0.30) or less for wood;

   (ii) Is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for wood; and
(iii) Has a maximum heat input capacity of 73 MW (250 MMBtu/hr) or less.

(d) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts municipal-type solid waste or mixtures of municipal-type solid waste with other fuels, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input;

(i) If the affected facility combuts only municipal-type solid waste; or

(ii) If the affected facility combusts municipal-type solid waste and other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 86 ng/J (0.20 lb/MMBtu) heat input if the affected facility combusts municipal-type solid waste or municipal-type solid waste and other fuels; and

(i) Has an annual capacity factor for municipal-type solid waste and other fuels of 30 percent (0.30) or less;

(ii) Has a maximum heat input capacity of 73 MW (250 MMBtu/hr) or less;

(iii) Has a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor of 30 percent (0.30) or less for municipal-type solid waste, or municipal-type solid waste and other fuels; and

(iv) Construction of the affected facility commenced after June 19, 1984, but on or before November 25, 1986.

(e) For the purposes of this section, the annual capacity factor is determined by dividing the actual heat input to the steam generating unit during the calendar year from the combustion of coal, wood, or municipal-type solid waste, and other fuels, as applicable, by the potential heat input to the steam generating unit if the steam generating unit had been operated for 8,760 hours at the maximum heat input capacity.

(f) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu), except during periods of startup, shutdown, or malfunction.

(h)(1) Except as provided in paragraphs (h)(2), (h)(3), (h)(4), (h)(5), and (h)(6) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input.

(2) As an alternative to meeting the requirements of paragraph (h)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under §60.8, no owner or operator of an affected facility that commences modification after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and
(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture
of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under
§60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after
February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a maximum
heat input capacity of 73 MW (250 MMBtu/h) or less shall cause to be discharged into the atmosphere from that
affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) On and after the date on which the initial performance test is completed or is required to be completed under
§60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after
February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a maximum
heat input capacity greater than 73 MW (250 MMBtu/h) shall cause to be discharged into the atmosphere from that
affected facility any gases that contain PM in excess of 37 ng/J (0.085 lb/MMBtu) heat input.

(5) On and after the date on which the initial performance test is completed or is required to be completed under
§60.8, whichever date comes first, an owner or operator of an affected facility not located in a noncontinental area
that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that
contains no more than 0.30 weight percent sulfur, coke oven gas, a mixture of these fuels, or either fuel (or a mixture
of these fuels) in combination with other fuels not subject to a PM standard in §60.43b and not using a post-
combustion technology (except a wet scrubber) to reduce SO2 or PM emissions is not subject to the PM limits in
(h)(1) of this section.

(6) On and after the date on which the initial performance test is completed or is required to be completed under
§60.8, whichever date comes first, an owner or operator of an affected facility located in a noncontinental area that
commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that
contains no more than 0.5 weight percent sulfur, coke oven gas, a mixture of these fuels, or either fuel (or a mixture
of these fuels) in combination with other fuels not subject to a PM standard in §60.43b and not using a post-
combustion technology (except a wet scrubber) to reduce SO2 or PM emissions is not subject to the PM limits in
(h)(1) of this section.


§60.44b Standard for nitrogen oxides (NOX).

(a) Except as provided under paragraphs (k) and (l) of this section, on and after the date on which the initial
performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or
operator of an affected facility that is subject to the provisions of this section and that combusts only coal, oil, or
natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain NOx
(expressed as NO2) in excess of the following emission limits:

<table>
<thead>
<tr>
<th>Fuel/steam generating unit type</th>
<th>Nitrogen oxide emission limits (expressed as NO2) heat input</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ng/J</td>
</tr>
<tr>
<td>(1) Natural gas and distillate oil, except (4):</td>
<td></td>
</tr>
<tr>
<td>(i) Low heat release rate</td>
<td>43</td>
</tr>
<tr>
<td>(ii) High heat release rate</td>
<td>86</td>
</tr>
<tr>
<td>(2) Residual oil:</td>
<td></td>
</tr>
<tr>
<td>(i) Low heat release rate</td>
<td>130</td>
</tr>
<tr>
<td>(ii) High heat release rate</td>
<td>170</td>
</tr>
<tr>
<td>(3) Coal:</td>
<td></td>
</tr>
<tr>
<td>(i) Mass-feed stoker</td>
<td>210</td>
</tr>
</tbody>
</table>
Fuel/steam generating unit type | Nitrogen oxide emission limits (expressed as NO\(_2\)) heat input
---|---
(ii) Spreader stoker and fluidized bed combustion | 260 ng/J, 0.60 lb/MMBtu
(iii) Pulverized coal | 300 ng/J, 0.70 lb/MMBtu
(iv) Lignite, except (v) | 260 ng/J, 0.60 lb/MMBtu
(v) Lignite mined in North Dakota, South Dakota, or Montana and combusted in a slag tap furnace | 340 ng/J, 0.80 lb/MMBtu
(vi) Coal-derived synthetic fuels | 210 ng/J, 0.50 lb/MMBtu

(4) Duct burner used in a combined cycle system:

(i) Natural gas and distillate oil | 86 ng/J, 0.20 lb/MMBtu
(ii) Residual oil | 170 ng/J, 0.40 lb/MMBtu

(b) Except as provided under paragraphs (k) and (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts mixtures of only coal, oil, or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO\(_X\) in excess of a limit determined by the use of the following formula:

\[
E_n = \frac{(EL_{g0} H_{g0}) + (EL_{r0} H_{r0}) + (EL_c H_c)}{(H_{g0} + H_{r0} + H_c)}
\]

Where:

\(E_n\) = NO\(_X\) emission limit (expressed as NO\(_2\)), ng/J (lb/MMBtu);

\(EL_{g0}\) = Appropriate emission limit from paragraph (a)(1) for combustion of natural gas or distillate oil, ng/J (lb/MMBtu);

\(H_{g0}\) = Heat input from combustion of natural gas or distillate oil, J (MMBtu);

\(EL_{r0}\) = Appropriate emission limit from paragraph (a)(2) for combustion of residual oil, ng/J (lb/MMBtu);

\(H_{r0}\) = Heat input from combustion of residual oil, J (MMBtu);

\(EL_c\) = Appropriate emission limit from paragraph (a)(3) for combustion of coal, ng/J (lb/MMBtu); and

\(H_c\) = Heat input from combustion of coal, J (MMBtu).

(c) Except as provided under paragraph (d) and (l) of this section, on and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts coal or oil, natural gas (or any combination of the three), and wood, or any other fuel shall cause to be discharged into the atmosphere any gases that contain NO\(_X\) in excess of the emission limit for the coal, oil, natural gas (or any combination of the three), combusted in the affected facility, as determined pursuant to paragraph (a) or (b) of this section. This standard does not apply to an affected facility that is subject to and in compliance with a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor of 10 percent (0.10) or less for coal, oil, natural gas (or any combination of the three).

(d) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that simultaneously combusts natural
gas and/or distillate oil with a potential SO2 emissions rate of 26 ng/J (0.060 lb/MMBtu) or less with wood, municipal-
type solid waste, or other solid fuel, except coal, shall cause to be discharged into the atmosphere from that affected
facility any gases that contain NOx in excess of 130 ng/J (0.30 lb/MMBtu) heat input unless the affected facility has
an annual capacity factor for natural gas, distillate oil, or a mixture of these fuels of 10 percent (0.10) or less and is
subject to a federally enforceable requirement that limits operation of the affected facility to an annual capacity factor
of 10 percent (0.10) or less for natural gas, distillate oil, or a mixture of these fuels.

(e) Except as provided under paragraph (l) of this section, on and after the date on which the initial performance test
is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an
affected facility that simultaneously combusts only coal, oil, or natural gas with byproduct/waste shall cause to be
discharged into the atmosphere any gases that contain NOx in excess of the emission limit determined by the
following formula unless the affected facility has an annual capacity factor for coal, oil, and natural gas of 10 percent
(0.10) or less and is subject to a federally enforceable requirement that limits operation of the affected facility to an
annual capacity factor of 10 percent (0.10) or less:

(2) The NOx emission limits for natural gas or distillate oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, shall be applicable to the affected facility until and unless the petition is approved by the Administrator. If the petition is approved by the Administrator, a facility-specific NOx emission limit will be established at the NOx emission level achievable when the affected facility is combusting oil or
natural gas and byproduct/waste in a manner that the Administrator determines to be consistent with minimizing NOx
emissions. In lieu of amending this subpart, a letter will be sent to the facility describing the facility-specific NOx limit.

(f) Any owner or operator of an affected facility that combusts byproduct/waste with either natural gas or oil may
petition the Administrator within 180 days of the initial startup of the affected facility to establish a NOx emission limit
that shall apply specifically to that affected facility when the byproduct/waste is combusted. The petition shall include
sufficient and appropriate data, as determined by the Administrator, such as NOx emissions from the affected facility,
for regulations applicable to the incineration of materials containing polychlorinated biphenyls (PCB's).) In lieu of
waste composition (including nitrogen content), and combustion conditions to allow the Administrator to confirm that
the affected facility is unable to comply with the emission limits in paragraph (e) of this section and to determine the
appropriate emission limit for the affected facility.

(1) Any owner or operator of an affected facility petitioning for a facility-specific NOx emission limit under this section shall:

(i) Demonstrate compliance with the emission limits for natural gas and distillate oil in paragraph (a)(1) of this section
or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, by conducting a 30-day performance test
as provided in §60.46b(e). During the performance test only natural gas, distillate oil, or residual oil shall be
combusted in the affected facility; and

(ii) Demonstrate that the affected facility is unable to comply with the emission limits for natural gas and distillate oil in
paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, when
gaseous or liquid byproduct/waste is combusted in the affected facility under the same conditions and using the same
technological system of emission reduction applied when demonstrating compliance under paragraph (f)(1)(i) of this
section.

(g) Any owner or operator of an affected facility that combusts hazardous waste (as defined by 40 CFR part 261 or 40
CFR part 761) with natural gas or oil may petition the Administrator within 180 days of the initial startup of the
affected facility for a waiver from compliance with the NOx emission limit that applies specifically to that affected
facility. The petition must include sufficient and appropriate data, as determined by the Administrator, on NOx
emissions from the affected facility, waste destruction efficiencies, waste composition (including nitrogen content), the
quantity of specific wastes to be combusted and combustion conditions to allow the Administrator to determine if the
affected facility is able to comply with the NOx emission limits required by this section. The owner or operator of the
affected facility shall demonstrate that when hazardous waste is combusted in the affected facility, thermal
destruction efficiency requirements for hazardous waste specified in an applicable federally enforceable requirement
preclude compliance with the NOx emission limits of this section. The NOx emission limits for natural gas or distillate
oil in paragraph (a)(1) of this section or for residual oil in paragraph (a)(2) or (l)(1) of this section, as appropriate, are
applicable to the affected facility until and unless the petition is approved by the Administrator. (See 40 CFR 761.70
for regulations applicable to the incineration of materials containing polychlorinated biphenyls (PCB's).) In lieu of
amending this subpart, a letter will be sent to the facility describing the facility-specific NOx limit. The facility shall use the compliance procedures detailed in the letter and make the letter available to the public. If the Administrator determines it is appropriate, the conditions and requirements of the letter can be reviewed and changed at any point.

(h) For purposes of paragraph (i) of this section, the NOx standards under this section apply at all times including periods of startup, shutdown, or malfunction.

(i) Except as provided under paragraph (j) of this section, compliance with the emission limits under this section is determined on a 30-day rolling average basis.

(j) Compliance with the emission limits under this section is determined on a 24-hour average basis for the initial performance test and on a 3-hour average basis for subsequent performance tests for any affected facilities that:

1. Combust, alone or in combination, only natural gas, distillate oil, or residual oil with a nitrogen content of 0.30 weight percent or less;
2. Have a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil with a nitrogen content of 0.30 weight percent or less; and
3. Are subject to a federally enforceable requirement limiting operation of the affected facility to the firing of natural gas, distillate oil, and/or residual oil with a nitrogen content of 0.30 weight percent or less and limiting operation of the affected facility to a combined annual capacity factor of 10 percent or less for natural gas, distillate oil, and residual oil with a nitrogen content of 0.30 weight percent or less.

(k) Affected facilities that meet the criteria described in paragraphs (j)(1), (2), and (3) of this section, and that have a heat input capacity of 73 MW (250 MMBtu/hr) or less, are not subject to the NOx emission limits under this section.

(l) On and after the date on which the initial performance test is completed or is required to be completed under 60.8, whichever date is first, no owner or operator of an affected facility that commenced construction after July 9, 1997 shall cause to be discharged into the atmosphere from that affected facility any gases that contain NOx (expressed as NO2) in excess of the following limits:

1. 86 ng/J (0.20 lb/MMBtu) heat input if the affected facility combusts coal, oil, or natural gas (or any combination of the three), alone or with any other fuels. The affected facility is not subject to this limit if it is subject to and in compliance with a federally enforceable requirement that limits operation of the facility to an annual capacity factor of 10 percent (0.10) or less for coal, oil, and natural gas (or any combination of the three); or
2. If the affected facility has a low heat release rate and combusts natural gas or distillate oil in excess of 30 percent of the heat input on a 30-day rolling average from the combustion of all fuels, a limit determined by use of the following formula:

$$E_n = \left(0.10 \times H_{go}\right) + \left(0.20 \times H_r\right) \over \left(H_{go} + H_r\right)$$

Where:

$$E_n = \text{NOx emission limit, (lb/MMBtu);}$$

$$H_{go} = \text{30-day heat input from combustion of natural gas or distillate oil; and}$$

$$H_r = \text{30-day heat input from combustion of any other fuel.}$$

(3) After February 27, 2006, units where more than 10 percent of total annual output is electrical or mechanical may comply with an optional limit of 270 ng/J (2.1 lb/MWh) gross energy output, based on a 30-day rolling average. Units complying with this output-based limit must demonstrate compliance according to the procedures of §60.48Da(i) of
subpart Da of this part, and must monitor emissions according to §60.49Da(c), (k), through (n) of subpart Da of this part.


§60.45b Compliance and performance test methods and procedures for sulfur dioxide.

(a) The SO2 emission standards in §60.42b apply at all times. Facilities burning coke oven gas alone or in combination with any other gaseous fuels or distillate oil are allowed to exceed the limit 30 operating days per calendar year for SO2 control system maintenance.

(b) In conducting the performance tests required under §60.8, the owner or operator shall use the methods and procedures in appendix A (including fuel certification and sampling) of this part or the methods and procedures as specified in this section, except as provided in §60.8(b). Section 60.8(f) does not apply to this section. The 30-day notice required in §60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(c) The owner or operator of an affected facility shall conduct performance tests to determine compliance with the percent of potential SO2 emission rate (%Pₚ) and the SO2 emission rate (Eₛ) pursuant to §60.42b following the procedures listed below, except as provided under paragraph (d) and (k) of this section.

(1) The initial performance test shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the SO2 standards shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility.

(2) If only coal, only oil, or a mixture of coal and oil is combusted, the following procedures are used:

(i) The procedures in Method 19 of appendix A-7 of this part are used to determine the hourly SO2 emission rate (Eₜ₉ₒ) and the 30-day average emission rate (Eₜ₉ₒ). The hourly averages used to compute the 30-day averages are obtained from the CEMS of §60.47b(a) or (b).

(ii) The percent of potential SO2 emission rate (%Pₚ) emitted to the atmosphere is computed using the following formula:

\[
\%Pₚ = 100 \left( 1 - \frac{\%Rₕ}{100} \right) \left( 1 - \frac{\%Rₙ}{100} \right)
\]

Where:

%Pₚ = Potential SO2 emission rate, percent;
%Rₙ = SO2 removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and
%Rₕ = SO2 removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

(3) If coal or oil is combusted with other fuels, the same procedures required in paragraph (c)(2) of this section are used, except as provided in the following:

(i) An adjusted hourly SO2 emission rate (Eₜ₉ₒ°) is used in Equation 19-19 of Method 19 of appendix A of this part to compute an adjusted 30-day average emission rate (Eₜ₉ₒ°). The Eₜ₉ₒ° is computed using the following formula:

\[
Eₜ₉ₒ° = \frac{Eₜ₉ₒ - Eₜ₉ₒ (1 - Xₙ)}{Xₙ}
\]
Where:

\[ E_{h0} = \text{Adjusted hourly SO}_2 \text{ emission rate, ng/J (lb/MMBtu);} \]

\[ E_{ho} = \text{Hourly SO}_2 \text{ emission rate, ng/J (lb/MMBtu);} \]

\[ E_w = \text{SO}_2 \text{ concentration in fuels other than coal and oil combusted in the affected facility, as determined by the fuel} \]

\[ \text{sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value } E_w \text{ for each} \]

\[ \text{fuel lot is used for each hourly average during the time that the lot is being combusted; and} \]

\[ X_k = \text{Fraction of total heat input from fuel combustion derived from coal, oil, or coal and oil, as determined by applicable} \]

\[ \text{procedures in Method 19 of appendix A of this part.} \]

(ii) To compute the percent of potential SO\textsubscript{2} emission rate (%\(P_s\)), an adjusted %\(R_g\) (%\(R_{go}\)) is computed from the adjusted \(E_{ao}\) from paragraph (b)(3)(i) of this section and an adjusted average SO\textsubscript{2} inlet rate \((E_{aio})\) using the following formula:

\[ \%R_g = 100 \left( 1 - \frac{E_{ao}}{E_{aio}} \right) \]

To compute \(E_{ao}\), an adjusted hourly SO\textsubscript{2} inlet rate \((E_{i0})\) is used. The \(E_{i0}\) is computed using the following formula:

\[ E_{i0} = \frac{E_{ii} - E_w (1 - X_k)}{X_k} \]

Where:

\[ E_{i0} = \text{Adjusted hourly SO}_2 \text{ inlet rate, ng/J (lb/MMBtu); and} \]

\[ E_{ii} = \text{Hourly SO}_2 \text{ inlet rate, ng/J (lb/MMBtu).} \]

(4) The owner or operator of an affected facility subject to paragraph (c)(3) of this section does not have to measure parameters \(E_w\) or \(X_k\) if the owner or operator elects to assume that \(X_k = 1.0\). Owners or operators of affected facilities who assume \(X_k = 1.0\) shall:

(i) Determine %\(P_s\) following the procedures in paragraph (c)(2) of this section; and

(ii) Sulfur dioxide emissions \((E_s)\) are considered to be in compliance with SO\textsubscript{2} emission limits under §60.42b.

(5) The owner or operator of an affected facility that qualifies under the provisions of §60.42b(d) does not have to measure parameters \(E_w\) or \(X_k\) in paragraph (c)(3) of this section if the owner or operator of the affected facility elects to measure SO\textsubscript{2} emission rates of the coal or oil following the fuel sampling and analysis procedures in Method 19 of appendix A-7 of this part.

(d) Except as provided in paragraph (j) of this section, the owner or operator of an affected facility that combusts only very low sulfur oil, natural gas, or a mixture of these fuels, has an annual capacity factor for oil of 10 percent (0.10) or less, and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for oil of 10 percent (0.10) or less shall:

(1) Conduct the initial performance test over 24 consecutive steam generating unit operating hours at full load;

(2) Determine compliance with the standards after the initial performance test based on the arithmetic average of the hourly emissions data during each steam generating unit operating day if a CEMS is used, or based on a daily
average if Method 6B of appendix A of this part or fuel sampling and analysis procedures under Method 19 of appendix A of this part are used.

(e) The owner or operator of an affected facility subject to §60.42b(d)(1) shall demonstrate the maximum design capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. This demonstration will be made during the initial performance test and a subsequent demonstration may be requested at any other time. If the 24-hour average firing rate for the affected facility is less than the maximum design capacity provided by the manufacturer of the affected facility, the 24-hour average firing rate shall be used to determine the capacity utilization rate for the affected facility, otherwise the maximum design capacity provided by the manufacturer is used.

(f) For the initial performance test required under §60.8, compliance with the SO2 emission limits and percent reduction requirements under §60.42b is based on the average emission rates and the average percent reduction for SO2 for the first 30 consecutive steam generating unit operating days, except as provided under paragraph (d) of this section. The initial performance test is the only test for which at least 30 days prior notice is required unless otherwise specified by the Administrator. The initial performance test is to be scheduled so that the first steam generating unit operating day of the 30 successive steam generating unit operating days is completed within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility. The boiler load during the 30-day period does not have to be the maximum design load, but must be representative of future operating conditions and include at least one 24-hour period at full load.

(g) After the initial performance test required under §60.8, compliance with the SO2 emission limits and percent reduction requirements under §60.42b is based on the average emission rates and the average percent reduction for SO2 for 30 successive steam generating unit operating days, except as provided under paragraph (d). A separate performance test is completed at the end of each steam generating unit operating day after the initial performance test, and a new 30-day average emission rate and percent reduction for SO2 are calculated to show compliance with the standard.

(h) Except as provided under paragraph (i) of this section, the owner or operator of an affected facility shall use all valid SO2 emissions data in calculating %Ps and Eho under paragraph (c), of this section whether or not the minimum emissions data requirements under §60.46b are achieved. All valid emissions data, including valid SO2 emission data collected during periods of startup, shutdown and malfunction, shall be used in calculating %Ps and Eho pursuant to paragraph (c) of this section.

(i) During periods of malfunction or maintenance of the SO2 control systems when oil is combusted as provided under §60.42b(i), emission data are not used to calculate %Ps or Eo under §60.42b(a), (b) or (c), however, the emissions data are used to determine compliance with the emission limit under §60.42b(i).

(j) The owner or operator of an affected facility that only combusts very low sulfur oil, natural gas, or a mixture of these fuels with any other fuels not subject to an SO2 standard is not subject to the compliance and performance testing requirements of this section if the owner or operator obtains fuel receipts as described in §60.49b(r).

(k) The owner or operator of an affected facility seeking to demonstrate compliance in §§60.42b(d)(4), 60.42b(j), 60.42b(k)(2), and 60.42b(k)(3) (when not burning coal) shall follow the applicable procedures in §60.49b(r).

[72 FR 32742, June 13, 2007, as amended at 74 FR 5086, Jan. 28, 2009]

§60.46b Compliance and performance test methods and procedures for particulate matter and nitrogen oxides.

(a) The PM emission standards and opacity limits under §60.43b apply at all times except during periods of startup, shutdown, or malfunction. The NOx emission standards under §60.44b apply at all times.

(b) Compliance with the PM emission standards under §60.43b shall be determined through performance testing as described in paragraph (d) of this section, except as provided in paragraph (i) of this section.

(c) Compliance with the NOx emission standards under §60.44b shall be determined through performance testing under paragraph (e) or (f), or under paragraphs (g) and (h) of this section, as applicable.
(d) To determine compliance with the PM emission limits and opacity limits under §60.43b, the owner or operator of an affected facility shall conduct an initial performance test as required under §60.8, and shall conduct subsequent performance tests as requested by the Administrator, using the following procedures and reference methods:

(1) Method 3A or 3B of appendix A-2 of this part is used for gas analysis when applying Method 5 of appendix A-3 of this part or Method 17 of appendix A-6 of this part.

(2) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part shall be used at affected facilities without wet flue gas desulfurization (FGD) systems; and

(ii) Method 17 of appendix A-6 of this part may be used at facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of sections 8.1 and 11.1 of Method 5B of appendix A-3 of this part may be used in Method 17 of appendix A-6 of this part only if it is used after a wet FGD system. Do not use Method 17 of appendix A-6 of this part after wet FGD systems if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part is to be used only after wet FGD systems.

(3) Method 1 of appendix A of this part is used to select the sampling site and the number of traverse sampling points. The sampling time for each run is at least 120 minutes and the minimum sampling volume is 1.7 dscm (60 dscf) except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(4) For Method 5 of appendix A of this part, the temperature of the sample gas in the probe and filter holder is monitored and is maintained at 160±14 °C (320±25 °F).

(5) For determination of PM emissions, the oxygen (O2) or CO2 sample is obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(6) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rate expressed in ng/J heat input is determined using:

(i) The O2 or CO2 measurements and PM measurements obtained under this section;

(ii) The dry basis F factor; and

(iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(7) Method 9 of appendix A of this part is used for determining the opacity of stack emissions.

(e) To determine compliance with the emission limits for NOX required under §60.44b, the owner or operator of an affected facility shall conduct the performance test as required under §60.8 using the continuous system for monitoring NOx under §60.48(b).

(1) For the initial compliance test, NOx from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the NOx emission standards under §60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

(2) Following the date on which the initial performance test is completed or is required to be completed in §60.8, whichever date comes first, the owner or operator of an affected facility which combusts coal (except as specified under §60.46b(e)(4)) or which combusts residual oil having a nitrogen content greater than 0.30 weight percent shall determine compliance with the NOx emission standards in §60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated for each steam
generating unit operating day as the average of all of the hourly NO\textsubscript{X} emission data for the preceding 30 steam generating unit operating days.

(3) Following the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that has a heat input capacity greater than 73 MW (250 MMBtu/hr) and that combusts natural gas, distillate oil, or residual oil having a nitrogen content of 0.30 weight percent or less shall determine compliance with the NO\textsubscript{X} standards under §60.44b on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO\textsubscript{X} emission data for the preceding 30 steam generating unit operating days.

(4) Following the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that has a heat input capacity of 73 MW (250 MMBtu/hr) or less and that combusts natural gas, distillate oil, gasified coal, or residual oil having a nitrogen content of 0.30 weight percent or less shall upon request determine compliance with the NO\textsubscript{X} standards in §60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, NO\textsubscript{X} emissions data collected pursuant to §60.48b(g)(1) or §60.48b(g)(2) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports, but will not be used to determine compliance with the NO\textsubscript{X} emission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO\textsubscript{X} emission data for the preceding 30 steam generating unit operating days.

(5) If the owner or operator of an affected facility that combusts residual oil does not sample and analyze the residual oil for nitrogen content, as specified in §60.49b(e), the requirements of §60.48b(g)(1) apply and the provisions of §60.48b(g)(2) are inapplicable.

(f) To determine compliance with the emissions limits for NO\textsubscript{X} required by §60.44b(a)(4) or §60.44b(l) for duct burners used in combined cycle systems, either of the procedures described in paragraph (f)(1) or (2) of this section may be used:

(1) The owner or operator of an affected facility shall conduct the performance test required under §60.8 as follows:

   (i) The emissions rate (E) of NO\textsubscript{X} shall be computed using Equation 1 in this section:

   \[ E = E_{\text{sg}} + \left( \frac{H_{\text{g}}}{H_{\text{b}}} \right) (E_{\text{g}} - E_{\text{sg}}) \]  
   \[ \text{(Eq.1)} \]

   Where:

   \( E = \text{Emissions rate of NO\textsubscript{X} from the duct burner, ng/J (lb/MMBtu) heat input;} \)

   \( E_{\text{sg}} = \text{Combined effluent emissions rate, in ng/J (lb/MMBtu) heat input using appropriate F factor as described in Method 19 of appendix A of this part;} \)

   \( H_{\text{g}} = \text{Heat input rate to the combustion turbine, in J/hr (MMBtu/hr);} \)

   \( H_{\text{b}} = \text{Heat input rate to the duct burner, in J/hr (MMBtu/hr);} \)

   \( E_{\text{g}} = \text{Emissions rate from the combustion turbine, in ng/J (lb/MMBtu) heat input calculated using appropriate F factor as described in Method 19 of appendix A of this part;} \)

   (ii) Method 7E of appendix A of this part or Method 320 of appendix A of part 63 shall be used to determine the NO\textsubscript{X} concentrations. Method 3A or 3B of appendix A of this part shall be used to determine O\textsubscript{2} concentration.

   (iii) The owner or operator shall identify and demonstrate to the Administrator's satisfaction suitable methods to determine the average hourly heat input rate to the combustion turbine and the average hourly heat input rate to the affected duct burner.
(iv) Compliance with the emissions limits under §60.44b(a)(4) or §60.44b(l) is determined by the three-run average (nominal 1-hour runs) for the initial and subsequent performance tests; or

(2) The owner or operator of an affected facility may elect to determine compliance on a 30-day rolling average basis by using the CEMS specified under §60.48b for measuring NOx and O2 and meet the requirements of §60.48b. The sampling site shall be located at the outlet from the steam generating unit. The NOx emissions rate at the outlet from the steam generating unit shall constitute the NOx emissions rate from the duct burner of the combined cycle system.

(g) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) shall demonstrate the maximum heat input capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours. The owner or operator of an affected facility shall determine the maximum heat input capacity using the heat loss method or the heat input method described in sections 5 and 7.3 of the ASME Power Test Codes 4.1 (incorporated by reference, see §60.17). This demonstration of maximum heat input capacity shall be made during the initial performance test for affected facilities that meet the criteria of §60.44b(j). It shall be made within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of each facility, for affected facilities meeting the criteria of §60.44b(k). Subsequent demonstrations may be required by the Administrator at any other time. If this demonstration indicates that the maximum heat input capacity of the affected facility is less than that stated by the manufacturer of the affected facility, the maximum heat input capacity determined during this demonstration shall be used to determine the capacity utilization rate for the affected facility. Otherwise, the maximum heat input capacity provided by the manufacturer is used.

(h) The owner or operator of an affected facility described in §60.44b(j) that has a heat input capacity greater than 73 MW (250 MMBtu/hr) shall:

(1) Conduct an initial performance test as required under §60.8 over a minimum of 24 consecutive steam generating unit operating hours at maximum heat input capacity to demonstrate compliance with the NOx emission standards under §60.44b using Method 7, 7A, or 7E of appendix A of this part, Method 320 of appendix A of part 63 of this chapter, or other approved reference methods; and

(2) Conduct subsequent performance tests once per calendar year or every 400 hours of operation (whichever comes first) to demonstrate compliance with the NOx emission standards under §60.44b over a minimum of 3 consecutive steam generating unit operating hours at maximum heat input capacity using Method 7, 7A, or 7E of appendix A of this part, Method 320 of appendix A of part 63, or other approved reference methods.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the PM limit in paragraphs §60.43b(a)(4) or §60.43b(h)(5) shall follow the applicable procedures in §60.49b(r).

(j) In place of PM testing with Method 5 or 5B of appendix A-3 of this part, or Method 17 of appendix A-6 of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall comply with the requirements specified in paragraphs (j)(1) through (j)(14) of this section.

(1) Notify the Administrator one month before starting use of the system.

(2) Notify the Administrator one month before stopping use of the system.

(3) The monitor shall be installed, evaluated, and operated in accordance with §60.13 of subpart A of this part.

(4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under §60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of the CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.

(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under §60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS
specified in paragraph (j) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

(6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.

(7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraphs (j)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) [Reserved]

(8) The 1-hour arithmetic averages required under paragraph (j)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under §60.13(e)(2) of subpart A of this part.

(9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (j)(7) of this section are not met.

(10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.

(11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O₂ (or CO₂) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and performance tests conducted using the following test methods.

(i) For PM, Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall be used; and

(ii) For O₂ (or CO₂), Method 3A or 3B of appendix A-2 of this part, as applicable shall be used.

(12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.

(13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours per 30-day rolling average.

(14) As of January 1, 2012, and within 90 days after the date of completing each performance test, as defined in §60.8, conducted to demonstrate compliance with this subpart, you must submit relative accuracy test audit (i.e., reference method) data and performance test (i.e., compliance test) data, except opacity data, electronically to EPA’s Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see http://www.epa.gov/ttn/chief/ert/ert_tool.html/) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA’s WebFIRE database.


§60.47b Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (b) and (f) of this section, the owner or operator of an affected facility subject to the SO₂ standards in §60.42b shall install, calibrate, maintain, and operate CEMS for measuring SO₂ concentrations and either O₂ or CO₂ concentrations and shall record the output of the systems. For units complying with the percent
(1) When relative accuracy testing is conducted, SO\textsubscript{2} concentration data and CO\textsubscript{2} (or O\textsubscript{2}) data are collected simultaneously; and

(2) In addition to meeting the applicable SO\textsubscript{2} and CO\textsubscript{2} (or O\textsubscript{2}) relative accuracy specifications in Figure 2 of appendix B to part 75 of this chapter, the relative accuracy (RA) standard in section 13.2 of Performance Specification 2 in appendix B to this part is met when the RA is calculated on a lb/MMBtu basis; and

(3) The reporting requirements of §60.49b are met. SO\textsubscript{2} and CO\textsubscript{2} (or O\textsubscript{2}) data used to meet the requirements of §60.49b shall not include substitute data values derived from the missing data procedures in subpart D of part 75 of this chapter, nor shall the SO\textsubscript{2} data have been bias adjusted according to the procedures of part 75 of this chapter.

(b) As an alternative to operating CEMS as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO\textsubscript{2} emissions and percent reduction by:

(1) Collecting coal or oil samples in an as-fired condition at the inlet to the steam generating unit and analyzing them for sulfur and heat content according to Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average SO\textsubscript{2} input rate, or

(2) Measuring SO\textsubscript{2} according to Method 6B of appendix A of this part at the inlet or outlet to the SO\textsubscript{2} control system. An initial stratification test is required to verify the adequacy of the sampling location for Method 6B of appendix A of this part. The stratification test shall consist of three paired runs of a suitable SO\textsubscript{2} and CO\textsubscript{2} measurement train operated at the candidate location and a second similar train operated according to the procedures in Section 3.2 and the applicable procedures in Section 7 of Performance Specification 2. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 or 3B of appendix A of this part or Methods 6C or Method 320 of appendix A of part 63 of this chapter and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part, 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent.

(3) A daily SO\textsubscript{2} emission rate, $E_0$, shall be determined using the procedure described in Method 6A of appendix A of this part, section 7.6.2 (Equation 6A-8) and stated in ng/J (lb/MMBtu) heat input.

(4) The mean 30-day emission rate is calculated using the daily measured values in ng/J (lb/MMBtu) for 30 successive steam generating unit operating days using equation 19-20 of Method 19 of appendix A of this part.

(c) The owner or operator of an affected facility shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive boiler operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator or the reference methods and procedures as described in paragraph (b) of this section.

(d) The 1-hour average SO\textsubscript{2} emission rates measured by the CEMS required by paragraph (a) of this section and required under §60.13(h) is expressed in ng/J or lb/MMBtu heat input and is used to calculate the average emission rates under §60.42(b). Each 1-hour average SO\textsubscript{2} emission rate must be based on 30 or more minutes of steam generating unit operation. The hourly averages shall be calculated according to §60.13(h)(2). Hourly SO\textsubscript{2} emission rates are not calculated if the affected facility is operated less than 30 minutes in a given clock hour and are not counted toward determination of a steam generating unit operating day.

(e) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the CEMS.
(1) Except as provided for in paragraph (e)(4) of this section, all CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

(2) Except as provided for in paragraph (e)(4) of this section, quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

(3) For affected facilities combusting coal or oil, alone or in combination with other fuels, the span value of the SO$_2$ CEMS at the inlet to the SO$_2$ control device is 125 percent of the maximum estimated hourly potential SO$_2$ emissions of the fuel combusted, and the span value of the CEMS at the outlet to the SO$_2$ control device is 50 percent of the maximum estimated hourly potential SO$_2$ emissions of the fuel combusted. Alternatively, SO$_2$ span values determined according to section 2.1.1 in appendix A to part 75 of this chapter may be used.

(4) As an alternative to meeting the requirements of requirements of paragraphs (e)(1) and (e)(2) of this section, the owner or operator may elect to implement the following alternative data accuracy assessment procedures:

(i) For all required CO$_2$ and O$_2$ monitors and for SO$_2$ and NO$_X$ monitors with span values greater than or equal to 100 ppm, the daily calibration error test and calibration adjustment procedures described in sections 2.1.1 and 2.1.3 of appendix B to part 75 of this chapter may be followed instead of the CD assessment procedures in Procedure 1, section 4.1 of appendix F to this part.

(ii) For all required CO$_2$ and O$_2$ monitors and for SO$_2$ and NO$_X$ monitors with span values greater than 30 ppm, quarterly linearity checks may be performed in accordance with section 2.2.1 of appendix B to part 75 of this chapter, instead of performing the cylinder gas audits (CGAs) described in Procedure 1, section 5.1.2 of appendix F to this part. If this option is selected: The frequency of the linearity checks shall be as specified in section 2.2.1 of appendix B to part 75 of this chapter; the applicable linearity specifications in section 3.2 of appendix A to part 75 of this chapter shall be met; the data validation and out-of-control criteria in section 2.2.3 of appendix B to part 75 of this chapter shall be met instead of the excessive audit inaccuracy and out-of-control criteria in Procedure 1, section 5.2 of appendix F to this part; and the grace period provisions in section 2.2.4 of appendix B to part 75 of this chapter shall apply. For the purposes of data validation under this subpart, the cylinder gas audits described in Procedure 1, section 5.1.2 of appendix F to this part shall be performed for SO$_2$ and NO$_X$ span values less than or equal to 30 ppm; and

(iii) For SO$_2$, CO$_2$, and O$_2$ monitoring systems and for NO$_X$ emission rate monitoring systems, RATAs may be performed in accordance with section 2.3 of appendix B to part 75 of this chapter instead of following the procedures described in Procedure 1, section 5.1.1 of appendix F to this part. If this option is selected: The frequency of each RATA shall be as specified in section 2.3.1 of appendix B to part 75 of this chapter; the applicable relative accuracy specifications shown in Figure 2 in appendix B to part 75 of this chapter shall be met; the data validation and out-of-control criteria in section 2.3.2 of appendix B to part 75 of this chapter shall be met instead of the excessive audit inaccuracy and out-of-control criteria in Procedure 1, section 5.2 of appendix F to this part; and the grace period provisions in section 2.3.3 of appendix B to part 75 of this chapter shall apply. For the purposes of data validation under this subpart, the relative accuracy specification in section 13.2 of Performance Specification 2 in appendix B to this part shall be met on a lb/MMBtu basis for SO$_2$ (regardless of the SO$_2$ emission level during the RATA), and for NO$_X$ when the average NO$_X$ emission rate measured by the reference method during the RATA is less than 0.100 lb/MMBtu.

(f) The owner or operator of an affected facility that combusts very low sulfur oil or is demonstrating compliance under §60.45b(k) is not subject to the emission monitoring requirements under paragraph (a) of this section if the owner or operator maintains fuel records as described in §60.49b(r).


§60.48b Emission monitoring for particulate matter and nitrogen oxides.

(a) Except as provided in paragraph (j) of this section, the owner or operator of an affected facility subject to the opacity standard under §60.43b shall install, calibrate, maintain, and operate a continuous opacity monitoring systems (COMS) for measuring the opacity of emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility subject to an opacity standard under §60.43b and meeting the conditions under paragraphs (j)(1), (2), (3), (4), (5), or (6) of this section who elects not to use a COMS shall conduct a performance test using Method 9 of appendix A-4 of this part and the procedures in §60.11 to demonstrate
(1) Except as provided in paragraph (a)(2) and (a)(3) of this section, the owner or operator shall conduct subsequent Method 9 of appendix A-4 of this part performance tests using the procedures in paragraph (a) of this section according to the applicable schedule in paragraphs (a)(1)(i) through (a)(1)(iv) of this section, as determined by the most recent Method 9 of appendix A-4 of this part performance test results.

(i) If no visible emissions are observed, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(ii) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; or

(iv) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted.

(2) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 of this part performance tests, elect to perform subsequent monitoring using Method 22 of appendix A-7 of this part according to the procedures specified in paragraphs (a)(2)(i) and (ii) of this section.

(i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A-7 of this part and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (i.e., 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (i.e., 90 seconds per 30 minute period), the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation (i.e., 90 seconds) or conduct a new Method 9 of appendix A-4 of this part performance test using the procedures in paragraph (a) of this section within 45 calendar days according to the requirements in §60.46d(d)(7).

(ii) If no visible emissions are observed for 10 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.

(3) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in paragraph (a)(2) of this section. For reference purposes in preparing the monitoring plan, see OAQPS “Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems.” This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.
(b) Except as provided under paragraphs (g), (h), and (i) of this section, the owner or operator of an affected facility subject to a NOx standard under §60.44b shall comply with either paragraphs (b)(1) or (b)(2) of this section.

(1) Install, calibrate, maintain, and operate CEMS for measuring NOx and O2 (or CO2) emissions discharged to the atmosphere, and shall record the output of the system; or

(2) If the owner or operator has installed a NOx emission rate CEMS to meet the requirements of part 75 of this chapter and is continuing to meet the ongoing requirements of part 75 of this chapter, that CEMS may be used to meet the requirements of this section, except that the owner or operator shall also meet the requirements of §60.49b. Data reported to meet the requirements of §60.49b shall not include data substituted using the missing data procedures in subpart D of part 75 of this chapter, nor shall the data have been bias adjusted according to the procedures of part 75 of this chapter.

c) The CEMS required under paragraph (b) of this section shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

d) The 1-hour average NOx emission rates measured by the continuous NOx monitor required by paragraph (b) of this section and required under §60.19(h) shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.44b. The 1-hour averages shall be calculated using the data points required under §60.19(h)(2).

e) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems.

(1) For affected facilities combusting coal, wood or municipal-type solid waste, the span value for a COMS shall be between 60 and 80 percent.

(2) For affected facilities combusting coal, oil, or natural gas, the span value for NOx is determined using one of the following procedures:

(i) Except as provided under paragraph (e)(2)(ii) of this section, NOx span values shall be determined as follows:

<table>
<thead>
<tr>
<th>Fuel</th>
<th>Span values for NOx (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural gas</td>
<td>500</td>
</tr>
<tr>
<td>Oil</td>
<td>500</td>
</tr>
<tr>
<td>Coal</td>
<td>1,000</td>
</tr>
<tr>
<td>Mixtures</td>
<td>500 (x + y) + 1,000z</td>
</tr>
</tbody>
</table>

Where:

x = Fraction of total heat input derived from natural gas;

y = Fraction of total heat input derived from oil; and

z = Fraction of total heat input derived from coal.

(ii) As an alternative to meeting the requirements of paragraph (e)(2)(i) of this section, the owner or operator of an affected facility may elect to use the NOx span values determined according to section 2.1.2 in appendix A to part 75 of this chapter.
(3) All span values computed under paragraph (e)(2)(i) of this section for combusting mixtures of regulated fuels are rounded to the nearest 500 ppm. Span values computed under paragraph (e)(2)(ii) of this section shall be rounded off according to section 2.1.2 in appendix A to part 75 of this chapter.

(f) When NOX emission data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero span adjustments, emission data will be obtained by using standby monitoring systems, Method 7 of appendix A of this part, Method 7A of appendix A of this part, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.

(g) The owner or operator of an affected facility that has a heat input capacity of 73 MW (250 MMBtu/hr) or less, and that has an annual capacity factor for residual oil having a nitrogen content of 0.30 weight percent or less, natural gas, distillate oil, gasified coal, or any mixture of these fuels, greater than 10 percent (0.10) shall:

(1) Comply with the provisions of paragraphs (b), (c), (d), (e)(2), (e)(3), and (f) of this section; or

(2) Monitor steam generating unit operating conditions and predict NOX emission rates as specified in a plan submitted pursuant to §60.49b(c).

(h) The owner or operator of a duct burner, as described in §60.41b, that is subject to the NOX standards in §60.44b(a)(4), §60.44b(e), or §60.44b(l) is not required to install or operate a continuous emissions monitoring system to measure NOX emissions.

(i) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) is not required to install or operate a CEMS for measuring NOX emissions.

(j) The owner or operator of an affected facility that meets the conditions in either paragraph (j)(1), (2), (3), (4), (5), (6), or (7) of this section is not required to install or operate a COMS if:

(1) The affected facility uses a PM CEMS to monitor PM emissions; or

(2) The affected facility burns only liquid (excluding residual oil) or gaseous fuels with potential SO2 emissions rates of 26 ng/J (0.060 lb/MMBtu) or less and does not use a post-combustion technology to reduce SO2 or PM emissions. The owner or operator must maintain fuel records of the sulfur content of the fuels burned, as described under §60.49b(r); or

(3) The affected facility burns coke oven gas alone or in combination with fuels meeting the criteria in paragraph (j)(2) of this section and does not use a post-combustion technology to reduce SO2 or PM emissions; or

(4) The affected facility does not use post-combustion technology (except a wet scrubber) for reducing PM, SO2, or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.30 weight percent sulfur, and is operated such that emissions of CO to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a steam generating unit operating day average basis. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (j)(4)(i) through (iv) of this section; or

(i) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (j)(4)(i)(A) through (D) of this section.

(A) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in §60.58b(i)(3) of subpart Eb of this part.

(B) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).
(C) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. The 1-hour averages are calculated using the data points required in §60.13(h)(2).

(D) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(ii) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(iii) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(iv) You must record the CO measurements and calculations performed according to paragraph (j)(4) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(5) The affected facility uses a bag leak detection system to monitor the performance of a fabric filter (baghouse) according to the most current requirements in section §60.48Da of this part; or

(6) The affected facility uses an ESP as the primary PM control device and uses an ESP predictive model to monitor the performance of the ESP developed in accordance and operated according to the most current requirements in section §60.48Da of this part; or

(7) The affected facility burns only gaseous fuels or fuel oils that contain less than or equal to 0.30 weight percent sulfur and operates according to a written site-specific monitoring plan approved by the permitting authority. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard.

(k) Owners or operators complying with the PM emission limit by using a PM CEMS must calibrate, maintain, operate, and record the output of the system for PM emissions discharged to the atmosphere as specified in §60.46b(j). The CEMS specified in paragraph §60.46b(j) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(l) An owner or operator of an affected facility that is subject to an opacity standard under §60.43b(f) is not required to operate a COMS provided that the unit burns only gaseous fuels and/or liquid fuels (excluding residue oil) with a potential SO2 emissions rate no greater than 26 ng/J (0.060 lb/MMBtu), and the unit operates according to a written site-specific monitoring plan approved by the permitting authority is not required to operate a COMS. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard. For testing performed as part of this site-specific monitoring plan, the permitting authority may require as an alternative to the notification and reporting requirements specified in §§60.8 and 60.11 that the owner or operator submit any deviations with the excess emissions report required under §60.49b(h).

§60.49b Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of initial startup, as provided by §60.7. This notification shall include:

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

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §§60.42b(d)(1), 60.43b(a)(2), (a)(3)(iii), (c)(2)(ii), (d)(2)(iii), 60.44b(c), (d), (e), (i), (j), (k), 60.45b(d), (g), 60.46b(h), or 60.48b(i);

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

(4) Notification that an emerging technology will be used for controlling emissions of SO2. The Administrator will examine the description of the emerging technology and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42b(a) unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO2, PM, and/or NOX emission limits under §§60.42b, 60.43b, and 60.44b shall submit to the Administrator the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in appendix B of this part. The owner or operator of each affected facility described in §60.44b(j) or §60.44b(k) shall submit to the Administrator the maximum heat input capacity data from the demonstration of the maximum heat input capacity of the affected facility.

(c) The owner or operator of each affected facility subject to the NOX standard in §60.44b who seeks to demonstrate compliance with those standards through the monitoring of steam generating unit operating conditions in the provisions of §60.48b(g)(2) shall submit to the Administrator for approval a plan that identifies the operating conditions to be monitored in §60.48b(g)(2) and the records to be maintained in §60.49b(g). This plan shall be submitted to the Administrator for approval within 360 days of the initial startup of the affected facility. An affected facility burning coke oven gas alone or in combination with other gaseous fuels or distillate oil shall submit this plan to the Administrator for approval within 360 days of the initial startup of the affected facility or by November 30, 2009, whichever date comes later. If the plan is approved, the owner or operator shall maintain records of predicted nitrogen oxide emission rates and the monitored operating conditions, including steam generating unit load, identified in the plan. The plan shall:

(1) Identify the specific operating conditions to be monitored and the relationship between these operating conditions and NOX emission rates (i.e., ng/J or lbs/MMBtu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (i.e., the ratio of primary air to secondary and/or tertiary air) and the level of excess air (i.e., flue gas O2 level);

(2) Include the data and information that the owner or operator used to identify the relationship between NOx emission rates and these operating conditions; and

(3) Identify how these operating conditions, including steam generating unit load, will be monitored under §60.48b(g) on an hourly basis by the owner or operator during the period of operation of the affected facility; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the owner or operator under §60.49b(g).

(d) Except as provided in paragraph (d)(2) of this section, the owner or operator of an affected facility shall record and maintain records as specified in paragraph (d)(1) of this section.

(1) The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil,
natural gas, wood, and municipal-type solid waste for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.

(2) As an alternative to meeting the requirements of paragraph (d)(1) of this section, the owner or operator of an affected facility that is subject to a federally enforceable permit restricting fuel use to a single fuel such that the facility is not required to continuously monitor any emissions (excluding opacity) or parameters indicative of emissions may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(e) For an affected facility that combusts residual oil and meets the criteria under §§60.46b(e)(4), 60.44b(j), or (k), the owner or operator shall maintain records of the nitrogen content of the residual oil combusted in the affected facility and calculate the average fuel nitrogen content for the reporting period. The nitrogen content shall be determined using ASTM Method D4629 (incorporated by reference, see §60.17), or fuel suppliers. If residual oil blends are being combusted, fuel nitrogen specifications may be prorated based on the ratio of residual oils of different nitrogen content in the fuel blend.

(f) For an affected facility subject to the opacity standard in §60.43b, the owner or operator shall maintain records of opacity. In addition, an owner or operator that elects to monitor emissions according to the requirements in §60.46b(a) shall maintain records according to the requirements specified in paragraphs (f)(1) through (3) of this section, as applicable to the visible emissions monitoring method used.

(1) For each performance test conducted using Method 9 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (f)(1)(i) through (iii) of this section.

(i) Dates and time intervals of all opacity observation periods;

(ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

(iii) Copies of all visible emission observer opacity field data sheets;

(2) For each performance test conducted using Method 22 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (f)(2)(i) through (iv) of this section.

(i) Dates and time intervals of all visible emissions observation periods;

(ii) Name and affiliation for each visible emission observer participating in the performance test;

(iii) Copies of all visible emission observer opacity field data sheets; and

(iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.

(3) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator.

(g) Except as provided under paragraph (p) of this section, the owner or operator of an affected facility subject to the NOX standards under §60.44b shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date;

(2) The average hourly NOX emission rates (expressed as NO2) (ng/J or lb/MMBtu heat input) measured or predicted;

(3) The 30-day average NOX emission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;
(4) Identification of the steam generating unit operating days when the calculated 30-day average NOx emission rates are in excess of the NOx emissions standards under §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;

(5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;

(6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;

(7) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;

(8) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(h) The owner or operator of any affected facility in any category listed in paragraphs (h)(1) or (2) of this section is required to submit excess emission reports for any excess emissions that occurred during the reporting period.

(1) Any affected facility subject to the opacity standards in §60.43b(f) or to the operating parameter monitoring requirements in §60.13(i)(1).

(2) Any affected facility that is subject to the NOx standard of §60.44b, and that:

(i) Combusts natural gas, distillate oil, gasified coal, or residual oil with a nitrogen content of 0.3 weight percent or less; or

(ii) Has a heat input capacity of 73 MW (250 MMBtu/hr) or less and is required to monitor NOx emissions on a continuous basis under §60.48b(g)(1) or steam generating unit operating conditions under §60.48b(g)(2).

(3) For the purpose of §60.43b, excess emissions are defined as all 6-minute periods during which the average opacity exceeds the opacity standards under §60.43b(f).

(4) For purposes of §60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average NOx emission rate, as determined under §60.46b(e), that exceeds the applicable emission limits in §60.44b.

(i) The owner or operator of any affected facility subject to the continuous monitoring requirements for NOx under §60.48(b) shall submit reports containing the information recorded under paragraph (g) of this section.

(j) The owner or operator of any affected facility subject to the SO2 standards under §60.42b shall submit reports.

(k) For each affected facility subject to the compliance and performance testing requirements of §60.45b and the reporting requirement in paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates covered in the reporting period;

(2) Each 30-day average SO2 emission rate (ng/J or lb/MMBtu heat input) measured during the reporting period, ending with the last 30-day period; reasons for noncompliance with the emission standards; and a description of corrective actions taken; For an exceedance due to maintenance of the SO2 control system covered in paragraph 60.45b(a), the report shall identify the days on which the maintenance was performed and a description of the maintenance;
(3) Each 30-day average percent reduction in SO₂ emissions calculated during the reporting period, ending with the last 30-day period; reasons for noncompliance with the emission standards; and a description of corrective actions taken;

(4) Identification of the steam generating unit operating days that coal or oil was combusted and for which SO₂ or diluent (O₂ or CO₂) data have not been obtained by an approved method for at least 75 percent of the operating hours in the steam generating unit operating day; justification for not obtaining sufficient data; and description of corrective action taken;

(5) Identification of the times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and description of corrective action taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit;

(6) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;

(7) Identification of times when hourly averages have been obtained based on manual sampling methods;

(8) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3;

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part; and

(11) The annual capacity factor of each fired as provided under paragraph (d) of this section.

(l) For each affected facility subject to the compliance and performance testing requirements of §60.45b(d) and the reporting requirements of paragraph (j) of this section, the following information shall be reported to the Administrator:

(1) Calendar dates when the facility was in operation during the reporting period;

(2) The 24-hour average SO₂ emission rate measured for each steam generating unit operating day during the reporting period that coal or oil was combusted, ending in the last 24-hour period in the quarter; reasons for noncompliance with the emission standards; and a description of corrective actions taken;

(3) Identification of the steam generating unit operating days that coal or oil was combusted for which SO₂ or diluent (O₂ or CO₂) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and description of corrective action taken;

(4) Identification of the times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and description of corrective action taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit;

(5) Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;

(6) Identification of times when hourly averages have been obtained based on manual sampling methods;

(7) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(8) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

(9) Results of daily CEMS drift tests and quarterly accuracy assessments as required under Procedure 1 of appendix F 1 of this part. If the owner or operator elects to implement the alternative data assessment procedures described in §§60.47b(e)(4)(i) through (e)(4)(iii), each data assessment report shall include a summary of the results of all of the
RATAs, linearity checks, CGAs, and calibration error or drift assessments required by §§60.47b(e)(4)(i) through (e)(4)(iii).

(m) For each affected facility subject to the SO₂ standards in §60.42(b) for which the minimum amount of data required in §60.47b(c) were not obtained during the reporting period, the following information is reported to the Administrator in addition to that required under paragraph (k) of this section:

(1) The number of hourly averages available for outlet emission rates and inlet emission rates;

(2) The standard deviation of hourly averages for outlet emission rates and inlet emission rates, as determined in Method 19 of appendix A of this part, section 7;

(3) The lower confidence limit for the mean outlet emission rate and the upper confidence limit for the mean inlet emission rate, as calculated in Method 19 of appendix A of this part, section 7; and

(4) The ratio of the lower confidence limit for the mean outlet emission rate and the allowable emission rate, as determined in Method 19 of appendix A of this part, section 7.

(n) If a percent removal efficiency by fuel pretreatment (i.e., %Rf) is used to determine the overall percent reduction (i.e., %Ro) under §60.45b, the owner or operator of the affected facility shall submit a signed statement with the report.

(1) Indicating what removal efficiency by fuel pretreatment (i.e., %Rf) was credited during the reporting period;

(2) Listing the quantity, heat content, and date each pre-treated fuel shipment was received during the reporting period, the name and location of the fuel pretreatment facility; and the total quantity and total heat content of all fuels received at the affected facility during the reporting period;

(3) Documenting the transport of the fuel from the fuel pretreatment facility to the steam generating unit; and

(4) Including a signed statement from the owner or operator of the fuel pretreatment facility certifying that the percent removal efficiency achieved by fuel pretreatment was determined in accordance with the provisions of Method 19 of appendix A of this part and listing the heat content and sulfur content of each fuel before and after fuel pretreatment.

(o) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of 2 years following the date of such record.

(p) The owner or operator of an affected facility described in §60.44b(j) or (k) shall maintain records of the following information for each steam generating unit operating day:

(1) Calendar date;

(2) The number of hours of operation; and

(3) A record of the hourly steam load.

(q) The owner or operator of an affected facility described in §60.44b(j) or §60.44b(k) shall submit to the Administrator a report containing:

(1) The annual capacity factor over the previous 12 months;

(2) The average fuel nitrogen content during the reporting period, if residual oil was fired; and
(3) If the affected facility meets the criteria described in §60.44b(j), the results of any NOX emission tests required during the reporting period, the hours of operation during the reporting period, and the hours of operation since the last NOX emission test.

(r) The owner or operator of an affected facility who elects to use the fuel based compliance alternatives in §60.42b or §60.43b shall either:

(1) The owner or operator of an affected facility who elects to demonstrate that the affected facility combusts only very low sulfur oil, natural gas, wood, a mixture of these fuels, or any of these fuels (or a mixture of these fuels) in combination with other fuels that are known to contain an insignificant amount of sulfur in §60.42b(j) or §60.42b(k) shall obtain and maintain at the affected facility fuel receipts (such as a current, valid purchase contract, tariff sheet, or transportation contract) from the fuel supplier that certify that the oil meets the definition of distillate oil and gaseous fuel meets the definition of natural gas as defined in §60.41b and the applicable sulfur limit. For the purposes of this section, the distillate oil need not meet the fuel nitrogen content specification in the definition of distillate oil. Reports shall be submitted to the Administrator certifying that only very low sulfur oil meeting this definition, natural gas, wood, and/or other fuels that are known to contain insignificant amounts of sulfur were combusted in the affected facility during the reporting period; or

(2) The owner or operator of an affected facility who elects to demonstrate compliance based on fuel analysis in §60.42b or §60.43b shall develop and submit a site-specific fuel analysis plan to the Administrator for review and approval no later than 60 days before the date you intend to demonstrate compliance. Each fuel analysis plan shall include a minimum initial requirement of weekly testing and each analysis report shall contain, at a minimum, the following information:

(i) The potential sulfur emissions rate of the representative fuel mixture in ng/J heat input;

(ii) The method used to determine the potential sulfur emissions rate of each constituent of the mixture. For distillate oil and natural gas a fuel receipt or tariff sheet is acceptable;

(iii) The ratio of different fuels in the mixture; and

(iv) The owner or operator can petition the Administrator to approve monthly or quarterly sampling in place of weekly sampling.

(s) Facility specific NOX standard for Cytec Industries Fortier Plant's C.AOG incinerator located in Westwego, Louisiana:

(1) **Definitions.**

- **Oxidation zone** is defined as the portion of the C.AOG incinerator that extends from the inlet of the oxidizing zone combustion air to the outlet gas stack.

- **Reducing zone** is defined as the portion of the C.AOG incinerator that extends from the burner section to the inlet of the oxidizing zone combustion air.

- **Total inlet air** is defined as the total amount of air introduced into the C.AOG incinerator for combustion of natural gas and chemical by-product waste and is equal to the sum of the air flow into the reducing zone and the air flow into the oxidation zone.

(2) **Standard for nitrogen oxides.** (i) When fossil fuel alone is combusted, the NOX emission limit for fossil fuel in §60.44b(a) applies.

(ii) When natural gas and chemical by-product waste are simultaneously combusted, the NOX emission limit is 289 ng/J (0.67 lb/MMBtu) and a maximum of 81 percent of the total inlet air provided for combustion shall be provided to the reducing zone of the C.AOG incinerator.
(3) **Emission monitoring.** (i) The percent of total inlet air provided to the reducing zone shall be determined at least every 15 minutes by measuring the air flow of all the air entering the reducing zone and the air flow of all the air entering the oxidation zone, and compliance with the percentage of total inlet air that is provided to the reducing zone shall be determined on a 3-hour average basis.

(ii) The NOx emission limit shall be determined by the compliance and performance test methods and procedures for NOx in §60.46b(i).

(iii) The monitoring of the NOx emission limit shall be performed in accordance with §60.48b.

(4) **Reporting and recordkeeping requirements.** (i) The owner or operator of the C.AOG incinerator shall submit a report on any excursions from the limits required by paragraph (a)(2) of this section to the Administrator with the quarterly report required by paragraph (i) of this section.

(ii) The owner or operator of the C.AOG incinerator shall keep records of the monitoring required by paragraph (a)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner of operator of the C.AOG incinerator shall perform all the applicable reporting and recordkeeping requirements of this section.

(t) **Facility-specific NOx standard for Rohm and Haas Kentucky Incorporated's Boiler No. 100 located in Louisville, Kentucky:**

(1) **Definitions.**

**Air ratio control damper** is defined as the part of the low NOx burner that is adjusted to control the split of total combustion air delivered to the reducing and oxidation portions of the combustion flame.

**Flue gas recirculation line** is defined as the part of Boiler No. 100 that recirculates a portion of the boiler flue gas back into the combustion air.

(2) **Standard for nitrogen oxides.** (i) When fossil fuel alone is combusted, the NOx emission limit for fossil fuel in §60.44b(a) applies.

(ii) When fossil fuel and chemical by-product waste are simultaneously combusted, the NOx emission limit is 473 ng/J (1.1 lb/MMBtu), and the air ratio control damper tee handle shall be at a minimum of 5 inches (12.7 centimeters) out of the boiler, and the flue gas recirculation line shall be operated at a minimum of 10 percent open as indicated by its valve opening position indicator.

(3) **Emission monitoring for nitrogen oxides.** (i) The air ratio control damper tee handle setting and the flue gas recirculation line valve opening position indicator setting shall be recorded during each 8-hour operating shift.

(ii) The NOx emission limit shall be determined by the compliance and performance test methods and procedures for NOx in §60.46b.

(iii) The monitoring of the NOx emission limit shall be performed in accordance with §60.48b.

(4) **Reporting and recordkeeping requirements.** (i) The owner or operator of Boiler No. 100 shall submit a report on any excursions from the limits required by paragraph (b)(2) of this section to the Administrator with the quarterly report required by §60.49b(i).

(ii) The owner or operator of Boiler No. 100 shall keep records of the monitoring required by paragraph (b)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner of operator of Boiler No. 100 shall perform all the applicable reporting and recordkeeping requirements of §60.49b.
(u) Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia. (1) This paragraph (u) applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia (“site”) and only to the natural gas-fired boilers installed as part of the powerhouse conversion required pursuant to 40 CFR 52.2454(g). The requirements of this paragraph shall apply, and the requirements of §§60.40b through 60.49b(t) shall not apply, to the natural gas-fired boilers installed pursuant to 40 CFR 52.2454(g).

(i) The site shall equip the natural gas-fired boilers with low NOx technology.

(ii) The site shall install, calibrate, maintain, and operate a continuous monitoring and recording system for measuring NOx emissions discharged to the atmosphere and opacity using a continuous emissions monitoring system or a predictive emissions monitoring system.

(iii) Within 180 days of the completion of the powerhouse conversion, as required by 40 CFR 52.2454, the site shall perform a performance test to quantify criteria pollutant emissions.

(2) [Reserved]

(v) The owner or operator of an affected facility may submit electronic quarterly reports for SO2 and/or NOx and/or opacity in lieu of submitting the written reports required under paragraphs (h), (i), (j), (k) or (l) of this section. The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this subpart was achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with the permitting authority to obtain their agreement to submit reports in this alternative format.

(w) The reporting period for the reports required under this subpart is each 6 month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

(x) Facility-specific NOx standard for Weyerhaeuser Company's No. 2 Power Boiler located in New Bern, North Carolina:

(1) Standard for nitrogen oxides. (i) When fossil fuel alone is combusted, the NOx emission limit for fossil fuel in §60.44b(a) applies.

(ii) When fossil fuel and chemical by-product waste are simultaneously combusted, the NOx emission limit is 215 ng/J (0.5 lb/MMBtu).

(2) Emission monitoring for nitrogen oxides. (i) The NOx emissions shall be determined by the compliance and performance test methods and procedures for NOx in §60.46b.

(ii) The monitoring of the NOx emissions shall be performed in accordance with §60.48b.

(3) Reporting and recordkeeping requirements. (i) The owner or operator of the No. 2 Power Boiler shall submit a report on any excursions from the limits required by paragraph (x)(2) of this section to the Administrator with the quarterly report required by §60.49b(i).

(ii) The owner or operator of the No. 2 Power Boiler shall keep records of the monitoring required by paragraph (x)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner or operator of the No. 2 Power Boiler shall perform all the applicable reporting and recordkeeping requirements of §60.49b.

(y) Facility-specific NOx standard for INEOS USA's AOGI located in Lima, Ohio:
(1) **Standard for NO\(_x\)**. (i) When fossil fuel alone is combusted, the NO\(_x\) emission limit for fossil fuel in §60.44b(a) applies.

(ii) When fossil fuel and chemical byproduct/waste are simultaneously combusted, the NO\(_x\) emission limit is 645 ng/J (1.5 lb/MMBtu).

(2) **Emission monitoring for NO\(_x\)**. (i) The NO\(_x\) emissions shall be determined by the compliance and performance test methods and procedures for NO\(_x\) in §60.46b.

(ii) The monitoring of the NO\(_x\) emissions shall be performed in accordance with §60.48b.

(3) **Reporting and recordkeeping requirements**. (i) The owner or operator of the AOGI shall submit a report on any excursions from the limits required by paragraph (y)(2) of this section to the Administrator with the quarterly report required by paragraph (i) of this section.

(ii) The owner or operator of the AOGI shall keep records of the monitoring required by paragraph (y)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner or operator of the AOGI shall perform all the applicable reporting and recordkeeping requirements of this section.

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart Kb—Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984

SOURCE: 52 FR 11429, Apr. 8, 1987, unless otherwise noted.

§ 60.110b   Applicability and designation of affected facility.

(a) Except as provided in paragraph (b) of this section, the affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 75 cubic meters (m\(^3\)) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.

(b) This subpart does not apply to storage vessels with a capacity greater than or equal to 151 m\(^3\) storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m\(^3\) but less than 151 m\(^3\) storing a liquid with a maximum true vapor pressure less than 15.0 kPa.

(c) [Reserved]

(d) This subpart does not apply to the following:

(1) Vessels at coke oven by-product plants.

(2) Pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere.

(3) Vessels permanently attached to mobile vehicles such as trucks, railcars, barges, or ships.

(4) Vessels with a design capacity less than or equal to 1,589,874 m\(^3\) used for petroleum or condensate stored, processed, or treated prior to custody transfer.

(5) Vessels located at bulk gasoline plants.

(6) Storage vessels located at gasoline service stations.

(7) Vessels used to store beverage alcohol.

(8) Vessels subject to subpart GGGG of 40 CFR part 63.

(e) Alternative means of compliance — (1) Option to comply with part 65. Owners or operators may choose to comply with 40 CFR part 65, subpart C, to satisfy the requirements of §§ 60.112b through 60.117b for storage vessels that are subject to this subpart that meet the specifications in paragraphs (e)(1)(i) and (ii) of this section. When choosing to comply with 40 CFR part 65, subpart C, the monitoring requirements of § 60.116b(c), (e), (f)(1), and (g) still apply.
Other provisions applying to owners or operators who choose to comply with 40 CFR part 65 are provided in 40 CFR 65.1.

(i) A storage vessel with a design capacity greater than or equal to 151 m³ containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa; or

(ii) A storage vessel with a design capacity greater than 75 m³ but less than 151 m³ containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa.

(2) Part 60, subpart A. Owners or operators who choose to comply with 40 CFR part 65, subpart C, must also comply with §§ 60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for those storage vessels. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(2) do not apply to owners or operators of storage vessels complying with 40 CFR part 65, subpart C, except that provisions required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart C, must comply with 40 CFR part 65, subpart A.

(3) Internal floating roof report. If an owner or operator installs an internal floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.43. This report shall be an attachment to the notification required by 40 CFR 65.5(b).

(4) External floating roof report. If an owner or operator installs an external floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.44. This report shall be an attachment to the notification required by 40 CFR 65.5(b).


§ 60.111b Definitions.

Terms used in this subpart are defined in the Act, in subpart A of this part, or in this subpart as follows:

**Bulk gasoline plant** means any gasoline distribution facility that has a gasoline throughput less than or equal to 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal requirement or Federal, State or local law, and discoverable by the Administrator and any other person.

**Condensate** means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature or pressure, or both, and remains liquid at standard conditions.

**Custody transfer** means the transfer of produced petroleum and/or condensate, after processing and/or treatment in the producing operations, from storage vessels or automatic transfer facilities to pipelines or any other forms of transportation.

**Fill** means the introduction of VOL into a storage vessel but not necessarily to complete capacity.

**Gasoline service station** means any site where gasoline is dispensed to motor vehicle fuel tanks from stationary storage tanks.

**Maximum true vapor pressure** means the equilibrium partial pressure exerted by the volatile organic compounds (as defined in 40 CFR 51.100) in the stored VOL at the temperature equal to the highest calendar-month average of the VOL storage temperature for VOL's stored above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for VOL's stored at the ambient temperature, as determined:
(1) In accordance with methods described in American Petroleum institute Bulletin 2517, Evaporation Loss From External Floating Roof Tanks, (incorporated by reference—see § 60.17); or

(2) As obtained from standard reference texts; or

(3) As determined by ASTM D2879-83, 96, or 97 (incorporated by reference—see § 60.17);

(4) Any other method approved by the Administrator.

Petroleum means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.

Petroleum liquids means petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery.

Process tank means a tank that is used within a process (including a solvent or raw material recovery process) to collect material discharged from a feedstock storage vessel or equipment within the process before the material is transferred to other equipment within the process, to a product or by-product storage vessel, or to a vessel used to store recovered solvent or raw material. In many process tanks, unit operations such as reactions and blending are conducted. Other process tanks, such as surge control vessels and bottoms receivers, however, may not involve unit operations.

Reid vapor pressure means the absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids except liquified petroleum gases, as determined by ASTM D323-82 or 94 (incorporated by reference—see § 60.17).

Storage vessel means each tank, reservoir, or container used for the storage of volatile organic liquids but does not include:

(1) Frames, housing, auxiliary supports, or other components that are not directly involved in the containment of liquids or vapors;

(2) Subsurface caverns or porous rock reservoirs; or

(3) Process tanks.

Volatile organic liquid (VOL) means any organic liquid which can emit volatile organic compounds (as defined in 40 CFR 51.100) into the atmosphere.

Waste means any liquid resulting from industrial, commercial, mining or agricultural operations, or from community activities that is discarded or is being accumulated, stored, or physically, chemically, or biologically treated prior to being discarded or recycled.

§ 60.112b Standard for volatile organic compounds (VOC).

(a) The owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m³ containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m³ but less than 151 m³ containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with one of the following:

(1) A fixed roof in combination with an internal floating roof meeting the following specifications:

(i) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all
times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

(ii) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:

(A) A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.

(B) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.

(C) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

(iii) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

(iv) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.

(v) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.

(vi) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer’s recommended setting.

(vii) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

(viii) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(ix) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(2) An external floating roof. An external floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof. Each external floating roof must meet the following specifications:

(i) Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in § 60.113b(b)(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall.

(B) The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in § 60.113b(b)(4).
(ii) Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(iii) The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

(3) A closed vent system and control device meeting the following specifications:

(i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, § 60.485(b).

(ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (§ 60.18) of the General Provisions.

(4) A system equivalent to those described in paragraphs (a)(1), (a)(2), or (a)(3) of this section as provided in § 60.114b of this subpart.

(b) The owner or operator of each storage vessel with a design capacity greater than or equal to 75 m³ which contains a VOL that, as stored, has a maximum true vapor pressure greater than or equal to 76.6 kPa shall equip each storage vessel with one of the following:

(1) A closed vent system and control device as specified in § 60.112b(a)(3).

(2) A system equivalent to that described in paragraph (b)(1) as provided in § 60.114b of this subpart.

(c) Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia. This paragraph applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia (“site”).

(1) For any storage vessel that otherwise would be subject to the control technology requirements of paragraphs (a) or (b) of this section, the site shall have the option of either complying directly with the requirements of this subpart, or reducing the site-wide total criteria pollutant emissions cap (total emissions cap) in accordance with the procedures set forth in a permit issued pursuant to 40 CFR 52.2454. If the site chooses the option of reducing the total emissions cap in accordance with the procedures set forth in such permit, the requirements of such permit shall apply in lieu of the otherwise applicable requirements of this subpart for such storage vessel.

(2) For any storage vessel at the site not subject to the requirements of 40 CFR 60.112b (a) or (b), the requirements of 40 CFR 60.116b (b) and (c) and the General Provisions (subpart A of this part) shall not apply.


§ 60.113b Testing and procedures.

The owner or operator of each storage vessel as specified in § 60.112b(a) shall meet the requirements of paragraph (a), (b), or (c) of this section. The applicable paragraph for a particular storage vessel depends on the control equipment installed to meet the requirements of § 60.112b.
(a) After installing the control equipment required to meet § 60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall:

(1) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.

(2) For Vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in § 60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(3) For vessels equipped with a double-seal system as specified in § 60.112b(a)(1)(ii)(B):

(i) Visually inspect the vessel as specified in paragraph (a)(4) of this section at least every 5 years; or

(ii) Visually inspect the vessel as specified in paragraph (a)(2) of this section.

(4) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in paragraphs (a)(2) and (a)(3)(ii) of this section and at intervals no greater than 5 years in the case of vessels specified in paragraph (a)(3)(i) of this section.

(5) Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by paragraphs (a)(1) and (a)(4) of this section to afford the Administrator the opportunity to have an observer present. If the inspection required by paragraph (a)(4) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

(b) After installing the control equipment required to meet § 60.112b(a)(2) (external floating roof), the owner or operator shall:

(1) Determine the gap areas and maximum gap widths, between the primary seal and the wall of the storage vessel and between the secondary seal and the wall of the storage vessel according to the following frequency.

(i) Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within 60 days of the initial fill with VOL and at least once every 5 years thereafter.

(ii) Measurements of gaps between the tank wall and the secondary seal shall be performed within 60 days of the initial fill with VOL and at least once per year thereafter.
(iii) If any source ceases to store VOL for a period of 1 year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill for the purposes of paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

(2) Determine gap widths and areas in the primary and secondary seals individually by the following procedures:

(i) Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.

(ii) Measure seal gaps around the entire circumference of the tank in each place where a 0.32-cm diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the storage vessel and measure the circumferential distance of each such location.

(iii) The total surface area of each gap described in paragraph (b)(2)(ii) of this section shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

(3) Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the respective standards in paragraph (b)(4) of this section.

(4) Make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the requirements listed in (b)(4) (i) and (ii) of this section:

(i) The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 Cm² per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm.

(A) One end of the mechanical shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 61 cm above the stored liquid surface.

(B) There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.

(ii) The secondary seal is to meet the following requirements:

(A) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (b)(2)(iii) of this section.

(B) The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm² per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.

(C) There are to be no holes, tears, or other openings in the seal or seal fabric.

(iii) If a failure that is detected during inspections required in paragraph (b)(1) of § 60.113b(b) cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in § 60.115b(b)(4). Such extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(5) Notify the Administrator 30 days in advance of any gap measurements required by paragraph (b)(1) of this section to afford the Administrator the opportunity to have an observer present.

(6) Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.

(i) If the external floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, the owner or operator
shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.

(ii) For all the inspections required by paragraph (b)(6) of this section, the owner or operator shall notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the Administrator the opportunity to inspect the storage vessel prior to refilling. If the inspection required by paragraph (b)(6) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

(c) The owner or operator of each source that is equipped with a closed vent system and control device as required in § 60.112b (a)(3) or (b)(2) (other than a flare) is exempt from § 60.8 of the General Provisions and shall meet the following requirements.

(1) Submit for approval by the Administrator as an attachment to the notification required by § 60.7(a)(1) or, if the facility is exempt from § 60.7(a)(1), as an attachment to the notification required by § 60.7(a)(2), an operating plan containing the information listed below.

(i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 °C is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.

(ii) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

(2) Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the Administrator in accordance with paragraph (c)(1) of this section, unless the plan was modified by the Administrator during the review process. In this case, the modified plan applies.

(d) The owner or operator of each source that is equipped with a closed vent system and a flare to meet the requirements in § 60.112b (a)(3) or (b)(2) shall meet the requirements as specified in the general control device requirements, § 60.18 (e) and (f).

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989]

§ 60.114b Alternative means of emission limitation.

(a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in emissions at least equivalent to the reduction in emissions achieved by any requirement in § 60.112b, the Administrator will publish in the FEDERAL REGISTER a notice permitting the use of the alternative means for purposes of compliance with that requirement.

(b) Any notice under paragraph (a) of this section will be published only after notice and an opportunity for a hearing.

(c) Any person seeking permission under this section shall submit to the Administrator a written application including:

(1) An actual emissions test that uses a full-sized or scale-model storage vessel that accurately collects and measures all VOC emissions from a given control device and that accurately simulates wind and accounts for other emission variables such as temperature and barometric pressure.
(2) An engineering evaluation that the Administrator determines is an accurate method of determining equivalence.

(d) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same emissions reduction as specified in § 60.112b.

§ 60.115b Reporting and recordkeeping requirements.

The owner or operator of each storage vessel as specified in § 60.112b(a) shall keep records and furnish reports as required by paragraphs (a), (b), or (c) of this section depending upon the control equipment installed to meet the requirements of § 60.112b. The owner or operator shall keep copies of all reports and records required by this section, except for the record required by (c)(1), for at least 2 years. The record required by (c)(1) will be kept for the life of the control equipment.

(a) After installing control equipment in accordance with § 60.112b(a)(1) (fixed roof and internal floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of § 60.112b(a)(1) and § 60.113b(a)(1). This report shall be an attachment to the notification required by § 60.7(a)(3).

(2) Keep a record of each inspection performed as required by § 60.113b(a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

(3) If any of the conditions described in § 60.113b(a)(2) are detected during the annual visual inspection required by § 60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

(4) After each inspection required by § 60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in § 60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of § 61.112b(a)(1) or § 60.113b(a)(3) and list each repair made.

(b) After installing control equipment in accordance with § 61.112b(a)(2) (external floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of § 60.112b(a)(2) and § 60.113b(b)(2), (b)(3), and (b)(4). This report shall be an attachment to the notification required by § 60.7(a)(3).

(2) Within 60 days of performing the seal gap measurements required by § 60.113b(b)(1), furnish the Administrator with a report that contains:

(i) The date of measurement.

(ii) The raw data obtained in the measurement.

(iii) The calculations described in § 60.113b(b)(2) and (b)(3).

(3) Keep a record of each gap measurement performed as required by § 60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain:

(i) The date of measurement.
(ii) The raw data obtained in the measurement.

(iii) The calculations described in § 60.113b (b)(2) and (b)(3).

(4) After each seal gap measurement that detects gaps exceeding the limitations specified by § 60.113b(b)(4), submit a report to the Administrator within 30 days of the inspection. The report will identify the vessel and contain the information specified in paragraph (b)(2) of this section and the date the vessel was emptied or the repairs made and date of repair.

(c) After installing control equipment in accordance with § 60.112b (a)(3) or (b)(1) (closed vent system and control device other than a flare), the owner or operator shall keep the following records.

(1) A copy of the operating plan.

(2) A record of the measured values of the parameters monitored in accordance with § 60.113b(c)(2).

(d) After installing a closed vent system and flare to comply with § 60.112b, the owner or operator shall meet the following requirements.

(1) A report containing the measurements required by § 60.18(f) (1), (2), (3), (4), (5), and (6) shall be furnished to the Administrator as required by § 60.8 of the General Provisions. This report shall be submitted within 6 months of the initial start-up date.

(2) Records shall be kept of all periods of operation during which the flare pilot flame is absent.

(3) Semiannual reports of all periods recorded under § 60.115b(d)(2) in which the pilot flame was absent shall be furnished to the Administrator.

§ 60.116b Monitoring of operations.

(a) The owner or operator shall keep copies of all records required by this section, except for the record required by paragraph (b) of this section, for at least 2 years. The record required by paragraph (b) of this section will be kept for the life of the source.

(b) The owner or operator of each storage vessel as specified in § 60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

(c) Except as provided in paragraphs (f) and (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kPa or with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

(d) Except as provided in paragraph (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor vapor pressure values for each volume range.

(e) Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below.

(1) For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at
ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

(2) For crude oil or refined petroleum products the vapor pressure may be obtained by the following:

(i) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference—see § 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

(ii) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

(3) For other liquids, the vapor pressure:

(i) May be obtained from standard reference texts, or

(ii) Determined by ASTM D2879-83, 96, or 97 (incorporated by reference—see § 60.17); or

(iii) Measured by an appropriate method approved by the Administrator; or

(iv) Calculated by an appropriate method approved by the Administrator.

(f) The owner or operator of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.

(1) Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in paragraph (e) of this section.

(2) For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in § 60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:

(i) ASTM D2879-83, 96, or 97 (incorporated by reference—see § 60.17); or

(ii) ASTM D323-82 or 94 (incorporated by reference—see § 60.17); or

(iii) As measured by an appropriate method as approved by the Administrator.

(g) The owner or operator of each vessel equipped with a closed vent system and control device meeting the specification of § 60.112b or with emissions reductions equipment as specified in 40 CFR 65.42(b)(4), (b)(5), (b)(6), or (c) is exempt from the requirements of paragraphs (c) and (d) of this section.


§ 60.117b Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States: §§ 60.111b(f)(4), 60.114b, 60.116b(e)(3)(iii), 60.116b(e)(3)(iv), and 60.116b(f)(2)(iii).
Attachment E

Part 70 Operating Permit Renewal No: T179-41632-00033

[Downloaded from the eCFR on September 6, 2016]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

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

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

What This Subpart Covers

§60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in paragraphs (a)(1) through (4) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

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

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

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

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

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

(3) Owners and operators of any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005.

(4) The provisions of §60.4208 of this subpart are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005.

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

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.
(d) Stationary CI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR part 89, subpart J and 40 CFR part 94, subpart J, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

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

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

Emission Standards for Manufacturers

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

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

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

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

(d) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

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

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

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

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

1. Their 2013 model year non-emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and
(2) Their 2014 model year and later non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

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

1. Remote areas of Alaska; and


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

(h) Stationary CI ICE certified to the standards in 40 CFR part 1039 and equipped with auxiliary emission control devices (AEDCs) as specified in 40 CFR 1039.665 must meet the Tier 1 certification emission standards for new nonroad CI engines in 40 CFR 89.112 while the AEDC is activated during a qualified emergency situation. A qualified emergency situation is defined in 40 CFR 1039.665. When the qualified emergency situation has ended and the AEDC is deactivated, the engine must resume meeting the otherwise applicable emission standard specified in this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011; 81 FR 44219, July 7, 2016]

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

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

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

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


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

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

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

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

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

(e) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE that are not fire pump engines to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

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

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

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

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

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

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

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

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

1. Remote areas of Alaska; and


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

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011; 81 FR 44219, July 7, 2016]
§60.4203 How long must my engines meet the emission standards if I am a manufacturer of stationary CI internal combustion engines?

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

[76 FR 37968, June 28, 2011]

Emission Standards for Owners and Operators

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

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

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

(c) Owners and operators of non-emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the following requirements:

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

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

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

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

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

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

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

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

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

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

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

(iii) 2.0 g/KW-hr (1.5 g/HP-hr) where maximum engine speed is greater than or equal to 2,000 rpm.
(4) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

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

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

(f) Owners and operators of stationary CI ICE certified to the standards in 40 CFR part 1039 and equipped with AECDs as specified in 40 CFR 1039.665 must meet the Tier 1 certification emission standards for new nonroad CI engines in 40 CFR 89.112 while the AECD is activated during a qualified emergency situation. A qualified emergency situation is defined in 40 CFR 1039.665. When the qualified emergency situation has ended and the AECD is deactivated, the engine must resume meeting the otherwise applicable emission standard specified in this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011; 81 FR 44219, July 7, 2016]

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

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

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

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

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

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

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

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

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

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

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

(ii) 44 · n \(-0.23\) g/KW-hr (33 · n \(-0.23\) g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and
(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

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

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

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

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

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

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 over the entire life of the engine.

[76 FR 37969, June 28, 2011]

Fuel Requirements for Owners and Operators

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

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

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.

(c) [Reserved]

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

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


Other Requirements for Owners and Operators

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

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.
(b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

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

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

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

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

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

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

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

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

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

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

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine.

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

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

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

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

(b) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the emission standards specified in §60.4201(d) and (e) and §60.4202(e) and (f) using the certification procedures required in 40 CFR part 94, subpart C, or 40 CFR part 1042, subpart C, as applicable, and must test their engines as specified in 40 CFR part 94 or 1042, as applicable.

(c) Stationary CI internal combustion engine manufacturers must meet the requirements of 40 CFR 1039.120, 1039.125, 1039.130, and 1039.135, and 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1039. Stationary CI internal combustion engine manufacturers must meet the corresponding provisions of 40 CFR part 89, 40 CFR part 94 or 40 CFR part 1042 for engines that would be covered by that part if they were nonroad (including marine) engines. Labels on such engines must refer to stationary engines, rather than or in addition to nonroad or marine engines, as appropriate. Stationary CI internal combustion engine manufacturers must label their engines according to paragraphs (c)(1) through (3) of this section.

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

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

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

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

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

(3) Stationary CI internal combustion engines manufactured after January 1, 2007 (for fire pump engines, after January 1 of the year listed in table 3 to this subpart, as applicable) must be labeled according to paragraphs (c)(3)(i) through (iii) of this section.
(i) Stationary CI internal combustion engines that meet the requirements of this subpart and the corresponding requirements for nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate.

(ii) Stationary CI internal combustion engines that meet the requirements of this subpart, but are not certified to the standards applicable to nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate, but the words “stationary” must be included instead of “nonroad” or “marine” on the label. In addition, such engines must be labeled according to 40 CFR 1039.20.

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

(d) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under 40 CFR parts 89, 94, 1039 or 1042 for that model year may certify any such family that contains both nonroad (including marine) and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts.

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

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

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

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

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

(j) Stationary CI ICE manufacturers may equip their stationary CI internal combustion engines certified to the emission standards in 40 CFR part 1039 with AECs for qualified emergency situations according to the requirements of 40 CFR 1039.665. Manufacturers of stationary CI ICE equipped with AECs as allowed by 40 CFR 1039.665 must meet all of the requirements in 40 CFR 1039.665 that apply to manufacturers. Manufacturers must document that the engine complies with the Tier 1 standard in 40 CFR 89.112 when the AEC is activated. Manufacturers must provide any relevant testing, engineering analysis, or other information in sufficient detail to support such statement when applying for certification (including amending an existing certificate) of an engine equipped with an AEC as allowed by 40 CFR 1039.665.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011; 81 FR 44219, July 7, 2016]
§60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, except as permitted under paragraph (g) of this section:

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

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

3. Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

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

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

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

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

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

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

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

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

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

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

(i) Identification of the specific parameters you propose to monitor continuously;
(ii) A discussion of the relationship between these parameters and NOx and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit NOx and PM emissions;

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

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

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

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

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

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

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

(f) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (f)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary ICE in emergency situations.

(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.
(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraph (f)(3)(i) of this section, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

(ii) [Reserved]

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

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

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

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

(h) The requirements for operators and prohibited acts specified in 40 CFR 1039.665 apply to owners or operators of
stationary CI ICE equipped with AECDs for qualified emergency situations as allowed by 40 CFR 1039.665.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37970, June 28, 2011; 78 FR 6695, Jan. 30, 2013; 81 FR 44219,
July 7, 2016]

Testing Requirements for Owners and Operators

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

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

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

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

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

\[ \text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \]  \hspace{1cm} (Eq. 1)

Where:

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

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

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

Where:

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

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in
§60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.
(e) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1042 must not exceed the NTE standards for the same model year and maximum engine power as required in 40 CFR 1042.101(c).

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

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

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

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

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

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

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

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

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

Where:

- \(C_i\) = concentration of NO\(_x\) or PM at the control device inlet,
- \(C_o\) = concentration of NO\(_x\) or PM at the control device outlet, and
- \(R\) = percent reduction of NO\(_x\) or PM emissions.

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

\[
C_{adj} = C_d \times \frac{5.9}{20.9 - \% O_2} \quad (Eq. 3)
\]

Where:

- \(C_{adj}\) = Calculated NO\(_x\) or PM concentration adjusted to 15 percent O\(_2\).
- \(C_d\) = Measured concentration of NO\(_x\) or PM, uncorrected.

5.9 = 20.9 percent O\(_2\)−15 percent O\(_2\), the defined O\(_2\) correction value, percent.
%O₂ = Measured O₂ concentration, dry basis, percent.

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

(i) Calculate the fuel-specific F₀ value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

\[
F_0 = \frac{0.209 F_d}{F_c} \quad (\text{Eq. 4})
\]

Where:

\(F_0\) = Fuel factor based on the ratio of O₂ volume to the ultimate CO₂ volume produced by the fuel at zero percent excess air.

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

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

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

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

\[
X_{CO₂} = \frac{5.9}{F_0} \quad (\text{Eq. 5})
\]

Where:

\(X_{CO₂}\) = CO₂ correction factor, percent.

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

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

\[
C_{adj} = C_d \frac{X_{CO₂}}{%CO₂} \quad (\text{Eq. 6})
\]

Where:

\(C_{adj}\) = Calculated NOₓ or PM concentration adjusted to 15 percent O₂.

\(C_d\) = Measured concentration of NOₓ or PM, uncorrected.

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

(e) To determine compliance with the NOₓ mass per unit output emission limitation, convert the concentration of NOₓ in the engine exhaust using Equation 7 of this section:
\[
ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{KW\text{-hour}} \quad (Eq. 7)
\]

Where:

ER = Emission rate in grams per KW-hour.

\(C_d\) = Measured NO\(_X\) concentration in ppm.

\(1.912\times10^{-3}\) = Conversion constant for ppm NO\(_X\) to grams per standard cubic meter at 25 degrees Celsius.

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

T = Time of test run, in hours.

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

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

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

Where:

ER = Emission rate in grams per KW-hour.

\(C_{adj}\) = Calculated PM concentration in grams per standard cubic meter.

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

T = Time of test run, in hours.

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

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

Notification, Reports, and Records for Owners and Operators

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

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

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

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

(ii) The address of the affected source;
(iii) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(iv) Emission control equipment; and

(v) Fuel used.

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

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

(ii) Maintenance conducted on the engine.

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

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

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

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

(d) If you own or operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §60.4211(f)(2)(ii) and (iii) or that operates for the purposes specified in §60.4211(f)(3)(i), you must submit an annual report according to the requirements in paragraphs (d)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

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

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in §60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(2)(ii) and (iii).

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

(vii) Hours spent for operation for the purposes specified in §60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.
(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA’s Central Data Exchange (CDX) ([www.epa.gov/cdx](http://www.epa.gov/cdx)). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §60.4.

(e) Owners or operators of stationary CI ICE equipped with AECDs pursuant to the requirements of 40 CFR 1039.665 must report the use of AECDs as required by 40 CFR 1039.665(e).


**Special Requirements**

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

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

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

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

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

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

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

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

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

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

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

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

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

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]
§60.4216 What requirements must I meet for engines used in Alaska?

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

(b) Except as indicated in paragraph (c) of this section, manufacturers, owners and operators of stationary CI ICE with a displacement of less than 10 liters per cylinder located in remote areas of Alaska may meet the requirements of this subpart by manufacturing and installing engines meeting the requirements of 40 CFR parts 94 or 1042, as appropriate, rather than the otherwise applicable requirements of 40 CFR parts 89 and 1039, as indicated in §§60.4201(f) and 60.4202(g).

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

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

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

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

[76 FR 37971, June 28, 2011, as amended at 81 FR 44219, July 7, 2016]

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

Owners and operators of stationary CI ICE that do not use diesel fuel may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in §60.4204 or §60.4205 using such fuels and that use of such fuel is appropriate and reasonably necessary, considering cost, energy, technical feasibility, human health and environmental, and other factors, for the operation of the engine.

[76 FR 37972, June 28, 2011]

General Provisions

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

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

§60.4219 What definitions apply to this subpart?

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

*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.

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

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

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

*Date of manufacture* means one of the following things:

1. For freshly manufactured engines and modified engines, date of manufacture means the date the engine is originally produced.

2. For reconstructed engines, date of manufacture means the date the engine was originally produced, except as specified in paragraph (3) of this definition.

3. Reconstructed engines are assigned a new date of manufacture if the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable entirely new facility. An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine is produced using all new components except for the engine block. In these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced.

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

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

*Emergency stationary internal combustion engine* means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary ICE must comply with the requirements specified in §60.4211(f) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in §60.4211(f), then it is not considered to be an emergency stationary ICE under this subpart.

1. The stationary ICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied...
to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc.

(2) The stationary ICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §60.4211(f).

(3) The stationary ICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §60.4211(f)(2)(ii) or (iii) and §60.4211(f)(3)(i).

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

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

**Freshly manufactured engine** means an engine that has not been placed into service. An engine becomes freshly manufactured when it is originally produced.

**Installed** means the engine is placed and secured at the location where it is intended to be operated.

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

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

**Model year** means the calendar year in which an engine is manufactured (see “date of manufacture”), except as follows:

(1) Model year means the annual new model production period of the engine manufacturer in which an engine is manufactured (see “date of manufacture”), if the annual new model production period is different than the calendar year and includes January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year.

(2) For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was manufactured (see “date of manufacture”).

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

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

**Remote areas of Alaska** means areas of Alaska that meet either paragraph (1) or (2) of this definition.

(1) Areas of Alaska that are not accessible by the Federal Aid Highway System (FAHS).

(2) Areas of Alaska that meet all of the following criteria:

(i) The only connection to the FAHS is through the Alaska Marine Highway System, or the stationary CI ICE 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 CI ICE on an annual basis is used for residential purposes.
(iii) The generating capacity of the source is less than 12 megawatts, or the stationary CI ICE is used exclusively for backup power for renewable energy.

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

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

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

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


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

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

<table>
<thead>
<tr>
<th>Maximum engine power (KW&lt;8 (HP&lt;11)</th>
<th>NMHC + NOₓ</th>
<th>HC</th>
<th>NOₓ</th>
<th>CO</th>
<th>PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>8≤KW&lt;19 (11≤HP&lt;25)</td>
<td>10.5 (7.8)</td>
<td>8.0 (6.0)</td>
<td>1.0 (0.75)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19≤KW&lt;37 (25≤HP&lt;50)</td>
<td>9.5 (7.1)</td>
<td>6.6 (4.9)</td>
<td>0.80 (0.60)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37≤KW&lt;56 (50≤HP&lt;75)</td>
<td>9.5 (7.1)</td>
<td>5.5 (4.1)</td>
<td>0.80 (0.60)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>56≤KW&lt;75 (75≤HP&lt;100)</td>
<td></td>
<td>9.2 (6.9)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75≤KW&lt;130 (100≤HP&lt;175)</td>
<td></td>
<td>9.2 (6.9)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>130≤KW&lt;225 (175≤HP&lt;300)</td>
<td>1.3 (1.0)</td>
<td>9.2 (6.9)</td>
<td>11.4 (8.5)</td>
<td>0.54 (0.40)</td>
<td></td>
</tr>
<tr>
<td>225≤KW&lt;450 (300≤HP&lt;600)</td>
<td>1.3 (1.0)</td>
<td>9.2 (6.9)</td>
<td>11.4 (8.5)</td>
<td>0.54 (0.40)</td>
<td></td>
</tr>
<tr>
<td>Maximum engine power</td>
<td>NMHC + NOX</td>
<td>HC</td>
<td>NOX</td>
<td>CO</td>
<td>PM</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------</td>
<td>----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>450&lt;=KW&lt;=560</td>
<td>1.3 (1.0)</td>
<td>9.2 (6.9)</td>
<td>11.4 (8.5)</td>
<td>0.54 (0.40)</td>
<td></td>
</tr>
<tr>
<td>(600&lt;=HP&lt;=750)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KW&gt;560 (HP&gt;750)</td>
<td>1.3 (1.0)</td>
<td>9.2 (6.9)</td>
<td>11.4 (8.5)</td>
<td>0.54 (0.40)</td>
<td></td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Engine power</th>
<th>NOX + NMHC</th>
<th>CO</th>
<th>PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>KW&lt;8 (HP&lt;11)</td>
<td>7.5 (5.6)</td>
<td>8.0 (6.0)</td>
<td>0.40 (0.30)</td>
</tr>
<tr>
<td>8&lt;=KW&lt;19</td>
<td>7.5 (5.6)</td>
<td>6.6 (4.9)</td>
<td>0.40 (0.30)</td>
</tr>
<tr>
<td>(11&lt;=HP&lt;25)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19&lt;=KW&lt;37</td>
<td>7.5 (5.6)</td>
<td>5.5 (4.1)</td>
<td>0.30 (0.22)</td>
</tr>
<tr>
<td>(25&lt;=HP&lt;50)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Engine power</th>
<th>Starting model year engine manufacturers must certify new stationary fire pump engines according to §60.4202(d)¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>KW&lt;75 (HP&lt;100)</td>
<td>2011</td>
</tr>
<tr>
<td>75&lt;=KW&lt;130 (100&lt;=HP&lt;175)</td>
<td>2010</td>
</tr>
<tr>
<td>130&lt;=KW&lt;=560 (175&lt;=HP&lt;=750)</td>
<td>2009</td>
</tr>
<tr>
<td>KW&gt;560 (HP&gt;750)</td>
<td>2008</td>
</tr>
</tbody>
</table>

¹Manufacturers of fire pump stationary CI ICE with a maximum engine power greater than or equal to 37 KW (50 HP) and less than 450 KW (600 HP) and a rated speed of greater than 2,650 revolutions per minute (rpm) are not required to certify such engines until three model years following the model year indicated in this Table 3 for engines in the applicable engine power category.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37972, June 28, 2011]
Table 4 to Subpart III of Part 60—Emission Standards for Stationary Fire Pump Engines

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

<table>
<thead>
<tr>
<th>Maximum engine power</th>
<th>Model year(s)</th>
<th>NMHC + NOₓ</th>
<th>CO</th>
<th>PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>KW&lt;8 (HP&lt;11)</td>
<td>2010 and earlier</td>
<td>10.5 (7.8)</td>
<td>8.0 (6.0)</td>
<td>1.0 (0.75)</td>
</tr>
<tr>
<td></td>
<td>2011 +</td>
<td>7.5 (5.6)</td>
<td></td>
<td>0.40 (0.30)</td>
</tr>
<tr>
<td>8≤KW&lt;19 (11≤HP&lt;25)</td>
<td>2010 and earlier</td>
<td>9.5 (7.1)</td>
<td>6.6 (4.9)</td>
<td>0.80 (0.60)</td>
</tr>
<tr>
<td></td>
<td>2011 +</td>
<td>7.5 (5.6)</td>
<td></td>
<td>0.40 (0.30)</td>
</tr>
<tr>
<td>19≤KW&lt;37 (25≤HP&lt;50)</td>
<td>2010 and earlier</td>
<td>9.5 (7.1)</td>
<td>5.5 (4.1)</td>
<td>0.80 (0.60)</td>
</tr>
<tr>
<td></td>
<td>2011 +</td>
<td>7.5 (5.6)</td>
<td></td>
<td>0.30 (0.22)</td>
</tr>
<tr>
<td>37≤KW&lt;56 (50≤HP&lt;75)</td>
<td>2010 and earlier</td>
<td>10.5 (7.8)</td>
<td>5.0 (3.7)</td>
<td>0.80 (0.60)</td>
</tr>
<tr>
<td></td>
<td>2011 +¹</td>
<td>4.7 (3.5)</td>
<td></td>
<td>0.40 (0.30)</td>
</tr>
<tr>
<td>56≤KW&lt;75 (75≤HP&lt;100)</td>
<td>2010 and earlier</td>
<td>10.5 (7.8)</td>
<td>5.0 (3.7)</td>
<td>0.80 (0.60)</td>
</tr>
<tr>
<td></td>
<td>2011 +¹</td>
<td>4.7 (3.5)</td>
<td></td>
<td>0.40 (0.30)</td>
</tr>
<tr>
<td>75≤KW&lt;130 (100≤HP&lt;175)</td>
<td>2009 and earlier</td>
<td>10.5 (7.8)</td>
<td>5.0 (3.7)</td>
<td>0.80 (0.60)</td>
</tr>
<tr>
<td></td>
<td>2010 +²</td>
<td>4.0 (3.0)</td>
<td></td>
<td>0.30 (0.22)</td>
</tr>
<tr>
<td>130≤KW&lt;225 (175≤HP&lt;300)</td>
<td>2008 and earlier</td>
<td>10.5 (7.8)</td>
<td>3.5 (2.6)</td>
<td>0.54 (0.40)</td>
</tr>
<tr>
<td></td>
<td>2009 +³</td>
<td>4.0 (3.0)</td>
<td></td>
<td>0.20 (0.15)</td>
</tr>
<tr>
<td>225≤KW&lt;450 (300≤HP&lt;600)</td>
<td>2008 and earlier</td>
<td>10.5 (7.8)</td>
<td>3.5 (2.6)</td>
<td>0.54 (0.40)</td>
</tr>
<tr>
<td></td>
<td>2009 +³</td>
<td>4.0 (3.0)</td>
<td></td>
<td>0.20 (0.15)</td>
</tr>
<tr>
<td>450≤KW≤560 (600≤HP≤750)</td>
<td>2008 and earlier</td>
<td>10.5 (7.8)</td>
<td>3.5 (2.6)</td>
<td>0.54 (0.40)</td>
</tr>
<tr>
<td></td>
<td>2009 +</td>
<td>4.0 (3.0)</td>
<td></td>
<td>0.20 (0.15)</td>
</tr>
<tr>
<td>KW&gt;560 (HP&gt;750)</td>
<td>2007 and earlier</td>
<td>10.5 (7.8)</td>
<td>3.5 (2.6)</td>
<td>0.54 (0.40)</td>
</tr>
<tr>
<td></td>
<td>2008 +</td>
<td>6.4 (4.8)</td>
<td></td>
<td>0.20 (0.15)</td>
</tr>
</tbody>
</table>

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

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

³In model years 2009-2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.
Table 5 to Subpart IIII of Part 60—Labeling and Recordkeeping Requirements for New Stationary Emergency Engines

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

<table>
<thead>
<tr>
<th>Engine power</th>
<th>Starting model year</th>
</tr>
</thead>
<tbody>
<tr>
<td>19≤KW&lt;56 (25≤HP&lt;75)</td>
<td>2013</td>
</tr>
<tr>
<td>56≤KW&lt;130 (75≤HP&lt;175)</td>
<td>2012</td>
</tr>
<tr>
<td>KW≥130 (HP≥175)</td>
<td>2011</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Mode No.</th>
<th>Engine speed¹</th>
<th>Torque (percent)²</th>
<th>Weighting factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rated</td>
<td>100</td>
<td>0.30</td>
</tr>
<tr>
<td>2</td>
<td>Rated</td>
<td>75</td>
<td>0.50</td>
</tr>
<tr>
<td>3</td>
<td>Rated</td>
<td>50</td>
<td>0.20</td>
</tr>
</tbody>
</table>

¹Engine speed: ±2 percent of point.

²Torque: NFPA certified nameplate HP for 100 percent point. All points should be ±2 percent of engine percent load value.
Table 7 to Subpart IIII of Part 60—Requirements for Performance Tests for Stationary CI ICE With a Displacement of ≥30 Liters per Cylinder

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

<table>
<thead>
<tr>
<th>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. Stationary CI internal combustion engine with a displacement of ≥30 liters per cylinder</td>
<td>a. Reduce NO&lt;sub&gt;x&lt;/sub&gt; emissions by 90 percent or more;</td>
<td>i. Select the sampling port location and number/location of traverse points at the inlet and outlet of the control device;</td>
<td>(a) For NO&lt;sub&gt;x&lt;/sub&gt;, O&lt;sub&gt;2&lt;/sub&gt;, 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-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>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(b) Measurements to determine O&lt;sub&gt;2&lt;/sub&gt; concentration must be made at the same time as the measurements for NO&lt;sub&gt;x&lt;/sub&gt; concentration.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii. Measure O&lt;sub&gt;2&lt;/sub&gt; at the inlet and outlet of the control device;</td>
<td>(1) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2</td>
<td>(b) Measurements to determine O&lt;sub&gt;2&lt;/sub&gt; concentration must be made at the same time as the measurements for NO&lt;sub&gt;x&lt;/sub&gt; concentration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iii. If necessary, measure moisture content at the inlet and outlet of the control device; and</td>
<td>(2) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)</td>
<td>(c) Measurements to determine moisture content must be made at the same time as the measurements for NO&lt;sub&gt;x&lt;/sub&gt; concentration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iv. Measure NO&lt;sub&gt;x&lt;/sub&gt; at the inlet and outlet of the control device.</td>
<td>(3) Method 7E of 40 CFR part 60, appendix A-4, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)</td>
<td>(d) NO&lt;sub&gt;x&lt;/sub&gt; concentration must be at 15 percent O&lt;sub&gt;2&lt;/sub&gt; dry basis. Results of this test consist of the average of the three 1-hour or longer runs.</td>
</tr>
<tr>
<td>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>b.</td>
<td>Limit the concentration of NOₓ in the stationary CI internal combustion engine exhaust.</td>
<td>i. Select the sampling port location and number/location of traverse points at the exhaust of the stationary internal combustion engine;</td>
<td>(a) For NOₓ, 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-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>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii. Determine the O₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;</td>
<td>(1) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2</td>
<td>(b) Measurements to determine O₂ concentration must be made at the same time as the measurement for NOₓ concentration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and</td>
<td>(2) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)</td>
<td>(c) Measurements to determine moisture content must be made at the same time as the measurement for NOₓ concentration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iv. Measure NOₓ at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site must be located at the outlet of the control device.</td>
<td>(3) Method 7E of 40 CFR part 60, appendix A-4, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)</td>
<td>(d) NOₓ 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>
</tr>
<tr>
<td>c.</td>
<td>Reduce PM emissions by 60 percent or more</td>
<td>i. Select the sampling port location and the number of traverse points;</td>
<td>(1) Method 1 or 1A of 40 CFR part 60, appendix A-1</td>
<td>(a) Sampling sites must be located at the inlet and outlet of the control device.</td>
</tr>
</tbody>
</table>
Each Complying with the requirement to You must Using According to the following requirements

- ii. Measure O\textsubscript{2} at the inlet and outlet of the control device;
  - (2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2 (b) Measurements to determine O\textsubscript{2} concentration must be made at the same time as the measurements for PM concentration.
- iii. If necessary, measure moisture content at the inlet and outlet of the control device; and
  - (3) Method 4 of 40 CFR part 60, appendix A-3 (c) Measurements to determine and moisture content must be made at the same time as the measurements for PM concentration.
- iv. Measure PM at the inlet and outlet of the control device.
  - (4) Method 5 of 40 CFR part 60, appendix A-3 (d) PM concentration must be at 15 percent O\textsubscript{2}, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

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

[79 FR 11251, Feb. 27, 2014]

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

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

<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>§60.1</td>
<td>General applicability of the General Provisions</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§60.2</td>
<td>Definitions</td>
<td>Yes</td>
<td>Additional terms defined in §60.4219.</td>
</tr>
<tr>
<td>General Provisions citation</td>
<td>Subject of citation</td>
<td>Applies to subpart</td>
<td>Explanation</td>
</tr>
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<td>-----------------------------</td>
<td>----------------------------------------------</td>
<td>--------------------</td>
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</tr>
<tr>
<td>§60.3</td>
<td>Units and abbreviations</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§60.4</td>
<td>Address</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§60.5</td>
<td>Determination of construction or modification</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§60.6</td>
<td>Review of plans</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§60.7</td>
<td>Notification and Recordkeeping</td>
<td>Yes</td>
<td>Except that §60.7 only applies as specified in §60.4214(a).</td>
</tr>
<tr>
<td>§60.8</td>
<td>Performance tests</td>
<td>Yes</td>
<td>Except that §60.8 only applies to stationary CI ICE with a displacement of ( \geq 30 ) liters per cylinder and engines that are not certified.</td>
</tr>
<tr>
<td>§60.9</td>
<td>Availability of information</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§60.10</td>
<td>State Authority</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§60.11</td>
<td>Compliance with standards and maintenance requirements</td>
<td>No</td>
<td>Requirements are specified in subpart IIII.</td>
</tr>
<tr>
<td>§60.12</td>
<td>Circumvention</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>§60.13</td>
<td>Monitoring requirements</td>
<td>Yes</td>
<td>Except that §60.13 only applies to stationary CI ICE with a displacement of ( \geq 30 ) liters per cylinder.</td>
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<tr>
<td>§60.14</td>
<td>Modification</td>
<td>Yes</td>
<td></td>
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<tr>
<td>§60.15</td>
<td>Reconstruction</td>
<td>Yes</td>
<td></td>
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<tr>
<td>§60.16</td>
<td>Priority list</td>
<td>Yes</td>
<td></td>
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<tr>
<td>§60.17</td>
<td>Incorporations by reference</td>
<td>Yes</td>
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<tr>
<td>§60.18</td>
<td>General control device requirements</td>
<td>No</td>
<td></td>
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<tr>
<td>§60.19</td>
<td>General notification and reporting requirements</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>
Attachment F

Part 70 Operating Permit Renewal No: T179-41632-00033

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

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

(e) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 3 (Tier 2 for engines above 560 kilowatt (kW)) emission standards in Table 1 of 40 CFR 89.112, you may comply with the requirements under this part by meeting the requirements for Tier 3 engines (Tier 2 for engines above 560 kW) in 40 CFR part 60 subpart 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)(ii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(c) Beginning January 1, 2015, if you own or operate a new emergency CI stationary RICE with a site rating of more than 500 brake HP and a displacement of less than 30 liters per cylinder located at a major source of HAP that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.
(d) Existing CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2), or are on offshore vessels that meet §63.6603(c) are exempt from the requirements of this section.

[78 FR 6702, Jan. 30, 2013]

General Compliance Requirements

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

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

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


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:

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

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:

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

Where:
(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 that fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.
(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the
engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.


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:

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

- An existing emergency stationary RICE.

- 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.

- 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.

- 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 CO$_2$.

**Dual-fuel engine** means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

**Emergency stationary RICE** means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must comply with the requirements specified in §63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in §63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

1. The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.

2. The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §63.6640(f).
(3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §63.6640(f)(2)(ii) or (iii) and §63.6640(f)(4)(i) or (ii).

Engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes "rich" glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The "lean" glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

Institutional emergency stationary RICE means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and 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 1. 4SRB stationary RICE</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>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></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>b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O2</td>
<td></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.

As stated in §§63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

### Table 1b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

<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>
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>
<th>During periods of startup you must . . .</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 from the pressure drop across the catalyst that was measured during the initial performance test; and</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</td>
<td>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>
<td></td>
</tr>
</tbody>
</table>
For each . . . | You must meet the following operating limitation, except during periods of startup . . .
---|---
Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst. |  

1Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6707, Jan. 30, 2013]

Table 2c to Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions:

<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\(^1\) | a. Change oil and filter every 500 hours of operation or annually, whichever comes first.\(^2\)  
b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;  
c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.\(^3\) | Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.\(^3\) |
| 2. Non-Emergency, non-black start stationary CI RICE <100 HP | a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first.\(^2\)  
b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;  
c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.\(^3\) |  |
<p>| 3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP | Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent (O_2). |  |</p>
<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>
</tbody>
</table>
For each . . . & You must meet the following requirement, except during periods of startup . . . & During periods of startup you must . . .

| 9. Non-emergency, non-black startup 2SLB stationary RICE 100≤HP≤500 | Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent O₂. |  |
|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------| |
| 10. Non-emergency, non-black startup 4SLB stationary RICE 100≤HP≤500 | Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O₂. |  |
| 11. Non-emergency, non-black startup 4SRB stationary RICE 100≤HP≤500 | Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O₂. |  |
| 12. Non-emergency, non-black startup stationary RICE 100≤HP≤500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis | Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O₂. |  |

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>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>
| 5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year.  
   a. Change oil and filter every 500 hours of operation or annually, whichever comes first;  
   b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and  
   c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. | | |
| 6. Non-emergency, non-black start 2SLB stationary RICE  
   a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;  
   b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and  
   c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary. | | |
| 7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP  
   a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;  
   b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and  
   c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary. | | |
| 8. Non-emergency, non-black start 4SLB remote stationary RICE >500 HP  
   a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;  
   b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and | | |
<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>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>c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.</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>b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.</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>b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.</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>a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;¹ b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.</td>
</tr>
<tr>
<td>13. Non-emergency, non-black start stationary RICE which combuts 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 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>
For each . . . | You must meet the following requirement, except during periods of startup . . . | During periods of startup you must . . .
---|---|---
c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.

Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of this subpart.

If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[78 FR 6709, Jan. 30, 2013]

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

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

<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 ≥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]
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>
<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></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>(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)⁹⁻¹⁰ (heated probe not necessary)</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></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>iii. Measure the CO at the inlet and the outlet of the control device</td>
<td>(1) ASTM D6522-00 (Reapproved 2005)⁹⁻¹⁰ (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>
</tbody>
</table>
2. 4SRB stationary RICE
   a. reduce formaldehyde emissions

   i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and

   (a) For formaldehyde, O₂, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (‘3-point long line’). If the duct is >12 inches in diameter and the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be sampled at ‘3-point long line’; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A.

   ii. Measure O₂ at the inlet and outlet of the control device; and

   (1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)\(^a\) (heated probe not necessary)

   (a) Measurements to determine O₂ concentration must be made at the same time as the measurements for formaldehyde or THC concentration.

   iii. Measure moisture content at the inlet and outlet of the control device; and

   (1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03\(^a\)

   (a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or THC concentration.

   iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formaldehyde at the inlet and the outlet of the control device

   (1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03\(^a\), provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130

   (a) Formaldehyde concentration must be at 15 percent O₂, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

   v. If demonstrating compliance with the THC percent reduction requirement, measure THC at the inlet and the outlet of the control device

   (1) Method 25A, reported as propane, of 40 CFR part 60, appendix A-7

   (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.
<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>3. Stationary RICE</td>
<td>a. limit the concentration of formaldehyde or CO in the stationary RICE exhaust</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>(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)a (heated probe not necessary)</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>
</tr>
<tr>
<td></td>
<td></td>
<td>ii. Determine the O₂ concentration of the stationary RICE exhaust at the sampling port location; 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 6348-03a</td>
<td>(a) Measurements to determine O₂ concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and</td>
<td>(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03a, 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>(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO concentration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iv. Measure formaldehyde at the exhaust of the stationary RICE; or</td>
<td>(1) Method 10 of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (2005)a, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03a</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>
</tr>
<tr>
<td></td>
<td></td>
<td>v. measure CO at the exhaust of the stationary RICE</td>
<td>(1) Method 10 of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (2005)a, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03a</td>
<td>(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.</td>
</tr>
</tbody>
</table>
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 a major 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&lt;br&gt;ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and&lt;br&gt;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&lt;br&gt;ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and&lt;br&gt;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&lt;br&gt;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&lt;br&gt;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>
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<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>
</tr>
<tr>
<td>----------------</td>
<td>-----------------------------------------------</td>
<td>--------------------------------------------------</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>i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.</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>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 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>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>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 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>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>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>
</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>12. Existing non-emergency stationary RICE (100 \leq \text{HP} \leq 500) located at a major source of HAP and existing non-emergency stationary CI RICE (300 &lt; \text{HP} \leq 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 (\text{O}_2), 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>i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent (\text{O}_2);</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>i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent (\text{O}_2), or the average reduction of emissions of THC is 30 percent or more;</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 (\geq 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</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>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>iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and</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>
<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>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>iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.</td>
<td></td>
<td></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 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. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to §63.6620; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.</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>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>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>
</tr>
<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.³</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. Collecting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit; and</td>
</tr>
<tr>
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<td></td>
<td>ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and</td>
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<tr>
<td></td>
<td></td>
<td>iii. Reducing these data to 4-hour rolling averages; and</td>
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<td>iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and</td>
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<tr>
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<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>
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<tr>
<td></td>
<td></td>
<td>iii. Reducing these data to 4-hour rolling averages; and</td>
</tr>
<tr>
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<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>
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</tr>
<tr>
<td>9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE &lt;100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency stationary SI RICE located at an area source of HAP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE &gt;500 HP located at an area source of HAP that operate 24 hours or less per calendar year, and existing non-emergency 4SLB and 4SRB stationary RICE &gt;500 HP located at an area source of HAP that are remote stationary RICE</td>
<td>a. Work or Management practices</td>
<td>i. Operating and maintaining the stationary RICE according to the manufacturer’s emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.</td>
</tr>
<tr>
<td>10. Existing stationary CI RICE &gt;500 HP that are not limited use stationary RICE</td>
<td>a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and using oxidation catalyst</td>
<td>i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.</td>
</tr>
<tr>
<td>11. Existing stationary CI RICE &gt;500 HP that are not limited use stationary RICE</td>
<td>a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and not using oxidation catalyst</td>
<td>i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and</td>
</tr>
<tr>
<td>For each . . .</td>
<td>Complying with the requirement to . . .</td>
<td>You must demonstrate continuous compliance by . . .</td>
</tr>
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<td>----------------------------------------------------</td>
</tr>
<tr>
<td>12. Existing limited use CI stationary RICE &gt;500 HP a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using an oxidation catalyst</td>
<td>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</td>
<td>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.</td>
</tr>
<tr>
<td>13. Existing limited use CI stationary RICE &gt;500 HP a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and not using an oxidation catalyst</td>
<td>i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.</td>
<td>ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.</td>
</tr>
<tr>
<td>For each . . .</td>
<td>Complying with the requirement to . . .</td>
<td>You must demonstrate continuous compliance by . . .</td>
</tr>
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</tr>
<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>

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

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

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

<table>
<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 100s≤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</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>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></td>
<td></td>
<td>c. If you had a malfunction during the reporting period, the information in §63.6650(c)(4).</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 results of the annual compliance demonstration, if conducted during the reporting period.</td>
<td>i. Semiannually according to the requirements in §63.6650(b)(1)-(5).</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 . . .

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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>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)</td>
<td>Report</td>
<td>a. The information in §63.6650(h)(1) i. annually according to the requirements in §63.6650(h)(2)- (3).</td>
</tr>
</tbody>
</table>

[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>No.</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>No.</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>No.</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>
</tr>
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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 contains performance test dates at §§63.6610, 63.6611, and 63.6612.</td>
</tr>
<tr>
<td>§63.7(a)(3)</td>
<td>CAA section 114 authority</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(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 specifies conditions for conducting performance tests at §63.6620.</td>
</tr>
<tr>
<td>§63.7(e)(1)</td>
<td>Conditions for conducting performance tests</td>
<td>No.</td>
<td>Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620.</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 specifies test methods at §63.6620.</td>
</tr>
<tr>
<td>§63.7(f)</td>
<td>Alternative test method provisions</td>
<td>Yes.</td>
<td>Subpart ZZZZ specifies test methods at §63.6620.</td>
</tr>
<tr>
<td>§63.7(g)</td>
<td>Performance test data analysis, recordkeeping, and reporting</td>
<td>Yes.</td>
<td>Subpart ZZZZ specifies test methods at §63.6620.</td>
</tr>
<tr>
<td>§63.7(h)</td>
<td>Waiver of tests</td>
<td>Yes.</td>
<td>Subpart ZZZZ specifies test methods at §63.6620.</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></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 contains specific requirements for monitoring at §63.6625.</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 contains specific requirements for monitoring at §63.6625.</td>
</tr>
<tr>
<td>§63.8(c)(1)(iii)</td>
<td>Compliance with operation and maintenance requirements</td>
<td>No</td>
<td>Subpart ZZZZ contains specific requirements for monitoring at §63.6625.</td>
</tr>
<tr>
<td>§63.8(c)(2)-(3)</td>
<td>Monitoring system installation</td>
<td>Yes.</td>
<td>Subpart ZZZZ contains specific requirements for monitoring at §63.6625.</td>
</tr>
<tr>
<td>§63.8(c)(4)</td>
<td>Continuous monitoring system (CMS) requirements</td>
<td>Yes</td>
<td>Except that 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>Except that 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>
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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></td>
</tr>
<tr>
<td>§63.9(a)</td>
<td>Applicability and State delegation of notification requirements</td>
<td>Yes.</td>
<td>Except that §63.9(b)(3) is reserved.</td>
</tr>
<tr>
<td>§63.9(b)(1)-(5)</td>
<td>Initial notifications</td>
<td>Yes</td>
<td>Except that §63.9(h)(4) 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>
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<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>
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<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>
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<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>
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<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>
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<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>
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<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>Except that §63.9(h) only applies as specified in §63.6645.</td>
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<tr>
<td>§63.9(j)</td>
<td>Change in previous information</td>
<td>Yes.</td>
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<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>
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<tr>
<td>§63.10(b)(1)</td>
<td>Record retention</td>
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<td></td>
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<tr>
<td>§63.10(b)(2)(i)-(v)</td>
<td>Records related to SSM</td>
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</tr>
<tr>
<td>§63.10(b)(2)(vi)-(xi)</td>
<td>Records related to SSM</td>
<td>Yes</td>
<td></td>
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<tr>
<td>§63.10(b)(2)(xii)</td>
<td>Records when using alternative to RATA</td>
<td>Yes</td>
<td>For CO standard if using RATA alternative.</td>
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<tr>
<td>§63.10(b)(2)(xiii)</td>
<td>Records of supporting documentation</td>
<td>Yes</td>
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<td>§63.10(b)(2)(xiv)</td>
<td>Records of supporting documentation</td>
<td>Yes</td>
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<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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<td>§63.10(d)(2)</td>
<td>Report of performance test results</td>
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<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>Progress reports</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>
<td>Yes</td>
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<td>§63.10(e)(2)(ii)</td>
<td>COMS-related report</td>
<td>No</td>
<td>Subpart ZZZZ does not require COMS.</td>
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<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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<tr>
<td>§63.10(f)</td>
<td>Waiver for recordkeeping/reporting</td>
<td>Yes</td>
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<td>§63.11</td>
<td>Flares</td>
<td>No</td>
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<td>§63.12</td>
<td>State authority and delegations</td>
<td>Yes</td>
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</tr>
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<td>§63.13</td>
<td>Addresses</td>
<td>Yes</td>
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<td>§63.14</td>
<td>Incorporation by reference</td>
<td>Yes</td>
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<tr>
<td>§63.15</td>
<td>Availability of information</td>
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<td></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>
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<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


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>
<th>Time</th>
<th>Scrub. OK</th>
<th>Flow- Rate</th>
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</thead>
<tbody>
<tr>
<td>Run #</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td>CO</td>
<td>O2</td>
<td>CO</td>
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Sample Cond. Phase

Measurement Data Phase

Mean

Refresh Phase

[78 FR 6721, Jan. 30, 2013]
Attachment G

Part 70 Operating Permit Renewal No: T179-41632-00033

[Downloaded from the eCFR on May 13, 2013]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

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

Subpart CCCCC—National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities

Source: 73 FR 1945, Jan. 10, 2008, unless otherwise noted.

What This Subpart Covers

§ 63.11110 What is the purpose of this subpart?

This subpart establishes national emission limitations and management practices for hazardous air pollutants (HAP) emitted from the loading of gasoline storage tanks at gasoline dispensing facilities (GDF). This subpart also establishes requirements to demonstrate compliance with the emission limitations and management practices.

§ 63.11111 Am I subject to the requirements in this subpart?

(a) The affected source to which this subpart applies is each GDF that is located at an area source. The affected source includes each gasoline cargo tank during the delivery of product to a GDF and also includes each storage tank.

(b) If your GDF has a monthly throughput of less than 10,000 gallons of gasoline, you must comply with the requirements in § 63.11116.

(c) If your GDF has a monthly throughput of 10,000 gallons of gasoline or more, you must comply with the requirements in § 63.11117.

(d) If your GDF has a monthly throughput of 100,000 gallons of gasoline or more, you must comply with the requirements in § 63.11118.

(e) An affected source shall, upon request by the Administrator, demonstrate that their monthly throughput is less than the 10,000-gallon or the 100,000-gallon threshold level, as applicable. For new or reconstructed affected sources, as specified in § 63.11112(b) and (c), recordkeeping to document monthly throughput must begin upon startup of the affected source. For existing sources, as specified in § 63.11112(d), recordkeeping to document monthly throughput must begin on January 10, 2008. For existing sources that are subject to this subpart only because they load gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, recordkeeping to document monthly throughput must begin on January 24, 2011. Records required under this paragraph shall be kept for a period of 5 years.

(f) If you are an owner or operator of affected sources, as defined in paragraph (a) of this section, you are not required to obtain a permit under 40 CFR part 70 or 40 CFR part 71 as a result of being subject to this subpart. However, you must still apply for and obtain a permit under 40 CFR part 70 or 40 CFR part 71 if you meet one or more of the applicability criteria found in 40 CFR 70.3(a) and (b) or 40 CFR 71.3(a) and (b).
(g) The loading of aviation gasoline into storage tanks at airports, and the subsequent transfer of aviation gasoline within the airport, is not subject to this subpart.

(h) Monthly throughput is the total volume of gasoline loaded into, or dispensed from, all the gasoline storage tanks located at a single affected GDF. If an area source has two or more GDF at separate locations within the area source, each GDF is treated as a separate affected source.

(i) If your affected source’s throughput ever exceeds an applicable throughput threshold, the affected source will remain subject to the requirements for sources above the threshold, even if the affected source throughput later falls below the applicable throughput threshold.

(j) The dispensing of gasoline from a fixed gasoline storage tank at a GDF into a portable gasoline tank for the on-site delivery and subsequent dispensing of the gasoline into the fuel tank of a motor vehicle or other gasoline-fueled engine or equipment used within the area source is only subject to § 63.11116 of this subpart.

(k) For any affected source subject to the provisions of this subpart and another Federal rule, you may elect to comply only with the more stringent provisions of the applicable subparts. You must consider all provisions of the rules, including monitoring, recordkeeping, and reporting. You must identify the affected source and provisions with which you will comply in your Notification of Compliance Status required under § 63.11124. You also must demonstrate in your Notification of Compliance Status that each provision with which you will comply is at least as stringent as the otherwise applicable requirements in this subpart. You are responsible for making accurate determinations concerning the more stringent provisions, and noncompliance with this rule is not excused if it is later determined that your determination was in error, and, as a result, you are violating this subpart. Compliance with this rule is your responsibility and the Notification of Compliance Status does not alter or affect that responsibility.


§ 63.11112 What parts of my affected source does this subpart cover?

(a) The emission sources to which this subpart applies are gasoline storage tanks and associated equipment components in vapor or liquid gasoline service at new, reconstructed, or existing GDF that meet the criteria specified in § 63.11111. Pressure/Vacuum vents on gasoline storage tanks and the equipment necessary to unload product from cargo tanks into the storage tanks at GDF are covered emission sources. The equipment used for the refueling of motor vehicles is not covered by this subpart.

(b) An affected source is a new affected source if you commenced construction on the affected source after November 9, 2006, and you meet the applicability criteria in § 63.11111 at the time you commenced operation.

(c) An affected source is reconstructed if you meet the criteria for reconstruction as defined in § 63.2.

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

§ 63.11113 When do I have to comply with this subpart?

(a) If you have a new or reconstructed affected source, you must comply with this subpart according to paragraphs (a)(1) and (2) of this section, except as specified in paragraph (d) of this section.

(1) If you start up your affected source before January 10, 2008, you must comply with the standards in this subpart no later than January 10, 2008.

(2) If you start up your affected source after January 10, 2008, you must comply with the standards in this subpart upon startup of your affected source.

(b) If you have an existing affected source, you must comply with the standards in this subpart no later than January 10, 2011.
(c) If you have an existing affected source that becomes subject to the control requirements in this subpart because of an increase in the monthly throughput, as specified in §63.11111(c) or §63.11111(d), you must comply with the standards in this subpart no later than 3 years after the affected source becomes subject to the control requirements in this subpart.

(d) If you have a new or reconstructed affected source and you are complying with Table 1 to this subpart, you must comply according to paragraphs (d)(1) and (2) of this section.

(1) If you start up your affected source from November 9, 2006 to September 23, 2008, you must comply no later than September 23, 2008.

(2) If you start up your affected source after September 23, 2008, you must comply upon startup of your affected source.

(e) The initial compliance demonstration test required under §63.11120(a)(1) and (2) must be conducted as specified in paragraphs (e)(1) and (2) of this section.

(1) If you have a new or reconstructed affected source, you must conduct the initial compliance test upon installation of the complete vapor balance system.

(2) If you have an existing affected source, you must conduct the initial compliance test as specified in paragraphs (e)(2)(i) or (e)(2)(ii) of this section.

(i) For vapor balance systems installed on or before December 15, 2009, you must test no later than 180 days after the applicable compliance date specified in paragraphs (b) or (c) of this section.

(ii) For vapor balance systems installed after December 15, 2009, you must test upon installation of the complete vapor balance system.

(f) If your GDF is subject to the control requirements in this subpart only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in §63.11132, you must comply with the standards in this subpart as specified in paragraphs (f)(1) or (f)(2) of this section.

(1) If your GDF is an existing facility, you must comply by January 24, 2014.

(2) If your GDF is a new or reconstructed facility, you must comply by the dates specified in paragraphs (f)(2)(i) and (ii) of this section.

(i) If you start up your GDF after December 15, 2009, but before January 24, 2011, you must comply no later than January 24, 2011.

(ii) If you start up your GDF after January 24, 2011, you must comply upon startup of your GDF.


Emission Limitations and Management Practices

§ 63.11115 What are my general duties to minimize emissions?

Each owner or operator of an affected source under this subpart must comply with the requirements of paragraphs (a) and (b) of this section.

(a) You must, at all times, 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. 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.

(b) You must keep applicable records and submit reports as specified in § 63.11125(d) and § 63.11126(b).

[76 FR 4182, Jan. 24, 2011]

§ 63.11116   Requirements for facilities with monthly throughput of less than 10,000 gallons of gasoline.

(a) You must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

(1) Minimize gasoline spills;

(2) Clean up spills as expeditiously as practicable;

(3) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;

(4) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

(b) You are not required to submit notifications or reports as specified in § 63.11125, § 63.11126, or subpart A of this part, but you must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

(c) You must comply with the requirements of this subpart by the applicable dates specified in § 63.11113.

(d) Portable gasoline containers that meet the requirements of 40 CFR part 59, subpart F, are considered acceptable for compliance with paragraph (a)(3) of this section.


§ 63.11117   Requirements for facilities with monthly throughput of 10,000 gallons of gasoline or more.

(a) You must comply with the requirements in section § 63.11116(a).

(b) Except as specified in paragraph (c) of this section, you must only load gasoline into storage tanks at your facility by utilizing submerged filling, as defined in § 63.11132, and as specified in paragraphs (b)(1), (b)(2), or (b)(3) of this section. The applicable distances in paragraphs (b)(1) and (2) shall be measured from the point in the opening of the submerged fill pipe that is the greatest distance from the bottom of the storage tank.

(1) Submerged fill pipes installed on or before November 9, 2006, must be no more than 12 inches from the bottom of the tank.

(2) Submerged fill pipes installed after November 9, 2006, must be no more than 6 inches from the bottom of the tank.

(3) Submerged fill pipes not meeting the specifications of paragraphs (b)(1) or (b)(2) of this section are allowed if the owner or operator can demonstrate that the liquid level in the tank is always above the entire opening of the fill pipe. Documentation providing such demonstration must be made available for inspection by the Administrator's delegated representative during the course of a site visit.

(c) Gasoline storage tanks with a capacity of less than 250 gallons are not required to comply with the submerged fill requirements in paragraph (b) of this section, but must comply only with all of the requirements in § 63.11116.
(d) You must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

(e) You must submit the applicable notifications as required under § 63.11124(a).

(f) You must comply with the requirements of this subpart by the applicable dates contained in § 63.11113.


§ 63.11118 Requirements for facilities with monthly throughput of 100,000 gallons of gasoline or more.

(a) You must comply with the requirements in §§ 63.11116(a) and 63.11117(b).

(b) Except as provided in paragraph (c) of this section, you must meet the requirements in either paragraph (b)(1) or paragraph (b)(2) of this section.

(1) Each management practice in Table 1 to this subpart that applies to your GDF.

(2) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(2)(i) and (ii) of this section, you will be deemed in compliance with this subsection.

(i) You operate a vapor balance system at your GDF that meets the requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.

(A) Achieves emissions reduction of at least 90 percent.

(B) Operates using management practices at least as stringent as those in Table 1 to this subpart.

(ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.

(c) The emission sources listed in paragraphs (c)(1) through (3) of this section are not required to comply with the control requirements in paragraph (b) of this section, but must comply with the requirements in § 63.11117.

(1) Gasoline storage tanks with a capacity of less than 250 gallons that are constructed after January 10, 2008.

(2) Gasoline storage tanks with a capacity of less than 2,000 gallons that were constructed before January 10, 2008.

(3) Gasoline storage tanks equipped with floating roofs, or the equivalent.

(d) Cargo tanks unloading at GDF must comply with the management practices in Table 2 to this subpart.

(e) You must comply with the applicable testing requirements contained in § 63.11120.

(f) You must submit the applicable notifications as required under § 63.11124.

(g) You must keep records and submit reports as specified in §§ 63.11125 and 63.11126.

(h) You must comply with the requirements of this subpart by the applicable dates contained in § 63.11113.

Testing and Monitoring Requirements

§ 63.11120 What testing and monitoring requirements must I meet?

(a) Each owner or operator, at the time of installation, as specified in § 63.11113(e), of a vapor balance system required under § 63.11118(b)(1), and every 3 years thereafter, must comply with the requirements in paragraphs (a)(1) and (2) of this section.

(1) You must demonstrate compliance with the leak rate and cracking pressure requirements, specified in item 1(g) of Table 1 to this subpart, for pressure-vacuum vent valves installed on your gasoline storage tanks using the test methods identified in paragraph (a)(1)(i) or paragraph (a)(1)(ii) of this section.

(i) California Air Resources Board Vapor Recovery Test Procedure TP-201.1E,—Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves, adopted October 8, 2003 (incorporated by reference, see § 63.14).

(ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in § 63.7(f).

(2) You must demonstrate compliance with the static pressure performance requirement specified in item 1(h) of Table 1 to this subpart for your vapor balance system by conducting a static pressure test on your gasoline storage tanks using the test methods identified in paragraphs (a)(2)(i), (a)(2)(ii), or (a)(2)(iii) of this section.


(ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in § 63.7(f).


(b) Each owner or operator choosing, under the provisions of § 63.6(g), to use a vapor balance system other than that described in Table 1 to this subpart must demonstrate to the Administrator or delegated authority under paragraph § 63.11131(a) of this subpart, the equivalency of their vapor balance system to that described in Table 1 to this subpart using the procedures specified in paragraphs (b)(1) through (3) of this section.

(1) You must demonstrate initial compliance by conducting an initial performance test on the vapor balance system to demonstrate that the vapor balance system achieves 95 percent reduction using the California Air Resources Board Vapor Recovery Test Procedure TP-201.1,—Volumetric Efficiency for Phase I Vapor Recovery Systems, adopted April 12, 1996, and amended February 1, 2001, and October 8, 2003, (incorporated by reference, see § 63.14).

(2) You must, during the initial performance test required under paragraph (b)(1) of this section, determine and document alternative acceptable values for the leak rate and cracking pressure requirements specified in item 1(g) of Table 1 to this subpart and for the static pressure performance requirement in item 1(h) of Table 1 to this subpart.

(3) You must comply with the testing requirements specified in paragraph (a) of this section.

(c) Conduct of performance tests. Performance tests conducted for this subpart shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance (i.e., performance based on normal operating conditions) of the affected source. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(d) Owners and operators of gasoline cargo tanks subject to the provisions of Table 2 to this subpart must conduct annual certification testing according to the vapor tightness testing requirements found in § 63.11092(f).
Notifications, Records, and Reports

§ 63.11124 What notifications must I submit and when?

(a) Each owner or operator subject to the control requirements in § 63.11117 must comply with paragraphs (a)(1) through (3) of this section.

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in § 63.11117, unless you meet the requirements in paragraph (a)(3) of this section. If your affected source is subject to the control requirements in § 63.11117 only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, you must submit the Initial Notification by May 24, 2011. The Initial Notification must contain the information specified in paragraphs (a)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in § 63.13.

(i) The name and address of the owner and the operator.

(ii) The address (i.e., physical location) of the GDF.

(iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of § 63.11117 that apply to you.

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in § 63.13, within 60 days of the applicable compliance date specified in § 63.11113, unless you meet the requirements in paragraph (a)(3) of this section. The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of this subpart, and must indicate whether the facilities' monthly throughput is calculated based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (a)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (a)(1) of this section.

(3) If, prior to January 10, 2008, you are operating in compliance with an enforceable State, local, or tribal rule or permit that requires submerged fill as specified in § 63.11117(b), you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (a)(1) or paragraph (a)(2) of this section.

(b) Each owner or operator subject to the control requirements in § 63.11118 must comply with paragraphs (b)(1) through (5) of this section.

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in § 63.11118. If your affected source is subject to the control requirements in § 63.11118 only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, you must submit the Initial Notification by May 24, 2011. The Initial Notification must contain the information specified in paragraphs (b)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in § 63.13.

(i) The name and address of the owner and the operator.

(ii) The address (i.e., physical location) of the GDF.

(iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of § 63.11118 that apply to you.

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in § 63.13, in accordance with the schedule specified in § 63.9(h). The Notification of
Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of this subpart, and must indicate whether the facility's throughput is determined based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (b)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (b)(1) of this section.

(3) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(3)(i) and (ii) of this section, you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (b)(1) or paragraph (b)(2) of this subsection.

(i) You operate a vapor balance system at your gasoline dispensing facility that meets the requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.

(A) Achieves emissions reduction of at least 90 percent.

(B) Operates using management practices at least as stringent as those in Table 1 to this subpart.

(ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.

(4) You must submit a Notification of Performance Test, as specified in § 63.9(e), prior to initiating testing required by § 63.11120(a) and (b).

(5) You must submit additional notifications specified in § 63.9, as applicable.


§ 63.11125 What are my recordkeeping requirements?

(a) Each owner or operator subject to the management practices in § 63.11118 must keep records of all tests performed under § 63.11120(a) and (b).

(b) Records required under paragraph (a) of this section shall be kept for a period of 5 years and shall be made available for inspection by the Administrator's delegated representatives during the course of a site visit.

(c) Each owner or operator of a gasoline cargo tank subject to the management practices in Table 2 to this subpart must keep records documenting vapor tightness testing for a period of 5 years. Documentation must include each of the items specified in § 63.11094(b)(2)(i) through (viii). Records of vapor tightness testing must be retained as specified in either paragraph (c)(1) or paragraph (c)(2) of this section.

(1) The owner or operator must keep all vapor tightness testing records with the cargo tank.

(2) As an alternative to keeping all records with the cargo tank, the owner or operator may comply with the requirements of paragraphs (c)(2)(i) and (ii) of this section.

(i) The owner or operator may keep records of only the most recent vapor tightness test with the cargo tank, and keep records for the previous 4 years at their office or another central location.

(ii) Vapor tightness testing records that are kept at a location other than with the cargo tank must be instantly available (e.g., via e-mail or facsimile) to the Administrator's delegated representative during the course of a site visit or within a mutually agreeable time frame. Such records must be an exact duplicate image of the original paper copy record with certifying signatures.
(d) Each owner or operator of an affected source under this subpart shall keep records as specified in paragraphs (d)(1) and (2) of this section.

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

(2) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.11115(a), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.


§ 63.11126 What are my reporting requirements?

(a) Each owner or operator subject to the management practices in §63.11118 shall report to the Administrator the results of all volumetric efficiency tests required under §63.11120(b). Reports submitted under this paragraph must be submitted within 180 days of the completion of the performance testing.

(b) Each owner or operator of an affected source under this subpart shall report, by March 15 of each year, the number, duration, and a brief description of each type of malfunction which occurred during the previous calendar year 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 §63.11115(a), including actions taken to correct a malfunction. No report is necessary for a calendar year in which no malfunctions occurred.

[76 FR 4183, Jan. 24, 2011]

Other Requirements and Information

§ 63.11130 What parts of the General Provisions apply to me?

Table 3 to this subpart shows which parts of the General Provisions apply to you.

§ 63.11131 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. EPA or a delegated authority such as the applicable State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or tribal agency.

(c) The authorities that cannot be delegated to State, local, or tribal agencies are as specified in paragraphs (c)(1) through (3) of this section.

(1) Approval of alternatives to the requirements in §§63.11116 through 63.11118 and 63.11120.

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart.

(3) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.
§ 63.11132 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act (CAA), or in subparts A and BBBBBB of this part. For purposes of this subpart, definitions in this section supersede definitions in other parts or subparts.

_Dual-point vapor balance system_ means a type of vapor balance system in which the storage tank is equipped with an entry port for a gasoline fill pipe and a separate exit port for a vapor connection.

_Gasoline_ means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater, which is used as a fuel for internal combustion engines.

_Gasoline cargo tank_ means a delivery tank truck or railcar which is loading or unloading gasoline, or which has loaded or unloaded gasoline on the immediately previous load.

_Gasoline dispensing facility (GDF)_ means any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including a nonroad vehicle or nonroad engine used solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on- and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline-fueled engines and equipment.

_Monthly throughput_ means the total volume of gasoline that is loaded into, or dispensed from, all gasoline storage tanks at each GDF during a month. Monthly throughput is calculated by summing the volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the current day, plus the total volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the previous 364 days, and then dividing that sum by 12.

_Motor vehicle_ means any self-propelled vehicle designed for transporting persons or property on a street or highway.

_Nonroad engine_ means an internal combustion engine (including the fuel system) that is not used in a motor vehicle or a vehicle used solely for competition, or that is not subject to standards promulgated under section 7411 of this title or section 7521 of this title.

_Nonroad vehicle_ means a vehicle that is powered by a nonroad engine, and that is not a motor vehicle or a vehicle used solely for competition.

_Submerged filling_ means, for the purposes of this subpart, the filling of a gasoline storage tank through a submerged fill pipe whose discharge is no more than the applicable distance specified in § 63.11117(b) from the bottom of the tank. Bottom filling of gasoline storage tanks is included in this definition.

_Vapor balance system_ means a combination of pipes and hoses that create a closed system between the vapor spaces of an unloading gasoline cargo tank and a receiving storage tank such that vapors displaced from the storage tank are transferred to the gasoline cargo tank being unloaded.

_Vapor-tight_ means equipment that allows no loss of vapors. Compliance with vapor-tight requirements can be determined by checking to ensure that the concentration at a potential leak source is not equal to or greater than 100 percent of the Lower Explosive Limit when measured with a combustible gas detector, calibrated with propane, at a distance of 1 inch from the source.

_Vapor-tight gasoline cargo tank_ means a gasoline cargo tank which has demonstrated within the 12 preceding months that it meets the annual certification test requirements in § 63.11092(f) of this part.

Table 1 to Subpart CCCCC of Part 63—Applicability Criteria and Management Practices for Gasoline Dispensing Facilities With Monthly Throughput of 100,000 Gallons of Gasoline or More

<table>
<thead>
<tr>
<th>If you own or operate</th>
<th>Then you must</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A new, reconstructed, or existing GDF subject to § 63.11118</td>
<td>Install and operate a vapor balance system on your gasoline storage tanks that meets the design criteria in paragraphs (a) through (h).</td>
</tr>
<tr>
<td>(a) All vapor connections and lines on the storage tank shall be equipped with closures that seal upon disconnect.</td>
<td></td>
</tr>
<tr>
<td>(b) The vapor line from the gasoline storage tank to the gasoline cargo tank shall be vapor-tight, as defined in § 63.11132.</td>
<td></td>
</tr>
<tr>
<td>(c) The vapor balance system shall be designed such that the pressure in the tank truck does not exceed 18 inches water pressure or 5.9 inches water vacuum during product transfer.</td>
<td></td>
</tr>
<tr>
<td>(d) The vapor recovery and product adaptors, and the method of connection with the delivery elbow, shall be designed so as to prevent the over-tightening or loosening of fittings during normal delivery operations.</td>
<td></td>
</tr>
<tr>
<td>(e) If a gauge well separate from the fill tube is used, it shall be provided with a submerged drop tube that extends the same distance from the bottom of the storage tank as specified in § 63.11117(b).</td>
<td></td>
</tr>
<tr>
<td>(f) Liquid fill connections for all systems shall be equipped with vapor-tight caps.</td>
<td></td>
</tr>
<tr>
<td>(g) Pressure/vacuum (PV) vent valves shall be installed on the storage tank vent pipes. The pressure specifications for PV vent valves shall be: a positive pressure setting of 2.5 to 6.0 inches of water and a negative pressure setting of 6.0 to 10.0 inches of water. The total leak rate of all PV vent valves at an affected facility, including connections, shall not exceed 0.17 cubic foot per hour at a pressure of 2.0 inches of water and 0.63 cubic foot per hour at a vacuum of 4 inches of water.</td>
<td></td>
</tr>
</tbody>
</table>
| (h) The vapor balance system shall be capable of meeting the static pressure performance requirement of the following equation: | \[
P_f = 2e^{-500.887/v}
\]
Where: | 
| \(P_f\) = Minimum allowable final pressure, inches of water. | |
| \(v\) = Total ullage affected by the test, gallons. | |
| \(e\) = Dimensionless constant equal to approximately 2.718. | |
| \(2\) = The initial pressure, inches water. | |

2. A new or reconstructed GDF, or any storage tank(s) constructed after November 9, 2006, at an existing affected facility subject to § 63.11118 | Equip your gasoline storage tanks with a dual-point vapor balance system, as defined in § 63.11132, and comply with the requirements of item 1 in this Table. |

1 The management practices specified in this Table are not applicable if you are complying with the requirements in § 63.11118(b)(2), except that if you are complying with the requirements in § 63.11118(b)(2)(i)(B), you must operate using management practices at least as stringent as those listed in this Table.

Table 2 to Subpart CCCCCC of Part 63—Applicability Criteria and Management Practices for Gasoline Cargo Tanks Unloading at Gasoline Dispensing Facilities With Monthly Throughput of 100,000 Gallons of Gasoline or More

<table>
<thead>
<tr>
<th>If you own or operate</th>
<th>Then you must</th>
</tr>
</thead>
<tbody>
<tr>
<td>A gasoline cargo tank</td>
<td>Not unload gasoline into a storage tank at a GDF subject to the control requirements in this subpart unless the following conditions are met:</td>
</tr>
<tr>
<td>(i) All hoses in the vapor balance system are properly connected;</td>
<td></td>
</tr>
<tr>
<td>(ii) The adapters or couplers that attach to the vapor line on the storage tank have closures that seal upon disconnect,</td>
<td></td>
</tr>
<tr>
<td>(iii) All vapor return hoses, couplers, and adapters used in the gasoline delivery are vapor-tight,</td>
<td></td>
</tr>
<tr>
<td>(iv) All tank truck vapor return equipment is compatible in size and forms a vapor-tight connection with the vapor balance equipment on the GDF storage tank, and</td>
<td></td>
</tr>
<tr>
<td>(v) All hatches on the tank truck are closed and securely fastened.</td>
<td></td>
</tr>
<tr>
<td>(vi) The filling of storage tanks at GDF shall be limited to unloading from vapor-tight gasoline cargo tanks. Documentation that the cargo tank has met the specifications of EPA Method 27 shall be carried with the cargo tank, as specified in § 63.1125(c).</td>
<td></td>
</tr>
</tbody>
</table>


Table 3 to Subpart CCCCCC of Part 63—Applicability of General Provisions

<table>
<thead>
<tr>
<th>Citation</th>
<th>Subject</th>
<th>Brief description</th>
<th>Applies to subpart CCCCCC</th>
</tr>
</thead>
<tbody>
<tr>
<td>§ 63.1</td>
<td>Applicability</td>
<td>Initial applicability determination; applicability after standard established; permit requirements; extensions, notifications</td>
<td>Yes, specific requirements given in § 63.11111.</td>
</tr>
<tr>
<td>§ 63.1(c)(2)</td>
<td>Title V Permit</td>
<td>Requirements for obtaining a title V permit from the applicable permitting authority</td>
<td>Yes, § 63.11111(f) of subpart CCCCCC exempts identified area sources from the obligation to obtain title V operating permits.</td>
</tr>
<tr>
<td>§ 63.2</td>
<td>Definitions</td>
<td>Definitions for part 63 standards</td>
<td>Yes, additional definitions in § 63.1132.</td>
</tr>
<tr>
<td>§ 63.3</td>
<td>Units and Abbreviations</td>
<td>Units and abbreviations for part 63 standards</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.4</td>
<td>Prohibited Activities and Circumvention</td>
<td>Prohibited activities; Circumvention, severability</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.5</td>
<td>Construction/Reconstruction</td>
<td>Applicability; applications; approvals</td>
<td>Yes, except that these notifications are not required for facilities subject to § 63.1116</td>
</tr>
<tr>
<td>§ 63.6(a)</td>
<td>Compliance with Standards/Operation &amp; Maintenance—Applicability</td>
<td>General Provisions apply unless compliance extension; General Provisions apply to area sources that become major</td>
<td>Yes.</td>
</tr>
<tr>
<td>Citation</td>
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</tr>
<tr>
<td>§ 63.6(b)(1)-(4)</td>
<td>Compliance Dates for New and Reconstructed Sources</td>
<td>Standards apply at effective date; 3 years after effective date; upon startup; 10 years after construction or reconstruction commences for CAA section 112(f)</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.6(b)(5)</td>
<td>Notification</td>
<td>Must notify if commenced construction or reconstruction after proposal</td>
<td>Yes.</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</td>
<td>Area sources that become major must comply with major source standards immediately upon becoming major, regardless of whether required to comply when they were an area source</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(c)(1)-(2)</td>
<td>Compliance Dates for Existing Sources</td>
<td>Comply according to date in this subpart, which must be no later than 3 years after effective date; for CAA section 112(f) standards, comply within 90 days of effective date unless compliance extension</td>
<td>No. § 63.11113 specifies the compliance dates.</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</td>
<td>Area sources That become major must comply with major source standards by date indicated in this subpart or by equivalent time period (e.g., 3 years)</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(d)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>63.6(e)(1)(i)</td>
<td>General duty to minimize emissions</td>
<td>Operate to minimize emissions at all times; information Administrator will use to determine if operation and maintenance requirements were met.</td>
<td>No. See § 63.11115 for general duty requirement.</td>
</tr>
<tr>
<td>63.6(e)(1)(ii)</td>
<td>Requirement to correct malfunctions ASAP</td>
<td>Owner or operator must correct malfunctions as soon as possible.</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(e)(2)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§ 63.6(e)(3)</td>
<td>Startup, Shutdown, and Malfunction (SSM) Plan</td>
<td>Requirement for SSM plan; content of SSM plan; actions during SSM</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(f)(1)</td>
<td>Compliance Except During SSM</td>
<td>You must comply with emission standards at all times except during SSM</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(f)(2)-(3)</td>
<td>Methods for Determining Compliance</td>
<td>Compliance based on performance test, operation and maintenance plans, records, inspection</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.6(g)(1)-(3)</td>
<td>Alternative Standard</td>
<td>Procedures for getting an alternative standard</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.6(h)(1)</td>
<td>Compliance with Opacity/Visible Emission (VE) Standards</td>
<td>You must comply with opacity/VE standards at all times except during SSM</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(2)(i)</td>
<td>Determining Compliance with Opacity/VE Standards</td>
<td>If standard does not State test method, use EPA Method 9 for opacity in appendix A of part 60 of this chapter and EPA Method 22 for VE in appendix A of part 60 of this chapter</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(2)(ii)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citation</td>
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</tr>
<tr>
<td>§ 63.6(h)(2)(iii)</td>
<td>Using Previous Tests To Demonstrate Compliance With Opacity/VE Standards</td>
<td>Criteria for when previous opacity/VE testing can be used to show compliance with this subpart</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(3)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§ 63.6(h)(4)</td>
<td>Notification of Opacity/VE Observation Date</td>
<td>Must notify Administrator of anticipated date of observation</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(5)(i), (iii)-(v)</td>
<td>Conducting Opacity/VE Observations</td>
<td>Dates and schedule for conducting opacity/VE observations</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(5)(ii)</td>
<td>Opacity Test Duration and Averaging Times</td>
<td>Must have at least 3 hours of observation with 30 6-minute averages</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(6)</td>
<td>Records of Conditions During Opacity/VE Observations</td>
<td>Must keep records available and allow Administrator to inspect</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(7)(i)</td>
<td>Report Continuous Opacity Monitoring System (COMS) Monitoring Data From Performance Test</td>
<td>Must submit COMS data with other performance test data</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(7)(ii)</td>
<td>Using COMS Instead of EPA Method 9</td>
<td>Can submit COMS data instead of EPA Method 9 results even if rule requires EPA Method 9 in appendix A of part 60 of this chapter, but must notify Administrator before performance test</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(7)(iii)</td>
<td>Averaging Time for COMS During Performance Test</td>
<td>To determine compliance, must reduce COMS data to 6-minute averages</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(7)(iv)</td>
<td>COMS Requirements</td>
<td>Owner/operator must demonstrate that COMS performance evaluations are conducted according to § 63.8(e); COMS are properly maintained and operated according to § 63.8(c) and data quality as § 63.8(d)</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(7)(v)</td>
<td>Determining Compliance with Opacity/VE Standards</td>
<td>COMS is probable but not conclusive evidence of compliance with opacity standard, even if EPA Method 9 observation shows otherwise. Requirements for COMS to be probable evidence-proper maintenance, meeting Performance Specification 1 in appendix B of part 60 of this chapter, and data have not been altered</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(8)</td>
<td>Determining Compliance with Opacity/VE Standards</td>
<td>Administrator will use all COMS, EPA Method 9 (in appendix A of part 60 of this chapter), and EPA Method 22 (in appendix A of part 60 of this chapter) results, as well as information about operation and maintenance to determine compliance</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(h)(9)</td>
<td>Adjusted Opacity Standard</td>
<td>Procedures for Administrator to adjust an opacity standard</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.6(i)(1)-(14)</td>
<td>Compliance Extension</td>
<td>Procedures and criteria for Administrator to grant compliance extension</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.6(j)</td>
<td>Presidential Compliance Exemption</td>
<td>President may exempt any source from requirement to comply with this subpart</td>
<td>Yes.</td>
</tr>
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</tr>
<tr>
<td>§ 63.7(a)(2)</td>
<td>Performance Test Dates</td>
<td>Dates for conducting initial performance testing; must conduct 180 days after compliance date</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(a)(3)</td>
<td>CAA Section 114 Authority</td>
<td>Administrator may require a performance test under CAA section 114 at any time</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(b)(1)</td>
<td>Notification of Performance Test</td>
<td>Must notify Administrator 60 days before the test</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(b)(2)</td>
<td>Notification of Re-scheduling</td>
<td>If have to reschedule performance test, must notify Administrator of rescheduled date as soon as practicable and without delay</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(c)</td>
<td>Quality Assurance (QA)/Test Plan</td>
<td>Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with; test plan approval procedures; performance audit requirements; internal and external QA procedures for testing</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(d)</td>
<td>Testing Facilities</td>
<td>Requirements for testing facilities</td>
<td>Yes.</td>
</tr>
<tr>
<td>63.7(e)(1)</td>
<td>Conditions for Conducting Performance Tests</td>
<td>Performance test must be conducted under representative conditions</td>
<td>No. § 63.11120(c) specifies conditions for conducting performance tests.</td>
</tr>
<tr>
<td>§ 63.7(e)(2)</td>
<td>Conditions for Conducting Performance Tests</td>
<td>Must conduct according to this subpart and EPA test methods unless Administrator approves alternative</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(e)(3)</td>
<td>Test Run Duration</td>
<td>Must have three test runs of at least 1 hour each; compliance is based on arithmetic mean of three runs; conditions when data from an additional test run can be used</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(f)</td>
<td>Alternative Test Method</td>
<td>Procedures by which Administrator can grant approval to use an intermediate or major change, or alternative to a test method</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(g)</td>
<td>Performance Test Data Analysis</td>
<td>Must include raw data in performance test report; must submit performance test data 60 days after end of test with the Notification of Compliance Status; keep data for 5 years</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.7(h)</td>
<td>Waiver of Tests</td>
<td>Procedures for Administrator to waive performance test</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.8(a)(1)</td>
<td>Applicability of Monitoring Requirements</td>
<td>Subject to all monitoring requirements in standard</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.8(a)(2)</td>
<td>Performance Specifications</td>
<td>Performance Specifications in appendix B of 40 CFR part 60 apply</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.8(a)(3)</td>
<td>[Reserved]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>§ 63.8(a)(4)</td>
<td>Monitoring of Flares</td>
<td>Monitoring requirements for flares in § 63.11 apply</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.8(b)(1)</td>
<td>Monitoring</td>
<td>Must conduct monitoring according to standard unless Administrator approves alternative</td>
<td>Yes.</td>
</tr>
<tr>
<td>Citation</td>
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</tr>
<tr>
<td>§ 63.8(b)(2)-(3)</td>
<td>Multiple Effluents and Multiple Monitoring Systems</td>
<td>Specific requirements for installing monitoring systems; must install on each affected source or after combined with another affected source before it is released to the atmosphere provided the monitoring is sufficient to demonstrate compliance with the standard; if more than one monitoring system on an emission point, must report all monitoring system results, unless one monitoring system is a backup</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.8(c)(1)</td>
<td>Monitoring System Operation and Maintenance</td>
<td>Maintain monitoring system in a manner consistent with good air pollution control practices</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.8(c)(1)(i)-(iii)</td>
<td>Operation and Maintenance of Continuous Monitoring Systems (CMS)</td>
<td>Must maintain and operate each CMS as specified in § 63.6(e)(1); must keep parts for routine repairs readily available; must develop a written SSM plan for CMS, as specified in § 63.6(e)(3)</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.8(c)(2)-(8)</td>
<td>CMS Requirements</td>
<td>Must install to get representative emission or parameter measurements; must verify operational status before or at performance test</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.8(d)</td>
<td>CMS Quality Control</td>
<td>Requirements for CMS quality control, including calibration, etc.; must keep quality control plan on record for 5 years; keep old versions for 5 years after revisions</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.8(e)</td>
<td>CMS Performance Evaluation</td>
<td>Notification, performance evaluation test plan, reports</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.8(f)(1)-(5)</td>
<td>Alternative Monitoring Method</td>
<td>Procedures for Administrator to approve alternative monitoring</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.8(f)(6)</td>
<td>Alternative to Relative Accuracy Test</td>
<td>Procedures for Administrator to approve alternative relative accuracy tests for continuous emissions monitoring system (CEMS)</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.8(g)</td>
<td>Data Reduction</td>
<td>COMS 6-minute averages calculated over at least 36 evenly spaced data points; CEMS 1 hour averages computed over at least 4 equally spaced data points; data that cannot be used in average</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.9(a)</td>
<td>Notification Requirements</td>
<td>Applicability and State delegation</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.9(b)(1)-(2), (4)-(5)</td>
<td>Initial Notifications</td>
<td>Submit notification within 120 days after effective date; notification of intent to construct/reconstruct, notification of commencement of construction/reconstruction, notification of startup; contents of each</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.9(c)</td>
<td>Request for Compliance Extension</td>
<td>Can request if cannot comply by date or if installed best available control technology or lowest achievable emission rate</td>
<td>Yes.</td>
</tr>
<tr>
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<tr>
<td>§ 63.9(d)</td>
<td>Notification of Special Compliance Requirements for New Sources</td>
<td>For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.9(e)</td>
<td>Notification of Performance Test</td>
<td>Notify Administrator 60 days prior</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.9(f)</td>
<td>Notification of VE/Opacity Test</td>
<td>Notify Administrator 30 days prior</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.9(g)</td>
<td>Additional Notifications when Using CMS</td>
<td>Notification of performance evaluation; notification about use of COMS data; notification that exceeded criterion for relative accuracy alternative</td>
<td>Yes, however, there are no opacity standards.</td>
</tr>
<tr>
<td>§ 63.9(h)(1)-(6)</td>
<td>Notification of Compliance Status</td>
<td>Contents due 60 days after end of performance test or other compliance demonstration, except for opacity/VE, which are due 30 days after; when to submit to Federal vs. State authority</td>
<td>Yes, however, there are no opacity standards.</td>
</tr>
<tr>
<td>§ 63.9(i)</td>
<td>Adjustment of Submittal Deadlines</td>
<td>Procedures for Administrator to approve change when notifications must be submitted</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.9(j)</td>
<td>Change in Previous Information</td>
<td>Must submit within 15 days after the change</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(a)</td>
<td>Recordkeeping/Reporting</td>
<td>Applies to all, unless compliance extension; when to submit to Federal vs. State authority; procedures for owners of more than one source</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(b)(1)</td>
<td>Recordkeeping/Reporting</td>
<td>General requirements; keep all records readily available; keep for 5 years</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(i)</td>
<td>Records related to SSM</td>
<td>Recordkeeping of occurrence and duration of startups and shutdowns</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(ii)</td>
<td>Records related to SSM</td>
<td>Recordkeeping of malfunctions</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(iii)</td>
<td>Maintenance records</td>
<td>Recordkeeping of maintenance on air pollution control and monitoring equipment</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(iv)</td>
<td>Records Related to SSM</td>
<td>Actions taken to minimize emissions during SSM</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(v)</td>
<td>Records Related to SSM</td>
<td>Actions taken to minimize emissions during SSM</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(vi)-(xi)</td>
<td>CMS Records</td>
<td>Malfunctions, inoperative, out-of-control periods</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(xii)</td>
<td>Records</td>
<td>Records when under waiver</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(xiii)</td>
<td>Records</td>
<td>Records when using alternative to relative accuracy test</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(b)(2)(xiv)</td>
<td>Records</td>
<td>All documentation supporting Initial Notification and Notification of Compliance Status</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(b)(3)</td>
<td>Records</td>
<td>Applicability determinations</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(c)</td>
<td>Records</td>
<td>Additional records for CMS</td>
<td>No.</td>
</tr>
<tr>
<td>Citation</td>
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<tr>
<td>§ 63.10(d)(1)</td>
<td>General Reporting Requirements</td>
<td>Requirement to report</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(d)(2)</td>
<td>Report of Performance Test Results</td>
<td>When to submit to Federal or State authority</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(d)(3)</td>
<td>Reporting Opacity or VE Observations</td>
<td>What to report and when</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(d)(4)</td>
<td>Progress Reports</td>
<td>Must submit progress reports on schedule if under compliance extension</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.10(d)(5)</td>
<td>SSM Reports</td>
<td>Contents and submission</td>
<td>No. See § 63.11126(b) for malfunction reporting requirements.</td>
</tr>
<tr>
<td>§ 63.10(e)(1)-(2)</td>
<td>Additional CMS Reports</td>
<td>Must report results for each CEMS on a unit; written copy of CMS performance evaluation; two-three copies of COMS performance evaluation</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(e)(3)(i)- (iii)</td>
<td>Reports</td>
<td>Schedule for reporting excess emissions</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(e)(3)(iv)-(v)</td>
<td>Excess Emissions Reports</td>
<td>Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in §§ 63.8(c)(7)-(8) and 63.10(c)(5)-(13)</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(e)(3)(iv)-(v)</td>
<td>Excess Emissions Reports</td>
<td>Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in §§ 63.8(c)(7)-(8) and 63.10(c)(5)-(13)</td>
<td>No. § 63.11130(K) specifies excess emission events for this subpart.</td>
</tr>
<tr>
<td>§ 63.10(e)(3)(vi)-(viii)</td>
<td>Excess Emissions Report and Summary Report</td>
<td>Requirements for reporting excess emissions for CMS; requires all of the information in §§ 63.10(c)(5)-(13) and 63.8(c)(7)-(8)</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(e)(4)</td>
<td>Reporting COMS Data</td>
<td>Must submit COMS data with performance test data</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.10(f)</td>
<td>Waiver for Recordkeeping/Reporting</td>
<td>Procedures for Administrator to waive</td>
<td>Yes.</td>
</tr>
<tr>
<td>Citation</td>
<td>Subject</td>
<td>Brief description</td>
<td>Applies to subpart CCCCCC</td>
</tr>
<tr>
<td>--------------</td>
<td>----------------------------</td>
<td>-------------------------------------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>§ 63.11(b)</td>
<td>Flares</td>
<td>Requirements for flares</td>
<td>No.</td>
</tr>
<tr>
<td>§ 63.12</td>
<td>Delegation</td>
<td>State authority to enforce standards</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.13</td>
<td>Addresses</td>
<td>Addresses where reports, notifications, and requests are sent</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.14</td>
<td>Incorporations by Reference</td>
<td>Test methods incorporated by reference</td>
<td>Yes.</td>
</tr>
<tr>
<td>§ 63.15</td>
<td>Availability of Information</td>
<td>Public and confidential information</td>
<td>Yes.</td>
</tr>
</tbody>
</table>

Indiana Department of Environmental Management
Office of Air Quality

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

Source Description and Location

<table>
<thead>
<tr>
<th>Source Name:</th>
<th>Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Location:</td>
<td>1441 South Adams St., Bluffton, Indiana 46714</td>
</tr>
<tr>
<td>County:</td>
<td>Wells</td>
</tr>
<tr>
<td>SIC Code:</td>
<td>2869 (Industrial Organic Chemicals, Not Elsewhere Classified)</td>
</tr>
<tr>
<td>Permit Renewal No.:</td>
<td>T179-41632-00033</td>
</tr>
<tr>
<td>Significant Source Modification No.:</td>
<td>179-41817-00033</td>
</tr>
<tr>
<td>Permit Reviewer:</td>
<td>Andrew Belt</td>
</tr>
</tbody>
</table>

On July 3, 2019, Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant submitted an application to the Office of Air Quality (OAQ) requesting to renew its operating permit. OAQ has reviewed the operating permit renewal application from Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant relating to the operation of a stationary grain elevator and ethanol production plant. Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant was issued its first Part 70 Operating Permit Renewal (T179-35207-00033) on April 8, 2015.

Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. T179-35207-00033 on April 8, 2015. The source has since received the following approvals:

(a) Administrative Amendment No. 179-38018-00033, issued on February 1, 2017; and
(b) Administrative Amendment No. 179-40835-00033, issued on January 1, 2018.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

(a) One (1) grain receiving and handling operation, constructed in 2007, using baghouse C20 as control, exhausting to stack S20, and consisting of the following:

(1) Three (3) grain receiving pits, identified as EU001, each with a maximum throughput rate of 20,000 bushels of corn per hour.

(2) Two (2) grain legs and conveying system, identified as EU002, modified in 2013, each with a maximum throughput rate of 20,000 bushels of corn per hour, with the conveying system.

(3) Two (2) grain silos, identified as EU003, each with a total maximum capacity of 500,000 bushels, and each with a maximum throughput rate of 40,000 bushels of corn per hour.
(b) One (1) permanent grain storage bin, identified as EU003a, constructed in 2013, with a maximum capacity of 576,222 bushels of corn and a maximum throughput rate of 40,000 bushels of corn per hour, with emissions uncontrolled.

(c) Two (2) corn scalpers, identified as EU004, each with a maximum throughput rate of 140 tons per hour, using baghouse C20 as control, constructed in 2007 and permitted in 2015, and exhausting to stack S20.

(d) One (1) day storage/surge bin, with a total maximum capacity of 47,871 bushels, identified as EU005, with a capacity of 171 tons per hour, using baghouse C20 as control, constructed in 2007 and permitted in 2015, and exhausting to stack S20.

(e) Four (4) hammermills, identified as EU006, EU007, EU008, and EU009, constructed in 2007 and modified in 2010, each with a maximum throughput rate of 42 tons of corn per hour, using baghouse C30 as control, and exhausting through stack S30.

(f) One (1) fermentation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with an equivalent hourly throughput rate of 18,738 gallons per hour of 200 proof ethanol, using wet scrubber C40 as control, and exhausting to stack S40. This process consists of the following:

1. Seven (7) fermenters, identified as EU012 through EU018.
2. One (1) beer well, identified as EU021.
3. One (1) wet scrubber, identified as C40, constructed in 2007 and modified in 2010, and exhausting to stack S40. Stack S40 is equipped with a high plume exhaust system, operated when necessary, to increase the CO2 exhaust stream discharge height. The scrubber is approved for modification in 2019 to include a recirculation pump to recover a portion of the scrubber bottoms and inject it back into the feed header from the beer well to the scrubber.

The following scenarios are approved:

<table>
<thead>
<tr>
<th>Scenario ID</th>
<th>Operating Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Maximum beer feed rate with recirculation pump on</td>
</tr>
<tr>
<td>AOS1</td>
<td>Maximum beer feed rate with recirculation pump off</td>
</tr>
<tr>
<td>AOS2</td>
<td>Reduced beer feed rate with recirculation pump on</td>
</tr>
<tr>
<td>AOS3</td>
<td>Reduced beer feed rate with recirculation pump off</td>
</tr>
<tr>
<td>AOS4</td>
<td>Scrubber cleaning (per preventative maintenance plan procedure)</td>
</tr>
</tbody>
</table>

Under 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered affected facilities.

(g) Two (2) thermal oxidizers with heat recovery steam generator (TO/HRSG) systems, identified as C9203 and C9303, constructed in 2007 and modified in 2010, with a maximum heat input capacity of 143 MMBtu/hr, each, using natural gas as fuel, and exhausting to stack S10.

Under 40 CFR 60, Subpart Db, the TO/HRSG systems are considered affected facilities.

(h) One (1) distillation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with a maximum throughput rate of 18,735 gallons of 200 proof ethanol per hour, using thermal oxidizers C9203 and C9303 as control, and exhausting to stack S10. This process consists of the following:
(1) Two (2) slurry tanks, identified as EU010 and EU011.

(2) Two (2) yeast propagation tanks, identified as EU019 and EU020.

(3) One (1) beer column, identified as EU022.

(4) One (1) rectifier column, identified as EU023.

(5) One (1) side stripper, identified as EU024.

(6) Three (3) sets of three (3) molecular sieves, identified as EU025.

(7) Two (2) sets of four (4) evaporators, identified as EU026.

Under 40 CFR 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered affected facilities.

(i) Two (2) sets of three (3) centrifuges, identified as EU027 and EU028, constructed in 2007, and using thermal oxidizers C9203 and C9303 as control.

(j) Four (4) natural gas-fired DDGS dryers, identified as EU029 through EU032, constructed in 2007 and modified in 2010, each with a maximum heat input rate of 45 MMBtu/hr, with a total maximum throughput rate of 56 tons of DDGS per hour, using multicyclones C029 through C032 as control, with emissions venting to thermal oxidizers C9203 and C9303, and exhausting to stack S10.

(k) One (1) DDGS cooling drum, identified as EU033, constructed in 2007, permitted in 2015, and approved in 2019 for modification, with a maximum throughput rate of 66 tons/hr of DDGS, using baghouse C70 and the TO/HRSG systems as control, and exhausting to stack S70.

Note: A portion of the emission stream is continuously exhausted to stack S70.

(l) One (1) DDGS handling and storage operation, constructed in 2007, with a maximum throughput rate of 220 tons/hr of DDGS, and consisting of the following:

(1) Two (2) DDGS storage silos, identified as EU034, using baghouse C90 as control, and exhausting to stack S90.

(2) One (1) DDGS storage building, identified as EU035, with emissions uncontrolled.

(m) One (1) DDGS loadout operation, identified as EU036, constructed in 2007 and modified in 2010, using baghouse C90 as control, exhausting to stack S90, and consisting of the following:

(1) One (1) DDGS conveyor with a maximum throughput rate of 550 tons/hr of DDGS.

(2) Two (2) DDGS truck/rail loadout spouts, each with a maximum throughput rate of 550 tons/hr of DDGS (only a single spout is able to operate at a time).

(n) One (1) ethanol loading system, identified as EU037, constructed in 2007, modified in 2010, and approved in 2019 for modification, consisting of two (2) rail loading spouts and two (2) truck loading spouts, with a combined limited throughput rate 165,000,000 gallons per twelve (12) consecutive month period for truck and railcar loading, using enclosed vapor combustion unit (VCU) C50 as control, which is fueled by natural gas, has a maximum heat input capacity of 12.4 MMBtu/hr, and exhausting to stack S50.
Under 40 CFR 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered affected facilities.

### Emission Units and Pollution Control Equipment Removed From the Source

The source has removed the following emission units:

(a) One (1) fermentation process, with a maximum throughput rate of 16,695 gallons per hour (as ethanol), using scrubber C40 as control, approved in 2007 for construction and in 2010 for modification, and exhausting to stack S40. This process consists of the following:

1. One degassing bottle, permitted in 2017, discharging CO₂ and VOC to the beerwell

### Insignificant Activities

The source also consists of the following specifically regulated insignificant activities:

(a) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:

1. Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) British thermal units per hour and firing fuel containing equal to or less than five-tenths percent (0.5%) sulfur by weight, as follows:

   (A) Three (3) kerosene-fired space heaters, constructed in 2007, each with a maximum rated capacity of 0.165 MMBtu/hr.

(b) One (1) diesel-fired fire pump, identified as EU038, constructed in 2007, with a maximum power output rate of 300 HP, and exhausting to stack S100.

   Under 40 CFR 60, Subpart III, the diesel-fired fire pump EU038 is considered an affected facility. Under 40 CFR 63, Subpart ZZZZ, the diesel-fired fire pump EU038 is considered an affected source.

(c) Fuel dispensing activities as follows:

1. A gasoline fuel transfer dispensing operation handling less than or equal to one thousand three hundred (1,300) gallons per day and filling storage tanks having a capacity equal to or less than ten thousand five hundred (10,500) gallons, as follows:

   Under 40 CFR 63, Subpart CCCCCC, the gasoline fuel transfer dispensing operation is considered as an affected facility.

   (A) One (1) gasoline tank, constructed in 2008, identified as C10 with a maximum storage capacity of 560 gallons and a maximum throughput of less than 10,000 gallons per year.

(d) Paved roads and parking lots with limited public access.

(e) Ethanol and denaturant storage tanks, including the following:

1. One (1) off spec tank for 190-proof ethanol, identified as T65, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons.

2. One (1) tank for 200-proof ethanol, identified as T63, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons of 200-proof ethanol.
(3) One (1) denatured ethanol tank, identified as T61, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 1,500,000 gallons of denatured ethanol, and permitted in 2014 to receive imported denatured ethanol via tanker truck.

(4) One (1) denatured ethanol tank, identified as T62, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 1,500,000 gallons of denatured ethanol, and permitted in 2014 to receive imported denatured ethanol via tanker truck.

(5) One (1) denaturant tank, identified as T64, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons of natural gasoline.

Under 40 CFR 60, Subpart Kb, storage tanks T61 through T65 are considered affected facilities.

The source also consists of the following insignificant activities:

(a) Solvent recycling systems with batch capacity less than or equal to 100 gallons.

(b) Forced and induced draft cooling tower system not regulated under a NESHAP, identified as C80, with a maximum capacity of 3 MM gallons per year, constructed in 2007, and exhausting to stack S80.

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

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

(e) Other emission units, not regulated by a NESHAP, with PM10, NOx, and SO2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:

(1) One (1) corrosion inhibitor tank, identified as Cl, constructed in 2007, with a maximum capacity of 3,000 gallons of corrosion inhibitor.

(2) One (1) diesel storage tank, identified as C2, constructed in 2007, with a maximum storage capacity less than 2,000 gallons of diesel fuel.

(3) One (1) thin stillage tank with vent, identified as C3, constructed in 2007, with a maximum storage capacity of 374,000 gallons of thin stillage.

(4) One (1) syrup tank with vent, identified as C4, constructed in 2007, with a maximum storage capacity of 180,000 gallons of syrup.

(5) One (1) cook water tank with vent, identified as C5 constructed in 2007, with a maximum storage capacity of 374,000 gallons of cook water.

(6) Two (2) liquefaction tanks with one (1) vent, identified as C6/C7, constructed in 2007, with a maximum storage capacity of 128,400 gallons each of liquefied corn slurry.

(7) One (1) methanator feed tank, identified as C8, constructed in 2007, with a maximum storage capacity of 180,000 gallons of methanator feed water.
(8) One (1) whole stillage tank with vent, identified as C9, constructed in 2007, with a maximum storage capacity of 374,000 gallons of whole stillage.

(9) One (1) syrup feed tank, constructed in 2010, identified as TS-6851, with a maximum storage capacity of 3,500 gallons.

(10) Four (4) corn oil storage tanks, constructed in 2010, identified as TS-8901 through TS-8904, each with a maximum storage capacity of 9,200 gallons.

(11) One (1) corn oil storage tank, constructed in 2014, identified as TS-8905, with a maximum storage capacity of 30,000 gallons.

(12) One (1) syrup receiver tank, constructed in 2010, identified as TS-6852, with a maximum storage capacity of 560 gallons.

(13) One (1) corn oil receiver tank, constructed in 2010, identified as TS-6853, with a maximum storage capacity of 300 gallons.

(14) One (1) corn oil receiver tank, constructed in 2010, identified as TS-6854, with a maximum storage capacity of 200 gallons.

(15) One (1) corn oil loadout station, constructed in 2010 and approved in 2019 for modification, identified as corn oil loadout, with a maximum throughput rate of 2,500,000 gallons per year.

(16) One (1) corn storage pile, constructed in 2012, with a maximum capacity of 1,000,000 bushels of corn and a maximum throughput rate of 28,000 tons per year, with emissions uncontrolled.

(17) One (1) corn storage area, containing a maximum of two (2) piles, constructed in 2013, with a maximum capacity of 2,000,000 bushels of corn and a maximum throughput rate of 560 tons per hour, with emissions uncontrolled.

(f) Fuel dispensing activities as follows:

(1) A petroleum fuel other than gasoline dispensing facility, having a storage tank capacity less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per day or less, as follows:

   (A) One (1) diesel storage tank, identified as C2, with a maximum capacity of 360 gallons.

   (B) One (1) diesel storage tank, constructed in 2008, identified as C11, with a maximum capacity of 1,050 gallons.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.
**County Attainment Status**

The source is located in Wells County.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO$_2$</td>
<td>Better than national standards.</td>
</tr>
<tr>
<td>CO</td>
<td>Unclassifiable or attainment effective November 15, 1990.</td>
</tr>
<tr>
<td>O$_3$</td>
<td>Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard.¹</td>
</tr>
<tr>
<td>PM$_{2.5}$</td>
<td>Unclassifiable or attainment effective April 5, 2005, for the annual PM$_{2.5}$ standard.</td>
</tr>
<tr>
<td>PM$_{2.5}$</td>
<td>Unclassifiable or attainment effective December 13, 2009, for the 24-hour PM$_{2.5}$ standard.</td>
</tr>
<tr>
<td>PM$_{10}$</td>
<td>Unclassifiable effective November 15, 1990.</td>
</tr>
<tr>
<td>NO$_2$</td>
<td>Cannot be classified or better than national standards.</td>
</tr>
<tr>
<td>Pb</td>
<td>Unclassifiable or attainment effective December 31, 2011.</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 (NO$_x$) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO$_x$ emissions are considered when evaluating the rule applicability relating to ozone. Wells County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO$_x$ emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) **PM$_{2.5}$**

Wells County has been classified as attainment for PM$_{2.5}$. Therefore, direct PM$_{2.5}$, SO$_2$, and NO$_x$ emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) **Other Criteria Pollutants**

Wells 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.

EPA published a final rule in the Federal Register on May 1, 2007 that excluded ethanol production facilities that produce ethanol through natural fermentation from the major source category "Chemical Process Plants." Therefore, the fugitive emissions from ethanol production facilities are not counted toward 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](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.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

<table>
<thead>
<tr>
<th>Unrestricted Potential Emissions (ton/year)</th>
<th>PM\textsuperscript{1}</th>
<th>PM\textsubscript{10}\textsuperscript{1}</th>
<th>PM\textsubscript{2.5}\textsuperscript{1, 2}</th>
<th>SO\textsubscript{2}</th>
<th>NO\textsubscript{X}</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP\textsuperscript{3}</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PTE of Entire Source Excluding Fugitive Emissions*</td>
<td>2905.74</td>
<td>2814.01</td>
<td>2788.50</td>
<td>2.90</td>
<td>210.55</td>
<td>5727.04</td>
<td>1765.23</td>
<td>40.26</td>
<td>272.41</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>10</td>
<td>25</td>
<td></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>--</td>
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<td></td>
</tr>
</tbody>
</table>

\textsuperscript{1}Under the Part 70 Permit program (40 CFR 70), PM\textsubscript{10} and PM\textsubscript{2.5}, not particulate matter (PM), are each considered as a "regulated air pollutant."

\textsuperscript{2}PM\textsubscript{2.5} listed is direct PM\textsubscript{2.5}.

\textsuperscript{3}Single highest source-wide HAP (acrolein).

*Fugitive HAP emissions are always included in the source-wide emissions.

Appendix A of this TSD reflects the detailed unrestricted potential emissions of the source.

(a) The potential to emit (as defined in 326 IAC 2-7-1(30)) of PM\textsubscript{10}, PM\textsubscript{2.5}, NO\textsubscript{X}, VOC, and CO is equal to or greater than one hundred (100) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(30)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(30)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. The source will be issued a Part 70 Operating Permit Renewal.

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.
The Office of Air Quality (OAQ) has reviewed an application, submitted by Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant on July 3, 2019, relating to expanding production capacity. To facilitate this increase, the fermentation scrubber will be upgraded to increase efficiency (i.e., less demand for fresh water and chemical additives) while providing equivalent or better emission control under the increased production scenario. This upgrade will be accommodated with a recirculation pump that is designed to recover scrubber bottoms and inject it back into the feed header from the beer well to the scrubber. The recirculation pump will allow for variation in scrubber operation, increasing the operational capacity of the fermentation system and allowing for an increase in the overall production rate of denatured ethanol.

The following is a list of the modified emission units and pollution control device(s):

(a) One (1) fermentation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with a maximum throughput rate of 18,738 gallons per hour of 200 proof ethanol, using wet scrubber C40 as control, and exhausting to stack S40. This process consists of the following:

1. Seven (7) fermenters, identified as EU012 through EU018.
2. One (1) beer well, identified as EU021.
3. One (1) wet scrubber, identified as C40, constructed in 2007 and modified in 2010, and exhausting to stack S40. Stack S40 is equipped with a high plume exhaust system, operated when necessary, to increase the CO2 exhaust stream discharge height. The scrubber is approved for modification in 2019 to include a recirculation pump to recover a portion of the scrubber bottoms and inject it back into the feed header from the beer well to the scrubber.

The following scenarios are approved:

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<tr>
<th>Scenario ID</th>
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</table>

Under 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered affected facilities.

(b) One (1) distillation process, constructed in 2007, modified in 2010, and approved in 2019 for modification, with a maximum throughput rate of 18,735 gallons of 200 proof ethanol per hour, using thermal oxidizers C9203 and C9303 as control, and exhausting to stack S10. This process consists of the following:

1. Two (2) slurry tanks, identified as EU010 and EU011.
2. Two (2) yeast propagation tanks, identified as EU019 and EU020.
3. One (1) beer column, identified as EU022.
4. One (1) rectifier column, identified as EU023.
5. One (1) side stripper, identified as EU024.
(6) Three (3) sets of three (3) molecular sieves, identified as EU025.

(7) Two (2) sets of four (4) evaporators, identified as EU026.

Under 40 CFR 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered affected facilities.

(c) One (1) DDGS cooling drum, identified as EU033, constructed in 2007, permitted in 2015, and approved in 2019 for modification, with a maximum throughput rate of 66 tons/hr of DDGS, using baghouse C70 and the TO/HRSG systems as control, and exhausting to stack S70.

(d) One (1) ethanol loading system, identified as EU037, constructed in 2007, modified in 2010, and approved in 2019 for modification, consisting of two (2) rail loading spouts and two (2) truck loading spouts, with a combined limited throughput rate 165,000,000 gallons per twelve (12) consecutive month period for truck and railcar loading, using enclosed vapor combustion unit (VCU) C50 as control, which is fueled by natural gas, has a maximum heat input capacity of 12.4 MMBtu/hr, and exhausting to stack S50.

Under 40 CFR 60, Subpart VVa, the pumps, compressors, pressure relief devices in gas/vapor service, sampling connection systems, open-ended valves or lines, and valves of this process are considered affected facilities.

(e) Ethanol and denaturant storage tanks, including the following:

(1) One (1) off spec tank for 190-proof ethanol, identified as T65, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons.

(2) One (1) tank for 200-proof ethanol, identified as T63, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons of 200-proof ethanol.

(3) One (1) denatured ethanol tank, identified as T61, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 1,500,000 gallons of denatured ethanol, and permitted in 2014 to receive imported denatured ethanol via tanker truck.

(4) One (1) denatured ethanol tank, identified as T62, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 1,500,000 gallons of denatured ethanol, and permitted in 2014 to receive imported denatured ethanol via tanker truck.

(5) One (1) denaturant tank, identified as T64, constructed in 2007 and approved in 2019 for modification, with a maximum capacity of 200,000 gallons of natural gasoline.

Under 40 CFR 60, Subpart Kb, storage tanks T61 through T65 are considered affected facilities.

(f) Other emission units, not regulated by a NESHAP, with PM10, NOx, and SO2 emissions less than five (5) pounds per hour or twenty-five (25) pounds per day, CO emissions less than twenty-five (25) pounds per day, VOC emissions less than three (3) pounds per hour or fifteen (15) pounds per day, lead emissions less than six-tenths (0.6) tons per year or three and twenty-nine hundredths (3.29) pounds per day, and emitting greater than one (1) pound per day but less than five (5) pounds per day or one (1) ton per year of a single HAP, or emitting greater than one (1) pound per day but less than twelve and five tenths (12.5) pounds per day or two and five tenths (2.5) ton per year of any combination of HAPs:
(1) One (1) corn oil loadout station, constructed in 2010 and approved in 2019 for modification, identified as corn oil loadout, with a maximum throughput rate of 2,500,000 gallons per year.

**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 limit 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$_{2.5}^{1}$</th>
<th>SO$_2$</th>
<th>NO$_x$</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP$^2$</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTE Before Modification (Fermentation Process (EU010 - EU021))</td>
<td>48.75</td>
<td>56.25</td>
<td>56.25</td>
<td>-</td>
<td>-</td>
<td>3,408.75</td>
<td>-</td>
<td>12.48</td>
<td>13.95</td>
</tr>
<tr>
<td>PTE After Modification (Fermentation Process (EU010 - EU021))</td>
<td>50.21</td>
<td>50.21</td>
<td>50.21</td>
<td>-</td>
<td>-</td>
<td>1,786.31</td>
<td>-</td>
<td>4.47</td>
<td>5.16</td>
</tr>
<tr>
<td>PTE Increase (Fermentation Process (EU010 - EU021))</td>
<td>1.46</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PTE Before Modification (Distillation, Dryers, and TOs (C9203 and C9303))</td>
<td>490.56</td>
<td>490.56</td>
<td>490.56</td>
<td>111.54</td>
<td>367.15</td>
<td>2,452.80</td>
<td>2,452.80</td>
<td>56.41</td>
<td>275.62</td>
</tr>
<tr>
<td>PTE After Modification (Distillation, Dryers, and TOs (C9203 and C9303))</td>
<td>703.88</td>
<td>703.88</td>
<td>703.88</td>
<td>1.61</td>
<td>204.11</td>
<td>1,321.66</td>
<td>1,763.45</td>
<td>31.21</td>
<td>111.89</td>
</tr>
<tr>
<td>PTE Increase (Distillation, Dryers, and TOs (C9203 and C9303))</td>
<td>213.32</td>
<td>213.32</td>
<td>213.32</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>PTE Before Modification (DDGS Cooler Bypass (C70))</td>
<td>750.86</td>
<td>750.86</td>
<td>750.86</td>
<td>-</td>
<td>-</td>
<td>28.91</td>
<td>-</td>
<td>0.74</td>
<td>1.40</td>
</tr>
<tr>
<td>PTE After Modification (DDGS Cooler Bypass (C70))</td>
<td>750.86</td>
<td>750.86</td>
<td>750.86</td>
<td>-</td>
<td>-</td>
<td>13.36</td>
<td>-</td>
<td>0.74</td>
<td>1.40</td>
</tr>
<tr>
<td>PTE Increase (DDGS Cooler Bypass (C70))</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>
Appendix A of this TSD reflects the detailed potential emissions of the modification.

(a) Approval to Construct

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, PM10, direct PM2.5, and VOC at equal to or greater than twenty-five (25) tons per year.

Pursuant to 326 IAC 2-7-10.5(g)(6), a Significant Source Modification is required because this modification has a potential to emit greater than or equal to ten (10) tons per year of a single HAP or twenty-five (25) tons per year of any combination of HAPs.

(b) Approval to Operate

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.
For the purposes of this permitting action, the Significant Permit Modification has been combined with the current Part 70 Operating Permit Renewal. Therefore, operation is not approved until the Part 70 Operating Permit Renewal has been issued.

### Permit Level Determination – PSD

The table below summarizes the potential to emit of the modification, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of the Part 70 source and 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>Process / Emission Unit</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>Fermentation Process (EU010 - EU021)</td>
<td>50.21</td>
<td>50.21</td>
<td>50.21</td>
<td>-</td>
<td>-</td>
<td>102.49</td>
<td>-</td>
</tr>
<tr>
<td>Distillation, Dryers and TOs (C9203 and C9303)</td>
<td>72.27</td>
<td>72.27</td>
<td>72.27</td>
<td>1.61</td>
<td>204.11</td>
<td>56.94</td>
<td>169.51</td>
</tr>
<tr>
<td>DDGS Cooler Bypass (C70)</td>
<td>11.39</td>
<td>11.39</td>
<td>11.39</td>
<td>-</td>
<td>-</td>
<td>11.33</td>
<td>-</td>
</tr>
<tr>
<td>Ethanol Loadout and Flare (C50)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3.79</td>
<td>5.03</td>
<td>1.20</td>
<td></td>
</tr>
<tr>
<td>Storage Tanks (T61 - T65)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>41.44</td>
<td>-</td>
</tr>
<tr>
<td>Corn Oil Loadout</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.05</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total for Modification</strong></td>
<td><strong>133.86</strong></td>
<td><strong>133.86</strong></td>
<td><strong>133.86</strong></td>
<td><strong>1.61</strong></td>
<td><strong>207.90</strong></td>
<td><strong>217.28</strong></td>
<td><strong>170.71</strong></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></td>
</tr>
</tbody>
</table>

1PM2.5 listed is direct PM2.5.

The source opted to take limit(s) in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) 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) for more information regarding the limit(s).

(a) This modification to an existing minor PSD stationary source is not major because the emissions increase of each PSD regulated pollutant is less than the PSD major source threshold. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

### Potential to Emit After Issuance

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

| Potential To Emit of the Entire Source After Issuance of Renewal (tons/year) |
|-------------------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                                                  | PM1 | PM10         | PM2.5          | SO2            | NOX            | VOC            | CO             |
| Total PTE of Entire Source Excluding Fugitive Emissions* | 212.33 | 197.17 | 192.95 | 2.90  | 210.55 | 218.19 | 171.29 | 9.78 | 17.77 |
| Title V Major Source Thresholds                  | NA  | 100          | 100            | 100            | 100            | 100            | 10             | 25             |
Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)

<table>
<thead>
<tr>
<th></th>
<th>PM¹</th>
<th>PM₁₀¹</th>
<th>PM₂₅¹.₂</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>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>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

¹Under the Part 70 Permit program (40 CFR 70), PM₁₀ and PM₂₅, not particulate matter (PM), are each considered as a "regulated air pollutant."
²PM₂₅ listed is direct PM₂₅.
³Single highest source-wide HAP (acetaldehyde).
*Fugitive HAP emissions are always included in the source-wide emissions.

Appendix A of this TSD reflects the detailed potential to emit of the entire source after issuance.

The source opted to take limit(s) in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to this source and to render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA). See Technical Support Document (TSD) State Rule Applicability - Entire Source section, 326 IAC 2-2 (PSD) and 326 IAC 20 (Hazardous Air Pollutants) for more information regarding the limit(s).

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no PSD regulated pollutant is emitted at a rate of two hundred fifty (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 source is not a major source of HAP, as defined in 40 CFR 63.2, because HAP emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Federal Rule Applicability

Federal rule applicability for this source has been reviewed as follows:

New Source Performance Standards (NSPS): (a) The two (2) thermal oxidizers with heat recovery steam generator (TO/HRSG) systems, identified as C9203 and C9303, are subject to the New Source Performance Standards for Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Db and 326 IAC 12, because these are steam generating units that commenced construction after June 19, 1984, and each has a heat input capacity from fuels combusted in the steam generating unit of greater than 100 million British thermal units per hour (MMBtu/hr).

The two (2) thermal oxidizers are subject to the following portions of Subpart Db.

1) 40 CFR 60.40b(a), (g), and (j)
2) 40 CFR 60.41b
3) 40 CFR 60.42b(e), (g), and (k)
4) 40 CFR 60.44b(a), (e), (f), (h), (i), (l)(1), and (l)(2)
5) 40 CFR 60.45b(a), (b), (c)(1), (f), (g), and (h)
6) 40 CFR 60.46b(a), (c), (e)(1), and (e)(4)
7) 40 CFR 60.47b
8) 40 CFR 60.48b(b)(1), (c), (d), (e)(2), (e)(3), (f), and (g)
9) 40 CFR 60.49b(a), (a)(1) through (a)(3), (b) through (d), (g), (h)(2), (h)(4), (i), (j), (k), (o), (v), and (w)
The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the thermal oxidizers with heat recovery steam generator (TO/HRSG) systems except as otherwise specified in 40 CFR 60, Subpart Db.

(b) The five (5) storage tanks, identified as T61, T62, T63, T64, and T65, are subject to the New Source Performance Standards for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984, 40 CFR 60, Subpart Kb and 326 IAC 12, because each is a storage vessel with a capacity greater than or equal to 75 cubic meters (m³) that is used to store volatile organic liquids (VOL) for which construction commenced after July 23, 1984.

The five (5) storage tanks, identified as T61, T62, T63, T64, and T65, are subject to the following portions of Subpart Kb.

1. 40 CFR 60.110b
2. 40 CFR 60.111b
3. 40 CFR 60.112b(a)(1)
4. 40 CFR 60.113b(a)
5. 40 CFR 60.115b(a)
6. 40 CFR 60.116b(a) through (e)
7. 40 CFR 60.117b

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

(c) The one (1) fermentation process, the one (1) distillation process, and the one (1) ethanol loading system, identified as EU037, are subject to the New Source Performance Standards for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006, 40 CFR 60, Subpart VVa and 326 IAC 12, because these are affected facilities in the synthetic organic chemicals manufacturing industry that commenced construction after November 7, 2006 and are involved in the production of ethanol, which is a listed chemical under 40 CFR 60.489.

The one (1) fermentation process, the one (1) distillation process, and the one (1) ethanol loading system, identified as EU037, is subject to the following portions of Subpart VVa.

1. 40 CFR 60.480a
2. 40 CFR 60.481a
3. 40 CFR 60.482-1a
4. 40 CFR 60.482-2a
5. 40 CFR 60.482-3a
6. 40 CFR 60.482-4a
7. 40 CFR 60.482-5a
8. 40 CFR 60.482-6a
9. 40 CFR 60.482-7a
10. 40 CFR 60.482-8a
11. 40 CFR 60.482-9a
12. 40 CFR 60.482-10a
13. 40 CFR 60.482-11a
14. 40 CFR 60.483-1a
15. 40 CFR 60.483-2a
16. 40 CFR 60.484a
17. 40 CFR 60.485a
18. 40 CFR 60.486a
19. 40 CFR 60.487a
20. 40 CFR 60.488a
The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the fermentation process, the distillation process, and the ethanol loading system except as otherwise specified in 40 CFR 60, Subpart VVa.

(d) The diesel-fired fire pump, identified as EU038, is subject to the New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart III and 326 IAC 12, because it is a stationary compression ignition (CI) internal combustion engine (ICE) that commenced construction after July 11, 2005.

The diesel-fired fire pump, identified as EU038, is subject to the following portions of Subpart III:

1. 40 CFR 60.4200(a)(1)(ii), (a)(2)(i), and (a)(3)
2. 40 CFR 60.4201(a)
3. 40 CFR 60.4204(b)
4. 40 CFR 60.4205(c)
5. 40 CFR 60.4206
6. 40 CFR 60.4207(a), (b) and (c)
7. 40 CFR 60.4208
8. 40 CFR 60.4209
9. 40 CFR 60.4211(a) and (c)
10. 40 CFR 60.4212(a), (b) and (c)
11. 40 CFR 60.4214(b) and (c)
12. 40 CFR 60.4218
13. 40 CFR 60.4219
14. Table 3 to Subpart III
15. Table 4 to Subpart III
16. Table 5 to Subpart III
17. Table 6 to Subpart III
18. Table 8 to Subpart III

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the diesel-fired fire pump except as otherwise specified in 40 CFR 60, Subpart III.

Based on this evaluation, this source is subject to 40 CFR 60, Subpart III. On May 4, 2016, the U.S. Court of Appeals for the D.C. Circuit issued a mandate vacating paragraphs 40 CFR 60.4211(f)(2)(i) - (iii) of NSPS Subpart III. Therefore, these paragraphs no longer have any legal effect and any engine that is operated for purposes specified in these paragraphs becomes a non-emergency engine and must comply with all applicable requirements for a non-emergency engine.

For additional information, please refer to the USEPA’s Guidance Memo: https://www.epa.gov/sites/production/files/2016-06/documents/ricevacaturguidance041516.pdf

Since the federal rule has not been updated to remove these vacated requirements, the text below shows the vacated language as strikethrough text. At this time, IDEM is not making any changes to the permit’s attachment due to this vacatur. However, the permit will not reference the vacated requirements, as applicable.

40 CFR 60.4211(f)(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).
(i) Emergency stationary ICE may be operated for maintenance checks and readiness
testing, provided that the tests are recommended by federal, state or local government,
the manufacturer, the vendor, the regional transmission organization or equivalent
balancing authority and transmission operator, or the insurance company associated with
the engine. The owner or operator may petition the Administrator for approval of
additional hours to be used for maintenance checks and readiness testing, but a petition
is not required if the owner or operator maintains records indicating that federal, state, or
local standards require maintenance and testing of emergency ICE beyond 100 hours per
calendar year.

(ii) Emergency stationary ICE may be operated for emergency demand response for periods
in which the Reliability Coordinator under the North American Electric Reliability
Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies
(incorporated by reference, see §60.17), or other authorized entity as determined by the
Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in
the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary ICE may be operated for periods where there is a deviation of
voltage or frequency of 5 percent or greater below standard voltage or frequency.

(e) The requirements of the New Source Performance Standard for Fossil-Fuel-Fired Steam
Generators, 40 CFR 60, Subpart D and 326 IAC 12, are not included in the permit for the two (2)
thermal oxidizers with heat recovery steam generator (TO/HRSG) systems, identified as C9203
and C9303, because each has a maximum heat input rate of less than 250 MMBtu/hr.

(f) The requirements of the New Source Performance Standard for Small Industrial-Commercial-
Institutional Steam Generating Units, 40 CFR 60, Subpart Dc and 326 IAC 12, are not included in
the permit for the two (2) thermal oxidizers with heat recovery steam generator (TO/HRSG)
systems, identified as C9203 and C9303, because each has a maximum heat input rate of less
than 100 MMBtu/hr.

(g) The requirements of the New Source Performance Standard for Grain Elevators, 40 CFR 60,
Subpart DD and 326 IAC 12, are not included in the permit for this source, because the source
does not have a grain elevator which has a permanent storage capacity of more than 88,100 m³
(ca. 2.5 million U.S. bushels)

(h) The requirements of the New Source Performance Standard for Equipment Leaks of VOC in the
Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or
Modification Commenced After January 5, 1981, and on or Before November 7, 2006, 40 CFR
60, Subpart VV and 326 IAC 12, are not included in the permit for the one (1) fermentation
process, the one (1) distillation process, and the one (1) ethanol loading system, identified as
EU037, because these facilities commenced construction after November 7, 2006.

(i) The requirements of the New Source Performance Standard for Bulk Gasoline Terminals, 40
CFR 60, Subpart XX and 326 IAC 12, are not included in the permit for this source, because the source
is not a bulk gasoline terminal, as defined in 40 CFR 60.501.

(j) The requirements of the New Source Performance Standard for Volatile Organic Compound
(VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation
Operations, 40 CFR 60, Subpart NNN and 326 IAC 12, are not included in the permit for this
source, because, while ethanol is one of the chemicals listed in 40 CFR 60.667, according to the
EPA memo from Mr. George T. Czerniak dated December 6, 2002, the manufacture of ethanol
using a fermentation process (biological synthesis) was excluded from the scope of 40 CFR 60,
Subpart NNN.

(k) The requirements of the New Source Performance Standard for Volatile Organic Compound
Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor
Processes, 40 CFR 60, Subpart RRR and 326 IAC 12, are not included in the permit for this source, because, while ethanol is one of the chemicals listed in 40 CFR 60.707, according to the EPA memo from Mr. George T. Czerniak dated December 6, 2002, the manufacture of ethanol using a fermentation process (biological synthesis) was excluded from the scope of 40 CFR 60, Subpart RRR.

(l) The requirements of the New Source Performance Standard for Stationary Spark Ignition Internal Combustion Engines, 40 CFR 60, Subpart JJJJ and 326 IAC 12, are not included in the permit for the diesel-fired fire pump, identified as EU038, because it is not a stationary spark ignition (SI) internal combustion engines (ICE).

(m) There are no other New Source Performance Standards (40 CFR Part 60) and 326 IAC 12 included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP):

(b) The diesel-fired fire pump, identified as EU038, 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 a stationary RICE at a major source of HAP emissions that commenced construction after June 12, 2006. The diesel-fired fire pump, identified as EU038, is subject to the following portions of Subpart ZZZZ:

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

Pursuant to 40 CFR 63.6665, the diesel-fired fire pump, identified as EU038, does not have to meet the requirements of 40 CFR 63, Subpart A (General Provisions), since it is considered a new stationary RICE located at an area source of HAP emissions.

Based on this evaluation, this source is subject to 40 CFR 63, Subpart ZZZZ. On May 4, 2016, the U.S. Court of Appeals for the D.C. Circuit issued a mandate vacating paragraphs 40 CFR 63.6640(f)(2)(ii) - (iii) of NESHAP Subpart ZZZZ. Therefore, these paragraphs no longer have any legal effect and any engine that is operated for purposes specified in these paragraphs becomes a non-emergency engine and must comply with all applicable requirements for a non-emergency engine.

For additional information, please refer to the USEPA’s Guidance Memo: https://www.epa.gov/sites/production/files/2016-06/documents/ricevacaturguidance041516.pdf

Since the federal rule has not been updated to remove these vacated requirements, the text below shows the vacated language as strikethrough text. At this time, IDEM is not making any changes to the permit’s attachment due to this vacatur. However, the permit will not reference the vacated requirements, as applicable.

40 CFR 63.6640(f)(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.

(b) The gasoline fuel transfer dispensing operation is subject to the National Emission Standards for Hazardous Air Pollutants for Gasoline-Dispensing Facilities, 40 CFR 63, Subpart CCCCCC, because it is a gasoline dispensing facility (GDF) located at an area source of HAP emissions.

The gasoline fuel transfer dispensing operation is subject to the following portions of Subpart CCCCCC:

1. 40 CFR 63.111110
2. 40 CFR 63.111111(a), (b), (e), (h), (i), and (j)
3. 40 CFR 63.111112(a) and (b)
4. 40 CFR 63.111113(a)(2)
5. 40 CFR 63.111115
6. 40 CFR 63.111116
7. 40 CFR 63.111125(d)
8. 40 CFR 63.111130
9. 40 CFR 63.111131
10. Table 3 to Subpart CCCCCC

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the gasoline fuel transfer dispensing operation except as otherwise specified in 40 CFR 63, Subpart CCCCCC.

(c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry, 40 CFR 63, Subpart F and 326 IAC 20-11 are not included in the permit for this source, because it manufactures ethanol as a primary product, which is not one or more of the chemicals listed in 40 CFR 63.100(b)(1)(i) and (b)(1)(ii).

(d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater, 40 CFR 63, Subpart G and 326 IAC 20-11 are not included in the permit for this source, because it manufactures ethanol as a primary product, which is not one or more of the chemicals listed in 40 CFR 63.100(b)(1)(i) and (b)(1)(ii).

(e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Organic Hazardous Air Pollutants for Equipment Leaks, 40 CFR 63, Subpart H and 326 IAC
20-11 are not included in the permit for this source, because it manufactures ethanol as a primary product, which is not one or more of the chemicals listed in 40 CFR 63.100(b)(1)(i) and (b)(1)(ii).

(f) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Organic Hazardous Air Pollutants for Certain Processes Subject to the Negotiated Regulation for Equipment Leaks, 40 CFR 63, Subpart I are not included in the permit for this source, because it does not manufacture any of the materials listed in 40 CFR 63.190(b)(1) through (b)(6).

(g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial Process Cooling Towers, 40 CFR 63, Subpart Q and 326 IAC 20-4 are not included in the permit for this source, because the source will take limits to remain an area source for HAP emissions.

(h) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations), 40 CFR 63, Subpart R and 326 IAC 20-10 are not included in the permit for this source, because the source will take limits to remain an area source for HAP emissions.

(i) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Tanks—Level 1, 40 CFR 63, Subpart OO and 326 IAC 20-35 are not included in the permit for this source, because there are no subparts of 40 CFR 60, 61, or 63 applicable to this source that reference Subpart OO.

(j) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process, 40 CFR 63, Subpart SS and 326 IAC 20-39 are not included in the permit for this source, because there are no subparts of 40 CFR Part 63 that reference the use of Subpart SS.

(k) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Equipment Leaks—Control Level 1, 40 CFR 63, Subpart TT and 326 IAC 20-40 are not included in the permit for this source, because there are no subparts of 40 CFR Part 63 that reference the use of Subpart TT.

(l) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Equipment Leaks—Control Level 2 Standards, 40 CFR 63, Subpart UU and 326 IAC 20-41 are not included in the permit for this source, because there are no subparts of 40 CFR Part 63 that reference the use of Subpart UU.

(m) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Storage Vessels (Tanks) - Control Level 2, 40 CFR 63, Subpart WW and 326 IAC 20-43 are not included in the permit for this source, because there are no subparts of 40 CFR Part 63 that reference the use of Subpart WW.

(n) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs): Organic Liquids Distribution (Non-Gasoline), 40 CFR 63, Subpart EEEE and 326 IAC 20-83, are not included in the permit for this source, because the source will take limits to remain an area source for HAP emissions.

(o) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Miscellaneous Organic Chemical Manufacturing, 40 CFR 63, Subpart FFFF and 326 IAC 20-84 are not included in the permit for this source, because the source will take limits to remain an area source for HAP emissions.

(p) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities, 40
CFR 63, Subpart BBBBBBB are not included in the permit for this source, since the source is not a bulk gasoline terminal, as defined in 40 CFR 63.11100.

(q) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Chemical Manufacturing Area Sources, 40 CFR 63, Subpart VVVVV are not included in the permit for this source, because this source does not use as feedstock, any material that contains quinoline, manganese, and/or trivalent chromium at an individual concentration greater than 1.0 percent by weight, or any other Table 1 HAP at an individual concentration greater than 0.1 percent by weight. This is based on national test data submitted by the Iowa Renewable Fuels Association and verified by the Iowa Department of Natural Resources.

(r) There are no other National Emission Standards for Hazardous Air Pollutants under 40 CFR 63, 326 IAC 14 and 326 IAC 20 included in the permit.

**Compliance Assurance Monitoring (CAM):**

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each existing 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.

The following table is used to identify the applicability of CAM to each emission unit and each emission limitation or standard for a specified pollutant based on the criteria specified under 40 CFR 64.2:

<table>
<thead>
<tr>
<th>Emission Unit/Pollutant</th>
<th>Control Device</th>
<th>Applicable Emission Limitation</th>
<th>Uncontrolled PTE (tons/year)</th>
<th>Controlled PTE (tons/year)</th>
<th>CAM Applicable (Y/N)</th>
<th>Large Unit (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grain Receiving and Handling / PM*</td>
<td>BH</td>
<td>326 IAC 6-3-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Grain Receiving and Handling / PM</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>-</td>
<td>-</td>
<td>N</td>
<td>-</td>
</tr>
<tr>
<td>Grain Receiving and Handling / PM10</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Grain Receiving and Handling / PM2.5</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Grain Bin (EU003a) / PM*</td>
<td>BH</td>
<td>326 IAC 6-3-2</td>
<td>&lt;100</td>
<td>&lt;100</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>Grain Bin (EU003a) / PM</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>-</td>
<td>-</td>
<td>N</td>
<td>-</td>
</tr>
<tr>
<td>Grain Bin (EU003a) / PM10</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>&lt;100</td>
<td>&lt;100</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Grain Bin (EU003a) / PM2.5</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>&lt;100</td>
<td>&lt;100</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Hammermills (EU006-EU009) / PM*</td>
<td>BH</td>
<td>326 IAC 6-3-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Hammermills (EU006-EU009) / PM</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>-</td>
<td>-</td>
<td>N</td>
<td>-</td>
</tr>
</tbody>
</table>
## Emission Unit/Pollutant

<table>
<thead>
<tr>
<th>Emission Unit/Pollutant</th>
<th>Control Device</th>
<th>Applicable Emission Limitation</th>
<th>Uncontrolled PTE (tons/year)</th>
<th>Controlled PTE (tons/year)</th>
<th>CAM Applicable (Y/N)</th>
<th>Large Unit (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hammermills (EU006-EU009) / PM10</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Hammermills (EU006-EU009) / PM2.5</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Fermentation Process / VOC</td>
<td>WS</td>
<td>326 IAC 2-2</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Fermentation Process / Acetaldehyde</td>
<td>WS</td>
<td>326 IAC 2-4.1</td>
<td>&lt;10</td>
<td>&lt;10</td>
<td>N 1</td>
<td>N</td>
</tr>
<tr>
<td>Distillation and Dryers / PM*</td>
<td>TO/HRSG</td>
<td>326 IAC 6-3-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Distillation and Dryers / PM</td>
<td>TO/HRSG</td>
<td>326 IAC 2-2</td>
<td>-</td>
<td>-</td>
<td>N 2</td>
<td>-</td>
</tr>
<tr>
<td>Distillation and Dryers / PM10</td>
<td>TO/HRSG</td>
<td>326 IAC 2-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Distillation and Dryers / PM2.5</td>
<td>TO/HRSG</td>
<td>326 IAC 2-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Distillation and Dryers / VOC</td>
<td>TO/HRSG</td>
<td>326 IAC 2-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Distillation and Dryers / Acetaldehyde</td>
<td>TO/HRSG</td>
<td>326 IAC 2-4.1</td>
<td>&gt;10</td>
<td>&lt;10</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Distillation and Dryers / Acrolein</td>
<td>TO/HRSG</td>
<td>326 IAC 2-4.1</td>
<td>&gt;10</td>
<td>&lt;10</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Distillation and Dryers / Formaldehyde</td>
<td>TO/HRSG</td>
<td>326 IAC 2-4.1</td>
<td>&gt;10</td>
<td>&lt;10</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Distillation and Dryers / Methanol</td>
<td>TO/HRSG</td>
<td>326 IAC 2-4.1</td>
<td>&gt;10</td>
<td>&lt;10</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>DDGS Cooling Drum (EU033) / PM*</td>
<td>BH</td>
<td>326 IAC 6-3-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>DDGS Cooling Drum (EU033) / PM</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>-</td>
<td>-</td>
<td>N 2</td>
<td>-</td>
</tr>
<tr>
<td>DDGS Cooling Drum (EU033) / PM10</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>DDGS Cooling Drum (EU033) / PM2.5</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>DDGS Loadout Operation (EU036) / PM*</td>
<td>BH</td>
<td>326 IAC 6-3-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>DDGS Loadout Operation (EU036) / PM</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>-</td>
<td>-</td>
<td>N 2</td>
<td>-</td>
</tr>
<tr>
<td>DDGS Loadout Operation (EU036) / PM10</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>DDGS Loadout Operation (EU036) / PM2.5</td>
<td>BH</td>
<td>326 IAC 2-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Ethanol Loading System (EU037) / VOC</td>
<td>VCU</td>
<td>326 IAC 2-2</td>
<td>&gt;100</td>
<td>&lt;100</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Ethanol Loading System (EU037) / Hexane</td>
<td>VCU</td>
<td>326 IAC 2-4.1</td>
<td>&gt;10</td>
<td>&lt;10</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Ethanol Loading System (EU037) / Toluene</td>
<td>VCU</td>
<td>326 IAC 2-4.1</td>
<td>&gt;10</td>
<td>&lt;10</td>
<td>Y</td>
<td>N</td>
</tr>
</tbody>
</table>

Uncontrolled PTE (tpy) and controlled PTE (tpy) are evaluated against the Major Source Threshold for each pollutant. Major Source Threshold for criteria pollutants (PM10, PM2.5, SO2, NOX, VOC and CO) is 100 tpy, for a single HAP ten (10) tpy, and for total HAPs twenty-five (25) tpy.

Under the Part 70 Permit program (40 CFR 70), PM is not a regulated pollutant.

**PM*** For limitations under 326 IAC 6-3-2, 326 IAC 6.5, and 326 IAC 6.8, IDEM OAQ uses PM as a surrogate for the regulated air pollutant PM10. Therefore, uncontrolled PTE and controlled PTE reflect the emissions of the regulated air pollutant PM10.
Based on this evaluation, the requirements of 40 CFR Part 64, CAM, are applicable to the one (1) grain receiving and handling operation, the one (1) permanent grain storage bin, identified as EU003a, the four (4) hammermills, identified as EU006, EU007, EU008, and EU009, the one (1) fermentation process, the one (1) distillation process, the one (1) DDGS cooling drum, identified as EU033, the one (1) DDGS loadout operation, identified as EU036, and the one (1) ethanol loading system, identified as EU037, for PM, PM10, PM2.5, VOC, acetaldehyde, acrolein, formaldehyde, methanol, hexane, and toluene. A CAM plan was submitted as part of a previous permit application and the Compliance Determination and Monitoring Requirements section includes a detailed description of the CAM requirements.

State Rule Applicability - Entire Source

State rule applicability for this source has been reviewed as follows:

326 IAC 1-6-3 (Preventive Maintenance Plan)
The source is subject to 326 IAC 1-6-3.

326 IAC 1-5-2 (Emergency Reduction Plans)
The source is subject to 326 IAC 1-5-2.

326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset)
PSD and Emission Offset applicability is discussed under the Potential to Emit After Issuance section of this document.

PSD Minor Source Limits

Grain Receiving and Handling, Grain Bin, and Hammermills

(a) In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the PM, PM10, and PM2.5 emissions from the following emission units shall be less than the following emission limits:

<table>
<thead>
<tr>
<th>Unit ID</th>
<th>Unit Description</th>
<th>Baghouse ID</th>
<th>PM Emission Limit (lbs/hr)</th>
<th>PM10 Emission Limit (lbs/hr)</th>
<th>PM2.5 Emission Limit (lbs/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU001, EU002, EU003, EU004, EU005</td>
<td>Grain Receiving and Handling (Conveyors, Storage Bins, Corn Scalpers, and Surge Bin)</td>
<td>C20</td>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
</tr>
<tr>
<td>EU006, EU007, EU008, EU009</td>
<td>Hammermills #1- #4</td>
<td>C30</td>
<td>1.44</td>
<td>1.44</td>
<td>1.44</td>
</tr>
<tr>
<td>Unit ID</td>
<td>Unit Description</td>
<td>Baghouse ID</td>
<td>PM Emission Limit (lbs/hr)</td>
<td>PM10 Emission Limit (lbs/hr)</td>
<td>PM2.5 Emission Limit (lbs/hr)</td>
</tr>
<tr>
<td>---------</td>
<td>------------------</td>
<td>------------</td>
<td>---------------------------</td>
<td>-------------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td>EU034, EU036</td>
<td>DDGS storage silo, DDGS loadout operations</td>
<td>C90</td>
<td>9.3</td>
<td>9.3</td>
<td>9.3</td>
</tr>
</tbody>
</table>

Note: PM10 = PM2.5

<table>
<thead>
<tr>
<th>Unit ID</th>
<th>Unit Description</th>
<th>Baghouse ID</th>
<th>PM Emission Limit (lbs/ton grain)</th>
<th>PM10 Emission Limit (lbs/ton grain)</th>
<th>PM2.5 Emission Limit (lbs/ton grain)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU003a</td>
<td>Permanent Grain Storage Bin</td>
<td>n/a</td>
<td>0.025</td>
<td>0.0063</td>
<td>0.0011</td>
</tr>
</tbody>
</table>

(b) The total grain received shall be less than 1,622,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(c) The Permittee shall use a choked flow system during grain receiving and handling.

Compliance with these limits, in combination with the potential to emit PM, PM10, and PM2.5 from other emission units at the source, shall limit the PM, PM10, and PM2.5 emissions from the entire source to less 250 tons per twelve (12) consecutive month period and render the requirements of 326 IAC 2-2 Prevention of Significant Deterioration (PSD) not applicable.

**Fermentation Process**

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) VOC emissions from the fermentation process shall not exceed 23.4 pounds per hour.

Compliance with the VOC limit, in combination with the potential to emit VOC from other units, shall limit the VOC emissions from the entire source to less than 250 tons per twelve (12) consecutive month period and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

**Distillation, Dryers, and Thermal Oxidizers**

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) PM emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 16.5 lbs/hr.

(b) PM10 emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 16.5 lbs/hr.

(c) PM2.5 emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 16.5 lbs/hr.

(d) VOC emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 13.0 lbs/hr.

(e) CO emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 38.7 lbs/hr.
(f) The total DDGS produced shall be less than 490,560 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits, in combination with the potential to emit PM, PM10, PM2.5, VOC, and CO from other units at the source, shall limit the PM, PM10, PM2.5, VOC, and CO emissions from the entire source to less than 250 tons per twelve (12) consecutive month period each and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

**DDGS Cooling Drum**

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following for the DDGS cooling drum (EU033):

(a) PM emissions shall be less than 2.6 lbs/hr.
(b) PM\(_{10}\) emissions shall be less than 2.6 lbs/hr.
(c) PM\(_{2.5}\) emissions shall be less than 2.6 lb/hr.
(d) The VOC emissions from baghouse stack S70 shall be less than 0.1 pounds per ton of DDGS produced in the DDGS cooling drum (EU033).
(e) The total DDGS produced shall be less than 490,560 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with the above limits, in combination with the potential to emit PM, PM10, PM2.5, and VOC from other units at the source, shall limit the PM, PM10, PM2.5, and VOC emissions from the entire source to less than 250 tons per twelve consecutive month period each and render the requirements of 326 IAC 2-2 Prevention of Significant Deterioration (PSD) not applicable.

**Ethanol Loading System**

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 denatured ethanol load-out from the ethanol loading system (EU037) shall not exceed 165,000,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.
(b) VOC emissions from VCU CE009 shall not exceed 0.061 lbs/kgal of denatured ethanol loaded.

Compliance with these limits, combined with the potential to emit VOC from all other emission units at this source, shall limit the source-wide total potential to emit of VOC to less than 250 tons per twelve (12) consecutive month and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

**326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))**

The provisions of 326 IAC 2-4.1 apply to any owner or operator who constructs or reconstructs a major source of hazardous air pollutants (HAP), as defined in 40 CFR 63.41, after July 27, 1997, unless the major source has been specifically regulated under or exempted from regulation under a NESHAP that was issued pursuant to Section 112(d), 112(h), or 112(j) of the Clean Air Act (CAA) and incorporated under 40 CFR 63. On and after June 29, 1998, 326 IAC 2-4.1 is intended to implement the requirements of Section 112(g)(2)(B) of the Clean Air Act (CAA).
The operation of this source will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

**Fermentation Process**

In order to render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable, the Permittee shall comply with the following:

(a) Acetaldehyde emissions from the fermentation process shall not exceed 1.37 lbs/hr.

Compliance with the HAP limit, in combination with the potential to emit HAP from other units, shall limit the HAP emissions from the entire source to less than ten (10) tons for any single HAP and less than twenty-five (25) for total HAPs per twelve (12) consecutive month period and render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable and shall render the source minor under Section 112 of the Clean Air Act (CAA).

**Distillation, Dryers, and Thermal Oxidizers**

In order to render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable, the Permittee shall comply with the following:

(a) Acetaldehyde emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 0.38 lbs/hr.

(b) Acrolein emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 0.33 lb/hr.

(c) Formaldehyde emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 0.52 lbs/hr.

(d) Methanol emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 0.33 lb/hr.

(e) Total HAP emissions from the thermal oxidizers, distillation process, and DDGS dryers shall not exceed 1.56 lbs/hr.

Compliance with the HAP limit, in combination with the potential to emit HAP from other units, shall limit the HAP emissions from the entire source to less than ten (10) tons for any single HAP and less than twenty-five (25) for total HAPs per twelve (12) consecutive month period and render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable and shall render the source minor under Section 112 of the Clean Air Act (CAA).

**Ethanol Loading System**

In order to render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable, the Permittee shall comply with the following:

(a) Hexane emissions from VCU CE009 shall not exceed 0.00303 lbs/kgal of denatured ethanol loaded.

(b) Toluene emissions from VCU CE009 shall not exceed 0.000363 lbs/kgal of denatured ethanol loaded.

(c) Total HAPs emissions from VCU CE009 shall not exceed 0.00355 lbs/kgal of denatured ethanol loaded.
Compliance with the HAP limit, in combination with the potential to emit HAP from other units, shall limit the HAP emissions from the entire source to less than ten (10) tons for any single HAP and less than twenty-five (25) for total HAPs per twelve (12) consecutive month period and render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable and shall render the source minor under Section 112 of the Clean Air Act (CAA).

326 IAC 2-6 (Emission Reporting)
This source, not located in Lake, Porter, or LaPorte County, is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit pursuant to 326 IAC 2-7 (Part 70). The potential to emit of VOC and PM10 is less than 250 tons per year; and the potential to emit of CO, NOx, and SO2 is less than 2,500 tons per year. Therefore, pursuant to 326 IAC 2-6-3(a)(2), triennial reporting is required. An emission statement shall be submitted in accordance with the compliance schedule in 326 IAC 2-6-3 and every three (3) years thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

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.

326 IAC 5-1 (Opacity Limitations)
This source is subject to the opacity limitations specified in 326 IAC 5-1-2(1).

326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
This source was constructed after December 13, 1985 and has potential fugitive particulate emissions of twenty-five (25) tons per year or more. Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the Fugitive Dust Control Plan that is included as Attachment A to the permit.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
Pursuant to 326 IAC 6.5-1-1(a), this source (located in Wells County) is not subject to the requirements of 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

326 IAC 6.8 (Particulate Matter Limitations for Lake County)
Pursuant to 326 IAC 6.8-1-1(a), this source (located in Wells County) is not subject to the requirements of 326 IAC 6.8 because it is not located in Lake County.
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:

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

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

<table>
<thead>
<tr>
<th>Unit ID</th>
<th>Unit Description</th>
<th>Max. Throughput Rate (tons/hr)</th>
<th>Particulate Emission Limit (lbs/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU001, EU002, EU003</td>
<td>Grain Receiving and Handling (Conveyors, and Storage Bins)</td>
<td>560</td>
<td>70.32</td>
</tr>
<tr>
<td>EU004, EU005</td>
<td>Corn Scalpers (each)</td>
<td>140</td>
<td>54.72</td>
</tr>
<tr>
<td>EU005</td>
<td>Surge Bin</td>
<td>171</td>
<td>56.83</td>
</tr>
<tr>
<td>EU006</td>
<td>Hammermill #1</td>
<td>42</td>
<td>42.97</td>
</tr>
<tr>
<td>EU007</td>
<td>Hammermill #2</td>
<td>42</td>
<td>42.97</td>
</tr>
<tr>
<td>EU008</td>
<td>Hammermill #3</td>
<td>42</td>
<td>42.97</td>
</tr>
<tr>
<td>EU009</td>
<td>Hammermill #4</td>
<td>42</td>
<td>42.97</td>
</tr>
<tr>
<td>EU034</td>
<td>DDGS storage silos</td>
<td>220</td>
<td>59.55</td>
</tr>
<tr>
<td>EU036</td>
<td>DDGS loadout operation</td>
<td>550</td>
<td>70.10</td>
</tr>
<tr>
<td>EU035</td>
<td>DDGS storage building</td>
<td>220</td>
<td>59.55</td>
</tr>
<tr>
<td>EU003a</td>
<td>Grain Bin</td>
<td>1,120</td>
<td>79.06</td>
</tr>
</tbody>
</table>

(b) Pursuant to 326 IAC 6-3-2(e)(3), when the process weight exceeds 200 tons per hour, the maximum allowable emission may exceed the emission limits shown in the table above, provided the concentration of particulate matter in the gas discharged to the atmosphere is less than 0.10 pounds per 1,000 pounds of gases.

**Fermentation Process**

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

Pursuant to 326 IAC 1-2-59, the one (1) fermentation process is exempt from the requirements of 326 IAC 6-3-2, since liquid and gaseous fuels and combustion air are not considered as part of the process weight rate.

**326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)**

The one (1) fermentation process is not subject to the requirements of 326 IAC 8-1-6 because it is regulated by other rules in 326 IAC 8. The one (1) fermentation process is subject to the requirements of 326 IAC 8-5-6.

**326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills)**

Pursuant to 326 IAC 8-5-6(a), the source is subject to the requirements of 326 IAC 8-5-6, when the source is using whole kernel corn in the production of their ethanol. Pursuant to 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills), the Permittee shall comply with the following when using only whole kernel corn to produce a meal that is then used in the production of fuel grade ethanol:

(a) The VOC emissions from the fermentation process shall be controlled by wet scrubber C40.

(b) A wet scrubber (C40) with an overall control efficiency of not less than ninety-eight percent (98%) or resulting in a volatile organic compound concentration of not more than twenty (20) parts per million (ppm).
Distillation, Dryers, and Thermal Oxidizers

326 IAC 3-5 (Continuous Emission Monitoring System)
The two (2) thermal oxidizers with heat recovery steam generator (TO/HRSG) systems, identified as C9203 and C9303, are subject to the monitoring requirements of 326 IAC 3-5 because each is a fossil fuel-fired steam generator of greater than one hundred million (100,000,000) British thermal units (Btu) per hour heat input capacity. The Permittee shall install, calibrate, maintain, and operate all necessary continuous emission monitoring systems (CEMS) and related equipment for NOx emissions.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
Pursuant to 326 IAC 6-2-1(d), indirect heating facilities which received permit to construct after September 21, 1983 are subject to the requirements of 326 IAC 6-2-4.

The particulate matter emissions (Pt) shall be limited by the following equation:

\[ Pt = \frac{1.09}{Q^{0.26}} \]

Where:

\( Pt = \) Pounds of particulate matter emitted per million British thermal units (lb/MMBtu).

\( Q = \) Total source maximum operating capacity rating in MMBtu/hr heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility’s permit application, except when some lower capacity is contained in the facility’s operation permit; in which case, the capacity specified in the operation.

<table>
<thead>
<tr>
<th>Indirect Heating Units Which Began Operation After September 21, 1983</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>TO/HRSG Systems</td>
</tr>
</tbody>
</table>

Where: \( Q = \) Includes the capacity (MMBtu/hr) of the new unit(s) and the capacities for those unit(s) which were in operation at the source at the time the new unit(s) was constructed.

Note: Emission units shown in strikethrough were subsequently removed from the source. The effect of removing these units on "Q" is shown in the year the boiler was removed.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, particulate emissions from each of the DDGS dryers (EU029 through EU032) shall be less than 45.64 pounds per hour when operating at a maximum throughput rate of 56 tons per hour.

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

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
326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The one (1) fermentation process is not subject to the requirements of 326 IAC 8-1-6 because is regulated by other rules in 326 IAC 8. The one (1) fermentation process is subject to the requirements of 326 IAC 8-5-6.

326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills)
Pursuant to 326 IAC 8-5-6(a), the source is subject to the requirements of 326 IAC 8-5-6, when the source is using whole kernel corn in the production of their ethanol. Pursuant to 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills), the Permittee shall comply with the following when using only whole kernel corn to produce a meal that is then used in the production of fuel grade ethanol:

(a) The VOC emissions from the DDGS Dryers and distillation process shall be controlled by thermal oxidizers (C9203 and C9303).

(b) A thermal oxidizer (C9203 and C9303) with an overall control efficiency of not less than ninety-eight percent (98%) or resulting in a volatile organic compound concentration of not more than ten (10) parts per million (ppm).

DDGS Cooling Drum and Loadout Operation

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, particulate emissions from the one (1) DDGS cooling drum, identified as EU033, shall be less than 47.20 pounds per hour when operating at the maximum process throughput rate of 66 per hour.

The pound per hour limitation was calculated using the following equation:

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:

\[ E = 55.0 \times P^{0.11} - 40 \]

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

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The one (1) DDGS cooling drum, identified as EU033, is not subject to the requirements of 326 IAC 8-1-6, because it has potential VOC emissions of less than twenty-five (25) tons per year.

Ethanol Loading System

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The one (1) ethanol loading system, identified as EU037, is not subject to the requirements of 326 IAC 8-1-6 because is regulated by other rules in 326 IAC 8. The one (1) ethanol loading system, identified as EU037, is subject to the requirements of 326 IAC 8-5-6.

326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills)
Pursuant to 326 IAC 8-5-6(a), the source is subject to the requirements of 326 IAC 8-5-6, when the source is using whole kernel corn in the production of their ethanol. Pursuant to 326 IAC 8-5-6 (Fuel Grade Ethanol Production at Dry Mills), the Permittee shall comply with the following when using only whole kernel corn to produce a meal that is then used in the production of fuel grade ethanol:

(a) The VOC emissions from the ethanol loadout shall be collected and controlled by an enclosed vapor combustion unit (VCU) (C50) when loading denatured ethanol.

(b) An enclosed vapor combustion unit (VCU) (C50) with an overall control efficiency of not less than ninety-eight percent (98%).
**Diesel-Fired Fire Pump**

**326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)**
The one (1) diesel-fired fire pump, identified as EU038, is not subject to the requirements of 326 IAC 6-2 since it is not a source of indirect heating.

**326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)**
Pursuant to 326 IAC 1-2-59, the one (1) diesel-fired fire pump, identified as EU038, is exempt from the requirements of 326 IAC 6-3-2, since liquid and gaseous fuels and combustion air are not considered as part of the process weight rate.

**326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)**
The one (1) diesel-fired fire pump, identified as EU038, is not subject to the requirements of 326 IAC 7-1.1, because it has unlimited SO\(_2\) potential emissions of less than twenty-five (25) tons per year, and ten (10) pounds per hour.

**326 IAC 8-1-6 (New Facilities; General Reduction Requirements)**
The one (1) diesel-fired fire pump, identified as EU038, is not subject to the requirements of 326 IAC 8-1-6, because it has potential VOC emissions of less than twenty-five (25) tons per year.

**Space Heaters**

**326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)**
Pursuant to 326 IAC 6-2-1(d), indirect heating facilities which received permit to construct after September 21, 1983 are subject to the requirements of 326 IAC 6-2-4.

The particulate matter emissions (Pt) shall be limited by the following equation:

\[
Pt = \frac{1.09}{Q^{0.26}}
\]

Where:

- Pt = Pounds of particulate matter emitted per million British thermal units (lb/MMBtu).
- Q = Total source maximum operating capacity rating in MMBtu/hr heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility’s permit application, except when some lower capacity is contained in the facility’s operation permit; in which case, the capacity specified in the operation.

### Indirect Heating Units Which Began Operation After September 21, 1983

<table>
<thead>
<tr>
<th>Facility</th>
<th>Construction Date (Removal Date)</th>
<th>Operating Capacity (MMBtu/hr)</th>
<th>Q (MMBtu/hr)</th>
<th>Calculated Pt (lb/MMBtu)</th>
<th>Particulate Limitation, (Pt) (lb/MMBtu)</th>
<th>PM PTE based on AP-42 (lb/MMBtu)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kerosene-Fired Space Heaters</td>
<td>2007</td>
<td>0.495</td>
<td>286.495</td>
<td>0.25</td>
<td>0.25</td>
<td>0.002</td>
</tr>
<tr>
<td>Facility</td>
<td>Construction Date (Removal Date)</td>
<td>Operating Capacity (MMBtu/hr)</td>
<td>Q (MMBtu/hr)</td>
<td>Calculated Pt Limitation, (Pt) (lb/MMBtu)</td>
<td>Particulate Limitation, (Pt) (lb/MMBtu)</td>
<td>PM PTE based on AP-42 (lb/MMBtu)</td>
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</tbody>
</table>

Where: \( Q = \) Includes the capacity (MMBtu/hr) of the new unit(s) and the capacities for those unit(s) which were in operation at the source at the time the new unit(s) was constructed.

Note: Emission units shown in strikethrough were subsequently removed from the source. The effect of removing these units on "Q" is shown in the year the boiler was removed.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 1-2-59, the three (3) kerosene-fired space heaters, are exempt from the requirements of 326 IAC 6-3, since liquid and gaseous fuels and combustion air are not considered as part of the process weight rate.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)
The three (3) kerosene-fired space heaters, are not subject to the requirements of 326 IAC 7-1.1, because the unlimited SO\(_2\) potential emissions are less than twenty-five (25) tons/year, and ten (10) pounds/hour.

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
The three (3) kerosene-fired space heaters, are not subject to the requirements of 326 IAC 8-1-6, because the unlimited VOC potential emissions are less than twenty-five (25) tons per year.

Storage Tanks

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
(a) The one (1) denaturant tank, identified as T64, is not subject to the requirements of 326 IAC 8-1-6 because is regulated by other rules in 326 IAC 8. The one (1) denaturant tank, identified as T64, is subject to the requirements of 326 IAC 8-4-3.

(b) The four (4) storage tanks, identified as T61, T62, T63, and T65 are not subject to the requirements of 326 IAC 8-1-6 because the unlimited VOC potential emissions are less than twenty-five (25) tons per year.

326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)
The one (1) denaturant tank, identified as T64, is subject to the requirements of 326 IAC 8-4-3, because the vessel, with a maximum capacity of 200,000 gallons, contains natural gasoline, which is a petroleum liquid.

(a) Pursuant to 326 IAC 8-4-3(b)(1) (Petroleum Liquid Storage Facilities), tank T64 is subject to the following:

(1) The facility must be retrofitted with an internal floating roof equipped with a closure seal, or seals, to close the space between the roof edge and tank wall unless the source has been retrofitted with equally effective alternative control which has been approved.

(2) The facility is maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials.

(3) All openings, except stub drains, are equipped with covers, lids, or seals such that:

(A) the cover, lid, or seal is in the closed position at all times except when in actual use;
(B) automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports; and

(C) rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting.

(b) Pursuant to 326 IAC 8-4-3(d) (Petroleum Liquid Storage Facilities), the Permittee shall maintain the following records for a period of two (2) years for tank T64:

1. The types of volatile petroleum liquid stored;
2. The maximum true vapor pressure of the liquids as stored; and
3. The results of the inspections performed on the storage vessels.

The above records shall be made available to the IDEM, OAQ upon written request.

<table>
<thead>
<tr>
<th>Compliance Determination and Monitoring Requirements</th>
</tr>
</thead>
</table>

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.

(a) The Compliance Determination Requirements applicable to this source are as follows:

Section D.1

1. In order to comply with 326 IAC 2-2 and 326 IAC 6-3-2, each of the following emission units shall be controlled by the associated baghouse, as listed in the table below, at all times these units are in operation:
## Section D.2

1. In order to comply with 326 IAC 2-2, 326 IAC 2-4.1, and 326 IAC 8-5-6, wet scrubber C40 shall be in operation and control emissions from the fermentation process at all times the fermentation process is in operation.

2. If compliance is demonstrated using the twenty (20) parts per million (ppm) VOC limit specified in 326 IAC 8-5-6, all VOC emissions from the fermentation process shall be routed to the wet scrubber, and that there are no open vents to the atmosphere between the fermentation process and the wet scrubber.

3. Scrubber cleaning will be conducted only as prescribed in the preventative maintenance plan required under 326 IAC 2-7-5(12).

## Section D.3

1. In order to comply with 326 IAC 2-2, 326 IAC 2-4.1, and 326 IAC 8-5-6, at least one of the two (2) thermal oxidizers (C9203 and C9303) shall be in operation and control emissions from the DDGS dryers (EU029 through EU032) and the distillation process at all times of operation.

2. If compliance is demonstrated with the 10 ppmv VOC outlet concentration specified in 326 IAC 8-5-6:
   - (A) all VOC emissions from the emission units in these processes shall be routed to the TO/HRSG systems,
   - (B) that there are no open vents to the atmosphere between the mashing, cooking, liquefaction, distillation and dehydration processes and the TO/HRSG systems, and
   - (C) that the DDGS dryers shall maintain negative pressure.
Section D.4

(1) In order to comply with 326 IAC 2-2 and 326 IAC 6-3-2, Baghouse C70 shall be in operation and control emissions from the DDGS cooling drum (EU033) at all times that this unit is in operation.

(2) 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.

Section D.5

(1) In order to comply with 326 IAC 2-2, 326 IAC 2-4.1 and 326 IAC 8-5-6, enclosed vapor combustion unit (VCU) (C50) shall be in operation and control emissions from the ethanol loading rack (EU037) at all times when this rack is in operation.

Testing Requirements:

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Control Device</th>
<th>Scenario ID</th>
<th>Timeframe for Testing or Date of Initial Valid Demonstration</th>
<th>Pollutant/Parameter</th>
<th>Frequency of Testing</th>
<th>Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grain Receiving and Handling, Hammermills, DDGS Handling, Storage, and Loadout Operations</td>
<td>Baghouses C20, C30, and C90</td>
<td>N/A</td>
<td>every five years</td>
<td>PM</td>
<td>every five years¹</td>
<td>326 IAC 2-2 326 IAC 6-3-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PM10 and PM2.5</td>
<td>every five years¹</td>
<td>326 IAC 2-2</td>
</tr>
<tr>
<td>Fermentation Process</td>
<td>Scrubber C40</td>
<td>Normal</td>
<td>120*</td>
<td>VOC</td>
<td>every five years²</td>
<td>326 IAC 2-2 326 IAC 8-5-6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Acetaldehyde</td>
<td>every five years²</td>
<td>326 IAC 2-4.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AOS1</td>
<td>120*</td>
<td>VOC</td>
<td>every five years²</td>
<td>326 IAC 2-2 326 IAC 8-5-6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Acetaldehyde</td>
<td>every five years²</td>
<td>326 IAC 2-4.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AOS2</td>
<td>120*</td>
<td>VOC</td>
<td>every five years²</td>
<td>326 IAC 2-2 326 IAC 8-5-6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Acetaldehyde</td>
<td>every five years²</td>
<td>326 IAC 2-4.1</td>
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<tr>
<td></td>
<td></td>
<td>AOS3</td>
<td>120*</td>
<td>VOC</td>
<td>every five years²</td>
<td>326 IAC 2-2 326 IAC 8-5-6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Acetaldehyde</td>
<td>every five years²</td>
<td>326 IAC 2-4.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AOS4</td>
<td>120*</td>
<td>VOC</td>
<td>every five years²</td>
<td>326 IAC 2-2 326 IAC 8-5-6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Acetaldehyde</td>
<td>every five years²</td>
<td>326 IAC 2-4.1</td>
</tr>
<tr>
<td>Thermal</td>
<td>Stack S10</td>
<td>N/A</td>
<td>every five years</td>
<td>PM</td>
<td>every five</td>
<td>326 IAC 2-2</td>
</tr>
</tbody>
</table>
### Oxidizers, Distillation Process, and DDGS Dryers

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Monitoring Frequency</th>
<th>Applicable Rule or Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM10 and PM2.5</td>
<td>every five years³</td>
<td>326 IAC 6-2-4, 326 IAC 6-3-2</td>
</tr>
<tr>
<td>VOC</td>
<td>every five years³</td>
<td>326 IAC 2-2</td>
</tr>
<tr>
<td>CO</td>
<td>every five years³</td>
<td>326 IAC 2-2</td>
</tr>
<tr>
<td>Acetaldehyde, Acrolein, Formaldehyde, and Methanol</td>
<td>every five years³</td>
<td>326 IAC 2-4.1</td>
</tr>
</tbody>
</table>

### DDGS Cooling Drum

<table>
<thead>
<tr>
<th>Baghouse C70</th>
<th>N/A</th>
<th>every five years</th>
<th>PM</th>
<th>every five years⁴</th>
<th>326 IAC 2-2, 326 IAC 6-3-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baghouse C80</td>
<td>N/A</td>
<td>every five years</td>
<td>PM10 and PM2.5</td>
<td>every five years⁴</td>
<td>326 IAC 2-2</td>
</tr>
<tr>
<td>Baghouse C90</td>
<td>N/A</td>
<td>every five years</td>
<td>VOC</td>
<td>every five years⁴</td>
<td>326 IAC 2-2</td>
</tr>
</tbody>
</table>

### Ethanol Loading System

<table>
<thead>
<tr>
<th>Enclosed Vapor Combustor Unit (VCU) C50</th>
<th>N/A</th>
<th>every five years</th>
<th>VOC</th>
<th>every five years⁵</th>
<th>326 IAC 2-2, 326 IAC 8-5-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enclosed Vapor Combustor Unit (VCU) C50</td>
<td>N/A</td>
<td>120*</td>
<td>Hexane and Toluene</td>
<td>every five years</td>
<td>326 IAC 2-4.1</td>
</tr>
</tbody>
</table>

*No later than 120 days from the issuance of this renewal.
¹The source last performed this testing on November 10, 2015.
²The source last performed this testing on March 29, 2016.
³The source last performed this testing on November 11, 2015.
⁴The source last performed this testing on September 4, 2015.
⁵The source last performed this testing on February 10, 2016.

### Continuous Emissions Monitoring System (CEMS) and Continuous Opacity Monitoring (COM) Requirements:

<table>
<thead>
<tr>
<th>Control Type</th>
<th>Type of Continuous Monitor (Pollutant Monitored)</th>
<th>Applicable Rule or Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal Oxidizers (C9203 and C9303)</td>
<td>CEMS (NOx)</td>
<td>326 IAC 3-5, 326 IAC 2-7-6(1),(6), 40 CFR 60 (NSPS)</td>
</tr>
</tbody>
</table>

(b) The Compliance Monitoring Requirements applicable to this source are as follows:

<table>
<thead>
<tr>
<th>Control Device</th>
<th>Scenario ID</th>
<th>Type of Parametric Monitoring</th>
<th>Frequency</th>
<th>Range or Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stacks S20, S30, and S90</td>
<td>N/A</td>
<td>Visible emission notations</td>
<td>Daily</td>
<td>Verify whether emissions are normal or abnormal</td>
</tr>
<tr>
<td>Scrubber C40</td>
<td>Normal</td>
<td>Pressure drop monitoring</td>
<td>Daily</td>
<td>Within normal range of 1.0 to 20.0 inches of water, unless a different upper or lower value is established in the most recent compliant stack test</td>
</tr>
<tr>
<td>Control Device</td>
<td>Scenario ID</td>
<td>Type of Parametric Monitoring</td>
<td>Frequency</td>
<td>Range or Specification</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
<td>-------------------------------</td>
<td>-----------</td>
<td>-----------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scrubber water flow rate monitoring</td>
<td>Daily</td>
<td>At or above 84.7 gallons/minute from permit issuance until stack test results are available, then at or above the value established in the most recent compliant stack test.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scrubber HAP control additive flow rate monitoring</td>
<td>Daily</td>
<td>At or above 504 mL/min from permit issuance until stack test results are available, then at or above the value established in the most recent compliant stack test.</td>
</tr>
<tr>
<td></td>
<td>AOS1</td>
<td>Pressure drop monitoring</td>
<td>Daily</td>
<td>Within normal range of 1.0 to 20.0 inches of water, unless a different upper or lower value is established in the most recent compliant stack test.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scrubber water flow rate monitoring</td>
<td>Daily</td>
<td>At or above 84.7 gallons/minute from permit issuance until stack test results are available, then at or above the value established in the most recent compliant stack test.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scrubber HAP control additive flow rate monitoring</td>
<td>Daily</td>
<td>At or above 504 mL/min from permit issuance until stack test results are available, then at or above the value established in the most recent compliant stack test.</td>
</tr>
<tr>
<td></td>
<td>AOS2</td>
<td>Pressure drop monitoring</td>
<td>Daily</td>
<td>Within normal range of 1.0 to 20.0 inches of water, unless a different upper or lower value is established in the most recent compliant stack test.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scrubber water flow rate monitoring</td>
<td>Daily</td>
<td>At or above 84.7 gallons/minute from permit issuance until stack test results are available, then at or above the value established in the most recent compliant stack test.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scrubber HAP control additive flow rate monitoring</td>
<td>Daily</td>
<td>At or above 504 mL/min from permit issuance until stack test results are available, then at or above the value established in the most recent compliant stack test.</td>
</tr>
<tr>
<td>Control Device</td>
<td>Scenario ID</td>
<td>Type of Parametric Monitoring</td>
<td>Frequency</td>
<td>Range or Specification</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>-------------</td>
<td>-------------------------------</td>
<td>-----------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Pressure drop monitoring</td>
<td>Daily</td>
<td>Within normal range of 1.0 to 20.0 inches of water, unless a different upper or lower value is established in the most recent compliant stack test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scrubber water flow rate monitoring</td>
<td>Daily</td>
<td>At or above 84.7 gallons/minute from permit issuance until stack test results are available, then at or above the value established in the most recent compliant stack test.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scrubber HAP control additive flow rate monitoring</td>
<td>Daily</td>
<td>At or above 504 mL/min from permit issuance until stack test results are available, then at or above the value established in the most recent compliant stack test.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stack S10</td>
<td>N/A</td>
<td>Visible emission notations</td>
<td>Daily</td>
<td>Verify whether emissions are normal or abnormal</td>
</tr>
<tr>
<td>3-hour average oxidizer temperature monitoring</td>
<td>Continuous</td>
<td>At or above 1,517°F from permit issuance until stack test results are available, then at or above the value established in the most recent compliant stack test.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duct pressure or fan amperage monitoring</td>
<td>Continuous</td>
<td>Within normal range from permit issuance until stack test results are available, then within the normal range established in the most recent compliant stack test.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stack S70</td>
<td>N/A</td>
<td>Visible emission notations</td>
<td>Daily</td>
<td>Verify whether emissions are normal or abnormal</td>
</tr>
<tr>
<td>Enclosed Vapor Combustion Unit (VCU) C50</td>
<td>N/A</td>
<td>Presence of flame</td>
<td>Continuous</td>
<td>Presence of flame</td>
</tr>
</tbody>
</table>

These monitoring conditions are necessary because the stacks S20, S30, and S90 for the grain receiving and handling operations (EU001 through EU005), the hammermills (EU006 through EU009), and the DDGS handling and loadout operations (EU034 through EU036), the scrubber C40 for the fermentation process, the stack S10 for the thermal oxidizers (C9203 and C9303), the thermal oxidizers (C9203 and C9303) for the distillation process, the stack S70 for the DDGS cooling drum (EU033), and the enclosed vapor combustion unit (VCU) C50 for the ethanol loading system (EU037) must operate properly to assure compliance with 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)), 326 IAC 6-3 (Particulate Emissions Limitations for Manufacturing Processes), and 326 IAC 8-5-6 (Fuel Grade Ethanol at Dry Mills).
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 were made to conditions contained previously issued permits/approvals (these changes may include Title I changes):

1. IDEM, OAQ has updated the emission unit descriptions in Conditions A.2 and A.4.
2. IDEM, OAQ has updated emission limits and compliance requirements in Sections D.1, D.2, D.3, D.4, and D.5.

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 July 3, 2019. Additional information was received on August 13, 2019.

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 179-41817-00033.

The operation of this stationary grain elevator and ethanol production plant shall be subject to the conditions of the attached proposed Part 70 Operating Permit Renewal No. T179-41632-00033.

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

IDEM Contact

(a) If you have any questions regarding this permit, please contact Andrew Belt, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 232-3217 or (800) 451-6027, and ask for Andrew Belt or (317) 232-3217.

(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.
### Uncontrolled Potential to Emit (ton/yr)

<table>
<thead>
<tr>
<th>Emission Unit (Control)</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>Grain Receiving and Handling</td>
<td>720.82</td>
<td>720.82</td>
<td>720.82</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Grain Bin (EU003a)</td>
<td>122.64</td>
<td>30.91</td>
<td>5.40</td>
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<tr>
<td>Hammermills (EU006-EU009)</td>
<td>420.48</td>
<td>420.48</td>
<td>420.48</td>
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<tr>
<td>Fermentation Process*****</td>
<td>50.21</td>
<td>50.21</td>
<td>50.21</td>
<td>-</td>
<td>-</td>
<td>1,786.31</td>
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<td>Distillation, Dryers, and TOs (C9203 and C9303)</td>
<td>703.88</td>
<td>703.88</td>
<td>703.88</td>
<td>1.61</td>
<td>204.11</td>
<td>1,321.66</td>
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<tr>
<td>DDGS Cooling Drum (EU033)***</td>
<td>750.86</td>
<td>750.86</td>
<td>750.86</td>
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<td>-</td>
<td>13.36</td>
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<td>DDGS Loadout Operation (EU036)</td>
<td>136.66</td>
<td>136.66</td>
<td>136.66</td>
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<tr>
<td>Wet Cake Storage*</td>
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<td>-</td>
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<td>Ethanol Loading System (EU037)**</td>
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<td>3.79</td>
<td>2,563.31</td>
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<td>Diesel-Fired Fire Pump (EU038)</td>
<td>0.17</td>
<td>0.17</td>
<td>0.17</td>
<td>0.15</td>
<td>2.33</td>
<td>0.19</td>
<td>0.50</td>
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<tr>
<td>Space Heaters</td>
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<td>0.04</td>
<td>0.03</td>
<td>1.14</td>
<td>0.32</td>
<td>0.01</td>
<td>0.08</td>
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<tr>
<td>Storage Tanks</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>41.44</td>
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<tr>
<td>Insignificant process tanks</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>0.71</td>
<td>-</td>
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<tr>
<td>Corn Oil Loadout</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.05</td>
<td>-</td>
</tr>
</tbody>
</table>

#### Total Non-Fugitive Emissions

|                | 2,905.74 | 2,814.01 | 2,788.50 | 2.90 | 210.55 | 5,727.04 | 1,765.23 |

#### Fugitives

<table>
<thead>
<tr>
<th></th>
<th>122.47</th>
<th>40.49</th>
<th>6.88</th>
<th>-</th>
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<tbody>
<tr>
<td>Uncaptured DDGS Handling and Loadout*****</td>
<td>3.58</td>
<td>0.87</td>
<td>0.87</td>
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<tr>
<td>Equipment Leaks</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>51.18</td>
<td>-</td>
</tr>
<tr>
<td>Additional Corn Storage and Corn Storage Pile*****</td>
<td>4.31</td>
<td>0.65</td>
<td>0.31</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Paved Roads</td>
<td>10.94</td>
<td>2.19</td>
<td>0.54</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

#### Total Fugitives

|                | 141.30 | 44.20 | 8.59 | - | - | 51.18 | - |

#### Source Total

|                | 3,047.04 | 2,858.21 | 2,797.09 | 2.90 | 210.55 | 5,778.22 | 1,765.23 |

**Notes:**

* This plant is capable of producing both DDGS and MDGS. Emissions from DDGS production is the worst case scenario. Therefore, the PTE of wet cake storage is not included in the PTE for the entire source.

** Emissions are based on 8,760 hrs/yr.

*** The insignificant process tanks were calculated by the Permittee and have been verified by IDEM.

**** Uncontrolled VOC emissions from the DDGS Cooling Drum are unknown. Controlled VOC emissions from the DDGS Cooling Drum are shown.

*****Effective July 2, 2007, U.S. EPA revised the definition of a “major stationary source” under 40 CFR Parts 51 and 52 PSD and Nonattainment New Source Review, and the definition of a “major source” under 40 CFR parts 70 and 71 (State and Federal Operating Permits). U.S. EPA has reinterpreted the component term “chemical process plants” within the statutory definition of “major emitting facility” in section 169(1) of the CAA to exclude wet and dry corn milling facilities that produce ethanol for fuel, or produce ethanol through a natural fermentation process that involves the use of such things as corn, sugar beets, sugar cane or cellulosic biomass as a feedstock regardless of whether the ethanol is produced for human consumption, fuel, or for an industrial purpose. Therefore, ethanol plants are no longer required to count fugitive emissions for purposes of determining whether a source is a major source under the PSD, nonattainment NSR, or Title V programs unless there is an applicable New Source Performance Standard that was in effect on August 7, 1980 for the ethanol plant, or the ethanol plant has a “nested” source category. Green Plains Bluffton, LLC does not have a “nested” source category; therefore, the entire source does not fall under one of the 28 listed source categories and fugitive emissions are not counted towards determining whether the source is a major source under the PSD, nonattainment NSR, or Title V programs. Please note that fugitive HAPs emissions are still included in the potential to emit calculations.
## Appendix A: Emission Calculations

### PTE Summary

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** 179-41817-00033  
**Part 70 Operating Permit Renewal No.:** T179-41632-00033  
**Reviewer:** Andrew Belt

### Potential to Emit After Control (ton/yr)

<table>
<thead>
<tr>
<th>Emission Unit (Control)</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO₂</th>
<th>NOₓ</th>
<th>VOC</th>
<th>CO</th>
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<td>-</td>
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<td>4.20</td>
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<tr>
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<td>1.00</td>
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<td>70.39</td>
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<tr>
<td>Wet Cake Storage*</td>
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<td>-</td>
<td>-</td>
<td>-</td>
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<td>Ethanol Loading System (EU037)**</td>
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<td>3.79</td>
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<td>1.14</td>
<td>0.32</td>
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<td>-</td>
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<tr>
<td><strong>Total Non-Fugitive Emissions</strong></td>
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<td>122.79</td>
<td>97.28</td>
<td>2.90</td>
<td>210.55</td>
<td>235.94</td>
<td>81.14</td>
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</table>

### Fugitives

| Uncaptured Grain Receiving and Handling***** | 122.47 | 40.49 | 6.88 | - | - | - | - |
| Uncaptured DDGS Handling and Loadout***** | 3.58 | 0.87 | 0.87 | - | - | - | - |
| Equipment Leaks | - | - | - | - | - | 8.85 | - |
| Additional Corn Storage and Corn Storage Pile***** | 4.31 | 0.65 | 0.31 | - | - | - | - |
| Paved Roads | 5.47 | 1.09 | 0.27 | - | - | - | - |
| **Total Fugitives** | 135.83 | 43.10 | 8.33 | - | - | 8.85 | - |

**Source Total** | 350.35 | 165.89 | 105.60 | 2.90 | 210.55 | 244.79 | 81.14 |

### Notes:

* This plant is capable of producing both DDGS and MDGS. Emissions from DDGS production is the worst case scenario. Therefore, the PTE of wet cake storage is not included in the PTE for the entire source.  
** Emissions are based on 8,760 hrs/yr  
*** The insignificant process tanks were calculated by the Permittee and have been verified by IDEM.  
**** Uncontrolled VOC emissions from the DDGS Cooler Bypass (C70) are unknown. Controlled VOC emissions from the DDGS Cooler Bypass (C70) are shown  
***** Effective July 2, 2007, U.S. EPA revised the definition of a "major stationary source" under 40 CFR Parts 51 and 52 PSD and Nonattainment New Source Review, and the definition of a "major source" under 40 CFR parts 70 and 71 (State and Federal Operating Permits). U.S. EPA has reinterpreted the component term "chemical process plants" within the statutory definition of "major emitting facility" in section 169(1) of the CAA to exclude wet and dry corn milling facilities that produce ethanol for fuel, or produce ethanol through a natural fermentation process that involves the use of such things as corn, sugar beets, sugar cane or cellulosic biomass as a feedstock regardless of whether the ethanol is produced for human consumption, fuel, or for an industrial purpose. Therefore, ethanol plants are no longer required to count fugitive emissions for purposes of determining whether a source is a major source under the PSD, nonattainment NSR, or Title V programs unless there is an applicable New Source Performance Standard that was in effect on August 7, 1980 for the ethanol plant, or the ethanol plant has a "nested" source category. Green Plains Bluffton, LLC does not have a "nested" source category; therefore, the entire source does not fall under one of the 28 listed source categories and fugitive emissions are not counted towards determining whether the source is a major source under the PSD, nonattainment NSR, or Title V programs. Please note that fugitive HAPs emissions are still included in the potential to emit calculations.
### Appendix A: Emission Calculations

#### PTE Summary

- **Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
- **Source Address:** 1441 South Adams St., Bluffton, IN 46714
- **Significant Source Modification No.:** 179-41817-00033
- **Part 70 Operating Permit Renewal No.:** T179-41632-00033
- **Reviewer:** Andrew Belt

#### Potential to Emit After Issuance (ton/yr)

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<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO₂</th>
<th>NOₓ</th>
<th>VOC</th>
<th>CO</th>
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<td>72.27</td>
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<td>Ethanol Loading System (EU037)**</td>
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<td>3.79</td>
<td>5.03</td>
<td>1.20</td>
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<td>Diesel-Fired Fire Pump (EU038)</td>
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<td>0.17</td>
<td>0.15</td>
<td>2.33</td>
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<td>0.50</td>
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<td>Space Heaters</td>
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<td>41.44</td>
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<tr>
<td>Insignificant process tanks</td>
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<td>-</td>
<td>-</td>
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<td>0.71</td>
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<tr>
<td>Corn Oil Loadout</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.05</td>
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<td><strong>Total Limited for 326 IAC 2-2 (PSD) applicability</strong></td>
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<td><strong>192.95</strong></td>
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<td><strong>210.55</strong></td>
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<td><strong>Fugitives</strong></td>
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<td>0.87</td>
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<td>-</td>
<td>8.85</td>
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<tr>
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<td><strong>2.90</strong></td>
<td><strong>210.55</strong></td>
<td><strong>227.04</strong></td>
<td><strong>171.29</strong></td>
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</tbody>
</table>

**Notes:**

* This plant is capable of producing both DDGS and MDGS. Emissions from DDGS production is the worst case scenario. Therefore, the PTE of wet cake storage is not included in the PTE for the entire source.

** Emissions are based on 8,760 hrs/yr

*** The insignificant process tanks were calculated by the Permittee and have been verified by IDEM.

**** Uncontrolled VOC emissions from the DDGS Cooler Bypass (C70) are unknown. Controlled VOC emissions from the DDGS Cooler Bypass (C70) are shown

***** Effective July 2, 2007, U.S. EPA revised the definition of a “major stationary source” under 40 CFR Parts 51 and 52 PSD and Nonattainment New Source Review, and the definition of a “major source” under 40 CFR parts 70 and 71 (State and Federal Operating Permits). U.S. EPA has reinterpreted the component term “chemical process plants” within the statutory definition of “major emitting facility” in section 169(1) of the CAA to exclude wet and dry corn milling facilities that produce ethanol for fuel, or produce ethanol through a natural fermentation process that involves the use of such things as corn, sugar beets, sugar cane or cellulosic biomass as a feedstock regardless of whether the ethanol is produced for human consumption, fuel, or for an industrial purpose. Therefore, ethanol plants are no longer required to count fugitive emissions for purposes of determining whether a source is a major source under the PSD, nonattainment NSR, or Title V programs unless there is an applicable New Source Performance Standard that was in effect on August 7, 1980 for the ethanol plant, or the ethanol plant has a “nested” source category. Green Plains Bluffton, LLC does not have a “nested” source category; therefore, the entire source does not fall under one of the 28 listed source categories and fugitive emissions are not counted towards determining whether the source is a major source under the PSD, nonattainment NSR, or Title V programs. Please note that fugitive HAPs emissions are still included in the potential to emit calculations.
## Appendix A: Emission Calculations

### HAPs Summary

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** 179-41817-00033  
**Part 70 Operating Permit Renewal No.:** T179-41632-00033  
**Reviewer:** Andrew Belt

---

### Pollutant Emissions Table

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Fermentation (C40)</th>
<th>Distillation, Dryers and Toxics (C2033 and C2033)</th>
<th>DODS Cooler Bypass (C70)</th>
<th>Ethanol Loadout and Flare (C50)</th>
<th>Diesel Fire Pump (EU03)</th>
<th>Storage Tanks</th>
<th>Equipment Leaks</th>
<th>Kerosene Space Heaters</th>
<th>Total</th>
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<tbody>
<tr>
<td>Uncontrolled Potential to Emit (ton/yr)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

*This plant is capable to produce both DDGS and MDGS. The emissions from the DDGS production is the worst case scenario. Therefore, the PTE of the wet cake storage is not included in the PTE for the entire source.*

**Effective July 2, 2007, U.S. EPA revised the definition of a "major stationary source" under 40 CFR Parts 51 and 52 PSD and Nonattainment New Source Review, and the definition of a "major source" under 40 CFR parts 70 and 71 (State and Federal Operating Permits). U.S. EPA has reinterpreted the component term "chemical process plants" within the statutory definition of "major emitting facility" in section 169(1) of the CAA to exclude wet and dry corn milling facilities that produce ethanol for fuel, or produce ethanol through a natural fermentation process that involves the use of such things as corn, sugar beets, sugar cane or cellulosic biomass as a feedstock regardless of whether the ethanol is produced for human consumption, fuel, or for an industrial purpose. Therefore, ethanol plants are no longer required to count fugitive emissions for purposes of determining whether a source is a major source under the PSD, nonattainment NSR, or Title V programs unless there is an applicable New Source Performance Standard that was in effect on August 7, 1980 for the ethanol client, or the ethanol plant has a "nested" source category. Green Planins Bluffton, LLC does not have a "nested" source category; therefore, the entire source does not fall under one of the 28 listed source categories and fugitive emissions are not counted towards determining whether the source is a major source under the PSD, nonattainment NSR, or Title V programs. Please note that fugitive HAPs emissions are still included in the potential to emit calculations.*
## Emission Calculations

### HAPs Summary

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** 179-41817-00033  
**Part 70 Operating Permit Renewal No.:** T179-41632-00033  
**Reviewer:** Andrew Belt

### Controlled Potential to Emit (ton/yr)

<table>
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<th>DGDG Cooler Bypass (C70)</th>
<th>Ethanol Loadout and Flare (C56)</th>
<th>Diesel Fire Pump EU038</th>
<th>Storage Tanks</th>
<th>Equipment Leaks</th>
<th>Kerosene Space Heaters</th>
<th>Total</th>
</tr>
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<td>-</td>
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<td>-</td>
<td>-</td>
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<td>-</td>
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<td>3.25E-06</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>8.02E-05</td>
</tr>
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</table>

**Total:** 2.95 6.86 1.40 2.01E-03 5.96 1.55 1.06E-04 16.70

- This plant is capable to produce both DDGS and MDGS. The emissions from the DDGS production is the worst case scenario. Therefore, the PTE of the wet cake storage is not included in the PTE for the entire source.

- Effective July 2, 2007, U.S. EPA revised the definition of a "major stationary source" under 40 CFR Parts 51 and 52 PSD and Nonattainment New Source Review, and the definition of a "major source" under 40 CFR parts 70 and 71 (State and Federal Operating Permits). U.S. EPA has reinterpreted the component term "chemical process plants" within the statutory definition of "major emitting facility" in section 169(1) of the CAA to exclude wet and dry corn milling facilities that produce ethanol for fuel, or produce ethanol through a natural fermentation process that involves the use of such things as corn, sugar beets, sugar cane or cellulotic biomass as a feedstock, regardless of whether the ethanol is produced for human consumption, fuel, or for an industrial purpose. Therefore, ethanol plants are no longer required to count fugitive emissions for purposes of determining whether a source is a major source under the PSD, nonattainment NER, or Title V programs unless there is an applicable New Source Performance Standard that was in effect on August 7, 1980 for the ethanol plant, or the ethanol plant has a "nested" source category; therefore, the entire source does not fall under one of the 28 listed source categories and fugitive emissions are not counted towards determining whether the source is a major source under the PSD, nonattainment NER, or Title V programs. Please note that fugitive HAPs emissions are still included in the potential to emit calculations.
## Appendix A: Emission Calculations

### HAPS Summary

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** T179-41632-00033  
**Part 70 Operating Permit Renewal No.:** T179-41632-00033  
**Reviewer:** Andrew Belt

### Pollutant Emissions

**Pollutant** | **Fermentation (C40)** | **Distillation, Dryers and TOs (C920 and C930)** | **DDGS Cooler Bypass (C70)** | **Ethanol Loadout and Flare (C50)** | **Diesel Fire Pump (C920)** | **Storage Tanks** | **Equipment Leaks** | **Kerosene Space Heaters** | **Total**
--- | --- | --- | --- | --- | --- | --- | --- | --- | ---
1,3-Butadiene | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
1-Methyl-1,2-epoxypropane | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
1-Methylethylbenzene | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
1,2-Dichloroethylene | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Acenaphthene | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Acenaphthylene | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Acetone | 0.23 | 0.25 | 0.32 | 2.05E-05 | - | - | - | 2.03E-05 | 2.03E-05
Anthracene | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Benzo(a)anthracene | - | 1.98 | 2.05E-05 | 4.05E-04 | 5.74E-03 | - | - | 5.77E-06 | 5.77E-06
Benzo(b)fluoranthene | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Benzo(k)fluoranthene | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Benzo(c)pyrene | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Benzo[g,h,i]perylene | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Carbon disulfide | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Chrysene | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Cinnamaldehyde | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Chlorophenol | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Chlorobenzene | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Dichlorobenzene | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Ethylbenzene | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Fluoranthene | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Fluorene | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Formaldehyde | 0.12 | 2.28 | 0.17 | 3.09E-03 | 5.74E-03 | 1.37 | 1.55 | 1.08E-04 | 17.77
Hexane | 3.48 | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
2,3-Diiodopropane | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Methanol | 0.35 | 1.45 | 0.17 | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Naphthalene | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
PAH (total) | 0.118E-03 | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Phenanthrene | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Flue gases | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Toluene | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Xylenes | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Arsenic | 3.86E-04 | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Beryllium | 2.32E-05 | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Cadmium | 2.13E-03 | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Chromium | 2.71E-03 | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Cobalt | 1.62E-04 | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Lead | - | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Manganese | 7.34E-04 | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Mercury | 5.02E-04 | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Nickel | 4.06E-03 | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Selenium | 4.64E-05 | - | - | 2.05E-05 | - | - | - | 2.05E-05 | 2.05E-05
Total | 5.74 | 6.83 | 5.06 | 2.05E-05 | 5.76E-05 | 5.76E-05 | 5.76E-05 | 5.76E-05 | 17.77

*This plant is capable to produce both DDGS and MDDGS. The emissions from the DDGS production is the worst case scenario. Therefore, the PTE of the wet cake storage is not included in the PTE for the entire source.*

*Effective July 2, 2007, U.S. EPA revised the definition of a "major stationary source" under 40 CFR Parts 51 and 52 PSD and Nonattainment New Source Review, and the definition of a "major source" under 40 CFR parts 70 and 71 (State and Federal Operating Permits). U.S. EPA has reinterpreted the component term "chemical process plants" within the statutory definition of "major emitting facility" in section 169(1) of the CAA to exclude wet and dry corn milling facilities that produce ethanol for fuel, or produce ethanol through a natural fermentation process that involves the use of such things as corn, sugar beets, sugar cane or cellulosic biomass as a feedstock regardless of whether the ethanol is produced for human consumption, fuel, or for an industrial purpose. Therefore, ethanol plants are no longer required to count fugitive emissions for purposes of determining whether a source is a major source under the PSD, nonattainment NSR, or Title V programs unless there is an applicable New Source Performance Standard that was in effect on August 7, 1980 for the ethanol plant, or the ethanol plant has a "nested" source category. Green Planins Bluffton, LLC does not have a "nested" source category; therefore, the entire source does not fall under one of the 28 listed source categories and fugitive emissions are not counted towards determining whether the source is a major source under the PSD, nonattainment NSR, or Title V programs. Please note that fugitive HAPs emissions are still included in the potential to emit calculations.


**Appendix A: Emissions Calculations**

**Modification Summary**

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant

**Significant Source Modification No.:** 179-41817-00033  
Part 70 Operating Permit Renewal No.: T179-41632-00033  
**Reviewer:** Andrew Belt

---

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<th>Hazardous Air Pollutants</th>
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<td>PM (tons/yr)</td>
<td>PM10 (tons/yr)</td>
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<tr>
<td>Fermentation Process (EU010 - EU021) (Before Modification)</td>
<td>1.46</td>
<td>0.00</td>
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<tr>
<td>Distillation, Dryers, and TOs (C9203 and C9303) (Before Modification)</td>
<td>213.32</td>
<td>213.32</td>
</tr>
<tr>
<td>DDGS Cooler Bypass (C70) (Before Modification)</td>
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<tr>
<td>Ethanol Loadout and Flare (C50) (Before Modification)</td>
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<td>Storage Tanks (T61 - T65) (Before Modification)</td>
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<tr>
<td>Corn Oil Loadout (Before Modification)</td>
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<td><strong>Total:</strong></td>
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<td>213.32</td>
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**Notes:**

*Highest single HAP is acetyldehyde.

---

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<th>Hazardous Air Pollutants</th>
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<td><strong>Net Potential Emission Increase:</strong></td>
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<th>Hazardous Air Pollutants</th>
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<td>213.32</td>
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<td>Process Description</td>
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<td>PM (tons/yr)</td>
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<tr>
<td>Corn Oil Loadout (Before Modification)</td>
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<tr>
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## TO/WHRB Emission Factors from Stack Testing

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<th>Parameter</th>
<th>Stack Test Emission Rate</th>
<th>Avg DDGS Throughput (tons/hr)</th>
<th>Avg Ethanol Production Rate (gpm)</th>
<th>Final EF (lbs/ton DDGS)</th>
<th>Final EF (lbs/mmGal)</th>
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<td>PM10/PM2.5</td>
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<td>VOC Control Efficiency</td>
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<td>CO</td>
<td>10.0 lbs/hr</td>
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<tr>
<td>Acetaldehyde</td>
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<td>Acrolein</td>
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<td>Formaldehyde</td>
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<td>Methanol</td>
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<td>Total HAP</td>
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<td>0.016</td>
<td>41.68</td>
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### Notes:
2. Average DDGS throughput and ethanol production rate during TO stack testing provided by Valero Bluffton, as recorded by the facility's DCS system on November 10, 2015.

## TO/WHRB Emission Factors from Reference Material

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<th>Parameter</th>
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<td>SO2 [3]</td>
<td>19.98 lbs/mmGal Ethanol</td>
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### Notes:
3. Emission Factors for NOx based on AP-42 emission factors for natural gas boilers: Uncontrolled = 280 (pre-NSPS) or 190 (post-NSPS), Low NOx Burner = 140, Flue gas recirculation = 100 (See Table 1.4-1). Limited NOx emission factor based on 40 CFR 60, Subpart Db limit.
4. Emission factor based on July 2015 stack testing on the thermal oxidizer/heat recovery steam generators at the Valero Linden facility. During the stack test, the 200-proof ethanol production rate was 14,864 gallons per hour and the DDGS production rate was 43.5 tons per hour. As this emission factor is based on actual stack test results, a safety factor of 10% has been incorporated.

## Fermentation/Scrubber Emission Factors from Stack Testing

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<td>VOC</td>
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<td>Acetaldehyde</td>
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<td>VOC Control Efficiency</td>
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<td>Acrolein</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Methanol</td>
<td>&lt;0.06 lbs/hr</td>
<td>4.741</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>&lt;0.019 lbs/hr</td>
<td>1.501</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM10/PM2.5</td>
<td>&lt;0.17 lbs/hr</td>
<td>256.1</td>
<td>0.01536</td>
<td>12.17</td>
</tr>
</tbody>
</table>

### Notes:
6. Average Ethanol Production Rate listed is taken from Table 1 of the March 22, 2016 stack test report, and represents the average of the rates recorded during the 3 test runs.
7. Controlled emission factors based on October 5, 2016 stack testing of scrubber outlet at Valero Linden facility; during the stack test the 200-proof ethanol production rate was 15,384 gallons per hour. Overall equivalent HAP emissions are routed to TO/HRS for mashing, cooking and liquefaction operations.
### Flare Emission Factors

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Stack Test EF</th>
<th>Avg Ethanol Production Rate (gpm)</th>
<th>Avg Ethanol Production Rate (mmGal/hr)</th>
<th>Final EF (lbs/mmGal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC</td>
<td>0.358 lbs/hr</td>
<td></td>
<td></td>
<td>0.029</td>
</tr>
<tr>
<td>VOC Control Efficiency</td>
<td>99.9 %</td>
<td></td>
<td></td>
<td>NA</td>
</tr>
<tr>
<td>Toluene</td>
<td>&lt;0.017 lbs/hr</td>
<td>225</td>
<td>13.5</td>
<td>0.001</td>
</tr>
<tr>
<td>Xylene</td>
<td>&lt;0.033 lbs/hr</td>
<td></td>
<td></td>
<td>0.003</td>
</tr>
<tr>
<td>Total HAP</td>
<td>&lt;0.050 lbs/hr</td>
<td></td>
<td></td>
<td>0.004</td>
</tr>
</tbody>
</table>


Note 9: Average Ethanol Production Rate is taken from the Executive Summary tables of the March 10, 2016 stack test report, and represents the average of the rates recorded during the 3 runs of testing on the flare (February 11, 2016).

### DDGS Cooling Drum Emission Factors

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Stack Test EF</th>
<th>Avg DDGS Throughput (tons/hr)</th>
<th>Final EF (lbs/ton DDGS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM/PM10/PM2.5</td>
<td>0.042 lbs/hr</td>
<td>40.7</td>
<td>0.0011</td>
</tr>
<tr>
<td>VOC</td>
<td>0.042 lbs/ton DDGS</td>
<td>0.046</td>
<td></td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>&lt;0.026 lbs/hr</td>
<td>45.03</td>
<td>0.00064</td>
</tr>
</tbody>
</table>

Note 10: PM and VOC emission factors and associated DDGS throughput are based on the December 9, 2015 stack test report from American Engineering Testing, Inc.


Note 12: The listed DDGS Throughput represents an average of the throughputs recorded during the 3 runs of each respective test.

### DDGS Cooling Drum Emission Factors from Reference Material

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Emission Factor (lbs/ton DDGS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrolein</td>
<td>0.0013</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>0.0007</td>
</tr>
<tr>
<td>Methanol</td>
<td>0.0007</td>
</tr>
</tbody>
</table>

Note 13: Acrolein, Formaldehyde, and Methanol emission rates were estimated by the source based on stack testing results from a similar engineered site (Glacial Lakes Energy, MN) and scaled linearly based on production capacity.
## Emission Calculations

### Natural Gas HAPs Combustion Emissions Summary

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** T179-41817-00033  
**Part 70 Operating Permit Renewal No.:** T179-41632-00033  
**Reviewer:** Andrew Belt

### Significant Source Modification No. 179-41817-00033

#### Part 70 Operating Permit Renewal No. T179-41632-00033

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor* (lb/MMSCF)</th>
<th>0.26 MMSCF/hr Potential to Emit Emissions (lb/hr)</th>
<th>0.18 MMSCF/hr Potential to Emit Emissions (lb/hr)</th>
<th>0.01 MMSCF/hr Potential to Emit Emissions (lb/hr)</th>
<th>Total Potential to Emit Emissions (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Methylnaphthalene</td>
<td>2.40E-05</td>
<td>6.4E-06</td>
<td>2.8E-05</td>
<td>2.8E-05</td>
<td>4.77E-05</td>
</tr>
<tr>
<td>3-Methylchlorantrrene</td>
<td>1.80E-06</td>
<td>4.8E-07</td>
<td>2.1E-06</td>
<td>2.1E-06</td>
<td>3.57E-06</td>
</tr>
<tr>
<td>7,12-Dimethylbenz(a)anthracene</td>
<td>1.60E-05</td>
<td>4.2E-06</td>
<td>1.9E-05</td>
<td>1.9E-05</td>
<td>3.18E-05</td>
</tr>
<tr>
<td>Acenaphthene</td>
<td>1.80E-06</td>
<td>4.8E-07</td>
<td>2.1E-06</td>
<td>2.1E-06</td>
<td>3.57E-06</td>
</tr>
<tr>
<td>Acenaphthylene</td>
<td>1.80E-06</td>
<td>4.8E-07</td>
<td>2.1E-06</td>
<td>2.1E-06</td>
<td>3.57E-06</td>
</tr>
<tr>
<td>Anthracene</td>
<td>2.40E-06</td>
<td>6.4E-07</td>
<td>2.8E-05</td>
<td>2.8E-05</td>
<td>4.77E-05</td>
</tr>
<tr>
<td>Benz(a)anthracene</td>
<td>1.80E-06</td>
<td>4.8E-07</td>
<td>2.1E-06</td>
<td>2.1E-06</td>
<td>3.57E-06</td>
</tr>
<tr>
<td>Benzene</td>
<td>2.10E-03</td>
<td>5.6E-04</td>
<td>2.4E-03</td>
<td>2.4E-03</td>
<td>4.17E-03</td>
</tr>
<tr>
<td>Benzo(a)pyrene</td>
<td>1.20E-06</td>
<td>3.2E-07</td>
<td>1.4E-06</td>
<td>1.4E-06</td>
<td>2.38E-06</td>
</tr>
<tr>
<td>Benzo(b)fluoranthene</td>
<td>1.80E-06</td>
<td>4.8E-07</td>
<td>2.1E-06</td>
<td>2.1E-06</td>
<td>3.57E-06</td>
</tr>
<tr>
<td>Benzo(g,h,i)perylene</td>
<td>1.20E-06</td>
<td>3.2E-07</td>
<td>1.4E-06</td>
<td>1.4E-06</td>
<td>2.38E-06</td>
</tr>
<tr>
<td>Benzo(k)fluoranthene</td>
<td>1.80E-06</td>
<td>4.8E-07</td>
<td>2.1E-06</td>
<td>2.1E-06</td>
<td>3.57E-06</td>
</tr>
<tr>
<td>Chrysene</td>
<td>1.60E-06</td>
<td>4.2E-07</td>
<td>1.9E-06</td>
<td>1.9E-06</td>
<td>3.18E-06</td>
</tr>
<tr>
<td>Dibenzo(a,h)anthracene</td>
<td>1.60E-06</td>
<td>4.2E-07</td>
<td>1.9E-06</td>
<td>1.9E-06</td>
<td>3.18E-06</td>
</tr>
<tr>
<td>Dibenzolanthracene</td>
<td>1.20E-06</td>
<td>3.2E-07</td>
<td>1.4E-06</td>
<td>1.4E-06</td>
<td>2.38E-06</td>
</tr>
<tr>
<td>Fluoranthene</td>
<td>3.00E-06</td>
<td>7.9E-07</td>
<td>3.5E-06</td>
<td>3.5E-06</td>
<td>5.96E-06</td>
</tr>
<tr>
<td>Fluorene</td>
<td>2.80E-06</td>
<td>7.4E-07</td>
<td>3.2E-06</td>
<td>3.2E-06</td>
<td>5.56E-06</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>7.50E-02</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>#VALUE!</td>
</tr>
<tr>
<td>Hexane</td>
<td>1.80E+00</td>
<td>4.8E-01</td>
<td>2.1E+00</td>
<td>2.1E+00</td>
<td>3.57E+00</td>
</tr>
<tr>
<td>Indeno(1,2,3-cd)pyrene</td>
<td>1.80E-06</td>
<td>4.8E-07</td>
<td>2.1E-06</td>
<td>2.1E-06</td>
<td>3.57E-06</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>6.10E-04</td>
<td>1.6E-04</td>
<td>7.1E-04</td>
<td>7.1E-04</td>
<td>1.21E-03</td>
</tr>
<tr>
<td>Phenanthrene</td>
<td>1.70E-05</td>
<td>4.5E-06</td>
<td>2.0E-05</td>
<td>2.0E-05</td>
<td>3.38E-05</td>
</tr>
<tr>
<td>Pyrene</td>
<td>5.00E-06</td>
<td>1.3E-06</td>
<td>5.8E-06</td>
<td>5.8E-06</td>
<td>9.93E-06</td>
</tr>
<tr>
<td>Toluene</td>
<td>3.40E-03</td>
<td>9.0E-04</td>
<td>3.9E-03</td>
<td>3.9E-03</td>
<td>6.75E-03</td>
</tr>
<tr>
<td>Arsenic</td>
<td>2.00E-04</td>
<td>5.3E-05</td>
<td>2.3E-04</td>
<td>2.3E-04</td>
<td>3.97E-04</td>
</tr>
<tr>
<td>Beryllium</td>
<td>1.20E-05</td>
<td>3.2E-06</td>
<td>1.4E-05</td>
<td>1.4E-05</td>
<td>2.38E-05</td>
</tr>
<tr>
<td>Cadmium</td>
<td>1.10E-03</td>
<td>2.9E-04</td>
<td>1.3E-03</td>
<td>1.3E-03</td>
<td>2.18E-03</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.40E-03</td>
<td>3.7E-04</td>
<td>1.8E-03</td>
<td>1.8E-03</td>
<td>2.78E-03</td>
</tr>
<tr>
<td>Cobalt</td>
<td>8.40E-05</td>
<td>2.2E-05</td>
<td>9.7E-05</td>
<td>9.7E-05</td>
<td>1.67E-04</td>
</tr>
<tr>
<td>Manganese</td>
<td>3.80E-04</td>
<td>1.0E-04</td>
<td>4.4E-04</td>
<td>4.4E-04</td>
<td>7.55E-04</td>
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<tr>
<td>Mercury</td>
<td>2.60E-04</td>
<td>6.9E-05</td>
<td>3.0E-04</td>
<td>3.0E-04</td>
<td>5.16E-04</td>
</tr>
<tr>
<td>Nickel</td>
<td>2.10E-03</td>
<td>5.6E-04</td>
<td>2.4E-03</td>
<td>2.4E-03</td>
<td>4.17E-03</td>
</tr>
<tr>
<td>Selenium</td>
<td>2.40E-05</td>
<td>6.4E-06</td>
<td>2.8E-05</td>
<td>2.8E-05</td>
<td>4.77E-05</td>
</tr>
</tbody>
</table>

Note: Formaldehyde emissions form the TOs and DDGS Dryers are included with process emission calculations.
1. Potential to Emit PM/PM10/PM2.5 - Captured Emissions:

<table>
<thead>
<tr>
<th>Baghouse ID (Stack ID)</th>
<th>Process Description</th>
<th>Control Device</th>
<th>Outlet Grain Loading (bushels/hr)</th>
<th>Maximum Air Flow Rate (scfm)</th>
<th>PTE of PM/PM10/PM2.5 after Control (lbs/hr)</th>
<th>PTE of PM/PM10/PM2.5 before Control (tons/yr)</th>
<th>Control Efficiency (%)</th>
<th>PTE of PM/PM10/PM2.5 before Control (tons/yr)</th>
<th>*Limited Uncaptured PM/PM10/PM2.5 Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C23520</td>
<td>Grain Receiving and Handling 2,452,800</td>
<td>Baghouses</td>
<td>0.064 48,000</td>
<td>1.85</td>
<td>7.21</td>
<td>99%</td>
<td>721</td>
<td>10.95</td>
<td>1.141</td>
</tr>
<tr>
<td>C34240</td>
<td>Hammermill #1- #4, 2,452,800</td>
<td>Baghouses</td>
<td>0.064 28,000</td>
<td>0.96</td>
<td>4.20</td>
<td>99%</td>
<td>420</td>
<td>6.31</td>
<td>1.17</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11.41</td>
</tr>
</tbody>
</table>

Assumed all PM emissions equal PM10 emissions.

* In order to render the requirements of 336 (04-2-2) not applicable, the PM / PM10 / PM2.5 emission limits for emission units EU001 through EU005 shall be less than 2.5 lbs/hr and the PM / PM10 / PM2.5 emission limits for emission units EU006 through EU009 shall be less than 1.4 lbs/hr.

Methodology:

- PTE of PM/PM10/PM2.5 after Control (lbs/hr) = Grain Loading (bushels/hr) x Air Flow Rate (scfm) x 60 mins/hr x 1/7000 lb/bushel x 0.0876 hr/yr x 1 ton/2000 lbs

2. Potential to Emit PM/PM10/PM2.5 - Uncaptured Emissions:

<table>
<thead>
<tr>
<th>Unit Description</th>
<th>Grain Throughput (tons/year)</th>
<th>Limited Grain Throughput (tons/year)</th>
<th>Uncaptured PM Emission Factor (lbs/ton)</th>
<th>Uncaptured PM10 Emission Factor (lbs/ton)</th>
<th>Capture Efficiency (%)</th>
<th>Uncaptured PM Emissions (tons/yr)</th>
<th>Uncaptured PM10 Emissions (tons/yr)</th>
<th>Uncaptured PM2.5 Emissions (tons/yr)</th>
<th>Limited Uncaptured PM Emissions (tons/yr)</th>
<th>Limited Uncaptured PM10 Emissions (tons/yr)</th>
<th>Limited Uncaptured PM2.5 Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grain Receiving</strong></td>
<td>2,452,800</td>
<td>1,622,000</td>
<td>0.064</td>
<td>0.016</td>
<td>95%</td>
<td>86.23</td>
<td>21.71</td>
<td>3.06</td>
<td>2.39</td>
<td>0.04</td>
<td>0.01</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>245.11</td>
<td>71.39</td>
<td>12.28</td>
<td>9.24</td>
<td>0.72</td>
<td>0.28</td>
</tr>
</tbody>
</table>

3. Potential to Emit PM/PM10/PM2.5 (Part 30 Determination)

<table>
<thead>
<tr>
<th>Unit Description</th>
<th>Grain Throughput (tons/year)</th>
<th>Controlled PM Emission Factor (lbs/ton)</th>
<th>Controlled PM10 Emission Factor (lbs/ton)</th>
<th>Controlled PM2.5 Emission Factor (lbs/ton)</th>
<th>Controlled PTE PM Emissions (tons/year)</th>
<th>Controlled PTE PM10 Emissions (tons/year)</th>
<th>Controlled PTE PM2.5 Emissions (tons/year)</th>
<th>PTE PM Emissions (tons/year)</th>
<th>PTE PM10 Emissions (tons/year)</th>
<th>PTE PM2.5 Emissions (tons/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grain Receiving</strong></td>
<td>2,452,800</td>
<td>0.064</td>
<td>0.016</td>
<td>0.005</td>
<td>0.086</td>
<td>22.51</td>
<td>5.52</td>
<td>1.06</td>
<td>2.30</td>
<td>0.04</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11.41</td>
<td>2.33</td>
<td>0.32</td>
<td>22.51</td>
<td>5.52</td>
</tr>
</tbody>
</table>
Appendix A: Emission Calculations
VOC and HAP Emissions
Fermentation Process (EU012 - EU018, EU021)

Company Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, IN 46714
Significant Source Modification No.: 179-41817-00033
Part 70 Operating Permit Renewal No.: T179-41632-00033
Reviewer: Andrew Belt

1. Process Description:

Max. Throughput Rate: 165 MMgal/yr of ethanol
Control Equipment: Wet Scrubber C40

2. Potential to Emit (PTE) of VOC and HAP:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Rate after Control</th>
<th>PTE after Controls</th>
<th>PTE before Controls</th>
<th>Control Efficiency</th>
<th>Potential to Emit After Issuance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(lbs/MMgal)</td>
<td>(lbs/hr)</td>
<td>(tons/yr)</td>
<td>(tons/yr)</td>
<td>(%)</td>
</tr>
<tr>
<td>VOC</td>
<td>433.05</td>
<td>8.2</td>
<td>35.73</td>
<td>1786.31</td>
<td>98%</td>
</tr>
<tr>
<td>PM^4</td>
<td>12.17</td>
<td>0.23</td>
<td>1.00</td>
<td>50.21</td>
<td>98%</td>
</tr>
<tr>
<td>PM10^4</td>
<td>12.17</td>
<td>0.23</td>
<td>1.00</td>
<td>50.21</td>
<td>98%</td>
</tr>
<tr>
<td>PM2.5^4</td>
<td>12.17</td>
<td>0.23</td>
<td>1.00</td>
<td>50.21</td>
<td>98%</td>
</tr>
<tr>
<td>HAP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>26.79</td>
<td>0.50</td>
<td>2.21</td>
<td>4.42</td>
<td>50%</td>
</tr>
<tr>
<td>Acrolein</td>
<td>2.77</td>
<td>0.05</td>
<td>0.23</td>
<td>0.23</td>
<td>0%</td>
</tr>
<tr>
<td>Methanol</td>
<td>4.74</td>
<td>0.09</td>
<td>0.39</td>
<td>0.39</td>
<td>0%</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>1.50</td>
<td>0.028</td>
<td>0.12</td>
<td>0.12</td>
<td>0%</td>
</tr>
<tr>
<td>Total HAPs</td>
<td>35.80</td>
<td>0.67</td>
<td>2.95</td>
<td>5.16</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1. Emission factors provided by the source based on testing at similar ethanol production facilities (actual test data) plus includes a moderate margin of safety and are therefore considered to be conservative.
The Permittee will perform stack testing to demonstrate compliance with the above emission rates.
2. Sodium bisulfite or ammonium bisulfite to be added to scrubber header to minimize emissions.
3. The VOC emissions from the fermentation process shall be less than 23.4 lbs/hr. The acetaldehyde emissions from the fermentation process are limited to 1.37 lbs/hr.
4. PM/PM10/PM2.5 emission factor based on expectation of higher condensable PM/PM10/PM2.5.

Methodology
PTE after Control (lbs/hr) = Emission Rate after Control (lbs/MMgal) x 150 MMgal/yr x 1 yr/8760 hrs
PTE after Control (tons/yr) = Emission Rate after Control (lbs/MMgal) x 150 MMgal/yr x 1 ton/2000 lbs
PTE Before Controls (tons/yr) = PTE After Controls (tons/yr) / (1 - Control Efficiency (%) / 100)
Appendix A: Emissions Calculations

CIP Venting from Fermentation

Company Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant

Source Address: 1441 South Adams St., Bluffton, IN 46714

Significant Source Modification No.: 179-41817-00033

Part 70 Operating Permit Renewal No.: T179-41632-00033

Reviewer: Andrew Belt

Fermenter fill time: 8 hr
Operating days: 365 days

Maximum Total No. of Ferm CIP Events (per day): 3
Maximum Total No. of Ferm CIP Events (annual): 1095
Ferm CIP Event Time (hrs): 0.25
Maximum Total Annual CIP Events (hrs): 1095

Emissions Per CIP Event

<table>
<thead>
<tr>
<th>Mass (lbs)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Dioxide</td>
<td>1241</td>
</tr>
<tr>
<td>Water</td>
<td>26.06</td>
</tr>
<tr>
<td>Ethanol</td>
<td>1.17</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>0.08</td>
</tr>
<tr>
<td>Methanol</td>
<td>2.54E-03</td>
</tr>
<tr>
<td>Acrolein</td>
<td>0.01</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Emissions lbs/hr/CIP event lbs/day TPY

<table>
<thead>
<tr>
<th>Ethanol</th>
<th>1.17</th>
<th>3.52</th>
<th>0.64</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total VOC</td>
<td>1.32</td>
<td>3.96</td>
<td>0.72</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>0.08</td>
<td>0.25</td>
<td>0.05</td>
</tr>
<tr>
<td>Total HAP</td>
<td>0.14</td>
<td>0.43</td>
<td>0.08</td>
</tr>
<tr>
<td>CO2</td>
<td>1241</td>
<td>3723</td>
<td>679</td>
</tr>
</tbody>
</table>

Notes:
A CIP process for each ferm lasts approximately one hour.
1. This calculation assumes that 3 15-min CIP events occur in one day.
2. This calculation assumes the maximum number of CIP events (3) occur each day and the plant runs a total of 365 days/year. It also assumes the total emission (tpy) are averaged over the entire year (8760 hours)

Methodology:
[2] Size varies with type of release. Worst case release is lift of the PSV from overpressure which results in area of 4.7 sq in
[3] Pressure of 28 in H2O assumed (set point of relief valve). Will be over conservative for leaks
[4] Airflow of 13,714 scfm October 2009 stack testing, assume air density (r) of 0.079 lb/ft³.
[6] 98% acetaldehyde control assumed, lb/hr outlet rate from October 2009 stack testing.
[7] Based on Valero Co-Fort Dodge Data
[8] To account for increasing ethanol concentrations in the fermentation stage, the ethanol mass per CIP event has been multiplied by the ratio of the beer well ethanol concentration after implementation of the new enzyme (14.3%) to the concentration before the enzyme change (13.2%).
Appendix A: Emissions Calculations

Fuel Combustion & Process Generated Emissions From the Thermal Oxidizer & Dryer Systems Producing DDGS

Company Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, IN 46714
Significant Source Modification No.: T179-41817-00033
Part 70 Operating Permit Renewal No.: T179-41632-00033
Reviewer: Andrew Belt

NOTES:

1. Thermal Oxidizers [C9203 and C9303 (135 MMBtu/hr each)] with 2 Waste Heat Recovery Boilers [B10 and B11] and 4 natural gas fired DDGS Dryers [EU029 through EU032 (45 MMBtu/hr each)] System also controls emissions from the distillation process [EU022-EU026] and DDGS cooling drum [EU033].

2. TO control efficiencies were provided by design manufacturer and were derived from test data for similar sources. Emission factors were derived from stack testing data for this facility, as detailed in the Emission Factors tab. Assume PM/PM10 emissions are equivalent. Under the Part 70 Permit program, particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM_{10}), not particulate matter (PM), is considered a "regulated pollutant".

3. NOx emission rate based on US EPA New Source Performance Standard Subpart Db NOx emission limit for natural gas and distillate oil combustion at the low heat release rate applied to the heat input capacity of the TO/HRSG systems. Valero acknowledges that the emission limit is inclusive of the fuel combustion emissions from the TO/HRSG and dryers as well as process NOx.

4. Emission factor based on July 2015 stack testing on the thermal oxidizer/heat recovery steam generators at the Valero Linden facility. During the stack test, the 200-proof ethanol production rate was 14,864 gallons per hour and the DDGS production rate was 43.5 tons per hour. As this emission factor is based on actual stack test results, a safety factor of 10% has been incorporated.


6. Methodology:
   - Uncontrolled LTOE (tons/yr) = Uncontrolled Emission Factor (lbs/ton DDGS) x Annual DDGS Production Limit (tons/yr) = 2000 (lbs/ton).
   - Uncontrolled LTOE (tons/yr) = Uncontrolled Emission Factor (lbs/gallon 200-proof) x Annual 200-Proof Production (gallons/yr) = 2000 (lbs/ton).
   - Uncontrolled LTOE (lbs/hr) = Uncontrolled Emission Rate (tons/yr) x 8,760 (hrs/yr).
   - Controlled LTOE (tons/yr) = Emission Rate (tons/yr) x (1-Control Efficiency).
   - Controlled LTOE (lbs/hr) = Controlled Emission Rate (tons/yr) x (1-Control Efficiency).

7. Limited LTOE emission rates have been set according to Total HAP emission rate limit of 1.56 lbs/hr on stack S10, listed in current Valero Bluffton Operating Permit Section D.3.2 (referencing area source requirements under 40 CFR 63.2).

Methodology:
- Uncontrolled LTOE (tons/yr) = Uncontrolled Emission Factor (lbs/ton DDGS) x Annual DDGS Production Limit (tons/yr) = 2000 (lbs/ton).
- Uncontrolled LTOE (tons/yr) = Uncontrolled Emission Factor (lbs/gallon 200-proof) x Annual 200-Proof Production (gallons/yr) = 2000 (lbs/ton).
- Uncontrolled LTOE (lbs/hr) = Uncontrolled Emission Rate (tons/yr) x 8,760 (hrs/yr).
- Controlled LTOE (tons/yr) = Emission Rate (tons/yr) x (1-Control Efficiency).
- Controlled LTOE (lbs/hr) = Controlled Emission Rate (tons/yr) x (1-Control Efficiency).

TO Control Efficiency For Criteria Emissions (% Removal):

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>VOC</th>
<th>PM</th>
<th>PM_{10}</th>
<th>HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor</td>
<td>0.1</td>
<td>0.32</td>
<td>19.98</td>
<td>0.11</td>
<td>0.29</td>
<td>0.29</td>
<td></td>
</tr>
</tbody>
</table>

Combustion and Process Emissions:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Total Heat Input Capacity (MMBtu/hr)</th>
<th>NOx</th>
<th>CO</th>
<th>SO2</th>
<th>VOC</th>
<th>PM</th>
<th>PM_{10}</th>
<th>HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor</td>
<td>466</td>
<td>318.5</td>
<td>10.5</td>
<td>3.2</td>
<td>0.11</td>
<td>0.29</td>
<td>0.29</td>
<td></td>
</tr>
</tbody>
</table>

HAP Emissions From Processing:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Total Process HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor</td>
<td>0.004</td>
</tr>
<tr>
<td>Emission Rate</td>
<td>lbs/ton DDGS</td>
</tr>
<tr>
<td>Emission Rate</td>
<td>lbs/hr</td>
</tr>
</tbody>
</table>

Notes:

- Note 1: 2 Thermal Oxidizers [C9203 and C9303 (135 MMBtu/hr each)] with 2 Waste Heat Recovery Boilers [B10 and B11] and 4 natural gas fired DDGS Dryers [EU029 through EU032 (45 MMBtu/hr each)] System also controls emissions from the distillation process [EU022-EU026] and DDGS cooling drum [EU033].
- Note 2: TO control efficiencies were provided by design manufacturer and were derived from test data for similar sources. Emission factors were derived from stack testing data for this facility, as detailed in the Emission Factors tab. Assume PM/PM10 emissions are equivalent. Under the Part 70 Permit program, particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM_{10}), not particulate matter (PM), is considered a "regulated pollutant".
- Note 3: NOx emission rate based on US EPA New Source Performance Standard Subpart Db NOx emission limit for natural gas and distillate oil combustion at the low heat release rate applied to the heat input capacity of the TO/HRSG systems. Valero acknowledges that the emission limit is inclusive of the fuel combustion emissions from the TO/HRSG and dryers as well as process NOx.
- Note 4: Emission factor based on July 2015 stack testing on the thermal oxidizer/heat recovery steam generators at the Valero Linden facility. During the stack test, the 200-proof ethanol production rate was 14,864 gallons per hour and the DDGS production rate was 43.5 tons per hour. As this emission factor is based on actual stack test results, a safety factor of 10% has been incorporated.
- Note 7: Limited LTOE emission rates have been set according to Total HAP emission rate limit of 1.56 lbs/hr on stack S10, listed in current Valero Bluffton Operating Permit Section D.3.2 (referencing area source requirements under 40 CFR 63.2).

Methodology:
- Uncontrolled LTOE (tons/yr) = Uncontrolled Emission Factor (lbs/ton DDGS) x Annual DDGS Production Limit (tons/yr) = 2000 (lbs/ton).
- Uncontrolled LTOE (tons/yr) = Uncontrolled Emission Factor (lbs/gallon 200-proof) x Annual 200-Proof Production (gallons/yr) = 2000 (lbs/ton).
- Uncontrolled LTOE (lbs/hr) = Uncontrolled Emission Rate (tons/yr) x 8,760 (hrs/yr).
- Controlled LTOE (tons/yr) = Emission Rate (tons/yr) x (1-Control Efficiency).
- Controlled LTOE (lbs/hr) = Controlled Emission Rate (tons/yr) x (1-Control Efficiency).
### 1. Potential to Emit PM/PM10/PM2.5

<table>
<thead>
<tr>
<th>Baghouse ID/Stack ID</th>
<th>Process Description</th>
<th>Control Device</th>
<th>Outlet Grain Loading (gr/dscf)</th>
<th>Maximum Air Flow Rate (scfm)</th>
<th>PTE of PM/PM10/PM2.5 after Control (lbs/hr)</th>
<th>Control Efficiency (%)</th>
<th>PTE of PM/PM10/PM2.5 before Control (tons/yr)</th>
<th>PTE of PM/PM10/PM2.5 Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C70/S70</td>
<td>DDGS Cooler Bypass</td>
<td>Baghouse</td>
<td>0.004</td>
<td>50,000</td>
<td>1.71</td>
<td>99%</td>
<td>750.86</td>
<td>11.39</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.51</td>
<td></td>
<td>750.86</td>
<td>11.39</td>
</tr>
</tbody>
</table>

Assume all PM emissions equal PM10 and PM2.5 emissions.

Note 1: Up to 50,000 cfm from Cooling Drum Baghouse is the combustion air for the TOs and 13,000-15,000 cfm normally goes to the atmosphere from the Cooling Drum Baghouse. To be conservative assume entire 50,000 cfm goes to the atmosphere.

*In order to render the requirements of 326 IAC 2-2 not applicable, the PM / PM10 / PM2.5 emission limits from baghouse C70 shall be less than 2.6 lbs/hr. The requested limits were increased by a factor of 1.5X to give the source additional flexibility.

**Methodology**

\[
PTE_{PM10/PM2.5} = \frac{\text{Grain Loading (gr/dscf)} \times \text{Max Air Flow Rate (scfm)} \times 60 \text{ mins/hr}}{7000 \text{ lb/gr}}
\]

\[
PTE_{PM10/PM2.5} = \frac{\text{Grain Loading (gr/dscf)} \times \text{Max Air Flow Rate (scfm)} \times 60 \text{ mins/hr} \times 1/7000 \text{ lb/gr} \times 8760 \text{ hr/yr} \times 1 \text{ ton/2000 lbs}}
\]

\[
PTE_{PM10/PM2.5} = \frac{\text{PTE}_{PM10/PM2.5} \times (1-\text{Control Efficiency})}{\text{Control Efficiency}}
\]

### 2. Potential to Emit VOC:

- **Maximum Throughput of Cooler:** 578,160 tons/yr
- **Annual DDGS Production Limit:** 490,560 tons/yr

\[
\text{VOC Emission Factor} = 0.0462 \text{ a margin of safety factor of 10%}
\]

**Controlled PTE of VOC (tons/yr) =**

\[
\frac{\text{Maximum Throughput tons/yr}}{\text{DDGS production limit (tons/yr) x 0.1 lbs/ton x 1 ton/2000 lbs}} = 13.36 \text{ tons/yr}
\]

**Limited PTE of VOC (tons/yr) =**

\[
\text{Annual DDGS Production Limit tons/yr x 0.1 lbs/ton x 1 ton/2000 lbs} = 11.33 \text{ tons/yr}
\]

### 3. Potential to Emit HAPs:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Rate (lbs/ton DDGS) *</th>
<th>Acetaldehyde</th>
<th>Acrolein</th>
<th>Formaldehyde</th>
<th>Methanol</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>3.00E-03</td>
<td>1.30E-03</td>
<td>7.00E-04</td>
<td>7.00E-04</td>
<td>0.32</td>
</tr>
</tbody>
</table>

**Limited PTE in tons/yr**

- **Acetaldehyde:** 0.74
- **Acrolein:** 0.32
- **Formaldehyde:** 0.17
- **Methanol:** 0.17
- **Total:** 1.40

*HAP emission rates were estimated by the source based on stack testing results from a similar engineered site (Glacial Lakes Energy, MN) and scaled linearly based on production capacity.

**Methodology**

\[
\text{Limited PTE (tons/yr)} = \text{Emission Rate (lbs/ton DDGS) x DDGS production limit (tons/yr) x 1 ton/2000 lbs}
\]
Appendix A: Emission Calculations

PM / PM10 / PM2.5 Emissions

DDGS Handling and Loadout Operations

Company Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, IN 46714
Significant Source Modification No.: 179-41817-00033
Part 70 Operating Permit Renewal No.: T179-41632-00033
Reviewer: Andrew Belt

1. Potential to Emit PM/PM10/PM2.5 - Captured Emissions:

<table>
<thead>
<tr>
<th>Baghouse (ID/Stack ID)</th>
<th>Process Description</th>
<th>Control Device</th>
<th>Outlet Grain Loading (gr/dscf)</th>
<th>Maximum Air Flow Rate (scfm)</th>
<th>PTE of PM/PM10/PM2.5 after Control (lbs/hr)</th>
<th>Control Efficiency (%)</th>
<th>PTE of PM/PM10/PM2.5 before Control (tons/yr)</th>
<th>PTE of PM/PM10/PM2.5 Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C90/S90</td>
<td>DDGS Handling and Loadout Baghouse</td>
<td>0.004</td>
<td>9,100</td>
<td>0.31</td>
<td>1.37</td>
<td>99%</td>
<td>136.7</td>
<td>160.7</td>
</tr>
</tbody>
</table>

Note: Assume all PM emissions equal PM10 and PM2.5 emissions.

Methodology

\[ \text{PTE of PM/PM10/PM2.5 after Control (lbs/hr)} = \text{Grain Loading (gr/dscf)} \times \text{Max. Air Flow Rate (scfm)} \times 60 \text{ mins/hr} \times \frac{1}{7000} \text{ lb/gr} \]

\[ \text{PTE of PM/PM10/PM2.5 before Control (tons/yr)} = \frac{\text{PTE of PM/PM10/PM2.5 after Control (tons/yr)}}{1 - \text{Control Efficiency}} \]

*Limited PM/PM10/PM2.5 Emissions (tons/yr)*

2. Potential to Emit PM/PM10/PM2.5 (Uncaptured)

<table>
<thead>
<tr>
<th>Unit Description</th>
<th>Grain Throughput (tons/hr)</th>
<th>Grain Throughput (tons/year)</th>
<th>Uncontrolled PM Emission Factor (lbs/ton)</th>
<th>Uncontrolled PM10 Emission Factor (lbs/ton)</th>
<th>Capture Efficiency (%)</th>
<th>Uncaptured PM Emissions (tons/yr)</th>
<th>Uncaptured PM10 Emissions (tons/yr)</th>
<th>Uncaptured PM2.5 Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DDGS Handling and Loadout Uncaptured</td>
<td>590</td>
<td>4,818,000</td>
<td>0.0033</td>
<td>0.0008</td>
<td>95%</td>
<td>0.40</td>
<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td>DDGS Storage Building (EU035)</td>
<td>220</td>
<td>1,927,200</td>
<td>0.0033</td>
<td>0.0008</td>
<td>0%</td>
<td>3.18</td>
<td>0.77</td>
<td>0.77</td>
</tr>
</tbody>
</table>

Total 3.58 0.87 0.87

Note: Emission factors are from AP-42, Chapter 9.9.1 - Grain Elevators, Table 9.9.1-2 (03/03).

Methodology

\[ \text{Uncaptured PM/PM10/PM2.5 (tons/yr)} = \text{Grain Throughput (tons/year)} \times \text{Uncontrolled Emission Factor (lbs/ton)} \times (1\text{-Capture Efficiency}) \times 1 \text{ ton/2000 lbs} \]
Appendix A: Emissions Calculations
Ethanol Loading Rack System & Enclosed Vapor Combustion Unit (VCU)

Company Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, IN 46714
Significant Source Modification No.: 179-41817-00033
Part 70 Operating Permit Renewal No.: T179-41632-00033
Reviewer: Andrew Belt

<table>
<thead>
<tr>
<th>Flare Heat Input Capacity</th>
<th>Maximum Hourly Loading Rate</th>
<th>Operations</th>
<th>Annual Shipping Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMBtu/hr</td>
<td>gals/hr</td>
<td>hours</td>
<td>gallons (denatured)</td>
</tr>
<tr>
<td>6.4</td>
<td>192,000</td>
<td>8,760</td>
<td>165,000,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>NOx</th>
<th>CO</th>
<th>PM</th>
<th>PM_{10}/PM_{2.5}</th>
<th>SO2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>lbs/kgal loaded</td>
<td>lbs/kgal loaded</td>
<td>Negligible</td>
<td>Negligible</td>
<td>Negligible</td>
</tr>
<tr>
<td>Uncontrolled Emission Factors</td>
<td>4.51E-03</td>
<td>1.43E-03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limited Emission Factors</td>
<td>0.0138</td>
<td>0.0392</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Uncontrolled PTE (based on maximum hourly loading rate)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>NOx</th>
<th>CO</th>
<th>PM</th>
<th>PM_{10}/PM_{2.5}</th>
<th>SO2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
Note 1: Ethanol Loading Rack System (EU047) With A Control Flare (CE009). Calculations based on shipping all denatured ethanol (98/2 blend).
Note 2: Emission factors based on July 2015 stack testing on the loading rack flare. As emission factors are based on actual stack test results, Valero requests incorporation of a ten percent safety factor to allow for operational variability.
Note 3: As per manufacturer, PM/PM_{10}/PM_{2.5} emissions are negligible due to smokeless design. SO_{2} emissions are negligible due to negligible sulfur in natural gas stream.

Methodology:
Uncontrolled PTE of NOx and CO (tons/yr) = Max. Load-out Rate (gal/hr) ÷ 1,000 (gals) x Emission Factor (lbs/kgal) x 8,760 (hr/yr) ÷ 2000 (lbs/ton)
Limited PTE of NOx and CO (tons/yr) = Annual Denatured Production Limit (gal/yr) ÷ 1,000 (gals) x Emission Factor (lbs/kgal) ÷ 2,000 (lbs/ton)
Appendix A: Emissions Calculations

Ethanol Loading Rack System & Enclosed Vapor Combustion Unit (VCU) 1

Company Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, IN 46714
Significant Source Modification No.: 179-41817-00033
Part 70 Operating Permit Renewal No.: T179-41632-00033
Reviewer: Andrew Belt

## 1. Emission Factors: AP-42

Denatured ethanol will be shipped by either truck or railcar via the Ethanol Loading Rack System. Railcars will be dedicated fleets, but the trucks may have been used to carry gasoline prior to filling with ethanol. Both railcars and trucks will be filled by a submerged loading process. The Ethanol Loading Rack System will be controlled by flare CE009. This flare has a control efficiency of ≥98%.

According to AP-42, Chapter 5.2 - Transportation and Marketing of Petroleum Liquids (06/08), the VOC emission factors for the truck and rail loading racks can be estimated from the following equation:

\[ LL = \frac{12.46 \times S \times P \times M}{T} \]

Where:
- \( LL \) = Loading loss for liquid loaded, lbs/kgal
- \( S \) = Saturation factor from Table 5.2-1:
- \( P \) = True vapor pressure of liquid loaded (psia):
- \( M \) = Molecular weight of vapors:
- \( T \) = Temperature of bulk liquid loaded (°R):

### Source

<table>
<thead>
<tr>
<th>Source</th>
<th>S</th>
<th>P</th>
<th>M</th>
<th>T</th>
<th>LL</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline (normal, vapor balance)</td>
<td>1.0</td>
<td>5.69</td>
<td>65.00</td>
<td>512</td>
<td>9.00</td>
<td>Assumed to be an average RVP11 gasoline. RVP9 for ozone months; RVP13 all others.</td>
</tr>
<tr>
<td>Gasoline (normal)</td>
<td>0.6</td>
<td>5.69</td>
<td>65.00</td>
<td>512</td>
<td>5.40</td>
<td></td>
</tr>
<tr>
<td>Gasoline (50%normal;50%VB)</td>
<td>0.8</td>
<td>5.69</td>
<td>65.00</td>
<td>512</td>
<td>7.20</td>
<td></td>
</tr>
<tr>
<td>Gasoline (clean cargo)</td>
<td>0.5</td>
<td>5.69</td>
<td>65.00</td>
<td>512</td>
<td>4.50</td>
<td></td>
</tr>
<tr>
<td>Denatured Ethanol (normal)</td>
<td>0.6</td>
<td>0.59</td>
<td>48.83</td>
<td>512</td>
<td>0.42</td>
<td>Assumed to be 97.5% EtOH &amp; 2.5% gasoline</td>
</tr>
<tr>
<td>Denatured Ethanol (clean cargo)</td>
<td>0.5</td>
<td>0.59</td>
<td>48.83</td>
<td>512</td>
<td>0.35</td>
<td></td>
</tr>
</tbody>
</table>

### Note

1. One (1) ethanol loading system, identified as EU037, consisting of two (2) rail loading spouts and two (2) truck loading spouts, with a combined limited throughput rate 165,000,000 gallons per twelve (12) consecutive month period for truck and railcar loading, using enclosed flare C50 as control, which is fueled by natural gas, has a maximum heat input capacity of 12.4 MMBlu/hr.

### 2. VOC Calculations & PTE (All Loading Options):

<table>
<thead>
<tr>
<th>Truck Loading Capacity Rate</th>
<th>192,000 gals/hr</th>
<th>PTE (VOCs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours Of Operation</td>
<td>8,760 hrs</td>
<td>Uncontrolled</td>
</tr>
<tr>
<td>Unlimited Gallons Loaded</td>
<td>1,681,920,000 gallons/year</td>
<td></td>
</tr>
<tr>
<td>Limited Gallons Loaded</td>
<td>165,000,000 gallons/year</td>
<td>lbs/hr</td>
</tr>
<tr>
<td>LL for Denatured Ethanol (normal): Loading denatured ethanol into a trucks which previously contained denatured ethanol (dedicated denatured ethanol trucks)</td>
<td>0.42 lbs/kgal</td>
<td>80.15</td>
</tr>
<tr>
<td>LL for Denatured Ethanol: Loading denatured ethanol into a trucks which previously contained gasoline (normal): (non-dedicated trucks)</td>
<td>1.25 lbs/kgal</td>
<td>239.61</td>
</tr>
<tr>
<td>LL for Denatured Ethanol: Loading denatured ethanol into a trucks which previously contained gasoline (50%/vapor/50%/normal): (non-dedicated trucks)</td>
<td>3.05 lbs/kgal</td>
<td>585.23</td>
</tr>
</tbody>
</table>

### Note

1. Since the source can load product at the maximum pumping rate, the lbs/hr emission rate will not change for limited annual loading capacity.

2. Since the source can load product at the maximum pumping rate, the lbs/hr emission rate will not change for limited annual loading capacity.

3. Railcars used by Valero will be dedicated. Railcars will not have previously contained gasoline only.
### 3. HAPs Calculations & PTE (Worst-Case Loading Operations):

#### LL for Denatured Ethanol: Loading denatured ethanol into a trucks which previously contained gasoline (50%vapor/50%normal): (non-dedicated trucks)

<table>
<thead>
<tr>
<th>Benzene</th>
<th>Ethylbenzene</th>
<th>Hexane (-n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>lbs/hr</td>
<td>tpy</td>
<td>lbs/hr</td>
</tr>
<tr>
<td>1.46</td>
<td>6.41</td>
<td>0.03</td>
</tr>
</tbody>
</table>

**Toluene**

<table>
<thead>
<tr>
<th>Xylene (-m)</th>
<th>Carbon Disulfide</th>
</tr>
</thead>
<tbody>
<tr>
<td>lbs/hr</td>
<td>tpy</td>
</tr>
<tr>
<td>2.93</td>
<td>12.82</td>
</tr>
</tbody>
</table>

**Cumene**

<table>
<thead>
<tr>
<th>lbs/hr</th>
<th>tpy</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.06</td>
<td>0.26</td>
</tr>
</tbody>
</table>

**Total HAPs Emissions**

<table>
<thead>
<tr>
<th>lbs/hr</th>
<th>tpy</th>
</tr>
</thead>
<tbody>
<tr>
<td>34.04</td>
<td>149.11</td>
</tr>
</tbody>
</table>

#### LL for Denatured Ethanol: Loading denatured ethanol into a trucks which previously contained gasoline (50%vapor/50%normal): (non-dedicated trucks)

<table>
<thead>
<tr>
<th>Benzene</th>
<th>Ethylbenzene</th>
<th>Hexane (-n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>lbs/hr</td>
<td>tpy</td>
<td>lbs/hr</td>
</tr>
<tr>
<td>0.03</td>
<td>0.13</td>
<td>5.8E-06-08</td>
</tr>
</tbody>
</table>

**Toluene**

<table>
<thead>
<tr>
<th>Xylene (-m)</th>
<th>Carbon Disulfide</th>
</tr>
</thead>
<tbody>
<tr>
<td>lbs/hr</td>
<td>tpy</td>
</tr>
<tr>
<td>0.06</td>
<td>0.26</td>
</tr>
</tbody>
</table>

**Cumene**

<table>
<thead>
<tr>
<th>lbs/hr</th>
<th>tpy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1E-03</td>
<td>5.1E-03</td>
</tr>
</tbody>
</table>

**Total HAPs Emissions**

<table>
<thead>
<tr>
<th>lbs/hr</th>
<th>tpy</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.78</td>
<td>2.98</td>
</tr>
</tbody>
</table>

#### LL for Denatured Ethanol: Loading denatured ethanol into a trucks which previously contained gasoline (50%vapor/50%normal): (non-dedicated trucks)

<table>
<thead>
<tr>
<th>Benzene</th>
<th>Ethylbenzene</th>
<th>Hexane (-n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>lbs/hr</td>
<td>tpy</td>
<td>lbs/hr</td>
</tr>
<tr>
<td>0.00</td>
<td>0.01</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**Toluene**

<table>
<thead>
<tr>
<th>Xylene (-m)</th>
<th>Carbon Disulfide</th>
</tr>
</thead>
<tbody>
<tr>
<td>lbs/hr</td>
<td>tpy</td>
</tr>
<tr>
<td>0.01</td>
<td>0.03</td>
</tr>
</tbody>
</table>

**Cumene**

<table>
<thead>
<tr>
<th>lbs/hr</th>
<th>tpy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1E-04</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**Total HAPs Emissions**

<table>
<thead>
<tr>
<th>lbs/hr</th>
<th>tpy</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.06</td>
<td>0.29</td>
</tr>
</tbody>
</table>

---

**Note 5:** This is the HAP fraction for gasoline vapors.

**Note 6:** All pilot light combustion HAPs emissions are included in HAPs combustion calculation. Process HAPs emissions are included in HAPs process emissions calculations.

**Methodology**

Limited PTE of HAP after Control (tons/yr) = Limited PTE of VOC (tons/yr) x HAP %
Appendix A: Emission Calculations
Criteria Pollutants
Diesel-Fired Fire Pump (EU038)

Company Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, IN 46714
Significant Source Modification No.: 179-41817-00033
Part 70 Operating Permit Renewal No.: T179-41632-00033
Reviewer: Andrew Belt

Emissions calculated based on output rating (hp)

| Output Horsepower Rating (hp) | 300.0 |
| Maximum Hours Operated per Year | 500 |
| Potential Throughput (hp-hr/yr) | 150,000 |

<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/hp-hr</td>
<td>0.0022</td>
<td>0.0022</td>
<td>0.0022</td>
<td>0.0021</td>
<td>0.0310</td>
<td>0.0025</td>
<td>0.0067</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>0.17</td>
<td>0.17</td>
<td>0.17</td>
<td>0.15</td>
<td>2.33</td>
<td>0.19</td>
<td>0.50</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>2.00E-06</td>
<td>2.74E-07</td>
<td>8.26E-06</td>
<td>5.37E-06</td>
<td>6.48E-07</td>
<td>1.18E-06</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>4.90E-04</td>
<td>2.15E-04</td>
<td>1.50E-04</td>
<td>2.05E-05</td>
<td>6.20E-04</td>
<td>4.03E-04</td>
<td>4.86E-05</td>
<td>8.82E-05</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).

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1, 3.4-2, 3.4-3, and 3.4-4.
Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]
### Appendix A: Emissions Calculations
#### VOC and HAP Emissions
#### Storage Tanks

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** 179-41817-00033  
**Part 70 Operating Permit Renewal No.:** T179-41632-00033  
**Reviewer:** Andrew Belt

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>190 Proof Ethanol (T65)</td>
<td>6.38</td>
<td>1.28E-03</td>
<td>1.28E-03</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>200 Proof Ethanol (T63)</td>
<td>6.38</td>
<td>1.28E-03</td>
<td>1.28E-03</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Denat. Ethanol Tanks (T61a/b, T62a/b)</td>
<td>15.93</td>
<td>3.19E-03</td>
<td>3.19E-03</td>
<td>7.96E-03</td>
<td>1.43E-01</td>
<td>7.96E-02</td>
<td>7.96E-03</td>
<td>1.59E-03</td>
<td>7.96E-04</td>
<td>3.19E-04</td>
</tr>
<tr>
<td>Denaturant (T64)</td>
<td>12.59</td>
<td>-</td>
<td>3.15E-03</td>
<td>6.30E-01</td>
<td>6.30E-02</td>
<td>6.30E-03</td>
<td>1.26E-03</td>
<td>6.30E-04</td>
<td>2.52E-04</td>
<td></td>
</tr>
<tr>
<td>Corrosion Inhibitor (C1)</td>
<td>2.57E-03</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Diesel Tank (C2)</td>
<td>8.00E-05</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Gasoline Tank (C10)</td>
<td>0.08</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Diesel Tank (C11)</td>
<td>3.25E-04</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Syrup feed tank (TS-6851)</td>
<td>0.01</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Corn oil storage tank (TS-8901)</td>
<td>4.03E-03</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Corn oil storage tank (TS-8902)</td>
<td>4.03E-03</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Corn oil storage tank (TS-8903)</td>
<td>4.03E-03</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Corn oil storage tank (TS-8904)</td>
<td>4.03E-03</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Corn oil storage tank (TS-8905)</td>
<td>0.05</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Syrup receiver tank (TS-6852)</td>
<td>4.61E-03</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Corn oil receiver tank (TS-6854)</td>
<td>4.60E-03</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>41.44</strong></td>
<td><strong>5.74E-03</strong></td>
<td><strong>5.74E-03</strong></td>
<td><strong>1.11E-02</strong></td>
<td><strong>7.73E-01</strong></td>
<td><strong>1.43E-01</strong></td>
<td><strong>1.43E-02</strong></td>
<td><strong>2.85E-03</strong></td>
<td><strong>1.43E-03</strong></td>
<td><strong>5.70E-04</strong></td>
</tr>
</tbody>
</table>

**Total HAPs =** 0.957 tons/yr

**Methodology**

Emissions from the storage tanks were calculated by the Permittee using EPA TANKS software (version 4.09d) and have been verified.
Appendix A: Emission Calculations

VOC and HAP Emissions

Equipment Leaks

Company Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, IN 46714
Significant Source Modification No.: 179-41817-00033
Part 70 Operating Permit Renewal No.: T179-41632-00033
Reviewer: Andrew Belt

1. Fugitive VOC Emissions:

<table>
<thead>
<tr>
<th>Equipment Component</th>
<th>Service</th>
<th>Count</th>
<th>Emission Factor</th>
<th>Control Effectiveness</th>
<th>Fugitive VOC Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>(kg/hr/source)</td>
<td>(%)</td>
<td>Uncontrolled (tons/yr)</td>
</tr>
<tr>
<td>Valves</td>
<td>Light Liquid</td>
<td>545</td>
<td>0.00403</td>
<td>84%</td>
<td>21.21</td>
</tr>
<tr>
<td>Pumps</td>
<td>Light Liquid</td>
<td>45</td>
<td>0.0199</td>
<td>69%</td>
<td>8.65</td>
</tr>
<tr>
<td>Valves</td>
<td>Gas/Vapor</td>
<td>91</td>
<td>0.00597</td>
<td>87%</td>
<td>5.25</td>
</tr>
<tr>
<td>Flanges/Connectors</td>
<td>Gas/Vapor</td>
<td>910</td>
<td>0.00183</td>
<td>87%</td>
<td>16.08</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>51.18</td>
</tr>
</tbody>
</table>

Notes:
1. Components in vacuum service are not inventoried and not able to be inspected due to leak free nature. Components with >20% VOC by volume or >10% by weight will be part of the LDAR program. Except for valves and pumps, non-welded components and fittings treated as "flanges" for LDAR. Above are based on actual counts at a 40 MMgpy (nameplate) plant + 15% and adjusted accordingly.
2. Component count estimated based on similar ethanol plants. Components added in Beer Degas System project are considered within the original design margin, component counts unchanged from original calculations.

Methodology
Fugitive VOC Emissions (tons/yr) = Component Count x Emission Factor (kg/hr/source) x (1 lb/0.45359 kg) x 8760 hr/yr x 1 ton/2000 lbs x (1-Control Effectiveness)

2. Fugitive HAP Emissions:

<table>
<thead>
<tr>
<th>HAP</th>
<th>HAP Fraction</th>
<th>Fugitive HAP Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formaldehyde</td>
<td>1.69E-04</td>
<td>1.50E-03</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>1.55E-01</td>
<td>1.37</td>
</tr>
<tr>
<td>Methanol</td>
<td>1.50E-02</td>
<td>1.33E-01</td>
</tr>
<tr>
<td>Acrolein</td>
<td>4.50E-03</td>
<td>3.98E-02</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>1.55</strong></td>
</tr>
</tbody>
</table>

* ICM HAP fraction derived from stack testing of Fermentation Scrubber

Methodology
Fugitive HAP Emissions (tons/yr) = Fugitive VOC Emissions (tons/yr) x HAP Fraction
## Appendix A: Emissions Calculations

### VOC Emissions

#### Insignificant Source of Fugitive Emissions (VOCs)

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** 179-41817-00033  
**Part 70 Operating Permit Renewal No.:** T179-41632-00033  
**Reviewer:** Andrew Belt

(110) Mmgpy Plants  
**Insignificant Source of Fugitive Emissions (VOCs):**

<table>
<thead>
<tr>
<th>Source Description</th>
<th>VOC Concentration (ppm)</th>
<th>Molecular Weight (from test data)</th>
<th>Flow Rate (cfm)</th>
<th>Conversion Constant</th>
<th>Midwest Scaling Factor (from test data)</th>
<th>VOC Emissions (lbs/hr)</th>
<th>VOC Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thin Stillage Tank Vent (C3)</td>
<td>44.00</td>
<td>59.2</td>
<td>8.0</td>
<td>1.56E-07</td>
<td>2.3</td>
<td>0.007</td>
<td>0.033</td>
</tr>
<tr>
<td>Syrup Tank Vent (C4)</td>
<td>62.20</td>
<td>59.2</td>
<td>5.4</td>
<td>1.56E-07</td>
<td>2.3</td>
<td>0.007</td>
<td>0.031</td>
</tr>
<tr>
<td>Cook Water Tank Vent (C5)</td>
<td>31.00</td>
<td>59.2</td>
<td>13.4</td>
<td>1.56E-07</td>
<td>2.3</td>
<td>0.009</td>
<td>0.039</td>
</tr>
<tr>
<td>Liquification Tank #1 (C6)</td>
<td>64.70</td>
<td>59.2</td>
<td>80</td>
<td>1.56E-07</td>
<td>2.3</td>
<td>0.110</td>
<td>0.481</td>
</tr>
<tr>
<td>Whole Stillage Tank (C9)</td>
<td>7.00</td>
<td>59.2</td>
<td>100</td>
<td>1.56E-07</td>
<td>2.3</td>
<td>0.015</td>
<td>0.065</td>
</tr>
<tr>
<td>Methanator Feed Tank (C8)</td>
<td>46.50</td>
<td>59.2</td>
<td>15</td>
<td>1.56E-07</td>
<td>2.3</td>
<td>0.015</td>
<td>0.065</td>
</tr>
<tr>
<td><strong>TOTAL EMISSIONS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>0.163</strong></td>
<td><strong>0.713</strong></td>
</tr>
</tbody>
</table>

**Notes:**

- Note 1: No vent on other liquefaction tanks
- Note 2: Based on VOC measurement of wet cake
- Note 3: Estimate based on 40F warmer than Cookwater tank
- Emission factors based on actual test data of similar equipment.
- Above vents at <1.0 tpy may be classified as insignificant.

**Methodology:**

VOC Emission lbs/hr = VOC Concentration (ppm) x Molecular Weight x Flow Rate x Conversion Constant x Scaling Factor  
VOC Emission ton/yr = VOC emission lbs/hr x 8,760 hr/yr / 2,000 lbs/ton
Appendix A: Emissions Calculations
Kerosene Space Heaters

Company Name: Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant
Source Address: 1441 South Adams St., Bluffton, IN 46714
Significant Source Modification No.: 179-41817-00033
Part 70 Operating Permit Renewal No.: T179-41632-00033
Reviewer: Andrew Belt

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/kgal</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PM* 2.0</td>
<td>0.032</td>
</tr>
<tr>
<td></td>
<td>PM10 2.4</td>
<td>0.038</td>
</tr>
<tr>
<td></td>
<td>direct PM2.5 2.1</td>
<td>0.034</td>
</tr>
<tr>
<td></td>
<td>SO2 71 (142.0S)</td>
<td>1.140</td>
</tr>
<tr>
<td></td>
<td>NOx 20.0</td>
<td>0.321</td>
</tr>
<tr>
<td></td>
<td>VOC 0.34</td>
<td>0.005</td>
</tr>
<tr>
<td></td>
<td>CO 5.0</td>
<td>0.080</td>
</tr>
</tbody>
</table>

Methodology

1 gallon of Kerosene has a heating value of 135,000 Btu
Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu

Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-03-005-01/02/03) Supplement E 9/98 (see errata file)

*PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal.
Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal)/2,000 lb/ton

HAPs - Metals

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/mmBtu</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>4.0E-06</td>
<td>8.67E-06</td>
</tr>
<tr>
<td>Beryllium</td>
<td>3.0E-06</td>
<td>6.50E-06</td>
</tr>
<tr>
<td>Cadmium</td>
<td>3.0E-06</td>
<td>6.50E-06</td>
</tr>
<tr>
<td>Chromium</td>
<td>3.0E-06</td>
<td>6.50E-06</td>
</tr>
<tr>
<td>Lead</td>
<td>9.0E-06</td>
<td>1.95E-05</td>
</tr>
</tbody>
</table>

HAPs - Metals (continued)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/mmBtu</th>
<th>Potential Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>3.0E-06</td>
<td>6.50E-06</td>
</tr>
<tr>
<td>Manganese</td>
<td>6.0E-06</td>
<td>1.30E-05</td>
</tr>
<tr>
<td>Nickel</td>
<td>3.0E-06</td>
<td>6.50E-06</td>
</tr>
<tr>
<td>Selenium</td>
<td>1.5E-05</td>
<td>3.25E-05</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1.06E-04</td>
</tr>
</tbody>
</table>

Methodology

No data was available in AP-42 for organic HAPs.
Potential Emissions (tons/year) = Throughput (mmBtu/hr)*Emission Factor (lb/mmBtu)*8,760 hrs/yr / 2,000 lb/ton
Appendix A: Emission Calculations
VOC Emissions
Corn Oil Loadout

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** 179-41817-00033  
**Part 70 Operating Permit Renewal No.:** T179-41632-00033  
**Reviewer:** Andrew Belt

1. Emission Factors: AP-42

According to AP-42, Chapter 5.2 - Transportation and Marketing of Petroleum Liquids (01/95), the VOC emission factors for the truck and rail loading racks can be estimated from the following equation:

\[ L = 12.46 \times \left( \frac{SPM}{T} \right) \]

where:
- \( L \) = loading loss (lbs/kgal)
- \( S \) = a saturation factor (see AP-42, Table 5.2-1)
- \( P \) = true vapor pressure of the liquid loaded (psia)
- \( M \) = molecular weight of vapors
- \( T \) = temperature of the bulk liquid loaded (degree R)

<table>
<thead>
<tr>
<th>Previous Stored Liquid</th>
<th>( S )</th>
<th>( P ) (psia)</th>
<th>( M ) (lbs/lb-mole)</th>
<th>( T ) (degree R)</th>
<th>( L ) (lbs/kgal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn Oil (normal)</td>
<td>0.6</td>
<td>0.0091</td>
<td>96.09</td>
<td>509.58</td>
<td>0.01</td>
</tr>
</tbody>
</table>

2. Potential to Emit VOC:

Max. Loading Rate: 7,500 kgal/yr for truck loading (worst case) = 7,500,000 gallons per year

PTE of VOC (tons/yr) = 2500 kgal/yr x 0.01 lbs/kgal x 1 ton/2000 lbs = 0.05 tons/yr
### Appendix A: Emission Calculations

#### PM, PM10 and PM2.5 Emissions

**Additional Corn Storage**

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** 179-41817-00033  
**Part 70 Operating Permit Renewal No.:** T179-41632-00033  
**Reviewer:** Andrew Belt

---

### Estimated Annual Use

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Grain Throughput (units)</th>
<th>PM Emission Factor (lb/ton)</th>
<th>PM10 Emission Factor (lb/ton)</th>
<th>PM2.5 Emission Factor (lb/ton)</th>
<th>PM Emission Rate (lb/yr)</th>
<th>PM10 Emission Rate (lb/yr)</th>
<th>PM2.5 Emission Rate (lb/yr)</th>
<th>PM Emission Rate (ton/yr)</th>
<th>PM10 Emission Rate (ton/yr)</th>
<th>PM2.5 Emission Rate (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck to Pile</td>
<td>28,000 ton/yr</td>
<td>0.0005</td>
<td>0.0002</td>
<td>0.00003</td>
<td>13.116</td>
<td>6.203</td>
<td>0.939</td>
<td>0.0066</td>
<td>0.0031</td>
<td>0.0005</td>
</tr>
<tr>
<td>Pile Movement</td>
<td>28,000 ton/yr</td>
<td>0.0005</td>
<td>0.0002</td>
<td>0.00003</td>
<td>13.116</td>
<td>6.203</td>
<td>0.939</td>
<td>0.0066</td>
<td>0.0031</td>
<td>0.0005</td>
</tr>
<tr>
<td>Pile to Truck</td>
<td>28,000 ton/yr</td>
<td>0.0005</td>
<td>0.0002</td>
<td>0.00003</td>
<td>13.116</td>
<td>6.203</td>
<td>0.939</td>
<td>0.0066</td>
<td>0.0031</td>
<td>0.0005</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35.347</td>
<td>13.510</td>
<td>2.815</td>
<td>0.020</td>
<td>0.009</td>
<td>0.001</td>
</tr>
</tbody>
</table>

### Grain Receiving Permit Limit

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Grain Throughput (units)</th>
<th>PM Emission Factor (lb/ton)</th>
<th>PM10 Emission Factor (lb/ton)</th>
<th>PM2.5 Emission Factor (lb/ton)</th>
<th>PM Emission Rate (lb/yr)</th>
<th>PM10 Emission Rate (lb/yr)</th>
<th>PM2.5 Emission Rate (lb/yr)</th>
<th>PM Emission Rate (ton/yr)</th>
<th>PM10 Emission Rate (ton/yr)</th>
<th>PM2.5 Emission Rate (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck to Pile</td>
<td>1,622,000 ton/yr</td>
<td>0.0005</td>
<td>0.0002</td>
<td>0.00003</td>
<td>759.776</td>
<td>359.353</td>
<td>54.416</td>
<td>0.3799</td>
<td>0.1797</td>
<td>0.0272</td>
</tr>
<tr>
<td>Pile Movement</td>
<td>1,622,000 ton/yr</td>
<td>0.0005</td>
<td>0.0002</td>
<td>0.00003</td>
<td>759.776</td>
<td>359.353</td>
<td>54.416</td>
<td>0.3799</td>
<td>0.1797</td>
<td>0.0272</td>
</tr>
<tr>
<td>Pile to Truck</td>
<td>1,622,000 ton/yr</td>
<td>0.0005</td>
<td>0.0002</td>
<td>0.00003</td>
<td>759.776</td>
<td>359.353</td>
<td>54.416</td>
<td>0.3799</td>
<td>0.1797</td>
<td>0.0272</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2279.328</td>
<td>1078.060</td>
<td>163.249</td>
<td>1.140</td>
<td>0.539</td>
<td>0.082</td>
</tr>
</tbody>
</table>

### Potential to Emit

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Grain Throughput (units)</th>
<th>PM Emission Factor (lb/ton)</th>
<th>PM10 Emission Factor (lb/ton)</th>
<th>PM2.5 Emission Factor (lb/ton)</th>
<th>PM Emission Rate (lb/hr)</th>
<th>PM10 Emission Rate (lb/hr)</th>
<th>PM2.5 Emission Rate (lb/hr)</th>
<th>PM Emission Rate (lb/yr)</th>
<th>PM10 Emission Rate (lb/yr)</th>
<th>PM2.5 Emission Rate (lb/yr)</th>
<th>PM Emission Rate (ton/yr)</th>
<th>PM10 Emission Rate (ton/yr)</th>
<th>PM2.5 Emission Rate (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck to Pile</td>
<td>140 tons/hr</td>
<td>0.0005</td>
<td>0.0002</td>
<td>0.00003</td>
<td>0.066</td>
<td>0.031</td>
<td>0.005</td>
<td>0.2872</td>
<td>0.1359</td>
<td>0.0206</td>
<td>140</td>
<td>0.005</td>
<td>0.006</td>
</tr>
<tr>
<td>Pile Movement</td>
<td>140 tons/hr</td>
<td>0.0005</td>
<td>0.0002</td>
<td>0.00003</td>
<td>0.066</td>
<td>0.031</td>
<td>0.005</td>
<td>0.2872</td>
<td>0.1359</td>
<td>0.0206</td>
<td>140</td>
<td>0.005</td>
<td>0.006</td>
</tr>
<tr>
<td>Pile to Truck</td>
<td>140 tons/hr</td>
<td>0.0005</td>
<td>0.0002</td>
<td>0.00003</td>
<td>0.066</td>
<td>0.031</td>
<td>0.005</td>
<td>0.2872</td>
<td>0.1359</td>
<td>0.0206</td>
<td>140</td>
<td>0.005</td>
<td>0.006</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.197</td>
<td>0.093</td>
<td>0.014</td>
<td>0.862</td>
<td>0.408</td>
<td>0.062</td>
<td>28,000</td>
<td>0.006</td>
<td>0.006</td>
</tr>
</tbody>
</table>

Emission Factors for PM, PM10 and PM2.5 all come from AP-42, 13.2.4

Emission Rate = E = k(0.0032^2)((U/5)^1.3)/(M/2)^1.4

k = particle size multiplier  
E = emission factor (lb/ton)  
U = mean wind speed (mph)  
Fort Wayne, IN (NWS) U = 9.9  
M = moisture content (%)  
M = 12

1 bushel of corn = 56 lbs  
1000000 (bu/yr of corn) * 56 (lb/bu) / 2000 (lb/ton) = 28,000 (ton/yr)
### Emission Calculations

#### PM, PM10 and PM2.5 Emissions

**Additional Corn Storage**

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** 179-41817-00033  
**Part 70 Operating Permit Renewal No.:** T179-41632-00033  
**Reviewer:** Andrew Belt

#### Estimated Annual Use

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Grain Throughput (units)</th>
<th>PM Emission Factor (lb/ton)</th>
<th>PM10 Emission Rate (lb/ton)</th>
<th>PM10 Emission Rate (lb/hr)</th>
<th>PM2.5 Emission Rate (lb/ton)</th>
<th>PM2.5 Emission Rate (lb/hr)</th>
<th>PM Emission Rate (ton/yr)</th>
<th>PM2.5 Emission Rate (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck to Pile</td>
<td>56,000 ton/yr</td>
<td>0.00005</td>
<td>0.00002</td>
<td>0.00003</td>
<td>26.231</td>
<td>12.407</td>
<td>1.879</td>
<td>0.0131</td>
</tr>
<tr>
<td>Pile Movement</td>
<td>56,000 ton/yr</td>
<td>0.00005</td>
<td>0.00002</td>
<td>0.00003</td>
<td>26.231</td>
<td>12.407</td>
<td>1.879</td>
<td>0.0131</td>
</tr>
<tr>
<td>Pile to Truck</td>
<td>56,000 ton/yr</td>
<td>0.00005</td>
<td>0.00002</td>
<td>0.00003</td>
<td>26.231</td>
<td>12.407</td>
<td>1.879</td>
<td>0.0131</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>78.694</td>
<td>37.220</td>
<td>5.636</td>
<td>0.039</td>
<td>0.019</td>
<td>0.003</td>
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</tr>
</tbody>
</table>

#### Potential to Emit

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Grain Throughput (units)</th>
<th>PM Emission Factor (lb/ton)</th>
<th>PM10 Emission Rate (lb/ton)</th>
<th>PM10 Emission Rate (lb/hr)</th>
<th>PM2.5 Emission Rate (lb/ton)</th>
<th>PM2.5 Emission Rate (lb/hr)</th>
<th>PM Emission Rate (ton/yr)</th>
<th>PM2.5 Emission Rate (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
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<td>0.00005</td>
<td>0.00002</td>
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<tr>
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<td>0.00002</td>
<td>0.00003</td>
<td>795.776</td>
<td>359.333</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
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<td>1.140</td>
<td>0.539</td>
<td>0.082</td>
<td></td>
</tr>
</tbody>
</table>

#### Grain Receiving Permit Limit

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Grain Throughput (units)</th>
<th>PM Emission Factor (lb/ton)</th>
<th>PM10 Emission Rate (lb/ton)</th>
<th>PM10 Emission Rate (lb/hr)</th>
<th>PM2.5 Emission Rate (lb/ton)</th>
<th>PM2.5 Emission Rate (lb/hr)</th>
<th>PM Emission Rate (ton/yr)</th>
<th>PM2.5 Emission Rate (ton/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Emission Factors for PM, PM10 and PM2.5

Emission Rates - E=k(0.0032)((U/5)^1.3)/((M/2)^1.4)

PM Emission Rate = PM2.5 Emission Rate = PM Emission Rate

E = Emission factor (lb/hr)

k = particle size multiplier

k = 0.74 for PM, 0.35 for PM10, 0.053 for PM2.5

U = mean wind speed (mph; Fort Wayne, IN (NWS)) U = 9.9

M = moisture content (%) M = 12

1 bushel of corn = 56 lbs

1000000 (bu/yr of corn) * 56 (lb/bu) / 2000 (lb/ton) = 28,000 (ton/yr)
### Appendix A: Emission Calculations

#### Fugitive Dust Emissions - Paved Roads

**Company Name:** Valero Renewables Fuels Company LLC DBA Valero Bluffton Plant  
**Source Address:** 1441 South Adams St., Bluffton, IN 46714  
**Significant Source Modification No.:** 179-41817-00033  
**Part 70 Operating Permit Renewal No.:** 1179-41632-00033  
**Reviewer:** Andrew Belt

#### Paved Roads at Industrial Site

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

### Vehicle Information (provided by source)

<table>
<thead>
<tr>
<th>Type</th>
<th>Maximum number of vehicles per day</th>
<th>Number of one-way trips per day per vehicle</th>
<th>Maximum trips per day (trips/day)</th>
<th>Maximum Weight of Loaded Vehicle (tons/trip)</th>
<th>Total Weight driven per day (tons/day)</th>
<th>Maximum one-way distance (mi/trip)</th>
<th>Maximum one-way distance (mi/week)</th>
<th>Maximum one-way distance (mi/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grain (entering plant) (one-way trip)</td>
<td>1.0</td>
<td>10.98</td>
<td>11.0</td>
<td>42.0</td>
<td>498.4</td>
<td>2840</td>
<td>21.3</td>
<td>530.4</td>
</tr>
<tr>
<td>Grain (leaving plant) (one-way trip)</td>
<td>1.0</td>
<td>10.98</td>
<td>11.0</td>
<td>42.0</td>
<td>498.4</td>
<td>2840</td>
<td>21.3</td>
<td>530.4</td>
</tr>
<tr>
<td>Denatured Ethanol (leaving plant) (one-way trip)</td>
<td>1.0</td>
<td>10.98</td>
<td>11.0</td>
<td>42.0</td>
<td>498.4</td>
<td>2840</td>
<td>21.3</td>
<td>530.4</td>
</tr>
<tr>
<td>Wet DGS (entering plant) (one-way trip)</td>
<td>1.0</td>
<td>10.98</td>
<td>11.0</td>
<td>42.0</td>
<td>498.4</td>
<td>2840</td>
<td>21.3</td>
<td>530.4</td>
</tr>
<tr>
<td>Wet DGS (leaving plant) (one-way trip)</td>
<td>1.0</td>
<td>10.98</td>
<td>11.0</td>
<td>42.0</td>
<td>498.4</td>
<td>2840</td>
<td>21.3</td>
<td>530.4</td>
</tr>
</tbody>
</table>

#### Methodology

- **Total Weight driven per day (ton/day):** 
  \[ \text{Total Weight driven per day (ton/day)} = \left( \frac{\text{Maximum Weight of Loaded Vehicle (tons/trip)} \times \text{Maximum trips per day (trips/day)}}{\text{Maximum one-way distance (mi/trip)}} \right) \times (8,760 \text{ hrs/day}) \]

- **Average Weight Per Trip:** 
  \[ \text{Average Weight Per Trip} = \frac{\text{Total Weight driven per day (ton/day)}}{\text{Maximum trips per day (trips/day)}} \]

- **Maximum one-way distance (mi/trip):** 
  \[ \text{Maximum one-way distance (mi/trip)} = \frac{\text{Maximum Weight of Loaded Vehicle (tons/trip)} \times \text{Maximum trips per day (trips/day)}}{\text{Maximum one-way distance (mi/week)}} \]

#### Abbreviations

- **PM:** Particulate Matter
- **PM10:** Particulate Matter (<10 μm)
- **PM2.5:** Particulate Matter (<2.5 μm)
- **T179-41632-00033:** Significant Source Modification No.
- **1179-41632-00033:** Part 70 Operating Permit Renewal No.
- **40.0:** Maximum one-way distance (mi/week)
November 15, 2019

Charles Liapes  
Valero Renewable Fuels Company LLC DBA Valero Bluffton Plant  
1441 S Adams St  
Bluffton, IN 46714  

Re: Public Notice  
Valero Renewable Fuels Company LLC DBA Valero Bluffton Plant  
Permit Level: Title V Renewal  
Permit Number: 179-41632-00033

Dear Mr. Liapes:

Enclosed is a copy of your draft Title V Operating Permit Renewal, 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](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 Wells County Public Library, 200 West Washington Street in Bluffton, 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 Andrew Belt, 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 2-3217 or dial (317) 232-3217.

Sincerely,

Theresa Weaver  
Permits Branch  
Office of Air Quality

Enclosures  
PN Applicant Cover Letter 4/12/19
November 15, 2019

To: Wells 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: Valero Renewable Fuels Company LLC DBA Valero Bluffton Plant
Permit Number: 179-41632-00033; 179-41817-00033

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

November 15, 2019
Valero Renewable Fuels Company LLC DBA Valero Bluffton Plant
179-41632-00033; 179-41817-00033

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.

Enclosure
PN AAA Cover Letter 4/12/2019
AFFECTED STATE NOTIFICATION OF PUBLIC COMMENT PERIOD
DRAFT INDIANA AIR PERMIT

November 15, 2019

A 30-day public comment period has been initiated for:

Permit Number:  179-41632-00033; 179-41817-00033
Applicant Name: Valero Renewable Fuels Company LLC DBA Valero Bluffton Plant
Location: Bluffton, Wells 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

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<td>Charles Liapes Valero Renewable Fuels Company LLC DBA Valero Bluf 1441 S Adams St Bluffton IN 46714 (Source CAATS)</td>
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<td>Ms. Joy Haney 5285 East 400 South Columbia City IN 46725 (Affected Party)</td>
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<td>Dr. James Rybarczyk 9815 N. CR. 300 E. Muncie IN 47303 (Affected Party)</td>
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<td>Mr. Neil Potter Southern Wells Community Schools 9120 S 300 W Poneto IN 46781 (Affected Party)</td>
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<td>Bluffton City Council and Mayors Office 128 East Market Street Bluffton IN 46714 (Local Official)</td>
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<td>Wells County Board of Commissioners 105 W Market Street, Suite 205, Courthouse Bluffton IN 46714 (Local Official)</td>
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<td>Lisa Green The Journal Gazette 600 W Main St Fort Wayne IN 46802 (Affected Party)</td>
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**Mail Code 61-53**

**Name and address of Sender**:  
Indiana Department of Environmental Management  
Office of Air Quality – Permits Branch  
100 N. Senate  
Indianapolis, IN 46204

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