



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

100 N. Senate Avenue • Indianapolis, IN 46204

(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

NOTICE OF PUBLIC MEETING

Preliminary Findings Regarding the Renewal of a Part 70 Operating Permit

for Carmeuse Lime, Inc. in Lake County

Part 70 Operating Permit Renewal No.: T 089-41162-00112

The Indiana Department of Environmental Management (IDEM) has received an application from Carmeuse Lime, Inc., located at 1 North Carmeuse Drive, Gary, Indiana 46406, for a renewal of its Part 70 Operating Permit. IDEM's Office of Air Quality (OAQ) issues renewals of this type of permit to regulate the operation of existing sources and modifications at existing sources that release air pollutants.

On April 4, 2023, the Office of Air Quality (OAQ) had a notice posted on IDEM's website (<https://www.in.gov/idem/public-notice/>) stating that the Part 70 Operating Permit Renewal for Carmeuse Lime, Inc. had been proposed for this operation and provided information on how the public could review the proposed permit and other documentation. Due to several comments received by IDEM from interested parties, a public meeting will be held on June 1, 2023, to discuss air permitting for Carmeuse Lime, Inc.

A copy of the permit application and IDEM's preliminary findings have been sent to:

Gary Public Library - John F Kennedy Branch
3953 Broadway
Gary, IN 46409

and

IDEM Northwest Regional Office
330 W. US Highway 30, Suites E & F
Valparaiso, IN 46385

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

A copy of the application and preliminary findings is also available via IDEM's Virtual File Cabinet (VFC). To access VFC, please go to: <https://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.

You are invited to attend a public meeting:

The Indiana Department of Environmental Management (IDEM) will hold a public meeting to discuss air permitting for Carmeuse Lime, Inc. on:

Thursday, June 1st, at 6:00 PM (CDT), Central Time
21st Century Charter School of Gary – Gymnasium
556 Washington Street Gary, Indiana 46402

What will happen at the meeting?

IDEM staff will describe the draft Carmeuse Lime, Inc. air permit and answer questions from citizens in an informal setting. The public meeting will not include formal presentations, but will give the public an opportunity to submit written comments, ask questions, and discuss air pollution concerns with IDEM staff.

Written comments and supporting documentation can be presented at the public meeting, or if you do not plan to attend this meeting, you can send written comments to IDEM before the end of the public notice period. The public notice period will end on Monday, June 5, 2023. 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. If you do not want to comment, but would like to be added to IDEM's mailing list to receive notice of future action related to this permit application, please contact IDEM. Please refer to permit number 089-41162-00112 in all correspondence.

To Contact IDEM:

Aasim Noveer
IDEM, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(800) 451-6027, ask for Aasim Noveer or (317) 234-1243
Or dial directly: (317) 234-1243
Fax: (317) 232-6749 attn: Aasim Noveer
E-mail: anoveer@idem.IN.gov

If you need reasonable accommodations to participate in the public meeting, please contact IDEM's Americans with Disabilities Act coordinator at:

Indiana Department of Environmental Management
Attn: ADA Coordinator
100 North Senate Avenue
Indianapolis, IN 46204-2251
317-233-4200

Please provide a minimum of 24 hours notice if possible. Speech and hearing impaired callers may contact the agency via the Indiana Relay Service at 1-800-743-3333.

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 and will also be sent to the local library indicated above, the IDEM Regional Office 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 Aasim Noveer or my staff at the above address.



Brian Williams, Section Chief
Permits Branch
Office of Air Quality

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: <https://www.in.gov/idem/airpermit/public-participation/>; and the Citizens' Guide to IDEM on the Internet at: <https://www.in.gov/idem/resources/citizens-guide-to-idem/>.



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NOTICE OF EXTENSION OF PERIOD FOR PUBLIC COMMENT

Preliminary Findings Regarding the Renewal of a
Part 70 Operating Permit

for Carmeuse Lime, Inc. in Lake County

Part 70 Operating Permit Renewal No.: T 089-41162-00112

On April 4, 2023, the Office of Air Quality (OAQ) had a notice posted on IDEM's website (<https://www.in.gov/idem/public-notices/>), stating that Carmeuse Lime, Inc. had applied for renewal of its Part 70 Operating Permit. The notice also stated that the OAQ proposed to issue a Part 70 Operating Permit Renewal for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On May 12, 2023, the Office of Air Quality (OAQ) also had a notice posted on IDEM's website (<https://www.in.gov/idem/public-notices/>), stating a public meeting would be held on June 1, 2023, to discuss the draft Part 70 Operating Permit Renewal for Carmeuse Lime, Inc. The notice provided information on how the public could attend the public meeting and how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that the public notice period would end on Monday, June 5, 2023.

On June 1, 2023, a public meeting will be held regarding the draft Part 70 Operating Permit Renewal.

This notice is provided to inform interested parties that the public notice period has been extended and will end on June 5, 2023.

A copy of the permit application and IDEM's preliminary findings have been sent to:

Gary Public Library - John F Kennedy Branch
3953 Broadway
Gary, IN 46409

and

IDEM Northwest Regional Office
330 W. US Highway 30, Suites E & F
Valparaiso, IN 46385

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

A copy of the application and preliminary findings is also available via IDEM's Virtual File Cabinet (VFC). To access VFC, please go to: <https://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?

Written comments and supporting documentation can be sent to IDEM before the end of the public notice period. The public notice period has been extended and will end on June 5, 2023.

. 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. If you do not want to comment, but would like to be added to IDEM's mailing list to receive notice of future action related to this permit application, please contact IDEM. Please refer to permit number 089-41162-00112 in all correspondence.

This notice is posted on IDEM's website (<https://www.in.gov/idem/public-notice/>).

Comments and supporting documentation 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 089-41162-00112 in all correspondence.

Comments should be sent to:

Aasim Noveer
IDEM, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
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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 and will also be sent to the local library indicated above, the IDEM Regional Office 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 Aasim Noveer or my staff at the above address.



Brian Williams, Section Chief
Permits Branch
Office of Air Quality



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NOTICE OF 30-DAY PERIOD FOR PUBLIC COMMENT

Preliminary Findings Regarding the Renewal of a
Part 70 Operating Permit

for Carmeuse Lime, Inc. in Lake County

Part 70 Operating Permit Renewal No.: T089-41162-00112

The Indiana Department of Environmental Management (IDEM) has received an application from Carmeuse Lime, Inc., located at 1 North Carmeuse Drive, Gary, Indiana 46406, for a renewal of its Part 70 Operating Permit issued on December 3, 2014. If approved by IDEM's Office of Air Quality (OAQ), this proposed renewal would allow Carmeuse Lime, Inc. to continue to operate its existing source.

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 have been sent to:

Gary Public Library - John F Kennedy Branch
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Gary, IN 46409

and

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How can you participate in this process?

This notice is posted on IDEM's website (<https://www.in.gov/idem/public-notice/>). The date that this notice is posted on IDEM's website 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 IDEM decides to conduct a public hearing and/or public meeting, IDEM will post a separate announcement of the date, time, and location of that public hearing and/or public meeting on IDEM's website (<https://www.in.gov/idem/public-notice/>). 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 T089-41162-00112 in all correspondence.

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Commissioner

Part 70 Operating Permit Renewal OFFICE OF AIR QUALITY

**Carmeuse Lime, Inc.
1 North Carmeuse Drive
Gary, Indiana 46406**

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

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

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

Operation Permit No.: T089-41162-00112 Master Agency Interest ID: 18050	
Issued by: Brian Williams, Section Chief Permits Branch Office of Air Quality	Issuance Date: Expiration Date:

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Manufacturing Plants**

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.4 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 lime manufacturing plant.

Source Address:	1 North Carmeuse Drive, Gary, Indiana 46406
General Source Phone Number:	(773) 978-6255
SIC Code:	3274 (Lime)
County Location:	Lake (Calumet Township)
Source Location Status:	Nonattainment for 8-hour ozone standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD and Emission Offset Rules Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

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

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

Lime Production

- (a) One (1) Allis Chalmers Rotary Kiln equipped with a hot face dam and Contact Cooler; identified as EU-1; constructed in 1966, modified in 2010, 2014, and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour, emissions controlled by baghouse CE-1; exhausting to stacks S-1A through S-1F. Under 40 CFR Part 63, Subpart AAAAAA, this is considered an existing affected facility.
- (b) One (1) Allis Chalmers Rotary Kiln equipped with a Contact Cooler; identified as EU-2; constructed in 1966, modified in 2014 and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-2; exhausting to stacks S-2A through S-2F. Under 40 CFR Part 63, Subpart AAAAAA, this is considered an existing affected facility.
- (c) One (1) Allis Chalmers Rotary Kiln equipped with a hot face dam and Contact Cooler; identified as EU-3; constructed in 1968, modified in 2010, 2014 and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-3; exhausting to stacks S-3A through S-3F. Under 40 CFR Part 63, Subpart AAAAAA, this is considered an existing affected facility.

- (d) One (1) Allis Chalmers Rotary Kiln equipped with a Contact Cooler; identified as EU-4; constructed in 1972, modified in 2014 and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-4; exhausting to stacks S-4A through S-4F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (e) One (1) Allis Chalmers Rotary Kiln equipped with a Contact Cooler; identified as EU-5; constructed in 1972, modified in 2014 and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-5; exhausting to stacks S-5A through S-5F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (f) Processed stone handling operations, identified as EU-50, consisting of three (3) drop points into Stone Tanks 1, 2, and 3 (each with a maximum capacity of 1,600 tons), each enclosed within a building; three (3) drop points from the Stone Tanks to a conveyor, each enclosed within a building, and five (5) drop points from the stone belt to Kilns 1-5, each enclosed within a building, constructed prior to 1970. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.

Lime Processing and Handling

- (g) One (1) Lime Grinder Handling System; identified as EU-15; constructed in 1972; a maximum capacity of 80 tons of lime per hour; includes bucket elevators K122 and K222 and conveyors with emissions controlled by baghouse CE-6 (ALG400); exhausting to stack S-6; and screens K123 and K223.
- (h) One (1) Grinding Mill Material Transfer Operation, identified as EU-15a, controlled by one (1) dust collector, CE-15a (ALG440), approved in 2013 for construction, exhausting to stack S-15a, and consisting of the following:
 - (1) One (1) lime tank, identified as Lime Tank 1, installed in 1966, with a maximum capacity of 224 tons, with a truck loading spout in the West Bay (also known as the Pulverized or Bland Bay), with emissions controlled by CE-15a (ALG440).
 - (2) Two (2) conveyors, installed in 1972 and replaced in 2011, with a maximum throughput of 80 tons/hr.
 - (3) Two (2) weigh belts, installed in 2011, with a maximum throughput of 80 tons/hr.
 - (4) One (1) surge bin, installed in 1972 and modified in 2011, with a maximum capacity of 46 tons.
 - (5) One (1) bucket elevator, installed in 2011, with a maximum throughput of 100 tons/hr.
- (i) One (1) Grinding Mill #1; identified as EU-13; constructed in 1972; a maximum capacity of 40 tons of lime per hour; emissions controlled by baghouse CE-8 (ALG450); exhausting to stack S-8.
- (j) One (1) Grinding Mill #2; identified as EU-12; constructed in 1972; a maximum capacity of 40 tons of lime per hour; emissions controlled by baghouse CE-7 (ALG460);

exhausting to stack S-7.

- (k) One (1) Lime Handling System #1 (302 Belt); identified as EU-6; constructed in 1972; a maximum capacity of 100 tons of lime per hour; emissions controlled by baghouse CE-14 (ALG310); exhausting to stack S-14.
- (l) One (1) Lime Handling System #2 (301 Belt); identified as EU-7; constructed in 1966; a maximum capacity of 100 tons of lime per hour; emissions controlled by baghouse CE-15 (ALG300); exhausting to stack S-15.
- (m) [RESERVED]
- (n) One (1) Lime Transfer System #2, identified as EU-42/43, approved for construction in 2006, with a maximum capacity of 80 tons of lime per hour, consisting of a hopper, piping and storage tank T1B, for transporting lime using high pressure pneumatic conveyance methods, with emissions controlled by bin vent filter (ALG410), and exhausting to stack S-43.
- (o) One (1) engineered fuel (EF) feed and pneumatic delivery system, identified as EU-33, approved in 2014 for construction, with maximum capacity of 159 tons/hour, consisting of the following equipment:
 - (1) One (1) EF Receiving Station, approved in 2014 for construction with a maximum capacity of 159 tons/hr, emissions vent inside the building.
 - (2) Four (4) main storage bins with a maximum total capacity of 656 tons, each controlled by a dust vent filter.
 - (3) Four (4) screw conveyors with a maximum capacity of 45 tons/hour each.
 - (4) Five (5) storage bins, each with a maximum capacity of 50 tons each, each controlled by a dust vent filter.
 - (5) Five (5) weigh feeders with a maximum capacity of 5.74 tons/hour each.

Lime Storage and Loadout

- (p) One (1) Lime Storage System (New Side); identified as EU-24; constructed prior to 1977; consisting of lime storage tanks 11, 12, 13, 14, 15 and 16; emissions controlled by baghouse CE-14 (ALG310); exhausting to stack S-14.
- (q) One (1) Lime Storage System (Old Side); identified as EU-14; constructed prior to 1977; consisting of lime storage tanks 2, 3, 4, 5, 6, and 7; emissions controlled by baghouse CE-6 (ALG400); exhausting to stack S-6; Tank 4 emissions are also controlled by bin vent ALG430. Tank 5 includes a truck loading spot in the Center Bay (also known as the Dolo Bay), with emissions controlled by CE-6 (ALG400).
- (r) One (1) Lime Loadout #2A (Center Bay, also known as the Dolo Bay); identified as EU-8; constructed in 1972; a maximum capacity of 200 tons of lime per hour; includes conveyor L357 with emissions controlled by baghouse CE-13 (ALG320), exhausting to stack S-13; emissions from truck loading sprouts are controlled by integral dust collectors. The EU-8 and EU-28 loadouts share a bay and cannot both be in operation at the same time due to truck space constraints.
- (s) One (1) Truck Flue Dust Loadout #2 and Flue Dust Tank #2; identified as EU-16; constructed in 1966; a maximum capacity of 28 tons of dust per hour; emissions

controlled by baghouse CE-9 (AKG450); exhausting to stack S-9.

- (t) One (1) Truck Flue Dust Loadout #1 and Flue Dust Tank #1; identified as EU-17; constructed in 1966; a maximum capacity of 32 tons of dust per hour; emissions controlled by baghouse CE-10 (AKG141); exhausting to stack S-10.
- (u) One (1) Lime Loadout #2B/Dolo Rescreen (Center Bay, also known as the Dolo Bay); identified as EU-28; constructed in 1972; a maximum capacity of 200 tons of lime per hour; includes Rescreen L702 and conveyors emissions controlled by baghouse CE-13 (ALG320), exhausting to stack S-13, and a truck loading spout with integral dust collector. The EU-8 and EU-28 loadouts share a bay and cannot both be in operation at the same time due to truck space constraints.
- (v) One (1) Lime Loadout #1 (West Bay, also known as the Pulverized or Blend Bay); identified as EU-11; constructed prior to 1977; a maximum capacity of 200 tons of lime per hour; emissions from two truck loading spouts are controlled by baghouse CE-15a (ALG440); exhausting to stack S-15a; emissions from two additional truck loading spouts are controlled by integral dust collectors.
- (w) One (1) Lime Loadout #3/Rescreen (East Bay, also known as the Hi-Cal Bay); identified as EU-25; constructed in 1996 and modified in 2010; a maximum capacity of 200 tons of lime per hour; emissions from the rescreen, conveyors, and two (2) truck loading spouts are controlled by baghouse CE-25 (ALG600); exhausting to stack S-25; a third truck loading spout has an integral dust collector.
- (x) One (1) Truck Transfer Station Reclaim Hopper; identified as EU-32; constructed in 1972 and modified in 2003; a maximum capacity of 100 tons of lime per hour; emissions controlled by baghouse CE-32 (ALG606CA); exhausting to stack S-32.
- (y) One (1) lime fines transfer system identified as EU-6a, constructed 1972, conveying material from Tank 16, one (1) of the five (5) lime storage tanks collectively identified as EU-24, and from the baghouse ALG320 dust hopper, to Tank 1 in EU-15a. System includes bucket elevator L401 and conveyors L323, L400, L402, L403, L404; maximum overall transfer capacity of system is 25 tons per hour.
- (z) [RESERVED]

Raw Material and Lime Storage and Handling (Fugitive)

- (aa) One (1) Coal Storage Pile, consisting of two (2) coal storage tents and one (1) coal pile, one tent constructed in 2009 and the second constructed in 2014; identified as EU-22; a capacity of greater than 7 acres; a source of fugitive emissions.
- (bb) One (1) coal storage pile, approved in 2014 for construction, identified as EU-21, with a capacity of 1 acres; a source of fugitive emissions.
- (cc) Two (2) Limestone Storage Piles; identified as EU-23 and EU-29; each a capacity of greater than 9.5 acres; a source of fugitive emissions.
- (dd) Coal Unloading and Processing operations; identified as EU-30; consisting of truck, barge/boat and rail unloading and assorted conveyors; a source of fugitive emissions.
- (ee) Limestone Unloading and Processing operations; identified as EU-31; consisting of barge unloading and assorted conveyors; a source of fugitive emissions.

- (ff) One (1) coal loading system, identified as EU-34, consisting of the following equipment:
 - (1) One (1) loader hopper loaded by a frontend loader from EU-22, constructed in 2014, identified as EU-34a, with a maximum capacity of 25 tons.
 - (2) One (1) long conveyor moving coal from EU-34a to EU-34d, constructed in 2014, identified as EU-34c, with a maximum capacity of 300 tons of coal per hour.
 - (3) One (1) 3-way gate moving coal to EU-34e and Coal Bin #2, constructed in 2014, identified as EU-34d, with a maximum capacity of 300 tons of coal per hour.
 - (4) Two (2) shorter reversible conveyors moving coal to Coal Bin #1 and Coal Bin #3, constructed in 2014, identified as EU-34e, with a maximum capacity of 300 tons of coal per hour.
 - (5) Coal grinding operations, identified as EU-34f, constructed prior to 1970, consisting of the following equipment that is enclosed within a building:
 - (i) Three (3) Coal Bins, identified as Coal Bins 1, 2, and 3, each with a maximum capacity of 750 tons
 - (ii) Five (5) coal mills fed by one of the coal bins and pneumatically transfers the pulverized coal to one of the five (5) Kilns, identified as Coal Mills 1, 2, 3, 4, and 5 each with a maximum capacity of 10.15 tons of coal per hour
- (gg) One (1) Kiln 1 exhaust dust chamber, identified as EU-44, consisting of two (2) unenclosed drop points for removal of lime dust from kiln exhaust (a source of fugitive emissions).
- (hh) One (1) Kiln 2 exhaust dust chamber, identified as EU-45, consisting of two (2) unenclosed drop points for removal of lime dust from kiln exhaust (a source of fugitive emissions).
- (ii) One (1) Kiln 3 exhaust dust chamber, identified as EU-46, consisting of two (2) unenclosed drop points for removal of lime dust from kiln exhaust (a source of fugitive emissions).
- (jj) One (1) Kiln 4 exhaust dust chamber, identified as EU-47, consisting of two (2) unenclosed drop points for removal of lime dust from kiln exhaust (a source of fugitive emissions).
- (kk) One (1) Kiln 5 exhaust dust chamber, identified as EU-48, consisting of two (2) unenclosed drop points for removal of lime dust from kiln exhaust (a source of fugitive emissions).
- (ll) One (1) lime dust storage pile, identified as EU-49, with a capacity of 18,000 tons; a source of fugitive emissions.

Lime Storage and Handling

- (mm) Lime storage bin system and associated conveying equipment at the Buffington Facility as follows:
 - (1) One (1) Run of Kiln (ROK) Lime Transfer System #1, identified as EU-51, approved in 2018 for construction, consisting of two (2) diverters, two (2) belt

conveyors, and a bucket elevator, with a maximum capacity of 200 tons of lime per hour, emissions controlled by baghouse CE-51 (ALG304), and exhausting to stack S-51.

- (2) One (1) ROK Lime Storage Bin #1, identified as EU-52, approved in 2018 for construction, with a maximum capacity of 2,000 tons, emissions controlled by a bin vent filter (CE-52/ALG620), and exhausting to S-52.
- (3) One (1) ROK Lime Storage Bin #2, identified as EU-53, approved in 2018 for construction, with a maximum capacity of 2,000 tons, emissions controlled by a bin vent filter (CE-53/ALG630), and exhausting to S-53.
- (4) One (1) ROK Lime Transfer System #2, identified as EU-54, approved in 2018 for construction, consisting of two (2) vibratory feeders and two (2) belt conveyors, with a maximum capacity of 200 tons of lime per hour, emissions controlled by baghouse CE-54 (ALG305), and exhausting to stack S-54.

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

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

- (a) Vehicular traffic on paved and unpaved roads, and parking lots with public access. [326 IAC 6-4][326 IAC 6.8-10];
- (b) Two (2) diesel fuel storage tanks, one (1) 10,000 gallon stationary tank and one (1) 300 gallon portable tank, both installed prior to 2001, handling less than or equal to three thousand five hundred (3,500) gallons, each with a capacity less than ten thousand five hundred (10,500) gallons [326 IAC 8-9-6(b)];
- (c) One (1) 550 gallon gasoline storage tank, installed prior to 2007, handling less than or equal to one thousand three hundred (1,300) gallons per day, with a capacity less than ten thousand five hundred (10,500) gallons [326 IAC 8-9-6(b)]; and
- (d) Two (2) parts washers without a remote solvent reservoir, installed May 2012, using solvents with vapor pressure less than two (2) kPa measured at thirty-eight degrees Centigrade (38°C) [326 IAC 8-3-2][326 IAC 8-3-8].
- (e) Five (5) emergency diesel pony engines, each with an output rating of 60 KW (80.5 hp) and 3.87 liter cylinder displacement volume, to provide torque to rotate the kiln in an emergency, operating no more than 500 hrs per year and venting to the atmosphere; emergency diesel pony engines, EG-1 and EG-2, were installed in 1966 for Rotary Kiln EU-1 and EU-2, respectively; emergency diesel pony engine EG-3 was installed in 1968 for Rotary Kiln EU-3, and; emergency diesel pony engines, EG-4 and EG-5, were installed in 1972 for Rotary Kiln EU-4 and EU-5, respectively; [40 CFR 63, Subpart ZZZZ]
- (f) One (1) natural gas-fired emergency generator engine (4SRB), identified as EG-NG1, permitted in 2017, with an output rating of 302 hp, operating no more than 500 hrs per year, and venting to the atmosphere. Under 40 CFR 60, Subpart JJJJ this is an affected unit. Under 40 CFR 63, Subpart ZZZZ this is a new affected unit.
- (g) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.

Location	Quantity	MMBTU/hr
Main Office	1	0.200
Maintenance	1	0.038
Maintenance Gas Heaters	2	0.300
Maintenance Gas Heaters	1	0.175
Receiving	1	0.125
Furnace Break Room	1	0.165
Mens Locker Room Furnace	1	0.500
Lab Furnace	1	0.100
Boathouse	1	0.250
Conveyor	1	0.450
Tunnel	1	0.175
Stone Feed Floor	5	1.250

- (h) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors, and electrostatic precipitators with a design grain loading of less than or equal to three one-hundredths (0.03) grains per actual cubic foot and a gas flow rate less than or equal to four thousand (4,000) actual cubic feet per minute.

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

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

- (a) A laboratory as defined in 326 IAC 2-7-1(21)(G).
- (b) Activities related to routine fabrication, maintenance, and repair of buildings, structures, equipment, or vehicles at the source where air emissions from those activities would not be associated with any commercial production process, including brazing, soldering, or welding operations and associated equipment.
- (c) The following sealed units, associated with the Lime Terminal:
- (1) Bins:

Emission Unit(s) ID	Facility ID	Maximum Storage Capacity (tons)
Hi-Cal ROC bin	Bin 203	1,000
Dolo ROC bin	Bin 301	1,000
Crushed Dolo fines surge lime bin	Bin 701	10

- (2) Two (2) enclosed Dolo fines screw conveyors, identified as T-700 and T-701, with a maximum throughput capacity of 25 tons per hour.
- (3) One (1) enclosed additive bin screw conveyor, identified as T-702, with a maximum throughput capacity of 0.1 tons per hour.

- (4) One (1) enclosed lime crusher, identified as T-703, with a maximum throughput capacity of 25 tons per hour.
- (5) Four (4) enclosed lime briquetter screw conveyors, identified as T-704, T-705, T-706, and T-707, respectively, with a maximum throughput capacity of five (5) tons per hour, each.
- (6) Four (4) enclosed lime briquetters, identified as T-708, T-709, T-710, and T-711, respectively, with a maximum throughput capacity of five (5) tons per hour, each.

A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

This 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, T089-41162-00112, 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 April 15 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 5
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 or Northwest Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Northwest Regional Office phone: (219) 464-0233; fax: (219) 464-0553.

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

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

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

The notice fulfills the requirement of 326 IAC 2-7-5(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 T089-41162-00112 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 permit, all previous registrations and permits are superseded by this Part 70 operating permit.

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

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

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

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit.
[326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
 - (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

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

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(42). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

Request for renewal shall be submitted to:

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

- (b) A timely renewal application is one that is:
 - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the

document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

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

- (a) No Part 70 permit revision or notice shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

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

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b) or (c) without a prior permit revision, if each of the following conditions is met:
 - (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
 - (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

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

- (4) The Permittee notifies the:

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 317-233-8590 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][62 FR 8314] [326 IAC 1-1-6]

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

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

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

C.1 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 twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.2 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.3 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.4 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.5 Fugitive Particulate Matter Emissions [326 IAC 6.8-10-3]

Pursuant to 326 IAC 6.8-10-3 (formerly 326 IAC 6-1-11.1) (Lake County Fugitive Particulate Matter Control Requirements), the particulate matter emissions from source wide activities shall meet the following requirements:

- (a) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).
- (b) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).
- (c) The opacity of fugitive particulate emissions from exposed areas shall not exceed ten percent (10%) on a six (6) minute average.
- (d) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.
- (e) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.

- (f) There shall be a zero (0) percent frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time.
- (g) The opacity of fugitive particulate emissions from the inplant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).
- (h) Material processing facilities shall include the following:
 - (1) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.
 - (2) The PM10 emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
 - (3) The PM10 stack emissions from a material processing facility shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
 - (4) The opacity of fugitive particulate emissions from the material processing facilities, except a crusher at which a capture system is not used, shall not exceed ten percent (10%) opacity.
 - (5) The opacity of fugitive particulate emissions from a crusher at which a capture system is not used shall not exceed fifteen percent (15%).
- (i) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).
- (j) Material transfer limits shall be as follows:
 - (1) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).
 - (2) Where adequate wetting of the material for fugitive particulate emissions control is prohibitive to further processing or reuse of the material, the opacity shall not exceed ten percent (10%), three (3) minute average.
 - (3) Slag and kish handling activities at integrated iron and steel plants shall comply with the following particulate emissions limits:
 - (A) The opacity of fugitive particulate emissions from transfer from pots and trucks into pits shall not exceed twenty percent (20%) on a six (6) minute average.
 - (B) The opacity of fugitive particulate emissions from transfer from pits into front end loaders and from transfer from front end loaders into trucks shall comply with the fugitive particulate emission limits in 326 IAC 6.8-10-3(9).
- (k) Any facility or operation not specified in 326 IAC 6.8-10-3 shall meet a twenty percent (20%), three (3) minute average opacity standard.

The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the attached Fugitive Dust Control Plan.

C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

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

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

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

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

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

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

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
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no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

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

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
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in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

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

- (c) For monitoring required by CAM, at all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.
- (d) For monitoring required by CAM, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

C.11 Continuous Compliance Plan [326 IAC 6.8-8-1] [326 IAC 6.8-8-8]

- (a) Pursuant to 326 IAC 6.8-8-1, the Permittee shall submit to IDEM and maintain at source a copy of the Continuous Compliance Plan (CCP). The Permittee shall perform the inspections, monitoring and record keeping in accordance with the information in 326 IAC 6.8-8-5 through 326 IAC 6.8-8-7 or applicable procedures in the CCP.

- (b) Pursuant to 326 IAC 6.8-8-8, the Permittee shall update the CCP, as needed, retain a copy of any changes and updates to the CCP at the source and make the updated CCP available for inspection by the department. The Permittee shall submit the updated CCP, if required to IDEM, OAQ not later than thirty (30) days after the update.
- (c) Pursuant to 326 IAC 6.8-8, failure to submit a CCP, maintain all information required by the CCP at the source, or submit update to a CCP is a violation of 326 IAC 6.8-8.

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 [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5] [326 IAC 2-7-6]

- (I) Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, not subject to CAM, in this permit:
 - (a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
 - (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

- (3) any necessary follow-up actions to return operation to normal or usual manner of operation.
 - (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
 - (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
 - (e) The Permittee shall record the reasonable response steps taken.
- (II)
 - (a) *CAM Response to excursions or exceedances.*
 - (1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
 - (2) Determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.
 - (b) If the Permittee identifies a failure to achieve compliance with an emission limitation, subject to CAM, or standard, subject to CAM, for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the IDEM, OAQ and, if necessary, submit a proposed significant permit modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

- (c) Based on the results of a determination made under paragraph (II)(a)(2) of this condition, the EPA or IDEM, OAQ may require the Permittee to develop and implement a Quality Improvement Plan (QIP). The Permittee shall develop and implement a QIP if notified to in writing by the EPA or IDEM, OAQ.
- (d) Elements of a QIP:
The Permittee shall maintain a written QIP, if required, and have it available for inspection. The plan shall conform to 40 CFR 64.8(b)(2).
- (e) If a QIP is required, the Permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the IDEM, OAQ if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.
- (f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(a)(2) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:
 - (1) Failed to address the cause of the control device performance problems;
or
 - (2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (g) Implementation of a QIP shall not excuse the Permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.
- (h) *CAM recordkeeping requirements.*
 - (1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(c) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.
 - (2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements

C.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]

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

- (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
- (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(33) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

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

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

**C.18 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]
[326 IAC 2-2][326 IAC 2-3]**

- (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) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A), 326 IAC 2-2-8 (b)(6)(B), 326 IAC 2-3-2 (l)(6)(A), and/or 326 IAC 2-3-2 (l)(6)(B)) that a "project" (as defined in 326 IAC 2-2-1(o) and/or 326 IAC 2-3-1(j)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:
 - (1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(o) and/or 326 IAC 2-3-1(j)) at an existing emissions unit, document and maintain the following records:
 - (A) A description of the project.
 - (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
 - (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
 - (i) Baseline actual emissions;
 - (ii) Projected actual emissions;
 - (iii) Amount of emissions excluded under section 326 IAC 2-2-1(pp)(2)(A)(iii) and/or 326 IAC 2-3-1 (kk)(2)(A)(iii); and
 - (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.
- (d) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A) and/or 326 IAC 2-3-2 (l)(6)(A)) that a "project" (as defined in 326 IAC 2-2-1(o) and/or 326 IAC 2-3-1(j)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

- (1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and
- (2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.19 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]
[326 IAC 2-2][326 IAC 2-3] [40 CFR 64][326 IAC 3-8]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B - Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

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

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

- (1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
- (2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
- (3) A description of the actions taken to implement a QIP during the reporting period as specified in Section C - Response to Excursions or Exceedances. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

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

- (b) The address for report submittal is:
- Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.
- (e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1 (oo) and/or 326 IAC 2-3-1 (jj)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:
- (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (ww) and/or 326 IAC 2-3-1 (pp), for that regulated NSR pollutant, and
 - (2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).
- (f) The report for project at an existing emissions *unit* shall be submitted no later than sixty (60) days after the end of the year and contain the following:
- (1) The name, address, and telephone number of the major stationary source.
 - (2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.
 - (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).
 - (4) Any other information that the Permittee wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction projection.

Reports required in this part 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

- (g) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

Stratospheric Ozone Protection

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

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

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Lime Production

- (a) One (1) Allis Chalmers Rotary Kiln equipped with a hot face dam and Contact Cooler; identified as EU-1; constructed in 1966, modified in 2010, 2014, and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour, emissions controlled by baghouse CE-1; exhausting to stacks S-1A through S-1F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (b) One (1) Allis Chalmers Rotary Kiln equipped with a Contact Cooler; identified as EU-2; constructed in 1966, modified in 2014 and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-2; exhausting to stacks S-2A through S-2F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (c) One (1) Allis Chalmers Rotary Kiln equipped with a hot face dam and Contact Cooler; identified as EU-3; constructed in 1968, modified in 2010, 2014 and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-3; exhausting to stacks S-3A through S-3F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (d) One (1) Allis Chalmers Rotary Kiln equipped with a Contact Cooler; identified as EU-4; constructed in 1972, modified in 2014 and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-4; exhausting to stacks S-4A through S-4F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (e) One (1) Allis Chalmers Rotary Kiln equipped with a Contact Cooler; identified as EU-5; constructed in 1972, modified in 2014 and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-5; exhausting to stacks S-5A through S-5F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (f) Processed stone handling operations, identified as EU-50, consisting of three (3) drop points into Stone Tanks 1, 2, and 3 (each with a maximum capacity of 1,600 tons), each enclosed within a building; three (3) drop points from the Stone Tanks to a conveyor, each enclosed within a building, and five (5) drop points from the stone belt

to Kilns 1-5, each enclosed within a building, constructed prior to 1970. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.

(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 Lake County PM₁₀ Emission Requirements [326 IAC 6.8-2-22][326 IAC 6.8-8]

- (a) Pursuant to 326 IAC 6.8-2-22, the facilities listed in the chart below shall not exceed the respective PM₁₀ emission limits:

Facility (as listed in 326 IAC 6.8-2-22)	Emission Unit Description and ID (as listed in permit)	Control Device ID	PM ₁₀ Emission Limits	
			(lbs/ton)	(lbs/hr)
Lime rotary kiln number 1	Allis Chalmers Rotary Kiln (EU-1)	CE-1	0.478	9.950
Lime rotary kiln number 2	Allis Chalmers Rotary Kiln (EU-2)	CE-2	0.478	9.950
Lime rotary kiln number 3	Allis Chalmers Rotary Kiln (EU-3)	CE-3	0.478	9.950
Lime rotary kiln number 4	Allis Chalmers Rotary Kiln (EU-4)	CE-4	0.478	9.950
Lime rotary kiln number 5	Allis Chalmers Rotary Kiln (EU-5)	CE-5	0.478	9.950

- (b) Pursuant to 326 IAC 6.8-8, the Permittee shall implement the maintenance and inspection practices outlined in the Continuous Compliance Plan (CCP), dated March 1997.

D.1.2 Lake County SO₂ Emission Limitations [326 IAC 7-4.1-6]

- (a) Pursuant to 326 IAC 7-4.1-6, Carmeuse Lime shall comply with the sulfur dioxide (SO₂) emission limits for Rotary Kilns EU-1 through EU-5 as follows:
- (1) When three (3) or fewer kilns are in operation at the same time, the sulfur dioxide emissions are not to exceed:
 - (A) two and ninety-four thousandths (2.094) pounds per ton of lime based on a one (1) hour average; and
 - (B) forty-eight (48) pounds per hour per operating kiln.
 - (2) When four (4) kilns are in operation at the same time, the sulfur dioxide emissions are not to exceed:
 - (A) one and seven hundred forty-five thousandths (1.745) pounds per ton of lime based on a one (1) hour average; and

- (B) forty (40) pounds per hour per operating kiln.
- (3) When five (5) kilns are in operation at the same time, the sulfur dioxide emissions are not to exceed:
 - (A) one and four hundred eighty-three thousandths (1.483) pounds per ton of lime based on a one (1) hour average; and
 - (B) thirty-four (34) pounds per hour per operating kiln.
- (4) The production of lime is not to exceed five hundred fifty (550) tons per day for each rotary kiln.
- (b) Sulfur dioxide emissions shall be vented from the kilns/kiln gas filter systems at the following heights above grade:
 - (1) For Kiln No. 1, a stack height of seventy-nine and one-tenth (79.1) feet.
 - (2) For Kiln No. 2, a stack height of eighty-five and nine-tenths (85.9) feet.
 - (3) For Kiln No. 3, a stack height of eighty-six and zero-tenths (86.0) feet.
 - (4) For Kiln No. 4, a stack height of ninety-four and four-tenths (94.4) feet.
 - (5) For Kiln No. 5, a stack height of eighty-seven and four-tenths (87.4) feet.

D.1.3 Volatile Organic Compounds (VOC) [326 IAC 8-7]

The total amount of lime produced from rotary kilns EU-1 through EU-5 shall not exceed 821,500 tons per twelve (12) consecutive month period with compliance determined at the end of each month. The VOC emissions from each kiln shall not exceed 0.06 pounds per ton of lime produced.

Compliance with these limits is equivalent to source-wide VOC emissions of less than 25 tons per year and will render the requirements of 326 IAC 8-7 not applicable.

D.1.4 Commissioner's Order

Pursuant to Commissioner's Order 2016-04, issued November 16, 2016, the SO₂ emission from Rotary Kilns EU-1, EU-2, EU-3, EU-4, and EU-5 shall not exceed nine and forty-eight hundredths (9.48) pounds per hour, each, calculated as a rolling seven hundred and twenty (720) operating hour average, per kiln.

D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for rotary kilns EU-1 through EU-5 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.1.6 Particulate Control

- (a) In order to ensure compliance with Condition D.1.1, the baghouses for particulate control shall be in operation and control particulate emissions from kilns EU-1 through EU-5 at all times those respective facilities are 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.1.7 Testing Requirements [326 IAC 2-1.1-11]

- (a) The Permittee shall perform PM₁₀ and SO₂ testing of the kilns EU-1, EU-2, EU-3, EU-4, and EU-5 utilizing methods approved by the Commissioner at least once every thirty (30) months from the date of the most recent valid compliance demonstration. This testing is required in order to demonstrate compliance with 326 IAC 6.8-2-22, 326 IAC 7-4.1-6, and Commissioner's Order 2016-04.
- (b) In order to demonstrate compliance with Condition D.1.3, the Permittee shall perform VOC testing of each kiln (EU-1 through EU-5) utilizing methods approved by the Commissioner at least once every five (5) years from the date of the last valid compliance demonstration. These tests are required in order to assure that the requirements of 326 IAC 8-7 do not apply.
- (c) Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.1.8 SO₂ Emissions [326 IAC 7-4.1-2][326 IAC 3-7][326 IAC 2-7-6]

- (a) Pursuant to 326 IAC 7-4.1-2 and 326 IAC 2-7-6, the Permittee shall demonstrate compliance with the SO₂ limits in Condition D.1.2 using one of the following options:
 - (1) Sampling, Analysis, and Calculations.
 - (A) Each shipment of limestone, glycerin, EF, and coal is sampled and analyzed by an independent laboratory, utilizing American Society for Testing and Materials (ASTM) standards for sampling and chemical analysis. The certified analyses that accompany each shipment shall be the source of the data of the sulfur content in both the limestone and coal calculation of the hourly SO₂ emissions for reporting. Either a certificate of analysis or certification that the EF complies with the source's specifications will be the source of the data of the sulfur content in the EF for calculations of the hourly SO₂ emissions for reporting. Information concerning the sulfur content of pipeline quality natural gas shall be the source of the data of the sulfur content in the natural gas. Pursuant to 326 IAC 7-4.1-2(c), the current sampling and analysis protocol to be used in lieu of certified analyses, certificates of analysis, or certification of compliance with the source's specifications for limestone, coal, glycerin, and/or EF is as follows:
 - (i) The sample acquisition points shall be at locations where representative samples of the respective material shipments may be obtained.
 - (ii) Minimum sample size shall be in accordance with ASTM specifications for representative samples in the size fraction and quantity delivered.
 - (iii) Samples shall be composited and analyzed in accordance with ASTM specifications.
 - For limestone, a sample shall be taken for each boat/barge load received and analyzed
 - For glycerin, a sample shall be taken for each truck load received and analyzed
 - For EF, analysis of a composite sample consisting of each truck load received per month

- For Coal, a sample shall be taken for each load received and analyzed
- (iv) Preparation of the sample and sulfur content, where applicable, analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d), and (e).
- (v) The limestone, glycerin, EF and coal utilized shall be reconciled monthly by means of the weigh slips and shipping documents.
- (B) For each kiln, the Permittee shall calculate the SO₂ scrubbing factor for each product type as follows:

$$\text{Scrubbing Factor (SF)}_{\text{Kiln}(i) / \text{Product}(i)} = 1 - [\text{SO}_{2, \text{stack test}(i)} / (\text{S}_{\text{input STest}(i)} * 2 * 2000)]$$

Where:

$$\text{S}_{\text{input STest}(i)} = \frac{[(\%S_{\text{limestone STest}(i)} \times \text{Usage}_{\text{limestone STest}(i)}) / 100] + [(\%S_{\text{coal STest}(i)} \times \text{Usage}_{\text{coal STest}(i)}) / 100] + [(\%S_{\text{glycerin STest}(i)} \times \text{Usage}_{\text{glycerin STest}(i)}) / 100] + [(\%S_{\text{EF STest}(i)} \times \text{Usage}_{\text{EF STest}(i)}) / 100] + [(S_{\text{natural gas STest}(i)} \times \text{Usage}_{\text{natural gas STest}(i)}) / (7000 \times 2000)]}{1}$$

%S_{STest(i)} = weight percent sulfur in limestone, coal, glycerin or EF inputs, as applicable, as determined by sampling and analysis for the respective material input during the most recent valid stack test for Kiln(i) for the applicable product type (Product(i)).

S_{natural gas STest(i)} = sulfur content of natural gas (grains/dscf) during the most recent valid stack test for Kiln(i) for the applicable product type (Product(i)).

Usage_{STest(i)} = average limestone, coal, glycerin, EF or natural gas input to the kiln during the most recent valid stack test for Kiln(i) for the applicable product type (Product(i)) in tons/hr or dscf/hr as applicable.

The Permittee shall recalculate the scrubbing factor not later than thirty (30) days after receiving the results of the most recent valid stack test for SO₂ for Kiln(i) for the applicable product type (Product(i)).

- (C) The Permittee shall calculate hourly SO₂ emissions (lb/hr) for each Rotary Kiln #1 through #5 (EU-1 through EU-5) by the following calculations using the input values determined in D.1.8(a)(1)(A) and D.1.8(a)(1)(B) above:

$$\text{SO}_2 \text{ Emissions}_{\text{Kiln}(i)} \text{ (lb/hr)} = (1 - \text{SF}_{\text{Kiln}(i) / \text{Product}(i)}) \times \text{S}_{\text{input}} \times 2 \times 2000$$

Where:

$$\text{S}_{\text{input}} = \frac{[(\%S_{\text{limestone}} \times \text{Hourly Input}_{\text{limestone}}) / 100] + [(\%S_{\text{coal}} \times \text{Hourly Input}_{\text{coal}}) / 100] + [(\%S_{\text{glycerin}} \times \text{Hourly Input}_{\text{glycerin}}) / 100] + [(\%S_{\text{EF}} \times \text{Hourly Input}_{\text{EF}}) / 100] + [(S_{\text{natural gas}} \times \text{Hourly Input}_{\text{natural gas}}) / (7000 \times 2000)]}{1}$$

SFKiln(i)/Product(i) = Scrubbing Factor value determined in Condition D.1.8(a)(1)(B) from the most recent valid stack test for Kiln(i) for the applicable product type (Product(i)) for which the total sulfur input during the test was the same as or greater than the total sulfur input for the hour. If the total sulfur input for the hour is greater than the total sulfur input during the most recent valid stack test for Kiln(i) for the applicable product type (Product(i)), then the Scrubbing Factor value used shall be the value determined based on the results of the most recent prior valid stack test for Kiln(i) for the applicable product type (Product(i)) for which the total sulfur input during the test was the same or greater than the total sulfur input for the hour. When limestone or product is not present in the kiln, the SF shall be equal to zero

Hours of operation = any hour that fuel is being combusted within the affected kiln(s)

%S = weight percent sulfur in limestone, coal, glycerin, or EF inputs, as applicable, as determined by the most recent vendor analysis or sampling, in accordance with Condition D.1.8(a)(1)(A).

S_{natural gas} = sulfur content of natural gas (grains/dscf)

Hourly Input = limestone, coal, glycerin, EF or natural gas input to the kiln in tons/hr or dscf/hr as applicable.

- (D) The source shall calculate the rolling seven hundred and twenty (720) operating hour average SO₂ emissions (lbs/hr) for each Rotary Kiln #1 through #5 (EU-1 through EU-5) by adding the hourly SO₂ emissions calculated in Condition D.1.8(a)(1)(C) for each Rotary Kiln to the preceding seven hundred and nineteen (719) hours of operation for each rotary kiln, then divide by seven hundred and twenty (720) to derive the rolling average emissions per kiln per averaging period.
- (2) Pursuant to 326 IAC 7-4.1-2(d), compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the kilns, using 40 CFR Part 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, which is conducted with such frequency as to generate the amount of information required by (a) above. IDEM, OAQ may also require that the Permittee conduct a stack test at any emissions unit within sixty (60) days of written notification by the department.
- (b) Pursuant to 326 IAC 2-7-6 and the Commissioner's Order 2016-04, issued November 16, 2016, the Permittee shall demonstrate compliance with the SO₂ limits in Condition D.1.4 as follows:
 - (1) Sampling, Analysis, and Calculations.
 - (A) Each shipment of limestone, glycerin, EF, and coal is sampled and analyzed by an independent laboratory, utilizing American Society for Testing and Materials (ASTM) standards for sampling and chemical analysis. The certified analyses that accompany each shipment shall be the source of the data of the sulfur content in both the limestone and coal calculation of the hourly SO₂ emissions for reporting. Either a certificate of analysis or certification that the EF complies with the source's specifications will be the source of the data of the sulfur content in the EF for calculations of the hourly SO₂ emissions for reporting. Information concerning the sulfur content of pipeline quality natural gas shall be the source of the data of the sulfur content in the natural gas. Pursuant to 326 IAC 7-4.1-2(c), the current sampling and analysis protocol to be

used in lieu of certified analyses, certificates of analysis, or certification of compliance with the source's specifications for limestone, coal, glycerin, and/or EF is as follows:

- (i) The sample acquisition points shall be at locations where representative samples of the respective material shipments may be obtained.
 - (ii) Minimum sample size shall be in accordance with ASTM specifications for representative samples in the size fraction and quantity delivered.
 - (iii) Samples shall be composited and analyzed in accordance with ASTM specifications.
 - For limestone, a sample shall be taken for each boat/barge load received and analyzed
 - For glycerin, a sample shall be taken for each truck load received and analyzed
 - For EF, analysis of a composite sample consisting of each truck load received per month
 - For Coal, a sample shall be taken for each rail load received and analyzed
 - (iv) Preparation of the sample and sulfur content, where applicable, analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d), and (e).
 - (v) The limestone, glycerin, EF and coal utilized shall be reconciled monthly by means of the weigh slips and shipping documents.
- (B) For each kiln, the Permittee shall calculate the SO₂ scrubbing factor for each product type as follows:

Scrubbing Factor (SF)_{Kiln(i) / Product(i)} = 1- [SO_{2, stack test(i)} / (S_{input STest(i)} * 2 * 2000)]

Where:
$$S_{input\ STest(i)} = \frac{[(\%S_{limestone\ STest(i)} \times Usage_{limestone\ STest(i)}) / 100] + [(\%S_{coal\ STest(i)} \times Usage_{coal\ STest(i)}) / 100] + [(\%S_{glycerin\ STest(i)} \times Usage_{glycerin\ STest(i)}) / 100] + [(\%S_{EF\ STest(i)} \times Usage_{EF\ STest(i)}) / 100] + [(S_{natural\ gas\ STest(i)} \times Usage_{natural\ gas\ STest(i)}) / (7000 \times 2000)]}{1}$$

%S_{STest(i)} = weight percent sulfur in limestone, coal, glycerin or EF inputs, as applicable, as determined by sampling and analysis for the respective material input during the most recent valid stack test for Kiln(i) for the applicable product type (Product(i)).

S_{natural gas STest(i)} = sulfur content of natural gas (grains/dscf) during the most recent valid stack test for Kiln(i) for the applicable product type (Product(i)).

Usage_{STest(i)} = average limestone, coal, glycerin, EF or natural gas input to the kiln during the most recent valid stack test for Kiln(i) for the

applicable product type (Product(i)) in tons/hr or dscf/hr as applicable.

The Permittee shall recalculate the scrubbing factor not later than thirty (30) days after receiving the results of the most recent valid stack test for SO₂ for Kiln(i) for the applicable product type (Product(i)).

- (C) The Permittee shall calculate hourly SO₂ emissions (lb/hr) for each Rotary Kiln #1 through #5 (EU-1 through EU-5) by the following calculations using the input values determined in D.1.8(b)(1)(A) and D.1.8(b)(1)(B) above:

$$\text{SO}_2 \text{ Emissions}_{\text{Kiln}(i)} \text{ (lb/hr)} = (1 - \text{SF}_{\text{Kiln}(i)/\text{Product}(i)}) \times S_{\text{Input}} \times 2 \times 2000$$

Where:

$$S_{\text{Input}} = \left[\frac{(\%S_{\text{limestone}} \times \text{Hourly Input}_{\text{limestone}})}{100} \right] + \left[\frac{(\%S_{\text{coal}} \times \text{Hourly Input}_{\text{coal}})}{100} \right] + \left[\frac{(\%S_{\text{glycerin}} \times \text{Hourly Input}_{\text{glycerin}})}{100} \right] + \left[\frac{(\%S_{\text{EF}} \times \text{Hourly Input}_{\text{EF}})}{100} \right] + \left[\frac{(S_{\text{natural gas}} \times \text{Hourly Input}_{\text{natural gas}})}{(7000 \times 2000)} \right]$$

SF_{Kiln(i)/Product(i)} = Scrubbing Factor value determined in Condition D.1.8(b)(1)(B) from the most recent valid stack test for Kiln(i) for the applicable product type (Product(i)) for which the total sulfur input during the test was the same as or greater than the total sulfur input for the hour. If the total sulfur input for the hour is greater than the total sulfur input during the most recent valid stack test for Kiln(i) for the applicable product type (Product(i)), then the Scrubbing Factor value used shall be the value determined based on the results of the most recent prior valid stack test for Kiln(i) for the applicable product type (Product(i)) for which the total sulfur input during the test was the same or greater than the total sulfur input for the hour. When limestone or product is not present in the kiln, the SF shall be equal to zero

Hours of operation = any hour that fuel is being combusted within the affected kiln(s)

%S = weight percent sulfur in limestone, coal, glycerin, or EF inputs, as applicable, as determined by the most recent vendor analysis or sampling, in accordance with Condition D.1.8(b)(1)(A).

S_{natural gas} = sulfur content of natural gas (grains/dscf)

Hourly Input = limestone, coal, glycerin, EF or natural gas input to the kiln in tons/hr or dscf/hr as applicable.

- (D) The source shall calculate the rolling seven hundred and twenty (720) operating hour average SO₂ emissions (lbs/hr) for each Rotary Kiln #1 through #5 (EU-1 through EU-5) by adding the hourly SO₂ emissions calculated in Condition D.1.8(b)(1)(C) for each Rotary Kiln to the preceding seven hundred and nineteen (719) hours of operation for each rotary kiln, then divide by seven hundred and twenty (720) to derive the rolling average emissions per kiln per averaging period.

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

D.1.9 Opacity Monitoring / Visible Emission Monitoring [326 IAC 6.8-8-5]

- (a) Pursuant to 326 IAC 6.8-8-5(1), the Permittee shall monitor the opacity of the exhaust from stacks S-1 through S-5 (exhausting emissions from kilns EU-1 through EU-5) during normal operation through self-monitoring of opacity (visible emission notations).
 - (1) The opacity monitoring tests shall be performed in accordance with Method 9 of 40 CFR Part 60, Appendix A and shall be performed once per day during normal daylight operations. Readings shall be taken for a minimum of thirty (30) minutes during each day.
 - (2) If opacity readings are greater than seventy-five percent (75%) of the applicable standard, 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.
- (b) If the Method 9 tests (required in (a) above) cannot be performed due to the position of the sun, inclement weather, etc., then the Permittee shall perform visible emission notations of the exhaust from stacks S-1 through S-5 once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
 - (1) 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. 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.
 - (2) 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.
 - (3) 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.1.10 Monitoring for Baghouses CAM [40 CFR 64]

The Permittee shall record the pressure drop across the baghouses used in conjunction with rotary kilns EU-1 through EU-5, at least once per day when the associated facilities are in operation. When, for any one reading, the pressure drop across a baghouse is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 1.0 and 7.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure 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.

The instrument used for determining the pressure 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.1.11 Baghouse Inspections [326 IAC 6.8-8-7]

The Permittee shall perform the baghouse inspections pursuant to the Continuous Compliance Plan (CCP) and 326 IAC 6.8-8-7(1). The inspections shall be performed at least once per calendar quarter. Inspections required by this condition shall be not be performed in consecutive months. All defective bags shall be replaced.

D.1.12 Broken or Failed Bag Detection

- (a) For a single compartment baghouses 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 have 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.1.13 Record Keeping Requirements

- (a) To document the compliance status with Condition D.1.3, the Permittee shall maintain records of the amount of lime and type produced by kilns EU-1 through EU-5.
- (b) To document the compliance status with Condition D.1.8 and pursuant to Commissioner's Order 2016-04, issued November 16, 2016, the Permittee shall maintain records of the sampling and analysis of raw materials and fuels, certifications, other documentation, and the equations used to demonstrate compliance with Conditions D.1.2 and D.1.4.
- (c) To document the compliance status with Condition D.1.9, the Permittee shall maintain a daily record of:
 - (1) All opacity measurements of the lime kiln stack exhausts (S-1 through S-5), evaluations, calibration checks, adjustments, and maintenance performed on the continuous monitoring system; or
 - (2) The daily visible emission notations of the lime kiln stack exhausts (S-1 through S-5), as required by Condition D.1.9. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of opacity measurement or visible emission notation, (e.g. the process did not operate that day).
- (d) To document the compliance status with Condition D.1.10, the Permittee shall maintain a daily record of the pressure drop across the baghouses used in conjunction with kilns EU-1 through EU-5, as required by Condition D.1.10. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day).

- (e) To document the compliance status with Condition D.1.11, the Permittee shall maintain at the source a copy of the Continuous Compliance Plan (CCP) and perform the inspections, monitoring and record keeping requirements in accordance with the Permittee's CCP.
- (f) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.

D.1.14 Reporting Requirements

- (a) A quarterly summary of the information to document the compliance status with Condition D.1.3 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).
- (b) Pursuant to Commissioner's Order 2016-04, issued November 16, 2016, and to document the compliance status with Condition D.1.8, a quarterly summary of the SO₂ emissions in pounds per hour from each of Rotary Kilns #1 through #5 (EU-01 through EU-05) on a rolling seven hundred and twenty (720) operating hour average calculated for each kiln shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Lime Processing and Handling

- (g) One (1) Lime Grinder Handling System; identified as EU-15; constructed in 1972; a maximum capacity of 80 tons of lime per hour; includes bucket elevators K122 and K222 and conveyors with emissions controlled by baghouse CE-6 (ALG400); exhausting to stack S-6; and screens K123 and K223.
- (h) One (1) Grinding Mill Material Transfer Operation, identified as EU-15a, controlled by one (1) dust collector, CE-15a (ALG440), approved in 2013 for construction, exhausting to stack S-15a, and consisting of the following:
 - (1) One (1) lime tank, identified as Lime Tank 1, installed in 1966, with a maximum capacity of 224 tons, with a truck loading spout in the West Bay (also known as the Pulverized or Bland Bay), with emissions controlled by CE-15a (ALG440).
 - (2) Two (2) conveyors, installed in 1972 and replaced in 2011, with a maximum throughput of 80 tons/hr.
 - (3) Two (2) weigh belts, installed in 2011, with a maximum throughput of 80 tons/hr.
 - (4) One (1) surge bin, installed in 1972 and modified in 2011, with a maximum capacity of 46 tons.
 - (5) One (1) bucket elevator, installed in 2011, with a maximum throughput of 100 tons/hr.
- (i) One (1) Grinding Mill #1; identified as EU-13; constructed in 1972; a maximum capacity of 40 tons of lime per hour; emissions controlled by baghouse CE-8 (ALG450); exhausting to stack S-8.
- (j) One (1) Grinding Mill #2; identified as EU-12; constructed in 1972; a maximum capacity of 40 tons of lime per hour; emissions controlled by baghouse CE-7 (ALG460); exhausting to stack S-7.
- (k) One (1) Lime Handling System #1 (302 Belt); identified as EU-6; constructed in 1972; a maximum capacity of 100 tons of lime per hour; emissions controlled by baghouse CE-14 (ALG310); exhausting to stack S-14.
- (l) One (1) Lime Handling System #2 (301 Belt); identified as EU-7; constructed in 1966; a maximum capacity of 100 tons of lime per hour; emissions controlled by baghouse CE-15 (ALG300); exhausting to stack S-15.
- (m) [RESERVED]
- (n) One (1) Lime Transfer System #2, identified as EU-42/43, approved for construction in 2006, with a maximum capacity of 80 tons of lime per hour, consisting of a hopper, piping and storage tank T1B, for transporting lime using high pressure pneumatic conveyance methods, with emissions controlled by bin vent filter (ALG410), and exhausting to stack S-43.
- (o) One (1) engineered fuel (EF) feed and pneumatic delivery system, identified as EU-33,

approved in 2014 for construction, with maximum capacity of 159 tons/hour, consisting of the following equipment:

- (1) One (1) EF Receiving Station, approved in 2014 for construction with a maximum capacity of 159 tons/hr, emissions vent inside the building.
- (2) Four (4) main storage bins with a maximum total capacity of 656 tons, each controlled by a dust vent filter.
- (3) Four (4) screw conveyors with a maximum capacity of 45 tons/hour each.
- (4) Five (5) storage bins, each with a maximum capacity of 50 tons each, each controlled by a dust vent filter.
- (5) Five (5) weigh feeders with a maximum capacity of 5.74 tons/hour each.

Lime Storage and Loadout

- (p) One (1) Lime Storage System (New Side); identified as EU-24; constructed prior to 1977; consisting of lime storage tanks 11, 12, 13, 14, 15 and 16; emissions controlled by baghouse CE-14 (ALG310); exhausting to stack S-14.
- (q) One (1) Lime Storage System (Old Side); identified as EU-14; constructed prior to 1977; consisting of lime storage tanks 2, 3, 4, 5, 6, and 7; emissions controlled by baghouse CE-6 (ALG400); exhausting to stack S-6; Tank 4 emissions are also controlled by bin vent ALG430. Tank 5 includes a truck loading spot in the Center Bay (also known as the Dolo Bay), with emissions controlled by CE-6 (ALG400).
- (r) One (1) Lime Loadout #2A (Center Bay, also known as the Dolo Bay); identified as EU-8; constructed in 1972; a maximum capacity of 200 tons of lime per hour; includes conveyor L357 with emissions controlled by baghouse CE-13 (ALG320), exhausting to stack S-13; emissions from truck loading sprouts are controlled by integral dust collectors. The EU-8 and EU-28 loadouts share a bay and cannot both be in operation at the same time due to truck space constraints.
- (s) One (1) Truck Flue Dust Loadout #2 and Flue Dust Tank #2; identified as EU-16; constructed in 1966; a maximum capacity of 28 tons of dust per hour; emissions controlled by baghouse CE-9 (AKG450); exhausting to stack S-9.
- (t) One (1) Truck Flue Dust Loadout #1 and Flue Dust Tank #1; identified as EU-17; constructed in 1966; a maximum capacity of 32 tons of dust per hour; emissions controlled by baghouse CE-10 (AKG141); exhausting to stack S-10.
- (u) One (1) Lime Loadout #2B/Dolo Rescreen (Center Bay, also known as the Dolo Bay); identified as EU-28; constructed in 1972; a maximum capacity of 200 tons of lime per hour; includes Rescreen L702 and conveyors emissions controlled by baghouse CE-13 (ALG320), exhausting to stack S-13, and a truck loading spout with integral dust collector. The EU-8 and EU-28 loadouts share a bay and cannot both be in operation at the same time due to truck space constraints.
- (v) One (1) Lime Loadout #1 (West Bay, also known as the Pulverized or Blend Bay); identified as EU-11; constructed prior to 1977; a maximum capacity of 200 tons of lime per hour; emissions from two truck loading spouts are controlled by baghouse CE-15a (ALG440); exhausting to stack S-15a; emissions from two additional truck loading spouts are controlled by integral dust collectors.

- (w) One (1) Lime Loadout #3/Rescreen (East Bay, also known as the Hi-Cal Bay); identified as EU-25; constructed in 1996 and modified in 2010; a maximum capacity of 200 tons of lime per hour; emissions from the rescreen, conveyors, and two (2) truck loading spouts are controlled by baghouse CE-25 (ALG600); exhausting to stack S-25; a third truck loading spout has an integral dust collector.
- (x) One (1) Truck Transfer Station Reclaim Hopper; identified as EU-32; constructed in 1972 and modified in 2003; a maximum capacity of 100 tons of lime per hour; emissions controlled by baghouse CE-32 (ALG606CA); exhausting to stack S-32.
- (y) One (1) lime fines transfer system identified as EU-6a, constructed 1972, conveying material from Tank 16, one (1) of the five (5) lime storage tanks collectively identified as EU-24, and from the baghouse ALG320 dust hopper, to Tank 1 in EU-15a. System includes bucket elevator L401 and conveyors L323, L400, L402, L403, L404; maximum overall transfer capacity of system is 25 tons per hour.

(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 Prevention of Significant Deterioration (PSD) and Emission Offset (EO) - Particulate [326 IAC 2-2][326 IAC 2-3]

- (a) Pursuant to CP 089-5851-00112, issued December 9, 1996, the PM/PM₁₀ emissions from Lime Loadout #3 (East Bay) (EU-25) shall not exceed 3.4 pounds per hour and 15 tons per year.

Compliance with this limit will ensure that the potential to emit is less than twenty-five (25) tons of PM per year and less than fifteen (15) tons of PM₁₀ per year and therefore will render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable to this source.

- (b) In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-3 (Emission Offset (EO)) not applicable and Pursuant to MSM 089-23502-00112, issued on November 17, 2006, the Permittee shall comply with the following:

- (1) The PM emission rate from the lime transfer system, identified as EU-42/43 controlled by a bin vent filter and exhausting to stack S-43 (ALG410), shall not exceed 1.32 pounds per hour.
- (2) The PM₁₀ emission rate from the lime transfer system, identified as EU-42/43, controlled by a bin vent filter and exhausting to stack S-43 (ALG410), shall not exceed 1.32 pounds per hour.

Compliance with these emission limits will ensure that the potential to emit from the modification performed under MSM 089-23502-00112, issued on November 17, 2006, is less than twenty-five (25) tons of PM per year and less than fifteen (15) tons of PM₁₀ per year and therefore will render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable to this source.

- (c) In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable and pursuant to MSM 089-32593-00112, issued on May 22, 2013, the Permittee shall comply with the following:

- (1) The PM emissions the Grinding Mill Material Transfer Operation (EU-15a) shall not exceed 5.5 pounds per hour.
- (2) The PM₁₀ emissions the Grinding Mill Material Transfer Operation (EU-15a) shall not exceed 3.2 pounds per hour.
- (3) The PM_{2.5} emissions the Grinding Mill Material Transfer Operation (EU-15a) shall not exceed 2.1 pounds per hour.

Compliance with these emission limits will ensure that the potential to emit from the modification performed under MSM 089-32593-00112, is less than twenty-five (25) tons of PM per year, less than fifteen (15) tons of PM₁₀ per year and less than ten (10) tons of PM_{2.5} per year and therefore will render the requirements of 326 IAC 2-2 (PSD) not applicable to this source.

D.2.2 Lake County PM₁₀ Fugitive Particulate Matter Requirements [326 IAC 6.8-10]

- (a) Pursuant to 326 IAC 6.8-10-3(7):
- (1) The PM₁₀ stack emissions from the Lime Fines Transfer System (EU-6a), Grinding Mill Material Transfer Operation (EU-15a), Lime Transfer System #2 (EU-42/43), EF feed and pneumatic delivery system (EU-33), Lime Loadout #1 (West Bay) (EU-11), and Truck Transfer Station Reclaim Hopper (EU-32) shall not exceed twenty-two thousandths (0.022) grain per dry standard cubic foot and ten percent (10%) opacity.
 - (2) The opacity of fugitive particulate emissions from the Grinding Mill Material Transfer Operation (EU-15a), Lime Transfer System #2 (EU-42/43), EF feed and pneumatic delivery system (EU-33), Lime Loadout #1 (West Bay) (EU-11), and Truck Transfer Station Reclaim Hopper (EU-32) shall not exceed ten percent (10%)
 - (3) There shall be a zero percent (0%) frequency of visible emission observations from a building enclosing all or a part of the Grinding Mill Material Transfer Operation (EU-15a), Lime Transfer System #2 (EU-42/43), EF feed and pneumatic delivery system (EU-33), Lime Loadout #1 (West Bay) (EU-11), and Truck Transfer Station Reclaim Hopper (EU-32) except from a vent in the building
 - (4) The PM₁₀ emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
- (b) Pursuant to 326 IAC 6.8-10-3(8), the opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).

D.2.3 Lake County PM10 Emission Requirements [326 IAC 6.8-2-22][326 IAC 6.8-8]

- (a) Pursuant to 326 IAC 6.8-2-22, the facilities listed in the chart below shall not exceed the respective PM₁₀ emission limits:

Facility (as listed in 326 IAC 6.8-2-22)	Emission Unit Description and ID (as listed in permit)	Control Device ID	PM10 Emission Limits	
			(lbs/ton)	(lbs/hr)
Flue dust loadout number 1 (MHL 14)	Truck Flue Dust Loadout #1 and Flue Dust Tank #1 (EU-17)	CE-10 AKG141	0.003	0.110
Flue dust loadout number 2 (MHL 15)	Truck Flue Dust Loadout #2 and Flue Dust Tank #2 (EU-16)	CE-9 AKG450	0.003	0.100
Lime grinder (MHL 13)	Lime Grinder Handling System (EU-15) Lime Storage System (Old Side) (EU-14)	CE-6 ALG- 400	0.015	0.44
Lime handling baghouse number 1 (MHL 6)	Lime Handling System #1 (302 Belt) (EU-6) Lime Storage System (New Side) (EU-24)	CE-14 ALG- 310	0.002	0.260
Lime handling baghouse number 2 (MHL 7)	Lime Handling System #2 (301 Belt) EU-7	CE-15 ALG- 300	0.002	0.180
Lime handling baghouse number 4 (MHL 9)	Lime Loadout #3/Rescreen (East Bay, also known as the Hi-Cal Bay) (EU-25)	CE-25 ALG- 600	0.001	0.13
Lime loadout baghouse number 3 (MHL 12)	Lime Loadout #2A (Center Bay, also known as the Dolo Bay) (EU-8) Lime Loadout #2B/Dolo Rescreen (Center Bay, also known as the Dolo Bay) (EU-28)	CE-13 ALG- 320	0.004	0.410
Lime loadout baghouse number 1 (MHL 10)	Grinding Mill #2 (EU-12)	CE-7 ALG- 460	0.0004	0.050
Lime loadout baghouse number 2 (MHL 11)	Grinding Mill #1 (EU-13)	CE-8 ALG- 450	0.0004	0.050

- (b) Pursuant to 326 IAC 6.8-8, the Permittee shall implement the maintenance and inspection practices outlined in the current Continuous Compliance Plan (CCP).

D.2.4 Preventative 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 Particulate Control

- (a) In order to ensure compliance with Conditions D.2.1, D.2.2, and D.2.3, the baghouses and bin vent filters for particulate control shall be in operation and control particulate emissions from all facilities listed in this section at all times those respective facilities are 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 unit 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.2.6 Testing Requirements [326 IAC 2-1.1-11]

- (a) In order to demonstrate compliance with Conditions D.2.1(a) and D.2.3, the Permittee shall perform PM and PM₁₀ testing of the Lime Loadout #3 (East Bay) (EU-25) baghouse utilizing methods approved by the commissioner at least once every 5 years from the date of the most recent valid compliance demonstration. PM₁₀ includes filterable and condensable PM for demonstrating compliance with Condition D.2.1(a) [326 IAC 2-2 and 326 IAC 2-3] but includes only filterable PM for demonstrating compliance with Condition D.2.3 [326 IAC 6.8-2-22].
- (b) In order to demonstrate compliance with Condition D.2.2, the Permittee shall perform PM₁₀ testing of the Lime Loadout #1 (West Bay) (EU-11) baghouse utilizing methods approved by the commissioner at least once every 5 years from the date of the most recent valid compliance demonstration. PM₁₀ includes only filterable PM demonstrating compliance with Condition D.2.2 [326 IAC 6.8-10].
- (c) In order to demonstrate compliance with Condition D.2.3, the Permittee shall perform PM₁₀ testing of the emission units listed in the table below utilizing methods approved by the Commissioner at least once every five (5) years from the date of the last valid compliance demonstration. PM₁₀ includes only filterable PM demonstrating compliance with Condition D.2.3 [326 IAC 6.8-2-22].

Emission Unit Description	Emission Unit ID	Control Device ID
Grinding Mill #2	EU-12	CE-7 ALG460
Grinding Mill #1	EU-13	CE-8 ALG450
Lime Handling System #1 (302 Belt)	EU-6	CE-14 ALG310
Lime Storage System (New Side)	EU-24	
Lime Loadout #2A (Center Bay, also known as the Dolo Bay)	EU-8	CE-13 ALG320
Lime Loadout #2B/Dolo Rescreen (Center Bay, also known as the Dolo Bay)	EU-28	
Truck Flue Dust Loadout #2 and Flue Dust Tank #2	EU-16	CE-9 AKG450
Truck Flue Dust Loadout #1 and Flue Dust Tank #1	EU-17	CE-10 AKG141
Lime Grinder Handling System	EU-15	CE-6 ALG400
Lime Storage System (Old Side)	EU-14	
Lime Handling System #2 (301 Belt)	EU-7	CE-15 ALG300

- (d) In order to demonstrate compliance with Conditions D.2.1(c) and D.2.2, the Permittee shall perform PM, PM₁₀, PM_{2.5} testing of the Grinding Mill Material Transfer Operation (EU-15a) baghouse utilizing methods approved by the commissioner at least once every 5 years from the date of the most recent valid compliance demonstration. PM₁₀ includes filterable and condensable PM for demonstrating compliance with Condition D.2.1(c) [326 IAC 2-2] but includes only filterable PM for demonstrating compliance with Condition D.2.2 [326 IAC 6.8-10].
- (e) 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 Visible Emissions Notations

- (a) Visible emission notations of the stack exhaust from facilities EU-32 and EU-15a shall be performed once per week 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.2.8 Visible Emissions Notations

- (a) Visible emission notations of the bin vent stack exhaust shall be performed once per week during normal daylight whenever T-1B is being loaded. 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.2.9 Monitoring for Baghouses

The Permittee shall record the pressure drop across the baghouses, used in conjunction with facilities EU-25, EU-17, EU-16, EU-15, EU-14, EU-6, EU-24, EU-28, EU-7, EU-8, EU-11, EU-12, EU-13, EU-33, and EU-42/43 at least once per day when the associated facilities are in operation. When, for any one reading, the pressure drop across a baghouse is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 2.0 and 8.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure 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.

The instrument used for determining the pressure 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 months.

D.2.10 Baghouse Inspections [326 IAC 6.8-8-7]

The Permittee shall inspect the baghouses listed in Condition D.2.3 and 326 IAC 6.8-2-22 pursuant to the CCP and 326 IAC 6.8-8-7. The inspections shall be performed at least once per calendar quarter. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

D.2.11 Broken or Failed Bag Detection

- (a) For a single compartment baghouses 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 have 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 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.2.12 Record Keeping Requirements

- (a) To document the compliance status with Condition D.2.7 and D.2.8, the Permittee shall maintain records of the weekly visible emission notations of the stack exhaust from facilities EU-33, EU-15a, and T-1B, as required by Condition D.2.7 and D.2.8. The Permittee shall include in its weekly 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 week).
- (c) To document the compliance status with Condition D.2.9, the Permittee shall maintain a daily record of the pressure drop across the baghouses controlling facilities, as required by Condition D.2.9. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day).
- (d) To document the compliance status with Condition D.2.10, the Permittee shall maintain records of the results of the inspections.
- (e) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Raw Material and Lime Storage and Handling (Fugitive)

- (aa) One (1) Coal Storage Pile, consisting of two (2) coal storage tents and one (1) coal pile, one tent constructed in 2009 and the second constructed in 2014 ; identified as EU-22; a capacity of greater than 7 acres; a source of fugitive emissions.
- (bb) One (1) coal storage pile, approved in 2014 for construction, identified as EU-21, with a capacity of 1 acres; a source of fugitive emissions.
- (cc) Two (2) Limestone Storage Piles; identified as EU-23 and EU-29; each a capacity of greater than 9.5 acres; a source of fugitive emissions.
- (dd) Coal Unloading and Processing operations; identified as EU-30; consisting of truck, barge/boat and rail unloading and assorted conveyors; a source of fugitive emissions.
- (ee) Limestone Unloading and Processing operations; identified as EU-31; consisting of barge unloading and assorted conveyors; a source of fugitive emissions.
- (ff) One (1) coal loading system, identified as EU-34, consisting of the following equipment:
 - (1) One (1) loader hopper loaded by a frontend loader from EU-22, constructed in 2014, identified as EU-34a, with a maximum capacity of 25 tons.
 - (2) One (1) long conveyor moving coal from EU-34a to EU-34d, constructed in 2014, identified as EU-34c, with a maximum capacity of 300 tons of coal per hour.
 - (3) One (1) 3-way gate moving coal to EU-34e and Coal Bin #2, constructed in 2014, identified as EU-34d, with a maximum capacity of 300 tons of coal per hour.
 - (4) Two (2) shorter reversible conveyors moving coal to Coal Bin #1 and Coal Bin #3, constructed in 2014, identified as EU-34e, with a maximum capacity of 300 tons of coal per hour.
 - (5) Coal grinding operations, identified as EU-34f, constructed prior to 1970, consisting of the following equipment that is enclosed within a building:
 - (i) Three (3) Coal Bins, identified as Coal Bins 1, 2, and 3, each with a maximum capacity of 750 tons
 - (ii) Five (5) coal mills fed by one of the coal bins and pneumatically transfers the pulverized coal to one of the five (5) Kilns, identified as Coal Mills 1, 2, 3, 4, and 5 each with a maximum capacity of 10.15 tons of coal per hour
- (gg) One (1) Kiln 1 exhaust dust chamber, identified as EU-44, consisting of two (2) unenclosed drop points for removal of lime dust from kiln exhaust (a source of fugitive emissions).

- (hh) One (1) Kiln 2 exhaust dust chamber, identified as EU-45, consisting of two (2) unenclosed drop points for removal of lime dust from kiln exhaust (a source of fugitive emissions).
- (ii) One (1) Kiln 3 exhaust dust chamber, identified as EU-46, consisting of two (2) unenclosed drop points for removal of lime dust from kiln exhaust; (a source of fugitive emissions).
- (jj) One (1) Kiln 4 exhaust dust chamber, identified as EU-47, consisting of two (2) unenclosed drop points for removal of lime dust from kiln exhaust (a source of fugitive emissions).
- (kk) One (1) Kiln 5 exhaust dust chamber, identified as EU-48, consisting of two (2) unenclosed drop points for removal of lime dust from kiln exhaust; (a source of fugitive emissions).
- (ll) One (1) lime dust storage pile, identified as EU-49, with a capacity of 18,000 tons; a source of fugitive emissions.

Specifically Regulated Insignificant Activities

- (a) Vehicular traffic on paved and unpaved roads, and parking lots with public access. [326 IAC 6-4][326 IAC 6.8-10];
- (b) Two (2) diesel fuel storage tanks, one (1) 10,000 gallon stationary tank and one (1) 300 gallon portable tank, both installed prior to 2001, handling less than or equal to three thousand five hundred (3,500) gallons, each with a capacity less than ten thousand five hundred (10,500) gallons [326 IAC 8-9-6(b)];
- (c) One (1) 550 gallon gasoline storage tank, installed prior to 2007, handling less than or equal to one thousand three hundred (1,300) gallons per day, with a capacity less than ten thousand five hundred (10,500) gallons [326 IAC 8-9-6(b)]; and
- (d) Two (2) parts washers without a remote solvent reservoir, installed May 2012, using solvents with vapor pressure less than two (2) kPa measured at thirty-eight degrees Centigrade (38°C) [326 IAC 8-3-2][326 IAC 8-3-8].
- (e) Five (5) emergency diesel pony engines, each with an output rating of 60 KW (80.5 hp) and 3.87 liter cylinder displacement volume, to provide torque to rotate the kiln in an emergency, operating no more than 500 hrs per year and venting to the atmosphere; emergency diesel pony engines, EG-1 and EG-2, were installed in 1966 for Rotary Kiln EU-1 and EU-2, respectively; emergency diesel pony engine EG-3 was installed in 1968 for Rotary Kiln EU-3, and; emergency diesel pony engines, EG-4 and EG-5, were installed in 1972 for Rotary Kiln EU-4 and EU-5, respectively; [40 CFR 63, Subpart ZZZZ]
- (f) One (1) natural gas-fired emergency generator engine (4SRB), identified as EG-NG1, permitted in 2017, with an output rating of 302 hp, operating no more than 500 hrs per year, and venting to the atmosphere. Under 40 CFR 60, Subpart JJJJ this is an affected unit. Under 40 CFR 63, Subpart ZZZZ this is a new affected unit.
- (g) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.

Location	Quantity	MMBTU/hr
Main Office	1	0.200
Maintenance	1	0.038
Maintenance Gas Heaters	2	0.300
Maintenance Gas Heaters	1	0.175
Receiving	1	0.125
Furnace Break Room	1	0.165
Mens Locker Room Furnace	1	0.500
Lab Furnace	1	0.100
Boathouse	1	0.250
Conveyor	1	0.450
Tunnel	1	0.175
Stone Feed Floor	5	1.250

(h) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors, and electrostatic precipitators with a design grain loading of less than or equal to three one-hundredths (0.03) grains per actual cubic foot and a gas flow rate less than or equal to four thousand (4,000) actual cubic feet per minute.

(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 Particulate Matter Emissions [326 IAC 6.8-1-2]

Pursuant to 326 IAC 6.8-1-2(a), the following units shall comply with the particulate matter limits below:

Facility	Unit ID	Particulate Limitation (gr/dscf)
Emergency diesel pony engines	EG-1, EG-2, EG-3, EG-4, EG-5	0.03, each
NG Fired Emergency Generator	EG-NG1	
Main Office	NA	
Maintenance	NA	
Maintenance Gas Heaters	NA	
Receiving	NA	
Furnace Break Room	NA	
Men's Locker Room Furnace	NA	
Lab Furnace	NA	
Boathouse	NA	
Conveyor	NA	
Tunnel	NA	
Stone Feed Floor	NA	
Grinding and machining operations	NA	

D.3.2 Cold Cleaner Degreaser Control Equipment and Operating Requirements [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Degreaser Control and Equipment Operating Requirements), the Permittee shall:

- (a) Ensure the following control equipment and operating requirements are met:
 - (1) Equip the degreaser with a cover.
 - (2) Equip the degreaser with a device for draining cleaned parts.
 - (3) Close the degreaser cover whenever parts are not being handled in the degreaser.
 - (4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
 - (5) Provide a permanent, conspicuous label that lists the operating requirements in subdivisions (3), (4), (6), and (7).
 - (6) Store waste solvent only in closed containers.
 - (7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.
- (b) Ensure the following additional control equipment and operating requirements are met:
 - (1) Equip the degreaser with one (1) of the following control devices if the solvent is heated to a temperature of greater than forty-eight and nine-tenths (48.9) degrees Celsius (one hundred twenty (120) degrees Fahrenheit):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent used is insoluble in, and heavier than, water.
 - (C) A refrigerated chiller.
 - (D) Carbon adsorption.
 - (E) An alternative system of demonstrated equivalent or better control as those outlined in clauses (A) through (D) that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.
 - (2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.
 - (3) If used, solvent spray:
 - (A) must be a solid, fluid stream; and
 - (B) shall be applied at a pressure that does not cause excessive splashing.

D.3.3 Material Requirements for Cold Cleaner Degreasers [326 IAC 8-3-8]

Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaning Degreasers), the Permittee shall not operate a cold cleaning degreaser with a solvent that has a VOC composite partial vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

D.3.4 Preventative 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.3.5 Particulate Matter (PM)

Pursuant to 326 IAC 6.8-10-3 (Lake County Fugitive Particulate Matter Emission Limitations), opacity from the activities (as applicable) shall be determined as follows:

(a) Paved Roads and Parking Lots

The average instantaneous opacity shall be the average of twelve (12) instantaneous opacity readings, taken for four (4) vehicle passes, consisting of three (3) opacity readings for each vehicle pass. The three (3) opacity readings for each vehicle pass shall be taken as follows:

- (1) The first will be taken at the time of emission generation.
- (2) The second will be taken five (5) seconds later.
- (3) The third will be taken five (5) seconds later or ten (10) seconds after the first.

The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand approximately fifteen (15) feet from the plume and at approximately right angles to the plume. Each reading shall be taken approximately four (4) feet above the surface of the roadway or parking area.

(b) Unpaved Roads

The average instantaneous opacity shall be the average of twelve (12) instantaneous opacity readings, taken for four (4) vehicle passes, consisting of three (3) opacity readings for each vehicle pass. The three (3) opacity readings for each vehicle pass shall be taken as follows:

- (1) The first will be taken at the time of emission generation.
- (2) The second will be taken five (5) seconds later.
- (3) The third will be taken five (5) seconds later or ten (10) seconds after the first.

The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand approximately fifteen (15) feet from the plume and at approximately right angles to the plume. Each reading shall be taken approximately four (4) feet above the surface of the roadway or parking area.

(c) Batch Transfer into or out of Storage Piles

The average instantaneous opacity shall consist of the average of three (3) opacity readings taken five (5) seconds, ten (10) seconds, and fifteen (15) seconds after the end of one (1) batch loading or unloading operation. The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand approximately fifteen (15) feet from the plume and at approximately right angles to the plume.

When adequate wetting of the material for fugitive particulate emissions control is prohibitive to further material processing or reuse, the opacity shall not exceed ten percent (10%), for three (3) minute average. This includes material transfer to the initial

hopper of a material processing facility as defined in section 2 of this rule or material transfer for transportation within or outside the source property including, but not limited to, the transfer of coal from a storage pile to a front end loader and from a front end loader to the initial hopper. Compliance with any operation lasting less than three (3) minutes shall be determined as an average of consecutive observations recorded at fifteen (15) second intervals for the duration of the operation.

- (d) **Continuous Transfer into or out of Storage Piles**
The opacity shall be determined using 40 CFR 60, Appendix A, Method 9. The opacity readings shall be taken at least four (4) feet from the point of origin.
- (e) **Storage Piles**
The opacity shall be determined using 40 CFR 60, Appendix A, Method 9, except that the opacity shall be observed at approximately four (4) feet from the surface at the point of maximum opacity. The observer shall stand approximately fifteen (15) feet from the plume and at approximately right angles to the plume. The limitations may not apply during periods when application of fugitive particulate control is either ineffective or unreasonable due to sustained very high wind speeds. During such periods, the company must continue to implement all reasonable fugitive particulate control measures and maintain records documenting the application of measures and the basis for a claim that meeting the opacity limitation was not reasonable given prevailing wind conditions.
- (f) **Exposed Areas**
The opacity shall be determined using 40 CFR 60, Appendix A, Method 9.
- (g) **In-Plant Material Transportation by Truck or Rail**
Compliance with the visible emission limitations for the in-plant transportation of material by truck or rail, shall be determined by 40 CFR 60, Appendix A, Method 22, except that the observation shall be taken at approximately right angles to the prevailing wind from the leeward side of the truck or railroad car. Material transported by truck or rail that is enclosed and covered shall be considered in compliance with the in-plant transportation requirement.
- (h) **In-Plant Material Transportation by Front End Loader or Skip Hoist**
Compliance with this limitation shall be determined by the average of three (3) opacity readings taken at five (5) second intervals. The three (3) opacity readings shall be taken as follows:
 - (1) The first will be taken at the time of emission generation.
 - (2) The second will be taken five (5) seconds later.
 - (3) The third will be taken five (5) seconds later or ten (10) seconds after the first.The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand at least fifteen (15) feet from the plume and at approximately right angles to the plume. Each reading shall be taken approximately four (4) feet above the surface of the roadway or parking area.
- (i) **Buildings Enclosing All or Part of the Material Processing Equipment**
Compliance with the visible emissions limitations from buildings enclosing all or part of the material processing equipment shall be determined using 40 CFR 60, Appendix A, Method 22.

- (j) Building Vents
Compliance with the concentration standard shall be determined using 40 CFR 60, Appendix A, Method 5 or 17. Opacity shall be determined by 40 CFR 60, Appendix A, Method F.
- (k) Dust Handling Equipment
Opacity shall be determined by 40 CFR 60, Appendix A, Method 9.

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

D.3.6 Record Keeping Requirements

- (a) Pursuant to 326 IAC 6.8-10-3 (Lake County Fugitive Particulate Matter Emission Limitations), the source shall keep the following documentation to show the compliance status with each of its control measures and control practices:
 - (1) A map or diagram showing the location of all emission sources controlled, including the location, identification, length, and width of roadways.
 - (2) For each application of water or chemical solution to roadways, the following shall be recorded:
 - (A) The name and location of the roadway controlled
 - (B) Application rate (as indicated on control plan)
 - (C) Time of each application
 - (D) Width of each application
 - (E) Identification of each method of application
 - (F) Total quantity of water or chemical used for each application
 - (G) For each application of chemical solution, the concentration and identity of the chemical
 - (H) The material data safety sheets for each chemical
 - (3) For application of physical or chemical control agents not covered by paragraph (2) above, the following:
 - (A) The name of the agent
 - (B) Location of application
 - (C) Application rate
 - (D) Total quantity of agent used
 - (E) If diluted, percent of concentration
 - (F) The material data safety sheets for each chemical
 - (4) A log recording incidents when control measures were not used and a statement of explanation.

- (5) Copies of all records required by this section shall be submitted to the department within twenty (20) working days of a written request by the department.
- (b) To document the compliance status with Condition D.3.3, the Permittee shall maintain the following records for each purchase of solvent used in the cold cleaner degreasing operations. These records shall be retained on-site or accessible electronically for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.
 - (1) The name and address of the solvent supplier.
 - (2) The date of purchase.
 - (3) The type of solvent purchased.
 - (4) The total volume of the solvent purchased.
 - (5) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).
- (c) Pursuant to 326 IAC 8-9-6(b) (Volatile Organic Compound Emission Limits), the Permittee shall maintain records and submit to IDEM, OAQ a report of the vessel identification number, the vessel dimensions, and the vessel capacity for the two (2) insignificant diesel storage tanks and the one (1) insignificant gasoline storage tank.
- (d) Pursuant to 326 IAC 8-9-6(a) (Volatile Organic Compound Emission Limits), the records required by 326 IAC 8-9-6 (b) shall be maintained for the life of the vessel.
- (e) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.

D.3.7 Reporting Requirements

- (a) Pursuant to 326 IAC 6.8-10-4(4)(G) (Lake County Fugitive Particulate Matter Emission Limitations), a quarterly report shall be submitted, stating the following:
 - (1) The dates any required control measures, as specified in the Fugitive Dust Plan included as Appendix A, were not implemented
 - (2) A listing of those control measures
 - (3) The reasons that the control measures were not implemented
 - (4) Any corrective action taken
- (b) These reports shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting Requirements contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Lime Storage and Handling

(mm) Lime storage bin system and associated conveying equipment at the Buffington Facility as follows:

- (1) One (1) Run of Kiln (ROK) Lime Transfer System #1, identified as EU-51, approved in 2018 for construction, consisting of two (2) diverters, two (2) belt conveyors, and a bucket elevator, with a maximum capacity of 200 tons of lime per hour, emissions controlled by baghouse CE-51 (ALG304), and exhausting to stack S-51.
- (2) One (1) ROK Lime Storage Bin #1, identified as EU-52, approved in 2018 for construction, with a maximum capacity of 2,000 tons, emissions controlled by a bin vent filter (CE-52/ALG620), and exhausting to S-52.
- (3) One (1) ROK Lime Storage Bin #2, identified as EU-53, approved in 2018 for construction, with a maximum capacity of 2,000 tons, emissions controlled by a bin vent filter (CE-53/ALG630), and exhausting to S-53.
- (4) One (1) ROK Lime Transfer System #2, identified as EU-54, approved in 2018 for construction, consisting of two (2) vibratory feeders and two (2) belt conveyors, with a maximum capacity of 200 tons of lime per hour, emissions controlled by baghouse CE-54 (ALG305), and exhausting to stack S-54.

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

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

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

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable and pursuant to SSM 089-40060-00112, issued on October 16, 2018, the Permittee shall comply with the following:

- (a) PM emissions from the ROK Lime Transfer System #1 (EU-51) shall not exceed 2.97 pounds per hour.
- (b) PM₁₀ emissions from the ROK Lime Transfer System #1 (EU-51) shall not exceed 1.61 pounds per hour.
- (c) PM_{2.5} emissions from the ROK Lime Transfer System #1 (EU-51) shall not exceed 0.85 pounds per hour.
- (d) PM emissions from the ROK Lime Storage Bin #1 (EU-52) shall not exceed 0.28 pounds per hour.
- (e) PM₁₀ emissions from the ROK Lime Storage Bin #1 (EU-52) shall not exceed 0.28 pounds per hour.
- (f) PM_{2.5} emissions from the ROK Lime Storage Bin #1 (EU-52) shall not exceed 0.28 pounds per hour.

- (g) PM emissions from the ROK Lime Storage Bin #2 (EU-53) shall not exceed 0.28 pounds per hour.
- (h) PM₁₀ emissions from the ROK Lime Storage Bin #2 (EU-53) shall not exceed 0.28 pounds per hour.
- (i) PM_{2.5} emissions from the ROK Lime Storage Bin #2 (EU-53) shall not exceed 0.28 pounds per hour.
- (j) PM emissions from the ROK Lime Transfer System #2 (EU-54) shall not exceed 2.07 pounds per hour.
- (k) PM₁₀ emissions from the ROK Lime Transfer System #2 (EU-54) shall not exceed 1.12 pounds per hour.
- (l) PM_{2.5} emissions from the ROK Lime Transfer System #2 (EU-54) shall not exceed 0.59 pounds per hour.

Compliance with these limits shall limit the potential to emit from Significant Source Modification No. 089-40060-00112 of PM to less than twenty-five (25) tons per twelve (12) consecutive month period, PM₁₀ to less than fifteen (15) tons per twelve (12) consecutive month period, PM_{2.5} to less than ten (10) tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (PSD) not applicable.

D.4.2 Lake County PM₁₀ Fugitive Particulate Matter Requirements [326 IAC 6.8-10]

- (a) Pursuant to 326 IAC 6.8-10-3(7):
 - (1) The PM₁₀ stack emissions from the ROK Lime Transfer System #1 (EU-51), ROK Lime Storage Bin #1, (EU-52), ROK Lime Storage Bin #2, (EU-53), and ROK Lime Transfer System #2 (EU-54) shall not exceed twenty-two thousandths (0.022) grain per dry standard cubic foot and ten percent (10%) opacity.
 - (2) The opacity of fugitive particulate emissions from the ROK Lime Transfer System #1 (EU-51), ROK Lime Storage Bin #1, (EU-52), ROK Lime Storage Bin #2, (EU-53), and ROK Lime Transfer System #2 (EU-54) shall not exceed ten percent (10%)
 - (3) There shall be a zero percent (0%) frequency of visible emission observations from a building enclosing all or a part of the ROK Lime Transfer System #1 (EU-51), ROK Lime Storage Bin #1, (EU-52), ROK Lime Storage Bin #2, (EU-53), and ROK Lime Transfer System #2 (EU-54) except from a vent in the building
 - (4) The PM₁₀ emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
- (b) Pursuant to 326 IAC 6.8-10-3(8), the opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).

D.4.3 Preventative 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 Matter Control

- (a) In order to assure compliance with Conditions D.4.1 and D.4.2(a)(1), the baghouses for particulate control shall be in operation and control emissions from the ROK Lime Transfer System #1 (EU-51) and ROK Lime Transfer System #2 (EU-54) facility at all times the ROK Lime Transfer System #1 (EU-51) and ROK Lime Transfer System #2 (EU-54) facility is in operation.

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

- (b) In order to assure compliance with Condition D.5.2(a)(1), the bin vents for particulate control shall be in operation and control emissions from the ROK Lime Storage Bin #1 (EU-52) and ROK Lime Storage Bin #2 (EU-53) facility at all times the ROK Lime Storage Bin #1 (EU-52) and ROK Lime Storage Bin #2 (EU-53) facility is in operation.

D.4.5 Testing Requirements [326 IAC 2-1.1-11]

- (a) In order to demonstrate compliance with Conditions D.4.1 and D.4.2(a)(1), the Permittee shall perform PM, PM₁₀, and PM_{2.5} testing of the ROK Lime Transfer System #1 (EU-51) and ROK Lime Transfer System #2 (EU-54) utilizing methods approved by the commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration.
- (b) 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 PM_{2.5} includes filterable and condensable PM for demonstrating compliance with Condition D.5.1 [326 IAC 2-2] but includes only filterable PM for demonstrating compliance with Condition D.5.3 [326 IAC 6.8-10].

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

D.4.6 Visible Emissions Notations [326 IAC 6.8-8-7]

- (a) Visible emission notations of the bin vents (CE-52 and CE-53) exhausts 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 Parametric Monitoring [326 IAC 6.8-8-7] [40 CFR 64]

- (a) The Permittee shall record the pressure drop across the following baghouses at least once per day:
 - (1) baghouse CE-51 when the ROK Lime Transfer System #1 (EU-51) is in operation, and
 - (2) baghouse CE-54 when the ROK Lime Transfer System #2 (EU-54) is in operation.

When, for any one reading, the pressure drop across a baghouse is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 2.0 and 8.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure 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.

- (b) The instruments used for determining the pressure 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.4.8 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 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).

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.4.9 Record Keeping Requirements

- (a) To document the compliance status with Condition D.4.6, the Permittee shall maintain records of daily visible emission notations of the bin vent CE-52 stack exhausts and the bin vent CE-53 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 visible emission notation (e.g. the process did not operate that day).
- (b) To document the compliance status with Condition D.4.7(a), the Permittee shall maintain daily records of pressure drop across baghouse CE-51 and baghouse CE-54. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).
- (c) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.

SECTION E.1

NSPS

Emissions Unit Description:

- (f) One (1) natural gas-fired emergency generator engine (4SRB), identified as EG-NG1, permitted in 2017, with an output rating of 302 hp, operating no more than 500 hrs per year, and venting to the atmosphere. Under 40 CFR 60, Subpart JJJJ this is an affected unit. Under 40 CFR 63, Subpart ZZZZ this is a new affected unit.

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

New Source Performance Standards (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 JJJJ.
- (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 Standards of Performance for Stationary Spark Ignition Internal Combustion Engines NSPS [326 IAC 12] [40 CFR Part 60, Subpart JJJJ]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart JJJJ (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 60.4230 (a)(4)(iv), (a)(6)
- (2) 40 CFR 60.4233(e)
- (3) 40 CFR 60.4234
- (4) 40 CFR 60.4236(a), (c)
- (5) 40 CFR 60.4237(b)
- (6) 40 CFR 60.4243 (b)(1), (b)(2)(i), (d)(1), (d)(2), (d)(2)(i), (d)(3)
- (7) 40 CFR 60.4245, (a), (b)
- (8) 40 CFR 60.4246
- (9) 40 CFR 60.4248
- (10) 40 CFR 60, Subpart JJJJ, Table 1
- (11) 40 CFR 60, Subpart JJJJ, Table 3

SECTION E.2

NESHAP

Emissions Unit Description:

- (e) Five (5) emergency diesel pony engines, each with an output rating of 60 KW (80.5 hp) and 3.87 liter cylinder displacement volume, to provide torque to rotate the kiln in an emergency, operating no more than 500 hrs per year and venting to the atmosphere; emergency diesel pony engines, EG-1 and EG-2, were installed in 1966 for Rotary Kiln EU-1 and EU-2, respectively; emergency diesel pony engine EG-3 was installed in 1968 for Rotary Kiln EU-3, and; emergency diesel pony engines, EG-4 and EG-5, were installed in 1972 for Rotary Kiln EU-4 and EU-5, respectively; [40 CFR 63, Subpart ZZZZ]
- (f) One (1) natural gas-fired emergency generator engine (4SRB), identified as EG-NG1, permitted in 2017, with an output rating of 302 hp, operating no more than 500 hrs per year, and venting to the atmosphere. Under 40 CFR 60, Subpart JJJJ this is an affected unit. Under 40 CFR 63, Subpart ZZZZ this is a new affected unit.

(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)]**

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

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

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

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

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

- (a) The following provisions are applicable to the five (5) diesel pony engine units, identified as EG-1, EG-2, EG-3, EG-4, and EG-5:
 - (1) 40 CFR 63.6580
 - (2) 40 CFR 63.6585(a), (b)
 - (3) 40 CFR 63.6590(a)(1)(ii), (iv)
 - (4) 40 CFR 63.6595(a)(1), (c)
 - (5) 40 CFR 63.6602
 - (6) 40 CFR 63.6605
 - (7) 40 CFR 63.6625(e)(2), (f), (h), (i)

- (8) 40 CFR 63.6640(a), (b), (e), (f)
- (9) 40 CFR 63.6645(a)(5)
- (10) 40 CFR 63.6650(f)
- (11) 40 CFR 63.6655(a)(1), (d), (e)(2), (f)(1)
- (12) 40 CFR 63.6660
- (13) 40 CFR 63.6665
- (14) 40 CFR 63.6670
- (15) 40 CFR 63.6675
- (16) 40 CFR 63, Subpart ZZZZ, Table 2c
- (17) 40 CFR 63, Subpart ZZZZ, Table 6
- (18) 40 CFR 63, Subpart ZZZZ, Table 8

- (b) The following provisions are applicable to the one (1) natural gas-fired emergency generator unit, identified as EG-NG1:

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585 (a), (b)
- (3) 40 CFR 63.6590 (a)(2)(ii), (c)(6)
- (4) 40 CFR 63.6595(a)(5), (c)
- (5) 40 CFR 63.6640 (f)(1), (f)(2)(i), (f)(3)
- (6) 40 CFR 63.6665
- (7) 40 CFR 63.6670
- (8) 40 CFR 63.6675

SECTION E.3

NESHAP

Emissions Unit Description:

Lime Production

- (a) One (1) Allis Chalmers Rotary Kiln equipped with hot face dam and a Contact Cooler; identified as EU-1; constructed in 1966, modified in 2010, 2014, and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour, emissions controlled by baghouse CE-1; exhausting to stacks S-1A through S-1F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (b) One (1) Allis Chalmers Rotary Kiln equipped with a Contact Cooler; identified as EU-2; constructed in 1966, modified in 2014 and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-2; exhausting to stacks S-2A through S-2F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (c) One (1) Allis Chalmers Rotary Kiln equipped with a hot face dam and Contact Cooler; identified as EU-3; constructed in 1968, modified in 2010, 2014 and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-3; exhausting to stacks S-3A through S-3F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (d) One (1) Allis Chalmers Rotary Kiln equipped with a Contact Cooler; identified as EU-4; constructed in 1972, modified in 2014 and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-4; exhausting to stacks S-4A through S-4F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (e) One (1) Allis Chalmers Rotary Kiln equipped with a Contact Cooler; identified as EU-5; constructed in 1972, modified in 2014 and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-5; exhausting to stacks S-5A through S-5F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (f) Processed stone handling operations, identified as EU-50, consisting of three (3) drop points into Stone Tanks 1, 2, and 3 (each with a maximum capacity of 1,600 tons), each enclosed within a building; three (3) drop points from the Stone Tanks to a conveyor, each enclosed within a building, and five (5) drop points from the stone belt

to Kilns 1-5, each enclosed within a building, constructed prior to 1970. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.

The affected facilities under 40 CFR 63, Subpart AAAAA are the five (5) rotary kilns (EU-1 through EU-5) and all processed stone handling (PSH) operations (EU-50), including all equipment associated with PSH operations beginning at the processed stone storage bin(s) or open storage pile(s) and ending where the processed stone is fed into the kiln. Affected PSH operations include man-made processed stone storage bins (but not open processed stone storage piles), conveying system transfer points, bulk loading or unloading systems, screening operations, surge bins, bucket elevators, and belt conveyors.

(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)]

E.3.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

- (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 AAAAA.
- (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.3.2 Lime Manufacturing Plants NESHAP [40 CFR Part 63, Subpart AAAAA] [326 IAC 20-91]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart AAAAA (included as Attachment D to the operating permit), which are incorporated by reference as 326 IAC 20-91, for the emission unit(s) listed above:

- (1) 40 CFR 63.7081
- (2) 40 CFR 63.7082(a), (e), (f), (g)
- (3) 40 CFR 63.7083(b), (d)
- (4) 40 CFR 63.7090
- (5) 40 CFR 63.7100
- (6) 40 CFR 63.7110(a), (d), (e)
- (7) 40 CFR 63.7111
- (8) 40 CFR 63.7112
- (9) 40 CFR 63.7113
- (10) 40 CFR 63.7114
- (11) 40 CFR 63.7120
- (12) 40 CFR 63.7121
- (13) 40 CFR 63.7130
- (14) 40 CFR 63.7131
- (15) 40 CFR 63.7132
- (16) 40 CFR 63.7133
- (17) 40 CFR 63.7140

- (18) 40 CFR 63.7141
- (19) 40 CFR 63.7143
- (20) 40 CFR 63, Subpart AAAAAA, Tables 1
- (20) 40 CFR 63, Subpart AAAAAA, Tables 2
- (20) 40 CFR 63, Subpart AAAAAA, Tables 3
- (20) 40 CFR 63, Subpart AAAAAA, Tables 4
- (20) 40 CFR 63, Subpart AAAAAA, Tables 5
- (20) 40 CFR 63, Subpart AAAAAA, Tables 6
- (20) 40 CFR 63, Subpart AAAAAA, Tables 7

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
CERTIFICATION**

Source Name: Carmeuse Lime, Inc.
Source Address: 1 North Carmeuse Drive, Gary, Indiana 46406
Part 70 Permit No.: T089-41162-00112

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:

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

**PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT**

Source Name: Carmeuse Lime, Inc.
Source Address: 1 North Carmeuse Drive, Gary, Indiana 46406
Part 70 Permit No.: T089-41162-00112

This form consists of 2 pages

Page 1 of 2

- | |
|---|
| <p><input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <ul style="list-style-type: none">• 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

Page 2 of 2

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

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

Part 70 Quarterly Report

Source Name: Carmeuse Lime, Inc.
Source Address: 1 North Carmeuse Drive, Gary, Indiana 46406
Part 70 Permit No.: T089-41162-00112
Facility: Rotary kilns EU-1 through EU-5
Parameter: Lime Produced
Limit: The total amount of lime produced from rotary kilns EU-1 through EU-5 shall not exceed 821,500 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Lime Produced (tons)	Lime Produced (tons)	Lime Produced (tons)
	This Month	Previous 11 Months	12 Month Total

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

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Carmeuse Lime, Inc.
Source Address: 1 North Carmeuse Drive, Gary, Indiana 46406
Part 70 Permit No.: T089-41162-00112

Months: _____ to _____ Year: _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B - Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C- General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attachment A

Part 70 Operating Permit No: 089-41162-00112 Fugitive Dust Control Plan

Carmeuse Lime, Inc.
1 North Carmeuse Drive
Gary, Indiana 46406

1.0 IMPLEMENTATION

- 1.1 All procedures described in this document will be implemented as defined within 326 IAC 6.8-10-4. Any circumstances delaying or modifying the application of any part of the program will require notification of the appropriate individuals listed under the personnel responsibilities.
- 1.2 The enclosed Daily Treatment Log, included at the end of the fugitive dust plan, or a similar record containing the information contained thereon will be completed under the supervision of the General Foreman.

2.0 COMPLIANCE DETERMINATION

- 2.1 The plant supervisory personnel will review on a daily basis the plant areas that are subject to fugitive dust control needs and/or actions. Comments of daily reviews will be included as necessary on the Daily Treatment Log Sheet.
- 2.2 Review of record keeping information.
- 2.3 Submit to the Indiana Department of Environmental Management a performance report on a quarterly basis identifying the dates and the number of times when specified control measures were not implemented as required.

3.0 FACILITY DESCRIPTION

The Buffington plant utilizes limestone as a feedstock which is fired in rotary kilns to produce lime products.

4.0 LOADING or UNLOADING of OPEN STOCKPILES and BULK MATERIALS

4.1 Transportation of Bulk Materials

4.1.1 Limestone

Limestone is crushed, sized, and washed prior to shipment to the Buffington plant. Consequently, the amount of material less than 200 mesh (silt content) is less than 1%. This factor, in addition to the material containing approximately 3% moisture as received, helps eliminate fugitive emissions from occurring during bulk material transfer operations.

The limestone is shipped to the Buffington plant by lake boats. The lake boats are unloaded using adjustable height conveyors to minimize the drop distance of the stone thereby minimizing fugitive dust emissions. Moisture content causes aggregation of the less than 200 mesh material to the surface of the larger particles.

Any significant rainfall soaks the interior of the limestone stockpiles and drying is

a very slow process. Conveyors and front-end loaders are used for both the loading and unloading of limestone from the stockpiles. Approximate annual throughput for the stockpiles is 1,800,000 tons.

4.1.2 Kiln Fuel (solid)

Fuel is received by truck and unloaded directly to the stockpile or to the below-grade hopper. A front-end loader moves the fuel to the aforementioned below-grade hopper.

The fuel silt content is approximately 5% by weight. This factor, in addition to the fuel having moisture content of approximately 9.5% as received, helps eliminate fugitive emissions from occurring during fuel transfer operations.

Any significant rainfall soaks the interior of the fuel stockpiles and drying is a very slow process. Approximate annual throughput for the stockpiles is 250,000 tons.

4.2 Transportation of Bulk Lime and Kiln By-Product

Both these materials are transported from the facility in haul trucks and rail cars which are not the property of Carmeuse Lime, Inc.. Open bed trucks are required to be equipped with tarpaulins which cover the bed of the truck. Covering of the bed of the truck is performed by the respective truck operator prior to exiting the plant.

In addition to the open bodied haul trucks and rail cars, blower type trucks are used to haul lime and kiln by-product from the Buffington plant. Since these truck types are completely enclosed no tarpaulin covers are required.

Rail cars and trucks are loaded in the loadout areas, which are equipped with telescoping spouts that are lowered over the rail cars and trucks. The spouts are vented to a dust collector that filters the displaced air/dust from the rail cars and trucks as the material is loaded.

Cleaning of the wheels and bodies of the trucks is the responsibility of each truck operator. It is also the responsibility of the truck operator to maintain the body of the truck in good condition to ensure that material does not leak out during shipment. Truck wheel and body cleaning takes place at the loadout areas or at hatch stations.

The loadout area housekeeping and maintenance is a designated responsibility of the individual operator for each shift. The plant supervisor will ensure that the housekeeping procedures are followed.

The plant speed limit is 8 mph and it is strictly enforced as both a safety and fugitive dust control.

4.3 Outdoor Conveying

Material flow diagrams identifying existing control equipment for all processing lines are shown in Appendices D, E, F, and G.

4.3.1 Limestone

Limestone is transferred by either gravimetric feed or front-end loader to a below-grade hopper. The hopper feeds a covered conveyor system which transfers the

limestone to enclosed storage silos. The moisture content of the limestone makes venting of the conveyor transfer points unnecessary.

4.3.2 Lime

Transfer of lime product is by covered conveyor systems. Conveyor transfer points control particulate fugitive emissions via dust collectors.

4.3.3 Material Collected by Kiln Baghouses

Materials from Kilns No. 1, 2, and 3 are pneumatically conveyed to an enclosed storage bin. Materials from Kilns No. 4 and 5 are transferred by enclosed screw conveyors and enclosed bucket elevators to an enclosed storage bin. Storage bins are equipped with dust collectors.

4.3.4 Kiln Fuel (solid)

Fuel is transferred by either gravimetric feed or front-end loader to a below-grade hopper. The hopper feeds a covered conveyor system which transfers the fuel to an enclosed storage silo. The moisture content of the fuel makes venting of the conveyor transfer points unnecessary.

4.4 Paved Roads and Parking Areas

Primary roadways and parking areas at the Buffington plant are paved.

The primary roadway and parking areas that are used by vehicles traveling in the plant are indicated on the enclosed plant drawing 83BF01 (See Appendix B).

4.4.1 Listing of Roadway Segments (All distances are approximate):

4.4.1.1 Plant Entry Segment – Seven hundred ninety (790) feet long and thirty (30) feet wide. Distance is from the entry onto plant property to the junction of the plant loop road.

4.4.1.2 Plant Loop Segment – One thousand seven hundred forty (1,740) feet long and twenty-five (25) feet wide, including the roadway route under the west product loadout area.

4.4.1.3 Under Kiln Segment – Two hundred fifty (250) feet long and twenty-five (25) feet wide.

4.4.1.4 Employee Parking Entry Road and Parking Lot Segment – Two hundred fifty five (255) feet long and twenty feet wide. The parking lot is three hundred ninety (390) feet long and two hundred seventy (270) feet wide.

4.4.1.5 Service Building Parking Lot Segment – One hundred seventy (170) feet long and forty two (42) feet wide.

4.4.1.6 East Product Loadout Segment – Four hundred eighty (480) feet long and twenty (20) feet wide.

4.4.1.7 Center Bay Loadout Segment – One hundred twenty (120) feet long and twenty (20) feet wide.

4.4.2 Vehicle Traffic Volume

The traffic volume on the plant roadways varies directly with lime production rates.

Approximate vehicular traffic volumes and mileage are estimated as follows:

Material Shipped	Vehicle Type	Number of Vehicle Trips per Year	Annual Vehicle Miles on Site
Lime	Trucks	23,010	11,505
Envirolime	Trucks	2,640	1,320
-	Plant Vehicles	1,095	1,083
-	Employee Vehicles	24,455	3,000

4.4.3 Control Action -The active paved roadways will be watered and/or swept as needed except as specified in AP-42 (Chapter 13.2.2) on those days when precipitation exceeds 0.1 inch, or on those days when the ambient temperature is at or below the freezing point (32°F).

4.5 Unpaved Roads

4.5.1 Segment to Dockside Limestone Unload Location – This unpaved roadway is approximately one thousand four hundred (1,400) feet long and twenty (20) feet wide. The road is typically used once a day by a front-end loader traveling to the stockpile area. Occasionally, a plant pick-up truck will use the roadway.

4.5.2 Segment around limestone storage area – This unpaved roadway is approximately eight hundred forty (840) feet long and twenty (20) feet wide. Roadway length and activity fluctuates significantly with season. Use of this roadway is the same as that of the Dockside Limestone Unload Location.

4.5.3 Segment leading to and from the new scale on the southwest side of the plant from the kiln area is approximately two thousand two hundred (2200) feet long and twenty (20) feet wide.

4.5.4 Control Action – The active unpaved roadways will be watered as needed except on those days when precipitation exceeds 0.1 inch, or on those days when the ambient temperature is at or below the freezing point (32°F).

4.6 Unpaved Plant Areas

4.6.1 Area Inside the Plant Loop Paved Roadway Segment – The area beneath the kilns is approximately twelve thousand four hundred and ninety three (12,493) square feet.

4.6.2 Area North of Kiln Baghouses – This area is approximately twenty seven thousand (27,000) square feet. The area may be used for the transfer of “pugged” Envirolime and lime. Envirolime or lime is mixed with water (pugged)

and transferred to truck for transport. Procedures call for pugged flue dust (high moisture content) to be stored in piles until transportation can be obtained.

- 4.6.3 Control Action – The active unpaved roadways will be watered as needed except on those days when precipitation exceeds 0.1 inch, or on those days when the ambient temperature is at or below the freezing point (32°F).

4.7 Stockpiles

4.7.1 Limestone

The limestone stockpiles are worked by section, with the bulk of the stock remaining undisturbed. Unloading operations from the lake boats to the dock area occur on an average of once per week for 8 hours each delivery during the months of April through December.

The limestone typically retains a moisture content of approximately 3%. This moisture content effectively controls fugitive emissions from the stockpile.

The limestone stockpile is not treated with chemical surfactants for quality control reasons. High purity, very low contaminant, lime products are required by our customers.

The front-end loader used to work the stockpiles does not generate significant fugitive emissions due to the moisture content of the limestone. If conditions warrant, the water truck will be used to minimize fugitive dust generation.

4.7.2 Kiln Fuel (solid)

The fuel stockpile is generally worked by section with the bulk of the stock remaining undisturbed. If conditions warrant, the water truck will be used to minimize fugitive dust generation in this area. The fuel supplied generally has a moisture content of eight percent.

5.0 CONDITIONS WHICH WILL PREVENT CONTROL MEASURES and PRACTICES from IMPLEMENTATION

All equipment used to implement control measures identified in this plan have replacement components or substitutes that can be employed within a reasonable time frame.

6.0 FUGITIVE DUST EMISSIONS OBSERVATIONS

Observations will be made on a monthly basis of the following activities:

6.1 Vehicle Traffic

- 6.1.1 Emissions from vehicle traffic will be observed at one paved road and one unpaved road.
- 6.1.2 The average instantaneous opacity of fugitive particulate emissions from paved and unpaved roads shall not exceed ten percent (10%). The average instantaneous opacity shall be the average of twelve (12) instantaneous opacity readings, taken for four (4) vehicle passes, consisting of three (3) opacity readings for each vehicle pass. The three (3) opacity readings for each vehicle pass shall be taken as follows:

- (A) The first shall be taken at the time of emission generation.
- (B) The second shall be taken five (5) seconds later.
- (C) The third shall be taken five (5) seconds later or ten (10) seconds after the first.

The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand approximately fifteen (15) feet from the plume and at approximately right angles to the plume. Each reading shall be taken approximately four (4) feet above the surface of the roadway or parking area.

6.2 Batch Transfer of Materials into Storage Piles.

- 6.2.1 Emissions from transferring material into one storage pile will be observed.
- 6.2.2 The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%). The average instantaneous opacity shall consist of the average of three (3) opacity readings taken five (5) seconds, ten (10) seconds, and fifteen (15) seconds after the end of one (1) batch loading or unloading operation. The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand approximately fifteen (15) feet from the plume and at approximately right angles to the plume.

6.3 Wind Erosion

- 6.3.1 Emissions from wind erosion at the high-calcium limestone and dolomitic limestone storage piles and the lime kiln dust (LKD) storage piles will be observed.
- 6.3.2 Emissions from wind erosion will be observed.
- 6.3.3 The opacity due to wind erosion from these storage piles and exposed areas shall be determined using 40 CFR 60, Appendix A, Method 9, except that the opacity shall be observed at approximately four (4) feet from the surface at the point of maximum opacity. The observer shall stand approximately fifteen (15) feet from the plume and at approximately right angles to the plume. The opacity of fugitive particulate emissions from exposed areas shall not exceed ten percent (10%) on a six (6) minute average.

6.4 In-plant Transportation by Mobile Equipment

- 6.4.1 Emissions from traffic of one (1) front end loader and one (1) skip hoist will be observed.
- 6.4.2 The opacity of fugitive particulate emissions from the in-plant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%). Compliance with this limitation shall be determined by the average of three (3) opacity readings taken at five (5) second intervals. The three (3) opacity readings shall be taken as follows:
 - (A) The first shall be taken at the time of emission generation.
 - (B) The second shall be taken five (5) seconds later.
 - (C) The third shall be taken five (5) seconds later or ten (10) seconds after

the first.

The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand at least fifteen (15) feet from the plume approximately and at right angles to the plume. Each reading shall be taken approximately four (4) feet above the surface of the roadway or parking area.

6.5 In-plant Transportation of Materials

- 6.5.1 Material transported by truck or rail that is enclosed and covered is considered in compliance with the in-plant transportation requirement of zero (0) percent opacity.

Appendix A

DAILY TREATMENT LOG

Item / Day of Week	SUN	MON	TUE	WED	THU	FRI	SAT	Comments
Date (XX/XX/XX):								
# of Gallons Applied:								
Application Rate (1):								
Method of Application (2):								
Treatment Area - Paved Roads								
Plant Entry Segment								
Plant Loop Segment								
Under Kilns Segment								
Employee Parking Segment								
Service Building Lot Segment								
East Product Loadout Segment								
Center Bay Loadout Area								
West Loadout Area								
Treatment Area - Unpaved Roads								
Segment to Dockside Limestone Pile								
Segment Around East Limestone Pile								
Treatment Area - Other Unpaved Roads								
Area Inside Plant Loop Paved Roadway								
Area North of Kiln Baghouses								
Railroad Tracks								
Other								
Weather Conditions								
C = Clear; S = Snow; R = Rain; L = Sleet/Hail; O = Overcast								
Wind Speed (mph)								
Wind Direction								
Temperature (deg F)								

(1) Application Rate: H = Heavy, M = Medium; L = Light;

(2) Method of Application: W = Water Truck, N = Not Necessary (wet/snow cover), U = Operator Unavailable

Attachment B

Part 70 Operating Permit No: 089-41162-00112

[Downloaded from the eCFR on March 29, 2023]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart JJJJ—Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

SOURCE: 73 FR 3591, Jan. 18, 2008, unless otherwise noted.

What This Subpart Covers

§ 60.4230 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (6) 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 SI ICE with a maximum engine power less than or equal to 19 kilowatt (KW) (25 horsepower (HP)) that are manufactured on or after July 1, 2008.

(2) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are gasoline fueled or that are rich burn engines fueled by liquefied petroleum gas (LPG), where the date of manufacture is:

(i) On or after July 1, 2008; or

(ii) On or after January 1, 2009, for emergency engines.

(3) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are not gasoline fueled and are not rich burn engines fueled by LPG, where the manufacturer participates in the voluntary manufacturer certification program described in this subpart and where the date of manufacture is:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) On or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;

(iii) On or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) On or after January 1, 2009, for emergency engines.

(4) Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) on or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;

(iii) on or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).

(5) Owners and operators of stationary SI ICE that are modified or reconstructed after June 12, 2006, and any person that modifies or reconstructs any stationary SI ICE after June 12, 2006.

(6) The provisions of § 60.4236 of this subpart are applicable to all owners and operators of stationary SI ICE that commence construction after June 12, 2006.

(b) The provisions of this subpart are not applicable to stationary SI ICE being tested at an engine 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 as applicable.

(d) For the purposes of this subpart, stationary SI ICE using alcohol-based fuels are considered gasoline engines.

(e) Stationary SI 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 parts 1048 and 1054, 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.

(f) Owners and operators of facilities with internal combustion engines 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.

[73 FR 3591, Jan. 18, 2008, as amended at 76 FR 37972, June 28, 2011; 86 FR 34360, June 29, 2021]

Emission Standards for Manufacturers

§ 60.4231 What emission standards must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing such engines?

(a) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008 to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1054, as follows:

If engine displacement is . . .	and manufacturing dates are . . .	the engine must meet the following non-handheld emission standards identified in 40 CFR part 1054 and related requirements:
(1) Below 225 cc	July 1, 2008 to December 31, 2011	Phase 2.
(2) Below 225 cc	January 1, 2012 or later	Phase 3.
(3) At or above 225 cc	July 1, 2008 to December 31, 2010	Phase 2.
(4) At or above 225 cc	January 1, 2011 or later	Phase 3.

(b) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) (except emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) that use gasoline and that are manufactured on or after the applicable date in § 60.4230(a)(2), or manufactured on or after the applicable date in § 60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE with a maximum engine power greater than 25 HP and less than 130 HP that use gasoline and that are manufactured on or after the applicable date in § 60.4230(a)(4) to the Phase 1 emission standards in 40 CFR part 1054, appendix I, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 1054. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cubic centimeters (cc) that use gasoline to the certification emission standards and other requirements as appropriate for new nonroad SI engines in 40 CFR part 1054.

(c) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) (except emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) that are rich burn engines that use LPG and that are manufactured on or after the applicable date in § 60.4230(a)(2), or manufactured on or after the applicable date in § 60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE greater than 25 HP and less than 130 HP that are rich burn engines that use LPG and that are manufactured on or after the applicable date in § 60.4230(a)(4) to the Phase 1 emission standards in 40 CFR part 1054, appendix I, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 1054. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc that are rich burn engines that use LPG to the certification emission standards and other requirements as appropriate for new nonroad SI engines in 40 CFR part 1054.

(d) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG and emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) under the voluntary manufacturer certification program described in this subpart must certify those engines to the certification emission standards for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers who choose to certify their emergency stationary SI ICE greater than 25 HP and less than 130 HP (except gasoline and rich burn engines that use LPG), must certify those engines to the Phase 1 emission standards in 40 CFR part 1054, appendix I, applicable to class II engines, for new nonroad SI engines in 40 CFR part 1054. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc (except gasoline and rich burn engines that use LPG) to the certification emission standards and other requirements as appropriate for new nonroad SI engines in 40 CFR part 1054. For stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG and emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) manufactured prior to January 1, 2011, manufacturers may choose to certify these engines to the standards in Table 1 to this subpart applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP.

(e) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) under the voluntary manufacturer certification program described in this subpart must certify those engines to the emission standards in Table 1 to this subpart. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) that are lean burn engines that use LPG to the certification emission standards for new nonroad SI engines in 40 CFR part 1048. For stationary SI ICE with a maximum engine power greater than or equal to 100 HP (75 KW) and less than 500 HP (373 KW) manufactured prior to January 1, 2011, and for stationary SI ICE with a maximum engine power greater than or equal to 500 HP (373 KW) manufactured prior to July 1, 2010, manufacturers may choose to certify these engines to the certification emission standards for new nonroad SI engines in 40 CFR part 1048 applicable to engines that are not severe duty engines.

(f) Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, to the extent they apply to equipment manufacturers.

(g) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary SI 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 SI ICE.

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59175, Oct. 8, 2008; 76 FR 37973, June 28, 2011; 78 FR 6697, Jan. 30, 2013; 86 FR 34360, June 29, 2021]

§ 60.4232 How long must my engines meet the emission standards if I am a manufacturer of stationary SI internal combustion engines?

Engines manufactured by stationary SI internal combustion engine manufacturers must meet the emission standards as required in § 60.4231 during the certified emissions life of the engines.

Emission Standards for Owners and Operators

§ 60.4233 What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?

(a) Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008, must comply with the emission standards in § 60.4231(a) for their stationary SI ICE.

(b) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in § 60.4230(a)(4) that use gasoline must comply with the emission standards in § 60.4231(b) for their stationary SI ICE.

(c) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in § 60.4230(a)(4) that are rich burn engines that use LPG must comply with the emission standards in § 60.4231(c) for their stationary SI ICE.

(d) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards for field testing in 40 CFR 1048.101(c) for their non-emergency stationary SI ICE and with the emission standards in Table 1 to this subpart for their emergency stationary SI ICE. Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) manufactured prior to January 1, 2011, that were certified to the standards in Table 1 to this subpart applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP, may optionally choose to meet those standards.

(e) Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1 to this subpart, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified.

(f) Owners and operators of any modified or reconstructed stationary SI ICE subject to this subpart must meet the requirements as specified in paragraphs (f)(1) through (5) of this section.

(1) Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with emission standards in § 60.4231(a) for their stationary SI ICE. Engines with a date of manufacture prior to July 1, 2008 must comply with the emission standards specified in § 60.4231(a) applicable to engines manufactured on July 1, 2008.

(2) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are gasoline engines and are modified or reconstructed after June 12, 2006, must comply with the emission standards in § 60.4231(b) for their stationary SI ICE. Engines with a date of manufacture prior to July 1, 2008 (or January 1, 2009 for emergency engines) must comply with the emission standards specified in § 60.4231(b) applicable to engines manufactured on July 1, 2008 (or January 1, 2009 for emergency engines).

(3) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are rich burn engines that use LPG, that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in § 60.4231(c). Engines with a date of manufacture prior to July 1, 2008 (or January 1, 2009 for emergency engines) must comply with the emission standards specified in § 60.4231(c) applicable to engines manufactured on July 1, 2008 (or January 1, 2009 for emergency engines).

(4) Owners and operators of stationary SI natural gas and lean burn LPG engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (d) or (e) of this section, except that such owners and operators of non-emergency engines and emergency engines greater than or equal to 130 HP must meet a nitrogen oxides (NO_x) emission standard of 3.0 grams per HP-hour (g/HP-hr), a CO emission standard of 4.0 g/HP-hr (5.0 g/HP-hr for non-emergency engines less than 100 HP), and a volatile organic compounds (VOC) emission standard of 1.0 g/HP-hr, or a NO_x emission standard of 250 ppmvd at 15 percent oxygen (O₂), a CO emission standard 540 ppmvd at 15 percent O₂ (675 ppmvd at 15 percent O₂ for non-emergency engines less than 100 HP), and a VOC emission standard of 86 ppmvd at 15 percent O₂, where the date of manufacture of the engine is:

(i) Prior to July 1, 2007, for non-emergency engines with a maximum engine power greater than or equal to 500 HP (except lean burn natural gas engines and LPG engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) Prior to July 1, 2008, for non-emergency engines with a maximum engine power less than 500 HP;

(iii) Prior to January 1, 2009, for emergency engines;

(iv) Prior to January 1, 2008, for non-emergency lean burn natural gas engines and LPG engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP.

(5) Owners and operators of stationary SI landfill/digester gas ICE engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (e) of this section for stationary landfill/digester gas engines. Engines with maximum engine power less than 500 HP and a date of manufacture prior to July 1, 2008 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE with a maximum engine power less than 500 HP manufactured on July 1, 2008. Engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines greater than or equal to 500 HP and less than 1,350 HP) and a date of manufacture prior to July 1, 2007 must comply with the emission standards

specified in paragraph (e) of this section for stationary landfill/digester gas ICE with a maximum engine power greater than or equal to 500 HP (except lean burn engines greater than or equal to 500 HP and less than 1,350 HP) manufactured on July 1, 2007. Lean burn engines greater than or equal to 500 HP and less than 1,350 HP with a date of manufacture prior to January 1, 2008 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE that are lean burn engines greater than or equal to 500 HP and less than 1,350 HP and manufactured on January 1, 2008.

(g) Owners and operators of stationary SI wellhead gas ICE engines may petition the Administrator for approval on a case-by-case basis to meet emission standards no less stringent than the emission standards that apply to stationary emergency SI engines greater than 25 HP and less than 130 HP due to the presence of high sulfur levels in the fuel, as specified in Table 1 to this subpart. The request must, at a minimum, demonstrate that the fuel has high sulfur levels that prevent the use of aftertreatment controls and also that the owner has reasonably made all attempts possible to obtain an engine that will meet the standards without the use of aftertreatment controls. The petition must request the most stringent standards reasonably applicable to the engine using the fuel.

(h) Owners and operators of stationary SI ICE that are required to meet standards that reference 40 CFR 1048.101 must, if testing their engines in use, meet the standards in that section applicable to field testing, except as indicated in paragraph (e) of this section.

[73 FR 3591, Jan. 18, 2008, as amended at 76 FR 37973, June 28, 2011]

§ 60.4234 How long must I meet the emission standards if I am an owner or operator of a stationary SI internal combustion engine?

Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in § 60.4233 over the entire life of the engine.

Other Requirements for Owners and Operators

§ 60.4235 What fuel requirements must I meet if I am an owner or operator of a stationary SI gasoline fired internal combustion engine subject to this subpart?

Owners and operators of stationary SI ICE subject to this subpart that use gasoline must use gasoline that meets the per gallon sulfur limit in 40 CFR 1090.205.

[73 FR 3591, Jan. 18, 2008, as amended at 85 FR 78463, Dec. 4, 2020]

§ 60.4236 What is the deadline for importing or installing stationary SI ICE produced in previous model years?

(a) After July 1, 2010, owners and operators may not install stationary SI ICE with a maximum engine power of less than 500 HP that do not meet the applicable requirements in § 60.4233.

(b) After July 1, 2009, owners and operators may not install stationary SI ICE with a maximum engine power of greater than or equal to 500 HP that do not meet the applicable requirements in § 60.4233, except that lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP that do not meet the applicable requirements in § 60.4233 may not be installed after January 1, 2010.

(c) For emergency stationary SI ICE with a maximum engine power of greater than 19 KW (25 HP), owners and operators may not install engines that do not meet the applicable requirements in § 60.4233 after January 1, 2011.

(d) In addition to the requirements specified in §§ 60.4231 and 60.4233, it is prohibited to import stationary SI ICE less than or equal to 19 KW (25 HP), stationary rich burn LPG SI ICE, and stationary gasoline SI ICE that do not meet the applicable requirements specified in paragraphs (a), (b), and (c) of this section, after the date specified in paragraph (a), (b), and (c) of this section.

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

§ 60.4237 What are the monitoring requirements if I am an owner or operator of an emergency stationary SI internal combustion engine?

(a) Starting on July 1, 2010, if the emergency stationary SI internal combustion engine that is greater than or equal to 500 HP that was built on or after July 1, 2010, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

(b) Starting on January 1, 2011, if the emergency stationary SI internal combustion engine that is greater than or equal to 130 HP and less than 500 HP that was built on or after January 1, 2011, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

(c) If you are an owner or operator of an emergency stationary SI internal combustion engine that is less than 130 HP, was built on or after July 1, 2008, and does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter upon startup of your emergency engine.

Compliance Requirements for Manufacturers

§ 60.4238 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines ≤19 KW (25 HP) or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in § 60.4231(a) must certify their stationary SI ICE using the certification and testing procedures required in 40 CFR part 1054, subparts C and F. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[86 FR 34361, June 29, 2021]

§ 60.4239 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines >19 KW (25 HP) that use gasoline or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in § 60.4231(b) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must test their engines as specified in that part. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1054, and manufacturers of stationary SI emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 emission standards in 40 CFR part 1054, appendix I, applicable to class II engines, must certify their stationary SI ICE using the certification and testing procedures required in 40 CFR part 1054, subparts C and F. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[86 FR 34361, June 29, 2021]

§ 60.4240 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines >19 KW (25 HP) that are rich burn engines that use LPG or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in § 60.4231(c) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must test their engines as specified in that part. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements

for new nonroad SI engines in 40 CFR part 1054, and manufacturers of stationary SI emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 emission standards in 40 CFR part 1054, appendix I, applicable to class II engines, must certify their stationary SI ICE using the certification and testing procedures required in 40 CFR part 1054, subparts C and F. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[86 FR 34361, June 29, 2021]

§ 60.4241 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines participating in the voluntary certification program or a manufacturer of equipment containing such engines?

(a) Manufacturers of stationary SI internal combustion engines with a maximum engine power greater than 19 KW (25 HP) that do not use gasoline and are not rich burn engines that use LPG can choose to certify their engines to the emission standards in § 60.4231(d) or (e), as applicable, under the voluntary certification program described in this subpart. Manufacturers who certify their engines under the voluntary certification program must meet the requirements as specified in paragraphs (b) through (g) of this section. In addition, manufacturers of stationary SI internal combustion engines who choose to certify their engines under the voluntary certification program, must also meet the requirements as specified in § 60.4247. Manufacturers of stationary SI internal combustion engines who choose not to certify their engines under this section must notify the ultimate purchaser that testing requirements apply as described in § 60.4243(b)(2); manufacturers must keep a copy of this notification for five years after shipping each engine and make those documents available to EPA upon request.

(b) Manufacturers of engines other than those certified to standards in 40 CFR part 1054 must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must follow the same test procedures that apply to Large SI nonroad engines under 40 CFR part 1048, but must use the D-1 cycle of International Organization for Standardization 8178-4: 1996(E) (incorporated by reference, see § 60.17) or the test cycle requirements specified in Table 3 to 40 CFR 1048.505, except that Table 3 of 40 CFR 1048.505 applies to high load engines only. Manufacturers of any size may certify their stationary emergency engines at or above 130 hp using assigned deterioration factors established by EPA, consistent with 40 CFR 1048.240. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1054, and manufacturers of emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 standards in 40 CFR part 1054, appendix I, applicable to class II engines, must certify their stationary SI ICE using the certification and testing procedures required in 40 CFR part 1054, subparts C and F. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

(c) Certification of stationary SI ICE to the emission standards specified in § 60.4231(d) or (e), as applicable, is voluntary, but manufacturers who decide to certify are subject to all of the requirements indicated in this subpart with regard to the engines included in their certification. Manufacturers must clearly label their stationary SI engines as certified or non-certified engines.

(d) Manufacturers of natural gas fired stationary SI ICE who conduct voluntary certification of stationary SI ICE to the emission standards specified in § 60.4231(d) or (e), as applicable, must certify their engines for operation using fuel that meets the definition of pipeline-quality natural gas. The fuel used for certifying stationary SI natural gas engines must meet the definition of pipeline-quality natural gas as described in § 60.4248. In addition, the manufacturer must provide information to the owner and operator of the certified stationary SI engine including the specifications of the pipeline-quality natural gas to which the engine is certified and what adjustments the owner or operator must make to the engine when installed in the field to ensure compliance with the emission standards.

(e) Manufacturers of stationary SI ICE that are lean burn engines fueled by LPG who conduct voluntary certification of stationary SI ICE to the emission standards specified in § 60.4231(d) or (e), as applicable, must certify their engines for operation using fuel that meets the specifications in 40 CFR 1065.720.

(f) Manufacturers may certify their engines for operation using gaseous fuels in addition to pipeline-quality natural gas; however, the manufacturer must specify the properties of that fuel and provide testing information showing

that the engine will meet the emission standards specified in § 60.4231(d) or (e), as applicable, when operating on that fuel. The manufacturer must also provide instructions for configuring the stationary engine to meet the emission standards on fuels that do not meet the pipeline-quality natural gas definition. The manufacturer must also provide information to the owner and operator of the certified stationary SI engine regarding the configuration that is most conducive to reduced emissions where the engine will be operated on gaseous fuels with different quality than the fuel that it was certified to.

(g) A stationary SI engine manufacturer may certify an engine family solely to the standards applicable to landfill/digester gas engines as specified in § 60.4231(d) or (e), as applicable, but must certify their engines for operation using landfill/digester gas and must add a permanent label stating that the engine is for use only in landfill/digester gas applications. The label must be added according to the labeling requirements specified in 40 CFR 1048.135(b).

(h) For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

(i) For engines being certified to the voluntary certification standards in Table 1 of this subpart, the VOC measurement shall be made by following the procedures in 40 CFR part 1065, subpart C, to determine the total NMHC emissions. As an alternative, manufacturers may measure ethane, as well as methane, for excluding such levels from the total VOC measurement.

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59176, Oct. 8, 2008; 76 FR 37974, June 28, 2011; 86 FR 34361, June 29, 2021]

§ 60.4242 What other requirements must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing stationary SI internal combustion engines or a manufacturer of equipment containing such engines?

(a) Stationary SI internal combustion engine manufacturers must meet the provisions of 40 CFR parts 1048, 1054, and 1068, as applicable, except that engines certified pursuant to the voluntary certification procedures in § 60.4241 are subject only to the provisions indicated in § 60.4247 and are permitted to provide instructions to owners and operators allowing for deviations from certified configurations, if such deviations are consistent with the provisions of § 60.4241(c) through (f). Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, as applicable. Labels on engines certified to 40 CFR part 1048 must refer to stationary engines, rather than or in addition to nonroad engines, as appropriate.

(b) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards identified in 40 CFR part 1048 or 1054 for that model year may certify any such family that contains both nonroad 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. This paragraph (b) also applies to equipment or component manufacturers certifying to standards under 40 CFR part 1060.

(c) Manufacturers of engine families certified to 40 CFR part 1048 may meet the labeling requirements referred to in paragraph (a) of this section for stationary SI ICE by either adding a separate label containing the information required in paragraph (a) of this section or by adding the words "and stationary" after the word "nonroad" to the label.

(d) For all engines manufactured on or after January 1, 2011, and for all engines with a maximum engine power greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, a stationary SI engine manufacturer that certifies an engine family solely to the standards applicable to emergency engines must add a permanent label stating that the engines in that family are for emergency use only. The label must be added according to the labeling requirements specified in 40 CFR 1048.135(b).

(e) All stationary SI engines subject to mandatory certification that do not meet the requirements of this subpart must be labeled and exported according to 40 CFR 1068.230. Manufacturers of stationary engines with a maximum engine power greater than 25 HP that are not certified to standards and other requirements under 40 CFR part 1048 are subject to the labeling provisions of 40 CFR 1048.20 pertaining to excluded stationary engines.

(f) For manufacturers of gaseous-fueled stationary engines required to meet the warranty provisions in 40 CFR 1054.120, we may establish an hour-based warranty period equal to at least the certified emissions life of the engines (in engine operating hours) if we determine that these engines are likely to operate for a number of hours greater than the applicable useful life within 24 months. We will not approve an alternate warranty under this paragraph (f) for nonroad engines. An alternate warranty period approved under this paragraph (f) will be the specified number of engine operating hours or two years, whichever comes first. The engine manufacturer shall request this alternate warranty period in its application for certification or in an earlier submission. We may approve an alternate warranty period for an engine family subject to the following conditions:

- (1) The engines must be equipped with non-resettable hour meters.
- (2) The engines must be designed to operate for a number of hours substantially greater than the applicable certified emissions life.
- (3) The emission-related warranty for the engines may not be shorter than any published warranty offered by the manufacturer without charge for the engines. Similarly, the emission-related warranty for any component shall not be shorter than any published warranty offered by the manufacturer without charge for that component.

[86 FR 34362, June 29, 2021]

Compliance Requirements for Owners and Operators

§ 60.4243 What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?

(a) If you are an owner or operator of a stationary SI internal combustion engine that is manufactured after July 1, 2008, and must comply with the emission standards specified in § 60.4233(a) through (c), you must comply by purchasing an engine certified to the emission standards in § 60.4231(a) through (c), as applicable, for the same engine class and maximum engine power. In addition, you must meet one of the requirements specified in (a)(1) and (2) of this section.

(1) If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator. You must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to you. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance.

(2) If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, your engine will be considered a non-certified engine, and you must demonstrate compliance according to (a)(2)(i) through (iii) of this section, as appropriate.

(i) If you are an owner or operator of a stationary SI internal combustion engine 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, but no performance testing is required if you are an owner or operator.

(ii) If you are an owner or operator of a stationary SI 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 within 1 year of engine startup to demonstrate compliance.

(iii) If you are an owner or operator of a stationary SI 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 within 1 year of engine startup and

conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(b) If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in § 60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section.

(1) Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in paragraph (a) of this section.

(2) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in § 60.4233(d) or (e) and according to the requirements specified in § 60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section.

(i) If you are an owner or operator of a stationary SI internal combustion engine greater than 25 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.

(ii) If you are an owner or operator of a stationary SI 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 and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(c) If you are an owner or operator of a stationary SI internal combustion engine that must comply with the emission standards specified in § 60.4233(f), you must demonstrate compliance according paragraph (b)(2)(i) or (ii) of this section, except that if you comply according to paragraph (b)(2)(i) of this section, you demonstrate that your non-certified engine complies with the emission standards specified in § 60.4233(f).

(d) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (d)(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, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (d)(1) through (3), is prohibited. If you do not operate the engine according to the requirements in paragraphs (d)(1) through (3), 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 the purpose specified in paragraph (d)(2)(i) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (d)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (d)(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)-(iii) [Reserved]

(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 provided in paragraph (d)(2) of this section. Except as provided in paragraph (d)(3)(i) 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) 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]

(e) Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of § 60.4233.

(f) If you are an owner or operator of a stationary SI internal combustion engine that is less than or equal to 500 HP and you purchase a non-certified engine or you do not operate and maintain your certified stationary SI internal combustion engine and control device according to the manufacturer's written emission-related instructions, you are required to perform initial performance testing as indicated in this section, but you are not required to conduct subsequent performance testing unless the stationary engine undergoes rebuild, major repair or maintenance. Engine rebuilding means to overhaul an engine or to otherwise perform extensive service on the engine (or on a portion of the engine or engine system). For the purpose of this paragraph (f), perform extensive service means to disassemble the engine (or portion of the engine or engine system), inspect and/or replace many of the parts, and reassemble the engine (or portion of the engine or engine system) in such a manner that significantly increases the service life of the resultant engine.

(g) It is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.

(h) If you are an owner/operator of an stationary SI internal combustion engine with maximum engine power greater than or equal to 500 HP that is manufactured after July 1, 2007 and before July 1, 2008, and must comply with the emission standards specified in sections 60.4233(b) or (c), you must comply by one of the methods specified in paragraphs (h)(1) through (h)(4) of this section.

(1) Purchasing an engine certified according to 40 CFR part 1048. 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.

(i) If you are an owner or operator of a modified or reconstructed stationary SI internal combustion engine and must comply with the emission standards specified in § 60.4233(f), you must demonstrate compliance according to one of the methods specified in paragraphs (i)(1) or (2) of this section.

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in § 60.4233(f), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in § 60.4244. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

[73 FR 3591, Jan. 18, 2008, as amended at 76 FR 37974, June 28, 2011; 78 FR 6697, Jan. 30, 2013; 86 FR 34362, June 29, 2021; 87 FR 48606, Aug. 10, 2022]

Testing Requirements for Owners and Operators

§ 60.4244 What test methods and other procedures must I use if I am an owner or operator of a stationary SI internal combustion engine?

Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this section.

(a) Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in § 60.8 and under the specific conditions that are specified by Table 2 to this subpart.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in § 60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.

(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 be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

(d) To determine compliance with the NO_x mass per unit output emission limitation, convert the concentration of NO_x in the engine exhaust using Equation 1 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \quad (Eq. 1)$$

Where:

ER = Emission rate of NO_x in g/HP-hr.

C_d = Measured NO_x concentration in parts per million by volume (ppmv).

1.912×10^{-3} = Conversion constant for ppm NO_x to grams per standard cubic meter at 20 degrees Celsius.

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

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

(e) To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 2})$$

Where:

ER = Emission rate of CO in g/HP-hr.

C_d = Measured CO concentration in ppmv.

1.164×10^{-3} = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(f) For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 3})$$

Where:

ER = Emission rate of VOC in g/HP-hr.

C_d = VOC concentration measured as propane in ppmv.

1.833×10^{-3} = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(g) If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_i = \frac{C_{Mi}}{C_{Ai}} \quad (\text{Eq. 4})$$

Where:

RF_i = Response factor of compound i when measured with EPA Method 25A.

C_{Mi} = Measured concentration of compound i in ppmv as carbon.

C_{Ai} = True concentration of compound i in ppmv as carbon.

$$C_{i\text{corr}} = RF_i \times C_{i\text{meas}} \quad (\text{Eq. 5})$$

Where:

$C_{i\text{corr}}$ = Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

$C_{i\text{meas}}$ = Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{\text{Peq}} = 0.6098 \times C_{i\text{corr}} \quad (\text{Eq. 6})$$

Where:

C_{Peq} = Concentration of compound i in mg of propane equivalent per DSCM.

Notification, Reports, and Records for Owners and Operators

§ 60.4245 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?

Owners or operators of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements.

(a) Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.

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

(2) Maintenance conducted on the engine.

(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 1048, 1054, and 1060, as applicable.

(4) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to § 60.4243(a)(2), documentation that the engine meets the emission standards.

(b) For all stationary SI emergency ICE greater than or equal to 500 HP manufactured on or after July 1, 2010, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of 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.

(c) Owners and operators of stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in § 60.4231 must submit an initial notification as required in § 60.7(a)(1). The notification must include the information in paragraphs (c)(1) through (5) of this section.

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

(2) The address of the affected source;

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

(4) Emission control equipment; and

(5) Fuel used.

(d) Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in § 60.4244 within 60 days after the test has been completed. Performance test reports using EPA Method 18, EPA Method 320, or ASTM D6348-03 (incorporated by reference - see 40 CFR 60.17) to measure VOC require reporting of all QA/QC data. For Method 18, report results from sections 8.4 and 11.1.1.4; for Method 320, report results from sections 8.6.2, 9.0, and 13.0; and for ASTM D6348-03 report results of all QA/QC procedures in Annexes 1-7.

(e) If you own or operate an emergency stationary SI ICE with a maximum engine power more than 100 HP that operates for the purpose specified in § 60.4243(d)(3)(i), you must submit an annual report according to the requirements in paragraphs (e)(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)-(vi) [Reserved]

(vii) Hours spent for operation for the purposes specified in § 60.4243(d)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in § 60.4243(d)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in § 60.4.

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59177, Oct. 8, 2008; 78 FR 6697, Jan. 30, 2013; 81 FR 59809, Aug. 30, 2016; 86 FR 34362, June 29, 2021; 87 FR 48606, Aug. 10, 2022]

General Provisions

§ 60.4246 What General Provisions and confidential information provisions apply to me?

(a) Table 3 to this subpart shows which parts of the General Provisions in §§ 60.1 through 60.19 apply to you.

(b) The provisions of 40 CFR 1068.10 and 1068.11 apply for engine manufacturers. For others, the general confidential business information (CBI) provisions apply as described in 40 CFR part 2.

[88 FR 4471, Jan. 24, 2023]

Mobile Source Provisions

§ 60.4247 What parts of the mobile source provisions apply to me if I am a manufacturer of stationary SI internal combustion engines or a manufacturer of equipment containing such engines?

(a) Manufacturers certifying to emission standards in 40 CFR part 1054 must meet the provisions of 40 CFR part 1054. Note that 40 CFR part 1054, appendix I, describes various provisions that do not apply for engines meeting Phase 1 standards in 40 CFR part 1054. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060 to the extent they apply to equipment manufacturers.

(b) Manufacturers required to certify to emission standards in 40 CFR part 1048 must meet the provisions of 40 CFR part 1048. Manufacturers certifying to emission standards in 40 CFR part 1048 pursuant to the voluntary certification program must meet the requirements in Table 4 to this subpart as well as the standards in 40 CFR 1048.101.

(c) For manufacturers of stationary SI internal combustion engines participating in the voluntary certification program and certifying engines to Table 1 to this subpart, Table 4 to this subpart shows which parts of the mobile source provisions in 40 CFR parts 1048, 1065, and 1068 apply to you. Compliance with the deterioration factor provisions under 40 CFR 1048.205(n) and 1048.240 will be required for engines built new on and after January 1, 2010. Prior to January 1, 2010, manufacturers of stationary internal combustion engines participating in the voluntary certification program have the option to develop their own deterioration factors based on an engineering analysis.

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59177, Oct. 8, 2008; 86 FR 34362, June 29, 2021]

Definitions

§ 60.4248 What definitions apply to this subpart?

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

Certified emissions life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) are given in 40 CFR 1054.107 and 1060.101, as appropriate. The values for certified emissions life for stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) certified to 40 CFR part 1048 are given in 40 CFR 1048.101(g). The certified emissions life for stationary SI ICE with a maximum engine power greater than 75 KW (100 HP) certified under the voluntary manufacturer certification program of this subpart is 5,000 hours or 7 years, whichever comes first. You may request in your application for certification that we approve a shorter certified emissions life for an engine family. We may approve a shorter certified emissions life, in hours of engine operation but not in years, if we determine that these engines will rarely operate longer than the shorter certified emissions life. If engines identical to those in the engine family have already been produced and are in use, your demonstration must include documentation from such in-use engines. In other cases, your demonstration must include an engineering analysis of information equivalent to such in-use data, such as data from research engines or similar engine models that are already in production. Your demonstration must also include any overhaul interval that you recommend, any mechanical warranty that you offer for the engine or its components, and any relevant customer design specifications. Your demonstration may include any other relevant information. The certified emissions life value may not be shorter than any of the following:

- (1) 1,000 hours of operation.
- (2) Your recommended overhaul interval.
- (3) Your mechanical warranty for the engine.

Certified stationary internal combustion engine means an engine that belongs to an engine family that has a certificate of conformity that complies with the emission standards and requirements in this part, or of 40 CFR part 1048 or 1054, as appropriate.

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.

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 carbon dioxide (CO₂).

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 § 60.4243(d) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in § 60.4243(d), 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 § 60.4243(d).

(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 § 60.4243(d)(3)(i).

Engine manufacturer means the manufacturer of the engine. See the definition of “manufacturer” in this section.

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.

Freshly manufactured engine means an engine that has not been placed into service. An engine becomes freshly manufactured when it is originally produced.

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.

Installed means the engine is placed and secured at the location where it is intended to be operated.

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.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining or natural gas production.

Manufacturer has the meaning given in section 216(1) of the Clean Air 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 resale.

Maximum engine power means maximum engine power as defined in 40 CFR 1048.801.

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”).

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.

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.

Pipeline-quality natural gas means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions, and which is provided by a supplier through a pipeline. Pipeline-quality natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1,100 British thermal units per standard cubic foot.

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 June 12, 2006, with passive emission control technology for NO_x (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

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 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 compression ignition 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.

Stationary internal combustion engine test cell/stand means an engine test cell/stand, as defined in 40 CFR part 63, subpart P, that tests stationary ICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Subpart means 40 CFR part 60, subpart JJJJ.

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.

Volatile organic compounds means volatile organic compounds as defined in 40 CFR 51.100(s).

Voluntary certification program means an optional engine certification program that manufacturers of stationary SI internal combustion engines with a maximum engine power greater than 19 KW (25 HP) that do not use gasoline and are not rich burn engines that use LPG can choose to participate in to certify their engines to the emission standards in § 60.4231(d) or (e), as applicable.

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59177, Oct. 8, 2008; 76 FR 37974, June 28, 2011; 78 FR 6698, Jan. 30, 2013; 86 FR 34363, June 29, 2021; 87 FR 48606, Aug. 10, 2022]

Table 1 to Subpart JJJJ of Part 60—NO_x, CO, and VOC Emission Standards for Stationary Non-Emergency SI Engines ≥100 HP (Except Gasoline and Rich Burn LPG), Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines >25 HP

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards ^a					
			g/HP-hr			ppmvd at 15% O ₂		
			NO _x	CO	VOC ^d	NO _x	CO	VOC ^d
Non-Emergency SI Natural Gas ^b and Non-Emergency SI Lean Burn LPG ^b	100≤HP<500	7/1/2008	2.0	4.0	1.0	160	540	86
		1/1/2011	1.0	2.0	0.7	82	270	60
Non-Emergency SI Lean Burn Natural Gas and LPG	500≤HP<1,350	1/1/2008	2.0	4.0	1.0	160	540	86
		7/1/2010	1.0	2.0	0.7	82	270	60
Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG (except lean burn 500≤HP<1,350)	HP≥500	7/1/2007	2.0	4.0	1.0	160	540	86
	HP≥500	7/1/2010	1.0	2.0	0.7	82	270	60
Landfill/Digester Gas (except lean burn 500≤HP<1,350)	HP<500	7/1/2008	3.0	5.0	1.0	220	610	80
		1/1/2011	2.0	5.0	1.0	150	610	80
	HP≥500	7/1/2007	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80
Landfill/Digester Gas Lean Burn	500≤HP<1,350	1/1/2008	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80
Emergency	25<HP<130	1/1/2009	^c 10	387	N/A	N/A	N/A	N/A
	HP≥130		2.0	4.0	1.0	160	540	86

^aOwners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O₂.

^bOwners and operators of new or reconstructed non-emergency lean burn SI stationary engines with a site rating of greater than or equal to 250 brake HP located at a major source that are meeting the requirements of 40 CFR part 63, subpart ZZZZ, Table 2a do not have to comply with the CO emission standards of Table 1 of this subpart.

^cThe emission standards applicable to emergency engines between 25 HP and 130 HP are in terms of NO_x + HC.

^dFor purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

[76 FR 37975, June 28, 2011]

Table 2 to Subpart JJJJ of Part 60—Requirements for Performance Tests

As stated in §60.4244, you must comply with the following requirements for performance tests within 10 percent of 100 percent peak (or the highest achievable) load].

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary SI internal combustion engine demonstrating compliance according to §60.4244	a. Limit the concentration of NO _x in the stationary SI internal combustion engine exhaust	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary internal combustion engine;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1, if measuring flow rate	(a) Alternatively, for NO _x , O ₂ , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter <i>and</i> 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. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B ^b of 40 CFR part 60, appendix A-2 or ASTM Method D6522-00 (Reapproved 2005) ^{ad}	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for NO _x concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 2C of 40 CFR part 60, appendix A-1 or Method 19 of 40 CFR part 60, appendix A-7	(c) Measurements to determine the exhaust flowrate must be made (1) at the same time as the measurement for NO _x concentration or, alternatively (2) according to the option in Section 11.1.2 of Method 1A of 40 CFR part 60, Appendix A-1, if applicable.
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, ^e or ASTM Method D6348-03 ^{de}	(d) Measurements to determine moisture must be made at the same time as the measurement for NO _x concentration.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		v. Measure NO _x 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	(5) Method 7E of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (Reapproved 2005), ^{ad} Method 320 of 40 CFR part 63, appendix A, ^e or ASTM Method D6348-03 ^{de}	(e) Results of this test consist of the average of the three 1-hour or longer runs.
	b. Limit the concentration of CO in the stationary SI internal combustion engine exhaust	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary internal combustion engine;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1, if measuring flow rate	(a) Alternatively, for CO, O ₂ , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter <i>and</i> 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. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B ^b of 40 CFR part 60, appendix A-2 or ASTM Method D6522-00 (Reapproved 2005) ^{ad}	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for CO concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 2C of 40 CFR 60, appendix A-1 or Method 19 of 40 CFR part 60, appendix A-7	(c) Measurements to determine the exhaust flowrate must be made (1) at the same time as the measurement for CO concentration or, alternatively (2) according to the option in Section 11.1.2 of Method 1A of 40 CFR part 60, Appendix A-1, if applicable.
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, ^e or ASTM Method D6348-03 ^{de}	(d) Measurements to determine moisture must be made at the same time as the measurement for CO concentration.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		v. Measure CO 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	(5) Method 10 of 40 CFR part 60, appendix A4, ASTM Method D6522-00 (Reapproved 2005), ^{ade} Method 320 of 40 CFR part 63, appendix A, ^e or ASTM Method D6348-03 ^{de}	(e) Results of this test consist of the average of the three 1-hour or longer runs.
	c. Limit the concentration of VOC in the stationary SI internal combustion engine exhaust	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary internal combustion engine;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1, if measuring flow rate	(a) Alternatively, for VOC, O ₂ , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter <i>and</i> 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. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B ^b of 40 CFR part 60, appendix A-2 or ASTM Method D6522-00 (Reapproved 2005) ^{ad}	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for VOC concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 2C of 40 CFR 60, appendix A-1 or Method 19 of 40 CFR part 60, appendix A-7	(c) Measurements to determine the exhaust flowrate must be made (1) at the same time as the measurement for VOC concentration or, alternatively (2) according to the option in Section 11.1.2 of Method 1A of 40 CFR part 60, Appendix A-1, if applicable.
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, ^e or ASTM Method D6348-03 ^{de}	(d) Measurements to determine moisture must be made at the same time as the measurement for VOC concentration.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		v. Measure VOC 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	(5) Methods 25A and 18 of 40 CFR part 60, appendices A-6 and A-7, Method 25A with the use of a hydrocarbon cutter as described in 40 CFR 1065.265, Method 18 of 40 CFR part 60, appendix A-6, ^{ce} Method 320 of 40 CFR part 63, appendix A, ^e or ASTM Method D6348-03 ^{de}	(e) Results of this test consist of the average of the three 1-hour or longer runs.

^aAlso, you may petition the Administrator for approval to use alternative methods for portable analyzer.

^bYou may use ASME PTC 19.10-1981, Flue and Exhaust Gas Analyses, for measuring the O₂ content of the exhaust gas as an alternative to EPA Method 3B. AMSE PTC 19.10-1981 incorporated by reference, see 40 CFR 60.17

^cYou may use EPA Method 18 of 40 CFR part 60, appendix A-6, provided that you conduct an adequate pre-survey test prior to the emissions test, such as the one described in OTM 11 on EPA's website (<http://www.epa.gov/ttn/emc/prelim/otm11.pdf>).

^dIncorporated by reference; see 40 CFR 60.17.

^eYou must meet the requirements in §60.4245(d).

[85 FR 63408, Oct. 7, 2020]

Table 3 to Subpart JJJJ of Part 60—Applicability of General Provisions to Subpart JJJJ

[As stated in §60.4246, you must comply with the following applicable General Provisions]

General provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4248.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4245.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§60.8	Performance tests	Yes	Except that §60.8 only applies to owners and operators who are subject to performance testing in subpart JJJJ.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	Yes	Requirements are specified in subpart JJJJ.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	No	
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

Table 4 to Subpart JJJJ of Part 60—Applicability of Mobile Source Provisions for Manufacturers Participating in the Voluntary Certification Program and Certifying Stationary SI ICE to Emission Standards in Table 1 of Subpart JJJJ

[As stated in §60.4247, you must comply with the following applicable mobile source provisions if you are a manufacturer participating in the voluntary certification program and certifying stationary SI ICE to emission standards in Table 1 of subpart JJJJ]

Mobile source provisions citation	Subject of citation	Applies to subpart	Explanation
1048 subpart A	Overview and Applicability	Yes	
1048 subpart B	Emission Standards and Related Requirements	Yes	Except for the specific sections below.
1048.101	Exhaust Emission Standards	No	
1048.105	Evaporative Emission Standards	No	
1048.110	Diagnosing Malfunctions	No	
1048.140	Certifying Blue Sky Series Engines	No	
1048.145	Interim Provisions	No	
1048 subpart C	Certifying Engine Families	Yes	Except for the specific sections below.
1048.205(b)	AECD reporting	Yes	
1048.205(c)	OBD Requirements	No	

Mobile source provisions citation	Subject of citation	Applies to subpart	Explanation
1048.205(n)	Deterioration Factors	Yes	Except as indicated in 60.4247(c).
1048.205(p)(1)	Deterioration Factor Discussion	Yes	
1048.205(p)(2)	Liquid Fuels as they require	No	
1048.240(b)(c)(d)	Deterioration Factors	Yes	
1048 subpart D	Testing Production-Line Engines	Yes	
1048 subpart E	Testing In-Use Engines	No	
1048 subpart F	Test Procedures	Yes	
1065.5(a)(4)	Raw sampling (refers reader back to the specific emissions regulation for guidance)	Yes	
1048 subpart G	Compliance Provisions	Yes	
1048 subpart H	Reserved		
1048 subpart I	Definitions and Other Reference Information	Yes	
1048 appendix I and II	Yes		
1065 (all subparts)	Engine Testing Procedures	Yes	Except for the specific section below.
1065.715	Test Fuel Specifications for Natural Gas	No	
1068 (all subparts)	General Compliance Provisions for Nonroad Programs	Yes	Except for the specific sections below.
1068.245	Hardship Provisions for Unusual Circumstances	No	
1068.250	Hardship Provisions for Small-Volume Manufacturers	No	
1068.255	Hardship Provisions for Equipment Manufacturers and Secondary Engine Manufacturers	No	

[Downloaded from the eCFR on August 12, 2022]

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Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart JJJJ—Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

SOURCE: 73 FR 3591, Jan. 18, 2008, unless otherwise noted.

What This Subpart Covers

§ 60.4230 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (6) 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 SI ICE with a maximum engine power less than or equal to 19 kilowatt (KW) (25 horsepower (HP)) that are manufactured on or after July 1, 2008.

(2) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are gasoline fueled or that are rich burn engines fueled by liquefied petroleum gas (LPG), where the date of manufacture is:

(i) On or after July 1, 2008; or

(ii) On or after January 1, 2009, for emergency engines.

(3) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are not gasoline fueled and are not rich burn engines fueled by LPG, where the manufacturer participates in the voluntary manufacturer certification program described in this subpart and where the date of manufacture is:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) On or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;

(iii) On or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) On or after January 1, 2009, for emergency engines.

(4) Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) on or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;

(iii) on or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).

(5) Owners and operators of stationary SI ICE that are modified or reconstructed after June 12, 2006, and any person that modifies or reconstructs any stationary SI ICE after June 12, 2006.

(6) The provisions of § 60.4236 of this subpart are applicable to all owners and operators of stationary SI ICE that commence construction after June 12, 2006.

(b) The provisions of this subpart are not applicable to stationary SI ICE being tested at an engine 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 as applicable.

(d) For the purposes of this subpart, stationary SI ICE using alcohol-based fuels are considered gasoline engines.

(e) Stationary SI 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 parts 1048 and 1054, 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.

(f) Owners and operators of facilities with internal combustion engines 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.

[73 FR 3591, Jan. 18, 2008, as amended at 76 FR 37972, June 28, 2011; 86 FR 34360, June 29, 2021]

Emission Standards for Manufacturers

§ 60.4231 What emission standards must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing such engines?

(a) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008 to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1054, as follows:

If engine displacement is . . .	and manufacturing dates are . . .	the engine must meet the following non-handheld emission standards identified in 40 CFR part 1054 and related requirements:
(1) Below 225 cc	July 1, 2008 to December 31, 2011	Phase 2.
(2) Below 225 cc	January 1, 2012 or later	Phase 3.
(3) At or above 225 cc	July 1, 2008 to December 31, 2010	Phase 2.
(4) At or above 225 cc	January 1, 2011 or later	Phase 3.

(b) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) (except emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) that use gasoline and that are manufactured on or after the applicable date in § 60.4230(a)(2), or manufactured on or after the applicable date in § 60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE with a maximum engine power greater than 25 HP and less than 130 HP that use gasoline and that are manufactured on or after the applicable date in § 60.4230(a)(4) to the Phase 1 emission standards in 40 CFR part 1054, appendix I, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 1054. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cubic centimeters (cc) that use gasoline to the certification emission standards and other requirements as appropriate for new nonroad SI engines in 40 CFR part 1054.

(c) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) (except emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) that are rich burn engines that use LPG and that are manufactured on or after the applicable date in § 60.4230(a)(2), or manufactured on or after the applicable date in § 60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE greater than 25 HP and less than 130 HP that are rich burn engines that use LPG and that are manufactured on or after the applicable date in § 60.4230(a)(4) to the Phase 1 emission standards in 40 CFR part 1054, appendix I, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 1054. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc that are rich burn engines that use LPG to the certification emission standards and other requirements as appropriate for new nonroad SI engines in 40 CFR part 1054.

(d) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG and emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) under the voluntary manufacturer certification program described in this subpart must certify those engines to the certification emission standards for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers who choose to certify their emergency stationary SI ICE greater than 25 HP and less than 130 HP (except gasoline and rich burn engines that use LPG), must certify those engines to the Phase 1 emission standards in 40 CFR part 1054, appendix I, applicable to class II engines, for new nonroad SI engines in 40 CFR part 1054. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc (except gasoline and rich burn engines that use LPG) to the certification emission standards and other requirements as appropriate for new nonroad SI engines in 40 CFR part 1054. For stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG and emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) manufactured prior to January 1, 2011, manufacturers may choose to certify these engines to the standards in Table 1 to this subpart applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP.

(e) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) under the voluntary manufacturer certification program described in this subpart must certify those engines to the emission standards in Table 1 to this subpart. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) that are lean burn engines that use LPG to the certification emission standards for new nonroad SI engines in 40 CFR part 1048. For stationary SI ICE with a maximum engine power greater than or equal to 100 HP (75 KW) and less than 500 HP (373 KW) manufactured prior to January 1, 2011, and for stationary SI ICE with a maximum engine power greater than or equal to 500 HP (373 KW) manufactured prior to July 1, 2010, manufacturers may choose to certify these engines to the certification emission standards for new nonroad SI engines in 40 CFR part 1048 applicable to engines that are not severe duty engines.

(f) Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, to the extent they apply to equipment manufacturers.

(g) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary SI 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 SI ICE.

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59175, Oct. 8, 2008; 76 FR 37973, June 28, 2011; 78 FR 6697, Jan. 30, 2013; 86 FR 34360, June 29, 2021]

§ 60.4232 How long must my engines meet the emission standards if I am a manufacturer of stationary SI internal combustion engines?

Engines manufactured by stationary SI internal combustion engine manufacturers must meet the emission standards as required in § 60.4231 during the certified emissions life of the engines.

Emission Standards for Owners and Operators

§ 60.4233 What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?

(a) Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008, must comply with the emission standards in § 60.4231(a) for their stationary SI ICE.

(b) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in § 60.4230(a)(4) that use gasoline must comply with the emission standards in § 60.4231(b) for their stationary SI ICE.

(c) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in § 60.4230(a)(4) that are rich burn engines that use LPG must comply with the emission standards in § 60.4231(c) for their stationary SI ICE.

(d) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards for field testing in 40 CFR 1048.101(c) for their non-emergency stationary SI ICE and with the emission standards in Table 1 to this subpart for their emergency stationary SI ICE. Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) manufactured prior to January 1, 2011, that were certified to the standards in Table 1 to this subpart applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP, may optionally choose to meet those standards.

(e) Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1 to this subpart, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified.

(f) Owners and operators of any modified or reconstructed stationary SI ICE subject to this subpart must meet the requirements as specified in paragraphs (f)(1) through (5) of this section.

(1) Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with emission standards in § 60.4231(a) for their stationary SI ICE. Engines with a date of manufacture prior to July 1, 2008 must comply with the emission standards specified in § 60.4231(a) applicable to engines manufactured on July 1, 2008.

(2) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are gasoline engines and are modified or reconstructed after June 12, 2006, must comply with the emission standards in § 60.4231(b) for their stationary SI ICE. Engines with a date of manufacture prior to July 1, 2008 (or January 1, 2009 for emergency engines) must comply with the emission standards specified in § 60.4231(b) applicable to engines manufactured on July 1, 2008 (or January 1, 2009 for emergency engines).

(3) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are rich burn engines that use LPG, that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in § 60.4231(c). Engines with a date of manufacture prior to July 1, 2008 (or January 1, 2009 for emergency engines) must comply with the emission standards specified in § 60.4231(c) applicable to engines manufactured on July 1, 2008 (or January 1, 2009 for emergency engines).

(4) Owners and operators of stationary SI natural gas and lean burn LPG engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (d) or (e) of this section, except that such owners and operators of non-emergency engines and emergency engines greater than or equal to 130 HP must meet a nitrogen oxides (NO_x) emission standard of 3.0 grams per HP-hour (g/HP-hr), a CO emission standard of 4.0 g/HP-hr (5.0 g/HP-hr for non-emergency engines less than 100 HP), and a volatile organic compounds (VOC) emission standard of 1.0 g/HP-hr, or a NO_x emission standard of 250 ppmvd at 15 percent oxygen (O₂), a CO emission standard 540 ppmvd at 15 percent O₂ (675 ppmvd at 15 percent O₂ for non-emergency engines less than 100 HP), and a VOC emission standard of 86 ppmvd at 15 percent O₂, where the date of manufacture of the engine is:

(i) Prior to July 1, 2007, for non-emergency engines with a maximum engine power greater than or equal to 500 HP (except lean burn natural gas engines and LPG engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) Prior to July 1, 2008, for non-emergency engines with a maximum engine power less than 500 HP;

(iii) Prior to January 1, 2009, for emergency engines;

(iv) Prior to January 1, 2008, for non-emergency lean burn natural gas engines and LPG engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP.

(5) Owners and operators of stationary SI landfill/digester gas ICE engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (e) of this section for stationary landfill/digester gas engines. Engines with maximum engine power less than 500 HP and a date of manufacture prior to July 1, 2008 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE with a maximum engine power less than 500 HP manufactured on July 1, 2008. Engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines greater than or equal to 500 HP and less than 1,350 HP) and a date of manufacture prior to July 1, 2007 must comply with the emission standards

specified in paragraph (e) of this section for stationary landfill/digester gas ICE with a maximum engine power greater than or equal to 500 HP (except lean burn engines greater than or equal to 500 HP and less than 1,350 HP) manufactured on July 1, 2007. Lean burn engines greater than or equal to 500 HP and less than 1,350 HP with a date of manufacture prior to January 1, 2008 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE that are lean burn engines greater than or equal to 500 HP and less than 1,350 HP and manufactured on January 1, 2008.

(g) Owners and operators of stationary SI wellhead gas ICE engines may petition the Administrator for approval on a case-by-case basis to meet emission standards no less stringent than the emission standards that apply to stationary emergency SI engines greater than 25 HP and less than 130 HP due to the presence of high sulfur levels in the fuel, as specified in Table 1 to this subpart. The request must, at a minimum, demonstrate that the fuel has high sulfur levels that prevent the use of aftertreatment controls and also that the owner has reasonably made all attempts possible to obtain an engine that will meet the standards without the use of aftertreatment controls. The petition must request the most stringent standards reasonably applicable to the engine using the fuel.

(h) Owners and operators of stationary SI ICE that are required to meet standards that reference 40 CFR 1048.101 must, if testing their engines in use, meet the standards in that section applicable to field testing, except as indicated in paragraph (e) of this section.

[73 FR 3591, Jan. 18, 2008, as amended at 76 FR 37973, June 28, 2011]

§ 60.4234 How long must I meet the emission standards if I am an owner or operator of a stationary SI internal combustion engine?

Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in § 60.4233 over the entire life of the engine.

Other Requirements for Owners and Operators

§ 60.4235 What fuel requirements must I meet if I am an owner or operator of a stationary SI gasoline fired internal combustion engine subject to this subpart?

Owners and operators of stationary SI ICE subject to this subpart that use gasoline must use gasoline that meets the per gallon sulfur limit in 40 CFR 1090.205.

[73 FR 3591, Jan. 18, 2008, as amended at 85 FR 78463, Dec. 4, 2020]

§ 60.4236 What is the deadline for importing or installing stationary SI ICE produced in previous model years?

(a) After July 1, 2010, owners and operators may not install stationary SI ICE with a maximum engine power of less than 500 HP that do not meet the applicable requirements in § 60.4233.

(b) After July 1, 2009, owners and operators may not install stationary SI ICE with a maximum engine power of greater than or equal to 500 HP that do not meet the applicable requirements in § 60.4233, except that lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP that do not meet the applicable requirements in § 60.4233 may not be installed after January 1, 2010.

(c) For emergency stationary SI ICE with a maximum engine power of greater than 19 KW (25 HP), owners and operators may not install engines that do not meet the applicable requirements in § 60.4233 after January 1, 2011.

(d) In addition to the requirements specified in §§ 60.4231 and 60.4233, it is prohibited to import stationary SI ICE less than or equal to 19 KW (25 HP), stationary rich burn LPG SI ICE, and stationary gasoline SI ICE that do not meet the applicable requirements specified in paragraphs (a), (b), and (c) of this section, after the date specified in paragraph (a), (b), and (c) of this section.

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

§ 60.4237 What are the monitoring requirements if I am an owner or operator of an emergency stationary SI internal combustion engine?

(a) Starting on July 1, 2010, if the emergency stationary SI internal combustion engine that is greater than or equal to 500 HP that was built on or after July 1, 2010, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

(b) Starting on January 1, 2011, if the emergency stationary SI internal combustion engine that is greater than or equal to 130 HP and less than 500 HP that was built on or after January 1, 2011, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

(c) If you are an owner or operator of an emergency stationary SI internal combustion engine that is less than 130 HP, was built on or after July 1, 2008, and does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter upon startup of your emergency engine.

Compliance Requirements for Manufacturers

§ 60.4238 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines ≤19 KW (25 HP) or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in § 60.4231(a) must certify their stationary SI ICE using the certification and testing procedures required in 40 CFR part 1054, subparts C and F. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[86 FR 34361, June 29, 2021]

§ 60.4239 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines >19 KW (25 HP) that use gasoline or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in § 60.4231(b) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must test their engines as specified in that part. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1054, and manufacturers of stationary SI emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 emission standards in 40 CFR part 1054, appendix I, applicable to class II engines, must certify their stationary SI ICE using the certification and testing procedures required in 40 CFR part 1054, subparts C and F. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[86 FR 34361, June 29, 2021]

§ 60.4240 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines >19 KW (25 HP) that are rich burn engines that use LPG or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in § 60.4231(c) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must test their engines as specified in that part. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements

for new nonroad SI engines in 40 CFR part 1054, and manufacturers of stationary SI emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 emission standards in 40 CFR part 1054, appendix I, applicable to class II engines, must certify their stationary SI ICE using the certification and testing procedures required in 40 CFR part 1054, subparts C and F. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[86 FR 34361, June 29, 2021]

§ 60.4241 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines participating in the voluntary certification program or a manufacturer of equipment containing such engines?

(a) Manufacturers of stationary SI internal combustion engines with a maximum engine power greater than 19 KW (25 HP) that do not use gasoline and are not rich burn engines that use LPG can choose to certify their engines to the emission standards in § 60.4231(d) or (e), as applicable, under the voluntary certification program described in this subpart. Manufacturers who certify their engines under the voluntary certification program must meet the requirements as specified in paragraphs (b) through (g) of this section. In addition, manufacturers of stationary SI internal combustion engines who choose to certify their engines under the voluntary certification program, must also meet the requirements as specified in § 60.4247. Manufacturers of stationary SI internal combustion engines who choose not to certify their engines under this section must notify the ultimate purchaser that testing requirements apply as described in § 60.4243(b)(2); manufacturers must keep a copy of this notification for five years after shipping each engine and make those documents available to EPA upon request.

(b) Manufacturers of engines other than those certified to standards in 40 CFR part 1054 must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must follow the same test procedures that apply to Large SI nonroad engines under 40 CFR part 1048, but must use the D-1 cycle of International Organization for Standardization 8178-4: 1996(E) (incorporated by reference, see § 60.17) or the test cycle requirements specified in Table 3 to 40 CFR 1048.505, except that Table 3 of 40 CFR 1048.505 applies to high load engines only. Manufacturers of any size may certify their stationary emergency engines at or above 130 hp using assigned deterioration factors established by EPA, consistent with 40 CFR 1048.240. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1054, and manufacturers of emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 standards in 40 CFR part 1054, appendix I, applicable to class II engines, must certify their stationary SI ICE using the certification and testing procedures required in 40 CFR part 1054, subparts C and F. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

(c) Certification of stationary SI ICE to the emission standards specified in § 60.4231(d) or (e), as applicable, is voluntary, but manufacturers who decide to certify are subject to all of the requirements indicated in this subpart with regard to the engines included in their certification. Manufacturers must clearly label their stationary SI engines as certified or non-certified engines.

(d) Manufacturers of natural gas fired stationary SI ICE who conduct voluntary certification of stationary SI ICE to the emission standards specified in § 60.4231(d) or (e), as applicable, must certify their engines for operation using fuel that meets the definition of pipeline-quality natural gas. The fuel used for certifying stationary SI natural gas engines must meet the definition of pipeline-quality natural gas as described in § 60.4248. In addition, the manufacturer must provide information to the owner and operator of the certified stationary SI engine including the specifications of the pipeline-quality natural gas to which the engine is certified and what adjustments the owner or operator must make to the engine when installed in the field to ensure compliance with the emission standards.

(e) Manufacturers of stationary SI ICE that are lean burn engines fueled by LPG who conduct voluntary certification of stationary SI ICE to the emission standards specified in § 60.4231(d) or (e), as applicable, must certify their engines for operation using fuel that meets the specifications in 40 CFR 1065.720.

(f) Manufacturers may certify their engines for operation using gaseous fuels in addition to pipeline-quality natural gas; however, the manufacturer must specify the properties of that fuel and provide testing information showing

that the engine will meet the emission standards specified in § 60.4231(d) or (e), as applicable, when operating on that fuel. The manufacturer must also provide instructions for configuring the stationary engine to meet the emission standards on fuels that do not meet the pipeline-quality natural gas definition. The manufacturer must also provide information to the owner and operator of the certified stationary SI engine regarding the configuration that is most conducive to reduced emissions where the engine will be operated on gaseous fuels with different quality than the fuel that it was certified to.

(g) A stationary SI engine manufacturer may certify an engine family solely to the standards applicable to landfill/digester gas engines as specified in § 60.4231(d) or (e), as applicable, but must certify their engines for operation using landfill/digester gas and must add a permanent label stating that the engine is for use only in landfill/digester gas applications. The label must be added according to the labeling requirements specified in 40 CFR 1048.135(b).

(h) For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

(i) For engines being certified to the voluntary certification standards in Table 1 of this subpart, the VOC measurement shall be made by following the procedures in 40 CFR part 1065, subpart C, to determine the total NMHC emissions. As an alternative, manufacturers may measure ethane, as well as methane, for excluding such levels from the total VOC measurement.

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59176, Oct. 8, 2008; 76 FR 37974, June 28, 2011; 86 FR 34361, June 29, 2021]

§ 60.4242 What other requirements must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing stationary SI internal combustion engines or a manufacturer of equipment containing such engines?

(a) Stationary SI internal combustion engine manufacturers must meet the provisions of 40 CFR parts 1048, 1054, and 1068, as applicable, except that engines certified pursuant to the voluntary certification procedures in § 60.4241 are subject only to the provisions indicated in § 60.4247 and are permitted to provide instructions to owners and operators allowing for deviations from certified configurations, if such deviations are consistent with the provisions of § 60.4241(c) through (f). Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, as applicable. Labels on engines certified to 40 CFR part 1048 must refer to stationary engines, rather than or in addition to nonroad engines, as appropriate.

(b) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards identified in 40 CFR part 1048 or 1054 for that model year may certify any such family that contains both nonroad 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. This paragraph (b) also applies to equipment or component manufacturers certifying to standards under 40 CFR part 1060.

(c) Manufacturers of engine families certified to 40 CFR part 1048 may meet the labeling requirements referred to in paragraph (a) of this section for stationary SI ICE by either adding a separate label containing the information required in paragraph (a) of this section or by adding the words “and stationary” after the word “nonroad” to the label.

(d) For all engines manufactured on or after January 1, 2011, and for all engines with a maximum engine power greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, a stationary SI engine manufacturer that certifies an engine family solely to the standards applicable to emergency engines must add a permanent label stating that the engines in that family are for emergency use only. The label must be added according to the labeling requirements specified in 40 CFR 1048.135(b).

(e) All stationary SI engines subject to mandatory certification that do not meet the requirements of this subpart must be labeled and exported according to 40 CFR 1068.230. Manufacturers of stationary engines with a maximum engine power greater than 25 HP that are not certified to standards and other requirements under 40 CFR part 1048 are subject to the labeling provisions of 40 CFR 1048.20 pertaining to excluded stationary engines.

(f) For manufacturers of gaseous-fueled stationary engines required to meet the warranty provisions in 40 CFR 1054.120, we may establish an hour-based warranty period equal to at least the certified emissions life of the engines (in engine operating hours) if we determine that these engines are likely to operate for a number of hours greater than the applicable useful life within 24 months. We will not approve an alternate warranty under this paragraph (f) for nonroad engines. An alternate warranty period approved under this paragraph (f) will be the specified number of engine operating hours or two years, whichever comes first. The engine manufacturer shall request this alternate warranty period in its application for certification or in an earlier submission. We may approve an alternate warranty period for an engine family subject to the following conditions:

- (1) The engines must be equipped with non-resettable hour meters.
- (2) The engines must be designed to operate for a number of hours substantially greater than the applicable certified emissions life.
- (3) The emission-related warranty for the engines may not be shorter than any published warranty offered by the manufacturer without charge for the engines. Similarly, the emission-related warranty for any component shall not be shorter than any published warranty offered by the manufacturer without charge for that component.

[86 FR 34362, June 29, 2021]

Compliance Requirements for Owners and Operators

§ 60.4243 What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?

(a) If you are an owner or operator of a stationary SI internal combustion engine that is manufactured after July 1, 2008, and must comply with the emission standards specified in § 60.4233(a) through (c), you must comply by purchasing an engine certified to the emission standards in § 60.4231(a) through (c), as applicable, for the same engine class and maximum engine power. In addition, you must meet one of the requirements specified in (a)(1) and (2) of this section.

(1) If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator. You must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to you. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance.

(2) If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, your engine will be considered a non-certified engine, and you must demonstrate compliance according to (a)(2)(i) through (iii) of this section, as appropriate.

(i) If you are an owner or operator of a stationary SI internal combustion engine 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, but no performance testing is required if you are an owner or operator.

(ii) If you are an owner or operator of a stationary SI 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 within 1 year of engine startup to demonstrate compliance.

(iii) If you are an owner or operator of a stationary SI 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 within 1 year of engine startup and

conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(b) If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in § 60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section.

(1) Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in paragraph (a) of this section.

(2) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in § 60.4233(d) or (e) and according to the requirements specified in § 60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section.

(i) If you are an owner or operator of a stationary SI internal combustion engine greater than 25 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.

(ii) If you are an owner or operator of a stationary SI 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 and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(c) If you are an owner or operator of a stationary SI internal combustion engine that must comply with the emission standards specified in § 60.4233(f), you must demonstrate compliance according paragraph (b)(2)(i) or (ii) of this section, except that if you comply according to paragraph (b)(2)(i) of this section, you demonstrate that your non-certified engine complies with the emission standards specified in § 60.4233(f).

(d) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (d)(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, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (d)(1) through (3), is prohibited. If you do not operate the engine according to the requirements in paragraphs (d)(1) through (3), 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 the purpose specified in paragraph (d)(2)(i) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (d)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (d)(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)-(iii) [Reserved]

(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 provided in paragraph (d)(2) of this section. Except as provided in paragraph (d)(3)(i) 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) 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]

(e) Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of § 60.4233.

(f) If you are an owner or operator of a stationary SI internal combustion engine that is less than or equal to 500 HP and you purchase a non-certified engine or you do not operate and maintain your certified stationary SI internal combustion engine and control device according to the manufacturer's written emission-related instructions, you are required to perform initial performance testing as indicated in this section, but you are not required to conduct subsequent performance testing unless the stationary engine undergoes rebuild, major repair or maintenance. Engine rebuilding means to overhaul an engine or to otherwise perform extensive service on the engine (or on a portion of the engine or engine system). For the purpose of this paragraph (f), perform extensive service means to disassemble the engine (or portion of the engine or engine system), inspect and/or replace many of the parts, and reassemble the engine (or portion of the engine or engine system) in such a manner that significantly increases the service life of the resultant engine.

(g) It is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.

(h) If you are an owner/operator of an stationary SI internal combustion engine with maximum engine power greater than or equal to 500 HP that is manufactured after July 1, 2007 and before July 1, 2008, and must comply with the emission standards specified in sections 60.4233(b) or (c), you must comply by one of the methods specified in paragraphs (h)(1) through (h)(4) of this section.

(1) Purchasing an engine certified according to 40 CFR part 1048. 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.

(i) If you are an owner or operator of a modified or reconstructed stationary SI internal combustion engine and must comply with the emission standards specified in § 60.4233(f), you must demonstrate compliance according to one of the methods specified in paragraphs (i)(1) or (2) of this section.

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in § 60.4233(f), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in § 60.4244. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

[73 FR 3591, Jan. 18, 2008, as amended at 76 FR 37974, June 28, 2011; 78 FR 6697, Jan. 30, 2013; 86 FR 34362, June 29, 2021; 87 FR 48606, Aug. 10, 2022]

Testing Requirements for Owners and Operators

§ 60.4244 What test methods and other procedures must I use if I am an owner or operator of a stationary SI internal combustion engine?

Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this section.

(a) Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in § 60.8 and under the specific conditions that are specified by Table 2 to this subpart.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in § 60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.

(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 be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

(d) To determine compliance with the NO_x mass per unit output emission limitation, convert the concentration of NO_x in the engine exhaust using Equation 1 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \quad (Eq. 1)$$

Where:

ER = Emission rate of NO_x in g/HP-hr.

C_d = Measured NO_x concentration in parts per million by volume (ppmv).

1.912×10^{-3} = Conversion constant for ppm NO_x to grams per standard cubic meter at 20 degrees Celsius.

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

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

(e) To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 2})$$

Where:

ER = Emission rate of CO in g/HP-hr.

C_d = Measured CO concentration in ppmv.

1.164×10^{-3} = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(f) For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 3})$$

Where:

ER = Emission rate of VOC in g/HP-hr.

C_d = VOC concentration measured as propane in ppmv.

1.833×10^{-3} = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(g) If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_i = \frac{C_{Mi}}{C_{Ai}} \quad (\text{Eq. 4})$$

Where:

RF_i = Response factor of compound i when measured with EPA Method 25A.

C_{Mi} = Measured concentration of compound i in ppmv as carbon.

C_{Ai} = True concentration of compound i in ppmv as carbon.

$$C_{i\text{corr}} = RF_i \times C_{i\text{meas}} \quad (\text{Eq. 5})$$

Where:

$C_{i\text{corr}}$ = Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

$C_{i\text{meas}}$ = Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{\text{Peq}} = 0.6098 \times C_{i\text{corr}} \quad (\text{Eq. 6})$$

Where:

C_{Peq} = Concentration of compound i in mg of propane equivalent per DSCM.

Notification, Reports, and Records for Owners and Operators

§ 60.4245 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?

Owners or operators of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements.

(a) Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.

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

(2) Maintenance conducted on the engine.

(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 1048, 1054, and 1060, as applicable.

(4) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to § 60.4243(a)(2), documentation that the engine meets the emission standards.

(b) For all stationary SI emergency ICE greater than or equal to 500 HP manufactured on or after July 1, 2010, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of 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.

(c) Owners and operators of stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in § 60.4231 must submit an initial notification as required in § 60.7(a)(1). The notification must include the information in paragraphs (c)(1) through (5) of this section.

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

(2) The address of the affected source;

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

(4) Emission control equipment; and

(5) Fuel used.

(d) Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in § 60.4244 within 60 days after the test has been completed. Performance test reports using EPA Method 18, EPA Method 320, or ASTM D6348-03 (incorporated by reference - see 40 CFR 60.17) to measure VOC require reporting of all QA/QC data. For Method 18, report results from sections 8.4 and 11.1.1.4; for Method 320, report results from sections 8.6.2, 9.0, and 13.0; and for ASTM D6348-03 report results of all QA/QC procedures in Annexes 1-7.

(e) If you own or operate an emergency stationary SI ICE with a maximum engine power more than 100 HP that operates for the purpose specified in § 60.4243(d)(3)(i), you must submit an annual report according to the requirements in paragraphs (e)(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)-(vi) [Reserved]

(vii) Hours spent for operation for the purposes specified in § 60.4243(d)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in § 60.4243(d)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in § 60.4.

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59177, Oct. 8, 2008; 78 FR 6697, Jan. 30, 2013; 81 FR 59809, Aug. 30, 2016; 86 FR 34362, June 29, 2021; 87 FR 48606, Aug. 10, 2022]

General Provisions

§ 60.4246 What parts of the General Provisions apply to me?

Table 3 to this subpart shows which parts of the General Provisions in §§ 60.1 through 60.19 apply to you.

Mobile Source Provisions

§ 60.4247 What parts of the mobile source provisions apply to me if I am a manufacturer of stationary SI internal combustion engines or a manufacturer of equipment containing such engines?

(a) Manufacturers certifying to emission standards in 40 CFR part 1054 must meet the provisions of 40 CFR part 1054. Note that 40 CFR part 1054, appendix I, describes various provisions that do not apply for engines meeting Phase 1 standards in 40 CFR part 1054. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060 to the extent they apply to equipment manufacturers.

(b) Manufacturers required to certify to emission standards in 40 CFR part 1048 must meet the provisions of 40 CFR part 1048. Manufacturers certifying to emission standards in 40 CFR part 1048 pursuant to the voluntary certification program must meet the requirements in Table 4 to this subpart as well as the standards in 40 CFR 1048.101.

(c) For manufacturers of stationary SI internal combustion engines participating in the voluntary certification program and certifying engines to Table 1 to this subpart, Table 4 to this subpart shows which parts of the mobile source provisions in 40 CFR parts 1048, 1065, and 1068 apply to you. Compliance with the deterioration factor provisions under 40 CFR 1048.205(n) and 1048.240 will be required for engines built new on and after January 1, 2010. Prior to January 1, 2010, manufacturers of stationary internal combustion engines participating in the voluntary certification program have the option to develop their own deterioration factors based on an engineering analysis.

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59177, Oct. 8, 2008; 86 FR 34362, June 29, 2021]

Definitions

§ 60.4248 What definitions apply to this subpart?

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

Certified emissions life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) are given in 40 CFR 1054.107 and 1060.101, as appropriate. The values for certified emissions life for stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) certified to 40 CFR part 1048 are given in 40 CFR 1048.101(g). The certified emissions life for stationary SI ICE with a maximum engine power greater than 75 KW (100 HP) certified under the voluntary manufacturer certification program of this subpart is 5,000 hours or 7 years, whichever comes first. You may request in your application for certification that we approve a shorter certified emissions life for an engine family. We may approve a shorter certified emissions life, in hours of engine operation but not in years, if we determine that these engines will rarely operate longer than the shorter certified emissions life. If engines identical to those in the engine family have already been produced and are in use, your demonstration must include documentation from such in-use engines. In other cases, your demonstration must include an engineering analysis of information equivalent to such in-use data, such as data from research engines or similar engine models that are already in production. Your demonstration must also include any overhaul interval that you recommend, any mechanical warranty that you offer for the engine or its components, and any relevant customer design specifications. Your demonstration may include any other relevant information. The certified emissions life value may not be shorter than any of the following:

- (1) 1,000 hours of operation.
- (2) Your recommended overhaul interval.
- (3) Your mechanical warranty for the engine.

Certified stationary internal combustion engine means an engine that belongs to an engine family that has a certificate of conformity that complies with the emission standards and requirements in this part, or of 40 CFR part 1048 or 1054, as appropriate.

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.

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 carbon dioxide (CO₂).

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 § 60.4243(d) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in § 60.4243(d), 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 § 60.4243(d).

(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 § 60.4243(d)(3)(i).

Engine manufacturer means the manufacturer of the engine. See the definition of “manufacturer” in this section.

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.

Freshly manufactured engine means an engine that has not been placed into service. An engine becomes freshly manufactured when it is originally produced.

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.

Installed means the engine is placed and secured at the location where it is intended to be operated.

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.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining or natural gas production.

Manufacturer has the meaning given in section 216(1) of the Clean Air 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 resale.

Maximum engine power means maximum engine power as defined in 40 CFR 1048.801.

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”).

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.

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.

Pipeline-quality natural gas means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions, and which is provided by a supplier through a pipeline. Pipeline-quality natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1,100 British thermal units per standard cubic foot.

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 June 12, 2006, with passive emission control technology for NO_x (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

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 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 compression ignition 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.

Stationary internal combustion engine test cell/stand means an engine test cell/stand, as defined in 40 CFR part 63, subpart P, that tests stationary ICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Subpart means 40 CFR part 60, subpart JJJJ.

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.

Volatile organic compounds means volatile organic compounds as defined in 40 CFR 51.100(s).

Voluntary certification program means an optional engine certification program that manufacturers of stationary SI internal combustion engines with a maximum engine power greater than 19 KW (25 HP) that do not use gasoline and are not rich burn engines that use LPG can choose to participate in to certify their engines to the emission standards in § 60.4231(d) or (e), as applicable.

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59177, Oct. 8, 2008; 76 FR 37974, June 28, 2011; 78 FR 6698, Jan. 30, 2013; 86 FR 34363, June 29, 2021; 87 FR 48606, Aug. 10, 2022]

Table 1 to Subpart JJJJ of Part 60—NO_x, CO, and VOC Emission Standards for Stationary Non-Emergency SI Engines ≥100 HP (Except Gasoline and Rich Burn LPG), Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines >25 HP

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards ^a					
			g/HP-hr			ppmvd at 15% O ₂		
			NO _x	CO	VOC ^d	NO _x	CO	VOC ^d
Non-Emergency SI Natural Gas ^b and Non-Emergency SI Lean Burn LPG ^b	100≤HP<500	7/1/2008	2.0	4.0	1.0	160	540	86
		1/1/2011	1.0	2.0	0.7	82	270	60
Non-Emergency SI Lean Burn Natural Gas and LPG	500≤HP<1,350	1/1/2008	2.0	4.0	1.0	160	540	86
		7/1/2010	1.0	2.0	0.7	82	270	60
Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG (except lean burn 500≤HP<1,350)	HP≥500	7/1/2007	2.0	4.0	1.0	160	540	86
		7/1/2010	1.0	2.0	0.7	82	270	60
Landfill/Digester Gas (except lean burn 500≤HP<1,350)	HP<500	7/1/2008	3.0	5.0	1.0	220	610	80
		1/1/2011	2.0	5.0	1.0	150	610	80
	HP≥500	7/1/2007	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80
Landfill/Digester Gas Lean Burn	500≤HP<1,350	1/1/2008	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80
Emergency	25<HP<130	1/1/2009	^c 10	387	N/A	N/A	N/A	N/A
	HP≥130		2.0	4.0	1.0	160	540	86

^aOwners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O₂.

^bOwners and operators of new or reconstructed non-emergency lean burn SI stationary engines with a site rating of greater than or equal to 250 brake HP located at a major source that are meeting the requirements of 40 CFR part 63, subpart ZZZZ, Table 2a do not have to comply with the CO emission standards of Table 1 of this subpart.

^cThe emission standards applicable to emergency engines between 25 HP and 130 HP are in terms of NO_x + HC.

^dFor purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

[76 FR 37975, June 28, 2011]

Table 2 to Subpart JJJJ of Part 60—Requirements for Performance Tests

As stated in §60.4244, you must comply with the following requirements for performance tests within 10 percent of 100 percent peak (or the highest achievable) load].

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary SI internal combustion engine demonstrating compliance according to §60.4244	a. Limit the concentration of NO _x in the stationary SI internal combustion engine exhaust	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary internal combustion engine;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1, if measuring flow rate	(a) Alternatively, for NO _x , O ₂ , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter <i>and</i> 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. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B ^b of 40 CFR part 60, appendix A-2 or ASTM Method D6522-00 (Reapproved 2005) ^{ad}	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for NO _x concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 2C of 40 CFR part 60, appendix A-1 or Method 19 of 40 CFR part 60, appendix A-7	(c) Measurements to determine the exhaust flowrate must be made (1) at the same time as the measurement for NO _x concentration or, alternatively (2) according to the option in Section 11.1.2 of Method 1A of 40 CFR part 60, Appendix A-1, if applicable.
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, ^e or ASTM Method D6348-03 ^{de}	(d) Measurements to determine moisture must be made at the same time as the measurement for NO _x concentration.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		v. Measure NO _x 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	(5) Method 7E of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (Reapproved 2005), ^{ad} Method 320 of 40 CFR part 63, appendix A, ^e or ASTM Method D6348-03 ^{de}	(e) Results of this test consist of the average of the three 1-hour or longer runs.
	b. Limit the concentration of CO in the stationary SI internal combustion engine exhaust	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary internal combustion engine;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1, if measuring flow rate	(a) Alternatively, for CO, O ₂ , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter <i>and</i> 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. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B ^b of 40 CFR part 60, appendix A-2 or ASTM Method D6522-00 (Reapproved 2005) ^{ad}	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for CO concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 2C of 40 CFR 60, appendix A-1 or Method 19 of 40 CFR part 60, appendix A-7	(c) Measurements to determine the exhaust flowrate must be made (1) at the same time as the measurement for CO concentration or, alternatively (2) according to the option in Section 11.1.2 of Method 1A of 40 CFR part 60, Appendix A-1, if applicable.
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, ^e or ASTM Method D6348-03 ^{de}	(d) Measurements to determine moisture must be made at the same time as the measurement for CO concentration.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		v. Measure CO 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	(5) Method 10 of 40 CFR part 60, appendix A4, ASTM Method D6522-00 (Reapproved 2005), ^{ade} Method 320 of 40 CFR part 63, appendix A, ^e or ASTM Method D6348-03 ^{de}	(e) Results of this test consist of the average of the three 1-hour or longer runs.
	c. Limit the concentration of VOC in the stationary SI internal combustion engine exhaust	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary internal combustion engine;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1, if measuring flow rate	(a) Alternatively, for VOC, O ₂ , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter <i>and</i> 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. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B ^b of 40 CFR part 60, appendix A-2 or ASTM Method D6522-00 (Reapproved 2005) ^{ad}	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for VOC concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 2C of 40 CFR 60, appendix A-1 or Method 19 of 40 CFR part 60, appendix A-7	(c) Measurements to determine the exhaust flowrate must be made (1) at the same time as the measurement for VOC concentration or, alternatively (2) according to the option in Section 11.1.2 of Method 1A of 40 CFR part 60, Appendix A-1, if applicable.
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, ^e or ASTM Method D6348-03 ^{de}	(d) Measurements to determine moisture must be made at the same time as the measurement for VOC concentration.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		v. Measure VOC 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	(5) Methods 25A and 18 of 40 CFR part 60, appendices A-6 and A-7, Method 25A with the use of a hydrocarbon cutter as described in 40 CFR 1065.265, Method 18 of 40 CFR part 60, appendix A-6, ^{ce} Method 320 of 40 CFR part 63, appendix A, ^e or ASTM Method D6348-03 ^{de}	(e) Results of this test consist of the average of the three 1-hour or longer runs.

^aAlso, you may petition the Administrator for approval to use alternative methods for portable analyzer.

^bYou may use ASME PTC 19.10-1981, Flue and Exhaust Gas Analyses, for measuring the O₂ content of the exhaust gas as an alternative to EPA Method 3B. AMSE PTC 19.10-1981 incorporated by reference, see 40 CFR 60.17

^cYou may use EPA Method 18 of 40 CFR part 60, appendix A-6, provided that you conduct an adequate pre-survey test prior to the emissions test, such as the one described in OTM 11 on EPA's website (<http://www.epa.gov/ttn/emc/prelim/otm11.pdf>).

^dIncorporated by reference; see 40 CFR 60.17.

^eYou must meet the requirements in §60.4245(d).

[85 FR 63408, Oct. 7, 2020]

Table 3 to Subpart JJJJ of Part 60—Applicability of General Provisions to Subpart JJJJ

[As stated in §60.4246, you must comply with the following applicable General Provisions]

General provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4248.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4245.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§60.8	Performance tests	Yes	Except that §60.8 only applies to owners and operators who are subject to performance testing in subpart JJJJ.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	Yes	Requirements are specified in subpart JJJJ.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	No	
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

Table 4 to Subpart JJJJ of Part 60—Applicability of Mobile Source Provisions for Manufacturers Participating in the Voluntary Certification Program and Certifying Stationary SI ICE to Emission Standards in Table 1 of Subpart JJJJ

[As stated in §60.4247, you must comply with the following applicable mobile source provisions if you are a manufacturer participating in the voluntary certification program and certifying stationary SI ICE to emission standards in Table 1 of subpart JJJJ]

Mobile source provisions citation	Subject of citation	Applies to subpart	Explanation
1048 subpart A	Overview and Applicability	Yes	
1048 subpart B	Emission Standards and Related Requirements	Yes	Except for the specific sections below.
1048.101	Exhaust Emission Standards	No	
1048.105	Evaporative Emission Standards	No	
1048.110	Diagnosing Malfunctions	No	
1048.140	Certifying Blue Sky Series Engines	No	
1048.145	Interim Provisions	No	
1048 subpart C	Certifying Engine Families	Yes	Except for the specific sections below.
1048.205(b)	AECD reporting	Yes	
1048.205(c)	OBD Requirements	No	

Mobile source provisions citation	Subject of citation	Applies to subpart	Explanation
1048.205(n)	Deterioration Factors	Yes	Except as indicated in 60.4247(c).
1048.205(p)(1)	Deterioration Factor Discussion	Yes	
1048.205(p)(2)	Liquid Fuels as they require	No	
1048.240(b)(c)(d)	Deterioration Factors	Yes	
1048 subpart D	Testing Production-Line Engines	Yes	
1048 subpart E	Testing In-Use Engines	No	
1048 subpart F	Test Procedures	Yes	
1065.5(a)(4)	Raw sampling (refers reader back to the specific emissions regulation for guidance)	Yes	
1048 subpart G	Compliance Provisions	Yes	
1048 subpart H	Reserved		
1048 subpart I	Definitions and Other Reference Information	Yes	
1048 appendix I and II	Yes		
1065 (all subparts)	Engine Testing Procedures	Yes	Except for the specific section below.
1065.715	Test Fuel Specifications for Natural Gas	No	
1068 (all subparts)	General Compliance Provisions for Nonroad Programs	Yes	Except for the specific sections below.
1068.245	Hardship Provisions for Unusual Circumstances	No	
1068.250	Hardship Provisions for Small-Volume Manufacturers	No	
1068.255	Hardship Provisions for Equipment Manufacturers and Secondary Engine Manufacturers	No	

Attachment C

Part 70 Operating Permit No: 089-41162-00112

[Downloaded from the eCFR on August 12, 2022]

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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? § 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 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 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 for the purpose specified in § 63.6640(f)(4)(ii).

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008; 78 FR 6700, Jan. 30, 2013; 87 FR 48607, Aug. 10, 2022]

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

This subpart applies to each affected source.

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

(1) Existing stationary RICE.

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

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

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

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

(2) New stationary RICE.

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

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

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

(3) Reconstructed stationary RICE.

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

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

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

(b) *Stationary RICE subject to limited requirements.*

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

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

(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.

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

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

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

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

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

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

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

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

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

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

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010; 78 FR 6700, Jan. 30, 2013; 87 FR 48607, Aug. 10, 2022]

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

(a) *Affected sources.*

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

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

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

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

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

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

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

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

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

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

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

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

Emission and Operating Limitations

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

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

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

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

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

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

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

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

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

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

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

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

[78 FR 6701, Jan. 30, 2013]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

§ 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 1090.305 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 for the purpose specified in § 63.6640(f)(4)(ii), you must use diesel fuel that meets the requirements in 40 CFR 1090.305 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) [Reserved]

(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, as amended at 85 FR 78463, Dec. 4, 2020; 87 FR 48607, Aug. 10, 2022]

General Compliance Requirements

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

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

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

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

Testing and Initial Compliance Requirements

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

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

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

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

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

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

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

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

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

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

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

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

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

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in § 63.6595 and according to the provisions in § 63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

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

§ 63.6615 When must I conduct subsequent performance tests?

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

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

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in paragraphs (b)(1) through (4) of this section.

(1) Non-emergency 4SRB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(2) New non-emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP located at a major source of HAP emissions.

(3) New non-emergency 2SLB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(4) New non-emergency CI stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(c) [Reserved]

(d) You must conduct three separate test runs for each performance test required in this section, as specified in § 63.7(e)(3). Each test run must last at least 1 hour, unless otherwise specified in this subpart.

(e)

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

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

Where:

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

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

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

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

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

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

Where:

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

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

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

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

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

$$X_{CO_2} = \frac{5.9}{F_o} \quad (Eq. 3)$$

Where:

X_{CO_2} = CO_2 correction factor, percent.

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

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

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

Where:

C_{adj} = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O₂.

C_d = Measured concentration of CO, THC, or formaldehyde, uncorrected.

X_{CO_2} = CO₂ correction factor, percent.

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

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

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

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

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

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (e.g., operator adjustment, automatic controller adjustment, etc.) or unintentionally (e.g., wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010; 78 FR 6702, Jan. 30, 2013]

§ 63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either 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.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6703, Jan. 30, 2013]

§ 63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?

- (a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies to you according to Table 5 of this subpart.
- (b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.
- (c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in § 63.6645.
- (d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.
- (e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:
 - (1) The compliance demonstration must consist of at least three test runs.
 - (2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.
 - (3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.
 - (4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.
 - (5) You must measure 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.

[69 FR 33506, June 15, 2004, as amended at 78 FR 6704, Jan. 30, 2013]

Continuous Compliance Requirements

§ 63.6635 How do I monitor and collect data to demonstrate continuous compliance?

- (a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.
- (b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.
- (c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

§ 63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?

- (a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.
- (b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in § 63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.
- (c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:
 - (1) The compliance demonstration must consist of at least one test run.
 - (2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.
 - (3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.
 - (4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.
 - (5) You must measure O₂ using one of the O₂ measurement methods specified in Table 4 of this subpart. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O₂ emissions simultaneously at the inlet and outlet of the control device.

(7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4), is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4), 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 the purpose specified in paragraph (f)(2)(i) 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)-(iii) [Reserved]

(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 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 provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6704, Jan. 30, 2013; 87 FR 48607, Aug. 10, 2022]

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, or no later than 120 days after the source becomes subject to this subpart, whichever is later.

(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, or no later than 120 days after the source becomes subject to this subpart, whichever is later.

(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 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)-(vi) {Reserved}

(vii) Hours spent for operation for the purpose specified in § 63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in § 63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(viii) If there were no deviations from the fuel requirements in § 63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in § 63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data

Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in § 63.13.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010; 78 FR 6705, Jan. 30, 2013; 87 FR 48607, Aug. 10, 2022]

§ 63.6655 What records must I keep?

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

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

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

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

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

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

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

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

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

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

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

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

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

(2) An existing stationary emergency RICE.

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

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

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

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

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 78 FR 6706, Jan. 30, 2013; 87 FR 48607, Aug. 10, 2022]

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

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

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

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

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

Other Requirements and Information

§ 63.6665 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

§ 63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in § 63.6600 under § 63.6(g).

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

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

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

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in § 63.6610(b).

§ 63.6675 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

Alaska Railbelt Grid means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

Backup power for renewable energy means an engine that provides backup power to a facility that generates electricity from renewable energy resources, as that term is defined in Alaska Statute 42.45.045(l)(5) (incorporated by reference, see § 63.14).

Black start engine means an engine whose only purpose is to start up a combustion turbine.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.*, as amended by Public Law 101-549, 104 Stat. 2399).

Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

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

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or
- (3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.
- (4) Fails to satisfy the general duty to minimize emissions established by § 63.6(e)(1)(i).

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (e.g. biodiesel) that is suitable for use in compression ignition engines.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO₂.

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must comply with the requirements specified in § 63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in § 63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

- (1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.
- (2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in § 63.6640(f).
- (3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in § 63.6640(f)(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 (NO_x) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_x, CO, and volatile organic compounds (VOC) into 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 NO_x (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

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

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

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart P of this part, that tests stationary RICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart ZZZZ.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011; 78 FR 6706, Jan. 30, 2013; 87 FR 48608, Aug. 10, 2022]

Table 1a to Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. ¹
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂	

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

[75 FR 9679, Mar. 3, 2010, as amended at 75 FR 51592, Aug. 20, 2010]

Table 1b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂ and using NSCR;	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F. ¹
2. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or	Comply with any operating limitations approved by the Administrator.
existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂ and not using NSCR.	

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:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O ₂ . If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O ₂ until June 15, 2007	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. ¹
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or	

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O ₂	
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O ₂	

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:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and using an oxidation catalyst; and New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst.	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F. ¹
2. Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F. ¹
3. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and not using an oxidation catalyst; and	Comply with any operating limitations approved by the Administrator.

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; and	
existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst.	

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:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Emergency stationary CI RICE and black start stationary CI RICE ¹	a. Change oil and filter every 500 hours of operation or annually, whichever comes first. ² b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. ³	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. ³

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
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	
3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP	Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O ₂ .	
4. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O ₂ ; or b. Reduce CO emissions by 70 percent or more.	
5. Non-Emergency, non-black start stationary CI RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O ₂ ; or b. Reduce CO emissions by 70 percent or more.	
6. Emergency stationary SI RICE and black start stationary SI RICE. ¹	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ² b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. ³	
7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; ² b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary;	

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. ³	
8. Non-Emergency, non-black start 2SLB stationary SI RICE <100 HP	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first; ² b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary. ³	
9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent O ₂ .	
10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O ₂ .	
11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O ₂ .	
12. Non-emergency, non-black start stationary RICE 100≤HP≤500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O ₂ .	

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:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Non-Emergency, non-black start CI stationary RICE ≤300 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first; ¹ b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
2. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O ₂ ; or	
	b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O ₂ ; or	
	b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE. ²	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ¹	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year. ²	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ¹ ; b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
6. Non-emergency, non-black start 2SLB stationary RICE	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
8. Non-emergency, non-black start 4SLB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	

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 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
9. Non-emergency, non-black start 4SLB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install an oxidation catalyst to reduce HAP emissions from the stationary RICE.	
10. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
11. Non-emergency, non-black start 4SRB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first; ¹	
	b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	
12. Non-emergency, non-black start 4SRB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install NSCR to reduce HAP emissions from the stationary RICE.	
13. Non-emergency, non-black start stationary RICE which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first; ¹ b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	

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.	

¹Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of this subpart.

²If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[78 FR 6709, Jan. 30, 2013]

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

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

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

¹After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[78 FR 6711, Jan. 30, 2013]

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

As stated in §§63.6610, 63.6611, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE:

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. reduce CO emissions	i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and		(a) For CO and O ₂ measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter <i>and</i> the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Measure the O ₂ at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005) ^a ^c (heated probe not necessary)	(b) Measurements to determine O ₂ must be made at the same time as the measurements for CO concentration.
		iii. Measure the CO at the inlet and the outlet of the control device	(1) ASTM D6522-00 (Reapproved 2005) ^{a b} ^c (heated probe not necessary) or Method 10 of 40 CFR part 60, appendix A-4	(c) The CO concentration must be at 15 percent O ₂ , dry basis.

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

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
3. Stationary RICE	a. limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary RICE; and		(a) For formaldehyde, CO, O ₂ , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter <i>and</i> the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A. If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O ₂ concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005) ^a (heated probe not necessary)	(a) Measurements to determine O ₂ concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 ^a	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03 ^a , provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. measure CO at the exhaust of the stationary RICE	(1) Method 10 of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (2005) ^{a c} , Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03 ^a	(a) CO concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

^aYou 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.

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

[79 FR 11290, Feb. 27, 2014]

Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations, Operating Limitations, and Other Requirements

As stated in §§63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and not using oxidation catalyst	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O ₂ or CO ₂ at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O ₂ or CO ₂ at the outlet of the oxidation catalyst according to the requirements in §63.6625(a); and
		ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average concentration of CO calculated using §63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.
7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction, or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
9. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O ₂ , dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O ₂ , dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
11. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Reduce CO emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
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 $300 < \text{HP} \leq 500$ located at an area source of HAP	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O ₂ , dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.
13. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O ₂ ;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F.
14. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O ₂ , or the average reduction of emissions of THC is 30 percent or more;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250 °F.

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

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

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved ^a ; and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved ^a ; and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, new or reconstructed non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS	i. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to §63.6620; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and
		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.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. Non-emergency 4SRB stationary RICE with a brake HP ≥5,000 located at a major source of HAP	a. Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved, or to demonstrate that the average reduction of emissions of THC determined from the performance test is equal to or greater than 30 percent. ^a
7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit ^a ; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.

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

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and not using oxidation catalyst	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
12. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
13. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and not using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
14. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O ₂ ; and either ii. Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than 450 °F and less than or equal to 1350 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 °F.
15. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O ₂ , or the average reduction of emissions of THC is 30 percent or more; and either ii. Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than or equal to 750 °F and less than or equal to 1250 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1250 °F.

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

[78 FR 6715, Jan. 30, 2013]

Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports

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

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
1. Existing non-emergency, non-black start stationary RICE 100≤HP≤500 located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP; new or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or	i. Semiannually according to the requirements in §63.6650(b)(1)-(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and ii. Annually according to the requirements in §63.6650(b)(6)-(9) for engines that are limited use stationary RICE subject to numerical emission limitations.
		b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), the information in §63.6650(e); or	i. Semiannually according to the requirements in §63.6650(b).
		c. If you had a malfunction during the reporting period, the information in §63.6650(c)(4).	i. Semiannually according to the requirements in §63.6650(b).
2. New or reconstructed non-emergency stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Report	a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and	i. Annually, according to the requirements in §63.6650.
		b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and	i. See item 2.a.i.

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
		c. Any problems or errors suspected with the meters.	i. See item 2.a.i.
3. Existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Compliance report	a. The results of the annual compliance demonstration, if conducted during the reporting period.	i. Semiannually according to the requirements in §63.6650(b)(1)-(5).
4. Emergency stationary RICE that operate for the purposes specified in § 63.6640(f)(4)(ii)	Report	a. The information in §63.6650(h)(1)	i. annually according to the requirements in §63.6650(h)(2)-(3).

[87 FR 48608, Aug. 10, 2022]

Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ.

As stated in §63.6665, you must comply with the following applicable general provisions.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.1	General applicability of the General Provisions	Yes.	
§63.2	Definitions	Yes	Additional terms defined in §63.6675.
§63.3	Units and abbreviations	Yes.	
§63.4	Prohibited activities and circumvention	Yes.	
§63.5	Construction and reconstruction	Yes.	
§63.6(a)	Applicability	Yes.	
§63.6(b)(1)-(4)	Compliance dates for new and reconstructed sources	Yes.	
§63.6(b)(5)	Notification	Yes.	
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes.	
§63.6(c)(1)-(2)	Compliance dates for existing sources	Yes.	
§63.6(c)(3)-(4)	[Reserved]		
§63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes.	
§63.6(d)	[Reserved]		
§63.6(e)	Operation and maintenance	No.	
§63.6(f)(1)	Applicability of standards	No.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.6(f)(2)	Methods for determining compliance	Yes.	
§63.6(f)(3)	Finding of compliance	Yes.	
§63.6(g)(1)-(3)	Use of alternate standard	Yes.	
§63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§63.6(i)	Compliance extension procedures and criteria	Yes.	
§63.6(j)	Presidential compliance exemption	Yes.	
§63.7(a)(1)-(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612.
§63.7(a)(3)	CAA section 114 authority	Yes.	
§63.7(b)(1)	Notification of performance test	Yes	Except that §63.7(b)(1) only applies as specified in §63.6645.
§63.7(b)(2)	Notification of rescheduling	Yes	Except that §63.7(b)(2) only applies as specified in §63.6645.
§63.7(c)	Quality assurance/test plan	Yes	Except that §63.7(c) only applies as specified in §63.6645.
§63.7(d)	Testing facilities	Yes.	
§63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620.
§63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at §63.6620.
§63.7(e)(3)	Test run duration	Yes.	
§63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§63.7(f)	Alternative test method provisions	Yes.	
§63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§63.7(h)	Waiver of tests	Yes.	
§63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at §63.6625.
§63.8(a)(2)	Performance specifications	Yes.	
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring for control devices	No.	
§63.8(b)(1)	Monitoring	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.8(b)(2)-(3)	Multiple effluents and multiple monitoring systems	Yes.	
§63.8(c)(1)	Monitoring system operation and maintenance	Yes.	
§63.8(c)(1)(i)	Routine and predictable SSM	No	
§63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	No	
§63.8(c)(2)-(3)	Monitoring system installation	Yes.	
§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)-(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§63.8(d)	CMS quality control	Yes.	
§63.8(e)	CMS performance evaluation	Yes	Except for §63.8(e)(5)(ii), which applies to COMS.
		Except that §63.8(e) only applies as specified in §63.6645.	
§63.8(f)(1)-(5)	Alternative monitoring method	Yes	Except that §63.8(f)(4) only applies as specified in §63.6645.
§63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that §63.8(f)(6) only applies as specified in §63.6645.
§63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.
§63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§63.9(b)(1)-(5)	Initial notifications	Yes	Except that §63.9(b)(3) is reserved.
		Except that §63.9(b) only applies as specified in §63.6645.	
§63.9(c)	Request for compliance extension	Yes	Except that §63.9(c) only applies as specified in §63.6645.
§63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that §63.9(d) only applies as specified in §63.6645.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.9(e)	Notification of performance test	Yes	Except that §63.9(e) only applies as specified in §63.6645.
§63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(1)	Notification of performance evaluation	Yes	Except that §63.9(g) only applies as specified in §63.6645.
§63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that §63.9(g) only applies as specified in §63.6645.	
§63.9(h)(1)-(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.
			Except that §63.9(h) only applies as specified in §63.6645.
§63.9(i)	Adjustment of submittal deadlines	Yes.	
§63.9(j)	Change in previous information	Yes.	
§63.9(k)	Electronic reporting procedures	Yes	Only as specified in §63.9(j).
§63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§63.10(b)(1)	Record retention	Yes	Except that the most recent 2 years of data do not have to be retained on site.
§63.10(b)(2)(i)-(v)	Records related to SSM	No.	
§63.10(b)(2)(vi)-(xi)	Records	Yes.	
§63.10(b)(2)(xii)	Record when under waiver	Yes.	
§63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§63.10(b)(3)	Records of applicability determination	Yes.	
§63.10(c)	Additional records for sources using CEMS	Yes	Except that §63.10(c)(2)-(4) and (9) are reserved.
§63.10(d)(1)	General reporting requirements	Yes.	
§63.10(d)(2)	Report of performance test results	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.10(d)(4)	Progress reports	Yes.	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that §63.10(e)(3)(i) (C) is reserved.
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§63.11	Flares	No.	
§63.12	State authority and delegations	Yes.	
§63.13	Addresses	Yes.	
§63.14	Incorporation by reference	Yes.	
§63.15	Availability of information	Yes.	

[75 FR 9688, Mar. 3, 2010, as amended at 78 FR 6720, Jan. 30, 2013; 85 FR 73912, Nov. 19, 2020]

Appendix A to Subpart ZZZZ of Part 63—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).

Analyte	CAS No.	Sensitivity
Carbon monoxide (CO)	630-08-0	Minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.
Oxygen (O ₂)	7782-44-7	

1.2 Applicability. When is this protocol acceptable?

This protocol is applicable to 40 CFR part 63, subpart ZZZZ. Because of inherent cross sensitivities of EC cells, you must not apply this protocol to other emissions sources without specific instruction to that effect.

1.3 Data Quality Objectives. How good must my collected data be?

Refer to Section 13 to verify and document acceptable analyzer performance.

1.4 Range. What is the targeted analytical range for this protocol?

The measurement system and EC cell design(s) conforming to this protocol will determine the analytical range for each gas component. The nominal ranges are defined by choosing up-scale calibration gas concentrations near the maximum anticipated flue gas concentrations for CO and 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 de-gas or desorb any interference gas scrubbers or filters so as to enable a stable CO EC cell response. There are four primary types of sampling runs: pre-sampling calibrations; stack gas sampling; post-sampling calibration checks; and measurement system repeatability checks. Stack gas sampling runs can be chained together for extended evaluations, providing all other procedural specifications are met.

3.10 Sampling Day. A time not to exceed twelve hours from the time of the pre-sampling calibration to the post-sampling calibration check. During this time, stack gas sampling runs can be repeated without repeated recalibrations, providing all other sampling specifications have been met.

3.11 Pre-Sampling Calibration/Post-Sampling Calibration Check. The protocols executed at the beginning and end of each sampling day to bracket measurement readings with controlled performance checks.

3.12 Performance-Established Configuration. The EC cell and sampling system configuration that existed at the time that it initially met the performance requirements of this protocol.

4.0 INTERFERENCES.

When present in sufficient concentrations, NO and 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 that the pre-sampling calibration in accordance with Section 10.1. Use Figure 1 to record all data. Zero the analyzer with zero gas. Confirm and record that the scrubber media color is correct and not exhausted. Then position the probe at the sampling point and begin the sampling run at the same flow rate used during the up-scale calibration. Record the start time. Record all EC cell output responses and the flow rate during the "sample conditioning phase" once per minute until constant readings are obtained. Then begin the "measurement data phase" and record readings every 15 seconds for at least two minutes (or eight readings), or as otherwise required to achieve two continuous minutes of data that meet the specification given in Section 13.1. Finally, perform the "refresh phase" by introducing dry air, free from CO and other combustion gases, until several minute-to-minute readings of consistent value have been obtained. For each run use the "measurement data phase" readings to calculate the average stack gas CO and 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.

Facility _____		Engine I.D. _____						Date _____				
Run Type:	()			()				()			()	
(X)	Pre-Sample Calibration			Stack Gas Sample				Post-Sample Cal. Check			Repeatability Check	
Run #	1	1	2	2	3	3	4	4	Time	Scrub. OK	Flow- Rate	
Gas	O ₂	CO	O ₂	CO	O ₂	CO	O ₂	CO				
Sample Cond. Phase												
"												
"												
"												
"												
Measurement Data Phase												
"												
"												
"												

Facility_____	Engine I.D._____					Date_____						
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Mean												
Refresh Phase												
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[78 FR 6721, Jan. 30, 2013]

Attachment D

Part 70 Operating Permit No: 089-41162-00112

[Downloaded from the eCFR on May 14, 2021]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

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

Subpart AAAAA—National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants

SOURCE: 69 FR 416, Jan. 5, 2004, unless otherwise noted.

WHAT THIS SUBPART COVERS

§63.7080 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for lime manufacturing plants. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.

§63.7081 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate a lime manufacturing plant (LMP) that is a major source, or that is located at, or is part of, a major source of hazardous air pollutant (HAP) emissions, unless the LMP is located at a kraft pulp mill, soda pulp mill, sulfite pulp mill, beet sugar manufacturing plant, or only processes sludge containing calcium carbonate from water softening processes.

(1) An LMP is an establishment engaged in the manufacture of lime product (calcium oxide, calcium oxide with magnesium oxide, or dead burned dolomite) by calcination of limestone, dolomite, shells or other calcareous substances.

(2) A major source of HAP is a plant site that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (10 tons) or more per year or any combination of HAP at a rate of 22.68 megagrams (25 tons) or more per year from all emission sources at the plant site.

(b) [Reserved]

§63.7082 What parts of my plant does this subpart cover?

(a) This subpart applies to each existing or new lime kiln(s) and their associated cooler(s), and processed stone handling (PSH) operations system(s) located at an LMP that is a major source.

(b) A new lime kiln is a lime kiln, and (if applicable) its associated lime cooler, for which construction or reconstruction began after December 20, 2002, if you met the applicability criteria in §63.7081 at the time you began construction or reconstruction.

(c) A new PSH operations system is the equipment in paragraph (g) of this section, for which construction or reconstruction began after December 20, 2002, if you met the applicability criteria in §63.7081 at the time you began construction or reconstruction.

(d) A lime kiln or PSH operations system is reconstructed if it meets the criteria for reconstruction defined in §63.2.

(e) An existing lime kiln is any lime kiln, and (if applicable) its associated lime cooler, that does not meet the definition of a new kiln of paragraph (b) of this section.

(f) An existing PSH operations system is any PSH operations system that does not meet the definition of a new PSH operations system in paragraph (c) of this section.

(g) A PSH operations system includes all equipment associated with PSH operations beginning at the processed stone storage bin(s) or open storage pile(s) and ending where the processed stone is fed into the kiln. It includes man-made processed stone storage bins (but not open processed stone storage piles), conveying system transfer points, bulk loading or unloading systems, screening operations, surge bins, bucket elevators, and belt conveyors. No other materials processing operations are subject to this subpart.

(h) Nuisance dust collectors on lime coolers are part of the lime materials processing operations and are not covered by this subpart.

(i) Lime hydrators are not subject to this subpart.

(j) Open material storage piles are not subject to this subpart.

§63.7083 When do I have to comply with this subpart?

(a) If you have a new affected source, you must comply with this subpart according to paragraphs (a)(1) and (2) of this section.

(1) If you start up your affected source before January 5, 2004, you must comply with the emission limitations no later than January 5, 2004, and you must have completed all applicable performance tests no later than July 5, 2004, except as noted in paragraphs (e)(1) and (2) of this section.

(2) If you start up your affected source after January 5, 2004, then you must comply with the emission limitations for new affected sources upon startup of your affected source and you must have completed all applicable performance tests no later than 180 days after startup, except as noted in paragraphs (e)(1) and (2) of this section.

(b) If you have an existing affected source, you must comply with the applicable emission limitations for the existing affected source, and you must have completed all applicable performance tests no later than January 5, 2007, except as noted in paragraphs (e)(1) and (2) of this section.

(c) If you have an LMP that is an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the deadlines specified in paragraphs (c)(1) and (2) of this section apply.

(1) New affected sources at your LMP you must be in compliance with this subpart upon startup.

(2) Existing affected sources at your LMP must be in compliance with this subpart within 3 years after your source becomes a major source of HAP.

(d) You must meet the notification requirements in §63.7130 according to the schedule in §63.7130 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limitations in this subpart.

(e)(1) If your affected source commenced construction or reconstruction on or before September 16, 2019, then the compliance date for the revised requirements promulgated at §§63.7090, 63.7100, 63.7112, 63.7113, 63.7121, 63.7130, 63.7131, 63.7132, 63.7140, 63.7141, 63.7142, and 63.7143 and Tables 2, 3, 4, 5, 7, 8 and 9 (except changes to the cross references to 63.6(f)(1) and (h)(1)) of 40 CFR 63, subpart AAAAA, published on July 24, 2020 is January 20, 2021.

(2) If your affected source commenced construction or reconstruction after September 16, 2019, then the compliance date for the revised requirements promulgated at §§63.7090, 63.7100, 63.7112, 63.7113, 63.7121, 63.7130, 63.7131, 63.7132, 63.7140, 63.7141, 63.7142, and 63.7143 and Tables 2, 3, 4, 5, 7, 8 and 9 to this subpart, published on July 24, 2020 is July 24, 2020 or the date of initial startup, whichever is later.

[69 FR 416, Jan. 5, 2004, as amended at 85 FR 44977, July 24, 2020]

EMISSION LIMITATIONS

§63.7090 What emission limitations must I meet?

(a) You must meet each emission limit in Table 1 to this subpart that applies to you.

(b) You must meet each operating limit in Table 3 to this subpart that applies to you.

(c) On or after the relevant compliance date for your source as specified in §63.7083(e), you must meet each startup and shutdown period emission limit in Table 2 to this subpart that applies to you.

[69 FR 416, Jan. 5, 2004, as amended at 85 FR 44977, July 24, 2020]

GENERAL COMPLIANCE REQUIREMENTS

§63.7100 What are my general requirements for complying with this subpart?

(a) Prior to the relevant compliance date for your source as specified in §63.7083(e), you must be in compliance with the emission limitations (including operating limits) in this subpart at all times, except during periods of startup, shutdown, and malfunction. On and after the relevant compliance date for your source as specified in §63.7083(e), you must be in compliance with the applicable emission limitations (including operating limits) at all times.

(b) Prior to the relevant compliance date for your source as specified in §63.7083(e), you must be in compliance with the opacity and visible emission (VE) limits in this subpart at all times, except during periods of startup, shutdown, and malfunction. On and after the relevant compliance date for your source as specified in §63.7083(e), you must be in compliance with the applicable opacity and VE limits at all times.

(c) Prior to the relevant compliance date for your source as specified in §63.7083(e), you must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in §63.6(e)(1)(i). On and after the relevant compliance date for your source as specified in §63.7083(e), you must always operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable 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.

(d) You must prepare and implement for each LMP, a written operations, maintenance, and monitoring (OM&M) plan. You must submit the plan to the applicable permitting authority for review and approval as part of the application for a 40 CFR part 70 or 40 CFR part 71 permit. Any subsequent changes to the plan must be submitted to the applicable permitting authority for review and approval. Pending approval by the applicable permitting authority of an initial or amended plan, you must comply with the provisions of the submitted plan. Each plan must contain the following information:

(1) Process and control device parameters to be monitored to determine compliance, along with established operating limits or ranges, as applicable, for each emission unit.

(2) A monitoring schedule for each emission unit.

(3) Procedures for the proper operation and maintenance of each emission unit and each air pollution control device used to meet the applicable emission limitations and operating limits in Tables 1, 2 and 3 to this subpart, respectively. On and after the relevant compliance date for your source as specified in §63.7083(e), your OM&M plan must address periods of startup and shutdown.

(4) Procedures for the proper installation, operation, and maintenance of monitoring devices or systems used to determine compliance, including:

(i) Calibration and certification of accuracy of each monitoring device;

(ii) Performance and equipment specifications for the sample interface, parametric signal analyzer, and the data collection and reduction systems;

(iii) Prior to the relevant compliance date for your source as specified in §63.7083(e), ongoing operation and maintenance procedures in accordance with the general requirements of §§63.8(c)(1)(i) and (ii), (3), and (4)(ii). On and after the relevant compliance date for your source as specified in §63.7083(e), ongoing operation and maintenance procedures in accordance with the general requirements of paragraph (c) of this section and §§63.8(c)(1)(ii), (3), and (4)(ii); and

(iv) Ongoing data quality assurance procedures in accordance with the general requirements of §63.8(d).

(5) Procedures for monitoring process and control device parameters.

(6) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the operating limits specified in Table 3 to this subpart, including:

(i) Procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended; and

(ii) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time and date the corrective action was completed.

(7) A maintenance schedule for each emission unit and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

(e) Prior to the relevant compliance date for your source as specified in §63.7083(e), you must develop a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in §63.6(e)(3).

[69 FR 416, Jan. 5, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 85 FR 44977, July 24, 2020]

TESTING AND INITIAL COMPLIANCE REQUIREMENTS

§63.7110 By what date must I conduct performance tests and other initial compliance demonstrations?

(a) If you have an existing affected source, you must complete all applicable performance tests within January 5, 2007, according to the provisions in §§63.7(a)(2) and 63.7114.

(b) If you have a new affected source, and commenced construction or reconstruction between December 20, 2002, and January 5, 2004, you must demonstrate initial compliance with either the proposed emission limitation or the promulgated emission limitation no later than 180 calendar days after January 5, 2004 or within 180 calendar days after startup of the source, whichever is later, according to §§63.7(a)(2)(ix) and 63.7114.

(c) If you commenced construction or reconstruction between December 20, 2002, and January 5, 2004, and you chose to comply with the proposed emission limitation when demonstrating initial compliance, you must conduct a demonstration of compliance with the promulgated emission limitation within January 5, 2007 or after startup of the source, whichever is later, according to §§63.7(a)(2)(ix) and 63.7114.

(d) For each initial compliance requirement in Table 4 to this subpart that applies to you where the monitoring averaging period is 3 hours, the 3-hour period for demonstrating continuous compliance for emission units within existing affected sources at LMP begins at 12:01 a.m. on the compliance date for existing affected sources, that is, the day following completion of the initial compliance demonstration, and ends at 3:01 a.m. on the same day.

(e) For each initial compliance requirement in Table 4 to this subpart that applies to you where the monitoring averaging period is 3 hours, the 3-hour period for demonstrating continuous compliance for emission units within new or reconstructed affected sources at LMP begins at 12:01 a.m. on the day following completion of the initial compliance demonstration, as required in paragraphs (b) and (c) of this section, and ends at 3:01 a.m. on the same day.

[69 FR 416, Jan. 5, 2004, as amended at 85 FR 44977, July 24, 2020]

§63.7111 When must I conduct subsequent performance tests?

You must conduct a performance test within 5 years following the initial performance test and within 5 years following each subsequent performance test thereafter.

§63.7112 What performance tests, design evaluations, and other procedures must I use?

(a) You must conduct each performance test in Table 5 to this subpart that applies to you.

(b) Prior to the relevant compliance date for your source as specified in §63.7083(e), each performance test must be conducted according to the requirements in §63.7(e)(1) and under the specific conditions specified in Table 5 to this subpart. On and after the relevant compliance date for your source as specified in §63.7083(e), each performance test must be conducted based on representative performance (*i.e.*, performance based on normal operating conditions) of the affected source and under the specific conditions in Table 5 to this subpart. Representative conditions exclude periods of startup and shutdown. The owner or operator may not conduct performance tests during periods of malfunction. The owner or operator must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. 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.

(c) Prior to the relevant compliance date for your source as specified in §63.7083(e), you may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §63.7(e)(1). On and after the relevant compliance date for your source as specified in §63.7083(e), you may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in paragraph (b) of this section.

(d) Except for opacity and VE observations, 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.

(e) The emission rate of particulate matter (PM) from each lime kiln (and each lime cooler if there is a separate exhaust to the atmosphere from the lime cooler) must be computed for each run using Equation 1 of this section:

$$E = (C_k Q_k + C_c Q_c) / PK \quad (Eq. 1)$$

Where:

E = Emission rate of PM, pounds per ton (lb/ton) of stone feed.

C_k = Concentration of PM in the kiln effluent, grain/dry standard cubic feet (gr/dscf).

Q_k = Volumetric flow rate of kiln effluent gas, dry standard cubic feet per hour (dscf/hr).

C_c = Concentration of PM in the cooler effluent, grain/dscf. This value is zero if there is not a separate cooler exhaust to the atmosphere.

Q_c = Volumetric flow rate of cooler effluent gas, dscf/hr. This value is zero if there is not a separate cooler exhaust to the atmosphere.

P = Stone feed rate, tons per hour (ton/hr).

K = Conversion factor, 7000 grains per pound (grains/lb).

(f)(1) If you choose to meet a weighted average emission limit as specified in item 4 of Table 1 to this subpart, you must calculate a combined particulate emission rate from all kilns and coolers within your LMP using Equation 2 of this section:

$$E_T = \frac{\sum_{i=1}^n E_i P_i}{\sum_{i=1}^n P_i} \quad (Eq. 2)$$

Where:

E_T = Emission rate of PM from all kilns and coolers, lb/ton of stone feed.

E_i = Emission rate of PM from kiln i , or from kiln/cooler combination i , lb/ton of stone feed.

P_i = Stone feed rate to kiln i , ton/hr.

n = Number of kilns you wish to include in averaging.

(2) You do not have to include every kiln in this calculation, only include kilns you wish to average. Kilns that have a PM emission limit of 0.60 lb/tsf are ineligible for any averaging.

(g) The weighted average PM emission limit from all kilns and coolers for which you are averaging must be calculated using Equation 3 of this section:

$$E_{TN} = \frac{\sum_{j=1}^m E_j P_j}{\sum_{j=1}^m P_j} \quad (Eq. 3)$$

Where:

E_{TN} = Weighted average PM emission limit for all kilns and coolers being included in averaging at the LMP, lb/ton of stone feed.

E_j = PM emission limit (0.10 or 0.12) for kiln j , or for kiln/cooler combination j , lb/ton of stone feed.

P_j = Stone feed rate to kiln j , ton/hr.

m = Number of kilns and kiln/cooler combinations you are averaging at your LMP. You must include the same kilns in the calculation of E_T and E_{TN} . Kilns that have a PM emission limit of 0.60 lb/tsf are ineligible for any averaging.

(h) Performance test results must be documented in complete test reports that contain the information required by paragraphs (h)(1) through (10) of this section, as well as all other relevant information. The plan to be followed during testing must be made available to the Administrator at least 60 days prior to testing.

(1) A brief description of the process and the air pollution control system;

(2) Sampling location description(s);

- (3) A description of sampling and analytical procedures and any modifications to standard procedures;
- (4) Test results, including opacity;
- (5) Quality assurance procedures and results;
- (6) Records of operating conditions during the test, preparation of standards, and calibration procedures;
- (7) Raw data sheets for field sampling and field and laboratory analyses;
- (8) Documentation of calculations;
- (9) All data recorded and used to establish operating limits; and
- (10) Any other information required by the test method.

(i) [Reserved]

(j) You must establish any applicable 3-hour block average operating limit indicated in Table 3 to this subpart according to the applicable requirements in Table 4 to this subpart and paragraphs (j)(1) through (4) of this section.

(1) Continuously record the parameter during the PM performance test and include the parameter record(s) in the performance test report.

(2) Determine the average parameter value for each 15-minute period of each test run.

(3) Calculate the test run average for the parameter by taking the average of all the 15-minute parameter values for the run.

(4) Calculate the 3-hour operating limit by taking the average of the three test run averages.

(k) For each building enclosing any PSH operations that is subject to a VE limit, you must conduct a VE check according to item 18 in Table 5 to this subpart, and in accordance with paragraphs (k)(1) through (3) of this section.

(1) Conduct visual inspections that consist of a visual survey of the building over the test period to identify if there are VE, other than condensed water vapor.

(2) Select a position at least 15 but not more 1,320 feet from each side of the building with the sun or other light source generally at your back.

(3) The observer conducting the VE checks need not be certified to conduct EPA Method 9 in appendix A-4 to part 60 of this chapter. However, the observer must meet the training requirements as described in EPA Method 22 in appendix A-7 to part 60 of this chapter.

(l) When determining compliance with the opacity standards for fugitive emissions from PSH operations in item 8 of Table 1 to this subpart, you must conduct EPA Method 9 in appendix A-4 to part 60 of this chapter according to item 17 in Table 5 to this subpart, and in accordance with paragraphs (l)(1) through (3) of this section.

(1) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(2) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun must be followed.

(3) If you use wet dust suppression to control PM from PSH operations, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered VE.

When a water mist of this nature is present, you must observe emissions at a point in the plume where the mist is no longer visible.

(m) On and after the relevant compliance date for your source as specified in §63.7083(e), during startup, kilns must be tested hourly to determine when lime product meets the definition of on-specification lime product.

[69 FR 416, Jan. 5, 2004, as amended at 85 FR 44977, July 24, 2020]

§63.7113 What are my monitoring installation, operation, and maintenance requirements?

(a) You must install, operate, and maintain each continuous parameter monitoring system (CPMS) according to your OM&M plan required by §63.7100(d) and paragraphs (a)(1) through (5) of this section, and you must install, operate, and maintain each continuous opacity monitoring system (COMS) as required by paragraph (g) of this section

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

(2) To calculate a valid hourly value, you must have at least four equally spaced data values (or at least two, if that condition is included to allow for periodic calibration checks) for that hour from a CPMS that is not out of control according your OM&M plan, and use all valid data.

(3) To calculate the average for each 3-hour block averaging period, you must use all valid data, and you must have at least 66 percent of the hourly averages for that period using only hourly average values that are based on valid data (*i.e.*, not from out-of-control periods).

(4) You must conduct a performance evaluation of each CPMS in accordance with your OM&M plan.

(5) You must continuously operate and maintain the CPMS according to the OM&M plan, including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(b) For each flow measurement device, you must meet the requirements in paragraphs (a)(1) through (5) and (b)(1) through (4) of this section.

(1) Use a flow sensor with a minimum tolerance of 2 percent of the flow rate.

(2) Reduce swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(3) Conduct a flow sensor calibration check at least semiannually.

(4) At least monthly, inspect all components for integrity, all electrical connections for continuity, and all mechanical connections for leakage.

(c) For each pressure measurement device, you must meet the requirements in paragraphs (a)(1) through (5) and (c)(1) through (7) of this section.

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

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion.

(3) Use a gauge with a minimum tolerance of 0.5 inch of water or a transducer with a minimum tolerance of 1 percent of the pressure range.

(4) Check pressure tap pluggage daily.

(5) Using a manometer, check gauge calibration quarterly and transducer calibration monthly.

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

(7) At least monthly, inspect all components for integrity, all electrical connections for continuity, and all mechanical connections for leakage.

(d) For each bag leak detection system (BLDS), you must meet any applicable requirements in paragraphs (a)(1) through (5) and (d)(1) through (10) of this section.

(1) The BLDS must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

(2) The sensor on the BLDS must provide output of relative PM emissions.

(3) The BLDS must be equipped with a device to continuously record the output signal from the sensor.

(4) The BLDS must have an alarm that will sound automatically when it detects an increase in relative PM emissions greater than a preset level.

(5) The alarm must be located in an area where appropriate plant personnel will be able to hear it.

(6) For a positive-pressure fabric filter (FF), each compartment or cell must have a bag leak detector (BLD). For a negative-pressure or induced-air FF, the BLD must be installed downstream of the FF. If multiple BLD are required (for either type of FF), the detectors may share the system instrumentation and alarm.

(7) Each triboelectric BLDS must be installed, calibrated, operated, and maintained according to EPA-454/R-98-015, "Fabric Filter Bag Leak Detection Guidance," (incorporated by reference—see §63.14). Other types of bag leak detection systems must be installed, operated, calibrated, and maintained according to the manufacturer's written specifications and recommendations. Standard operating procedures must be incorporated into the OM&M plan.

(8) At a minimum, initial adjustment of the system must consist of establishing the baseline output in both of the following ways, according to section 5.0 of the EPA-454/R-98-015, "Fabric Filter Bag Leak Detection Guidance," (incorporated by reference—see §63.14):

(i) Adjust the range and the averaging period of the device.

(ii) Establish the alarm set points and the alarm delay time.

(9) After initial adjustment, the sensitivity or range, averaging period, alarm set points, or alarm delay time may not be adjusted except as specified in the OM&M plan required by §63.7100(d). In no event may the range be increased by more than 100 percent or decreased by more than 50 percent over a 365-day period unless such adjustment follows a complete FF inspection that demonstrates that the FF is in good operating condition, as defined in section 5.2 of the "Fabric Filter Bag Leak Detection Guidance," (incorporated by reference—see §63.14). Record each adjustment.

(10) Record the results of each inspection, calibration, and validation check.

(e) For each PM detector, you must meet any applicable requirements in paragraphs (a)(1) through (5) and (e)(1) through (8) of this section.

(1) The PM detector must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

- (2) The sensor on the PM detector must provide output of relative PM emissions.
- (3) The PM detector must have an alarm that will sound automatically when it detects an increase in relative PM emissions greater than a preset level.
- (4) The alarm must be located in an area where appropriate plant personnel will be able to hear it.
- (5) For a positive-pressure electrostatic precipitator (ESP), each compartment must have a PM detector. For a negative-pressure or induced-air ESP, the PM detector must be installed downstream of the ESP. If multiple PM detectors are required (for either type of ESP), the detectors may share the system instrumentation and alarm.
- (6) Particulate matter detectors must be installed, operated, adjusted, and maintained according to the manufacturer's written specifications and recommendations. Standard operating procedures must be incorporated into the OM&M plan.
- (7) At a minimum, initial adjustment of the system must consist of establishing the baseline output in both of the following ways:
 - (i) Adjust the range and the averaging period of the device.
 - (ii) Establish the alarm set points and the alarm delay time.
- (8) After initial adjustment, the range, averaging period, alarm set points, or alarm delay time may not be adjusted except as specified in the OM&M plan required by §63.7100(d). In no event may the range be increased by more than 100 percent or decreased by more than 50 percent over a 365-day period unless a responsible official as defined in §63.2 certifies in writing to the Administrator that the ESP has been inspected and found to be in good operating condition.
- (f) For each emission unit equipped with an add-on air pollution control device, you must inspect each capture/collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in item 6 of Table 3 to this subpart and record the results of each inspection.
- (g) For each COMS used to monitor an add-on air pollution control device, you must meet the requirements in paragraphs (g)(1) and (2) of this section.
 - (1) Install the COMS at the outlet of the control device.
 - (2) Install, maintain, calibrate, and operate the COMS as required by 40 CFR part 63, subpart A, General Provisions and according to Performance Specification (PS)-1 of appendix B to part 60 of this chapter. Facilities that operate COMS installed on or before February 6, 2001, may continue to meet the requirements in effect at the time of COMS installation unless specifically required to re-certify the COMS by their permitting authority.

[69 FR 416, Jan. 5, 2004, as amended at 85 FR 44978, July 24, 2020]

§63.7114 How do I demonstrate initial compliance with the emission limitations standard?

- (a) You must demonstrate initial compliance with each emission limit in Table 1 to this subpart that applies to you, according to Table 4 to this subpart. For existing lime kilns and their associated coolers, you may perform VE measurements in accordance with EPA Method 9 of appendix A to part 60 in lieu of installing a COMS or PM detector if any of the conditions in paragraphs (a)(1) through (3) of this section exist:
 - (1) You use a FF for PM control, and the FF is under positive pressure and has multiple stacks; or
 - (2) The control device exhausts through a monovent; or

(3) The installation of a COMS in accordance with PS-1 of appendix B to part 60 is infeasible.

(b) You must establish each site-specific operating limit in Table 3 to this subpart that applies to you according to the requirements in §63.7112(j) and Table 5 to this subpart. Alternative parameters may be monitored if approval is obtained according to the procedures in §63.8(f).

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.7130(e).

[69 FR 416, Jan. 5, 2004, as amended at 85 FR 44979, July 24, 2020]

CONTINUOUS COMPLIANCE REQUIREMENTS

§63.7120 How do I monitor and collect data to demonstrate continuous compliance?

(a) You must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, required quality assurance or control activities (including, as applicable, calibration checks and required zero adjustments), and except for PSH operations subject to monthly VE testing, you must monitor continuously (or collect data at all required intervals) at all times that the emission unit is operating.

(c) Data recorded during the conditions described in paragraphs (c)(1) and (2) of this section may not be used either in data averages or calculations of emission or operating limits; or in fulfilling a minimum data availability requirement. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

(1) Monitoring system breakdowns, repairs, preventive maintenance, calibration checks, and zero (low-level) and high-level adjustments;

(2) Periods of non-operation of the process unit (or portion thereof), resulting in cessation of the emissions to which the monitoring applies; and

[69 FR 416, Jan. 5, 2004, as amended at 85 FR 44979, July 24, 2020]

§63.7121 How do I demonstrate continuous compliance with the emission limitations standard?

(a) You must demonstrate continuous compliance with each emission limitation in Tables 1 and 3 to this subpart that applies to you according to the methods specified in Tables 6 and 7 to this subpart.

(b) You must report each instance in which you did not meet each operating limit, opacity limit, and VE limit in Tables 2, 3 and 7 to this subpart that applies to you. These deviations must be reported according to the requirements in §63.7131.

(c) [Reserved]

(d) Prior to the relevant compliance date for your source as specified in §63.7083(e), consistent with §§63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with §63.6(e)(1). The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in §63.6(e).

(e) For each PSH operation subject to an opacity limit as specified in Table 1 to this subpart, and any vents from buildings subject to an opacity limit, you must conduct a VE check according to item 1 in Table 7 to this subpart, and as follows:

(1) Conduct visual inspections that consist of a visual survey of each stack or process emission point over the test period to identify if there are VE, other than condensed water vapor.

(2) Select a position at least 15 but not more 1,320 feet from the affected emission point with the sun or other light source generally at your back.

(3) The observer conducting the VE checks need not be certified to conduct EPA Method 9 in appendix A-4 to part 60 of this chapter but must meet the training requirements as described in EPA Method 22 of appendix A-7 to part 60 of this chapter.

(f) For existing lime kilns and their associated coolers, you may perform VE measurements in accordance with EPA Method 9 of appendix A to part 60 in lieu of installing a COMS or PM detector if any of the conditions in paragraphs (f)(1) or (3) of this section exist:

(1) You use a FF for PM control, and the FF is under positive pressure and has multiple stacks; or

(2) The control device exhausts through a monovent; or

(3) The installation of a COMS in accordance with PS-1 of appendix B to part 60 is infeasible.

[69 FR 416, Jan. 5, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 85 FR 44979, July 24, 2020]

NOTIFICATION, REPORTS, AND RECORDS

§63.7130 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.6(h)(4) and (5); 63.7(b) and (c); 63.8(e); (f)(4) and (6); and 63.9 (a) through (j) that apply to you, by the dates specified.

(b) As specified in §63.9(b)(2), if you start up your affected source before January 5, 2004, you must submit an initial notification not later than 120 calendar days after January 5, 2004, or no later than 120 days after the source becomes subject to this subpart, whichever is later.

(c) If you startup your new or reconstructed affected source on or after January 5, 2004, you must submit an initial notification not later than 120 calendar days after you start up your affected source, or no later than 120 days after the source becomes subject to this subpart, whichever is later.

(d) If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin, as required in §63.7(b)(1).

(e) If you are required to conduct a performance test, design evaluation, opacity observation, VE observation, or other initial compliance demonstration as specified in Table 4 or 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii). Beginning on the relevant compliance date for your source as specified in §63.7083(e), submit all subsequent Notification of Compliance Status following the procedure specified in §63.7131(h).

(1) For each initial compliance demonstration required in Table 4 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 calendar day following the completion of the initial compliance demonstration.

(2) For each compliance demonstration required in Table 6 to this subpart that includes a performance test conducted according to the requirements in Table 5 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to §63.10(d)(2).

[69 FR 416, Jan. 5, 2004, as amended at 85 FR 44979, July 24, 2020; 85 FR 73912, Nov. 19, 2020]

§63.7131 What reports must I submit and when?

(a) You must submit each report listed in Table 8 to 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 specified in Table 8 to this subpart and according to the requirements in paragraphs (b)(1) through (6) of this section:

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.7083 and ending on June 30 or December 31, whichever date is the first date following the end of the first half calendar year after the compliance date that is specified for your source in §63.7083.

(2) 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 half calendar year after the compliance date that is specified for your affected source in §63.7083.

(3) 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) 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 affected source that is subject to permitting regulations pursuant to part 70 or part 71 of this chapter, if the permitting authority has established dates for submitting semiannual reports pursuant to §§70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A) of this chapter, you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates specified in paragraphs (b)(1) through (4) of this section.

(6) Beginning on the relevant compliance date for your source as specified in §63.7083(e), submit all subsequent compliance reports following the procedure specified in paragraph (h) of this section.

(c) The compliance report must contain the information specified 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 truth, accuracy, and completeness of the content of the report.

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

(4) Prior to the relevant compliance date for your source as specified in §63.7083(e), if you had a startup, shutdown or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information in §63.10(d)(5)(i).

(5) If there were no deviations from any emission limitations (emission limit, operating limit, opacity limit, and VE limit) that apply to you, the compliance report must include a statement that there were no deviations from the emission limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring systems (CMS) were out-of-control as specified in §63.8(c)(7), a statement that there were no periods during which the CMS were out-of-control during the reporting period.

(d) For each deviation from an emission limitation (emission limit, operating limit, opacity limit, and VE limit) that occurs at an affected source where you are not using a CMS to comply with the emission limitations in this subpart, the compliance report must contain the information specified in paragraphs (c)(1) through (4) and (d)(1) and (2) of this

section. The deviations must be reported in accordance with the requirements in §63.10(d) prior to the relevant compliance date for your source as specified in §63.7083(e) and the requirements in §63.10(d)(1)-(4) beginning on the relevant compliance date for your source as specified in §63.7083(e).

(1) The total operating time of each emission unit during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), and the corrective action taken.

(3) An estimate of the quantity of each regulated pollutant emitted over a particulate matter emission limit, and a description of the method used to estimate the emissions.

(e) For each deviation from an emission limitation (emission limit, operating limit, opacity limit, and VE limit) occurring at an affected source where you are using a CMS to comply with the emission limitation in this subpart, you must include the information specified in paragraphs (c)(1) through (4) and (e)(1) through (11) of this section, except that beginning on the relevant compliance date for your source as specified in §63.7083(e), the semiannual compliance report must also include the information included in paragraph (e)(12) of this section. This includes periods of startup, shutdown, and malfunction.

(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 startup, shutdown, or malfunction or during another period.

(5) A summary of the total duration of the deviations during the reporting period and the total duration as a percent of the total affected 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 startup, shutdown, 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 emission unit operating time during that reporting period.

(8) A brief description of the process units.

(9) A brief description of the CMS.

(10) The date of the latest CMS certification or audit.

(11) A description of any changes in CMS, processes, or controls since the last reporting period.

(12) An estimate of the quantity of each regulated pollutant emitted over a particulate matter emission limit, and a description of the method used to estimate the emissions.

(f) Each facility that has obtained a title V operating permit pursuant to part 70 or part 71 of this chapter must report all deviations as defined in this subpart in the semiannual monitoring report required by §70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A) of this chapter. If you submit a compliance report specified in Table 8 to this subpart along with, or as part of, the semiannual monitoring report required by §70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A) of this chapter, and the compliance report includes all required information concerning deviations from any emission limitation (including any operating limit), 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 you may have to report deviations from permit requirements to the permit authority.

(g) If you are required to submit reports following the procedure specified in this paragraph, you must submit reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). You must use the appropriate electronic report template on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri>) for this subpart. The date report templates become available will be listed on the CEDRI website. The report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted. If you claim some of the information required to be submitted via CEDRI is confidential business information (CBI), submit a complete report, including information claimed to be CBI, to the EPA. The report must be generated using the appropriate form on the CEDRI website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(h) Within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedures specified in paragraphs (h)(1) through (3) of this section.

(1) *Data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website* (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) *at the time of the test.* Submit the results of the performance test to the EPA via CEDRI, which can be accessed through the EPA's CDX (<https://cdx.epa.gov/>). The data must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.

(2) *Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test.* The results of the performance test must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the ERT generated package or alternative file to the EPA via CEDRI.

(3) *Confidential business information (CBI).* If you claim some of the information submitted under paragraph (i) of this section is CBI, you must submit a complete file, including information claimed to be CBI, to the EPA. The file must be generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in paragraph (i) of this section.

(i) If you are required to electronically submit a report or notification through CEDRI in the EPA's CDX, you may assert a claim of EPA system outage for failure to timely comply with the reporting requirement. To assert a claim of EPA system outage, you must meet the requirements outlined in paragraphs (i)(1) through (7) of this section.

(1) You must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either the EPA's CEDRI or CDX systems.

(2) The outage must have occurred within the period of time beginning five business days prior to the date that the submission is due.

(3) The outage may be planned or unplanned.

(4) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(5) You must provide to the Administrator a written description identifying:

- (i) The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;
 - (ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;
 - (iii) Measures taken or to be taken to minimize the delay in reporting; and
 - (iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.
- (6) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.
- (7) In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.
- (j) If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of force majeure for failure to timely comply with the reporting requirement. To assert a claim of force majeure, you must meet the requirements outlined in paragraphs (j)(1) through (5) of this section.

(1) You may submit a claim if a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning five business days prior to the date the submission is due. For the purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (e.g., hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (e.g., large scale power outage).

(2) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(3) You must provide to the Administrator:

- (i) A written description of the force majeure event;
 - (ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;
 - (iii) Measures taken or to be taken to minimize the delay in reporting; and
 - (iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.
- (4) The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(5) In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs.

[69 FR 416, Jan. 5, 2004, as amended at 85 FR 44979, July 24, 2020]

§63.7132 What records must I keep?

- (a) You must keep the records specified in paragraphs (a)(1) through (3) of this section.

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

(2) Prior to the relevant compliance date for your source as specified in §63.7083(e), the records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction. On and after the relevant compliance date for your source as specified in §63.7083(e), the records in paragraphs (a)(2)(i) and (ii) of this section.

(i) You must keep records for each startup period of the date, the time startup began, the time began producing on-specification lime product, and the time discharge from the kiln began for any affected source that is subject to a standard during startup that differs from the standard applicable at other times.

(ii) You must keep records of the date, time, cause and duration of each malfunction (as defined in 40 CFR 63.2) that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date, time, cause, and duration of the monitoring malfunction; the record must list the affected source or equipment; if there was a failure to meet a particulate matter emissions limit, an estimate of the volume of each regulated pollutant emitted over the limit, and a description of the method used to estimate the emissions.

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

(b) You must keep the records in §63.6(h)(6) for VE observations.

(c) You must keep the records required by Tables 6 and 7 to this subpart to show continuous compliance with each emission limitation that applies to you.

(d) You must keep the records which document the basis for the initial applicability determination as required under §63.7081.

[69 FR 416, Jan. 5, 2004, as amended at 85 FR 44981, July 24, 2020]

§63.7133 In what form and for 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 onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You may keep the records offsite for the remaining 3 years.

(d) Any records required to be maintained by this part that are submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation.

[69 FR 416, Jan. 5, 2004, as amended at 85 FR 44981, July 24, 2020]

OTHER REQUIREMENTS AND INFORMATION

§63.7140 What parts of the General Provisions apply to me?

Table 9 to this subpart shows which parts of the General Provisions in §§63.1 through 63.16 apply to you. When there is overlap between subpart A and subpart AAAAA, as indicated in the "Explanations" column in Table 8, subpart AAAAA takes precedence.

[85 FR 44981, July 24, 2020]

§63.7141 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by us, the U.S. EPA, or by 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 if 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 subpart E of this part, 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 as specified in paragraphs (c)(1) through (7) of this section.

- (1) Approval of alternatives to the non-opacity emission limitations in §63.7090(a).
- (2) Approval of alternative opacity emission limitations in §63.7090(a) and (c).
- (3) Approval of alternatives to the operating limits in §63.7090(b).
- (4) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.
- (5) Approval of major alternatives to monitoring under §63.8(f) and as defined in §63.90.
- (6) Approval of major alternatives to recordkeeping and reporting under §63.10(f) and as defined in §63.90.
- (7) Approval of an alternative to any electronic reporting to the EPA required by this subpart.

[69 FR 416, Jan. 5, 2004, as amended at 85 FR 44981, July 24, 2020]

§63.7142 What are the requirements for claiming area source status?

(a) If you wish to claim that your LMP is an area source, you must measure the emissions of hydrogen chloride from all lime kilns, except as provided in paragraph (c) of this section, at your plant using either:

- (1) EPA Method 320 of appendix A to this part, or

(2) As an alternative to Method 320 of Appendix A, ASTM D6348-03 (Reapproved 2010) including Annexes A1 through A8 (incorporated by reference—see §63.14). ASTM D6348-12e1 (incorporated by reference—see §63.14) is an acceptable alternative to EPA Method 320 of appendix A, provided that the provisions of paragraphs (a)(2)(i) and (ii) of this section are followed:

(i) The test plan preparation and implementation in the Annexes to ASTM D6348-03 (Reapproved 2010), Sections A1 through A8 are mandatory.

(ii) In ASTM D6348-03 (Reapproved 2010) Annex A5 (Analyte Spiking Technique), the percent recovery (%R) must be determined for each target analyte (Equation A5.5). In order for the test data to be acceptable for a compound, %R must be greater than or equal to 70 percent and less than or equal to 130 percent. If the %R value does not meet this criterion for a target compound, the test data are not acceptable for that compound and the test must be repeated for that analyte (*i.e.*, the sampling and/or analytical procedure should be adjusted before a retest). The %R value for each compound must be reported in the test report, and all field measurements must be corrected with the calculated %R value for that compound by using the following equation: Reported Results = ((Measured Concentration in the Stack)/(%R) × 100; or

(3) EPA Method 321 of appendix A to this part, or

(4) As an alternative to EPA Method 321, ASTM Method D6735-01 (Reapproved 2009), (incorporated by reference—see §63.14), provided that the provisions in paragraphs (a)(3)(i) through (vi) of this section are followed.

(i) A test must include three or more runs in which a pair of samples is obtained simultaneously for each run according to section 11.2.6 of ASTM Method D6735-01 (Reapproved 2009).

(ii) You must calculate the test run standard deviation of each set of paired samples to quantify data precision, according to Equation 1 of this section:

$$RSD_a = (100) \text{ Absolute Value } \left[\frac{C1_a - C2_a}{C1_a + C2_a} \right] \quad (Eq. 1)$$

Where:

RSD_a = The test run relative standard deviation of sample pair a, percent.

$C1_a$ and $C2_a$ = The HCl concentrations, milligram/dry standard cubic meter(mg/dscm), from the paired samples.

(iii) You must calculate the test average relative standard deviation according to Equation 2 of this section:

$$RSD_{TA} = \frac{\sum_{a=1}^p RSD_a}{p} \quad (Eq. 2)$$

Where:

RSD_{TA} = The test average relative standard deviation, percent.

RSD_a = The test run relative standard deviation for sample pair a.

p = The number of test runs, ≥ 3 .

(iv) If RSD^{TA} is greater than 20 percent, the data are invalid and the test must be repeated.

(v) The post-test analyte spike procedure of section 11.2.7 of ASTM Method D6735-01 (Reapproved 2009) is conducted, and the percent recovery is calculated according to section 12.6 of ASTM Method D6735-01 (Reapproved 2009).

(vi) If the percent recovery is between 70 percent and 130 percent, inclusive, the test is valid. If the percent recovery is outside of this range, the data are considered invalid, and the test must be repeated.

(b) If you conduct tests to determine the rates of emission of specific organic HAP from lime kilns at LMP for use in applicability determinations under §63.7081, you may use either:

(1) Method 320 of appendix A to this part, or

(2) As an alternative to Method 320 of Appendix A, ASTM D6348-03 (Reapproved 2010) including Annexes A1 through A8 (incorporated by reference—see §63.14). ASTM D6348-12e1 (incorporated by reference—see §63.14) is

an acceptable alternative to EPA Method 320 of appendix A, provided that the provisions of paragraphs (b)(2)(i) and (ii) of this section are followed:

(i) The test plan preparation and implementation in the Annexes to ASTM D6348-03 (Reapproved 2010), Sections A1 through A8 are mandatory.

(ii) In ASTM D6348-03 (Reapproved 2010) Annex A5 (Analyte Spiking Technique), the percent recovery (%R) must be determined for each target analyte (Equation A5.5). In order for the test data to be acceptable for a compound, %R must be greater than or equal to 70 percent and less than or equal to 130 percent. If the %R value does not meet this criterion for a target compound, the test data are not acceptable for that compound and the test must be repeated for that analyte (*i.e.*, the sampling and/or analytical procedure should be adjusted before a retest). The %R value for each compound must be reported in the test report, and all field measurements must be corrected with the calculated %R value for that compound by using the following equation: Reported Results = ((Measured Concentration in the Stack)/(%R) × 100; or

(3) Method 18 of appendix A-6 to part 60 of this chapter; or

(4) As an alternative to Method 18, ASTM D6420-99 (Reapproved 2010), (incorporated by reference—see §63.14), provided that the provisions of paragraphs (b)(3)(i) through (iv) of this section are followed:

(i) The target compound(s) are those listed in section 1.1 of ASTM D6420-99 (Reapproved 2010) as measurable;

(ii) This ASTM should not be used for methane and ethane because their atomic mass is less than 35 and

(iii) ASTM D6420-99 (Reapproved 2010) should never be specified as a total VOC method.

(c) It is left to the discretion of the permitting authority whether or not idled kilns must be tested for (HCl) to claim area source status. If the facility has kilns that use common feed materials and fuel, are essentially identical in design, and use essentially identical emission controls, the permitting authority may also determine if one kiln can be tested, and the HCl emissions for the other essentially identical kilns be estimated from that test.

[69 FR 416, Jan. 5, 2004, as amended at 85 FR 44981, July 24, 2020]

§63.7143 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in §63.2, and in this section as follows:

Bag leak detector system (BLDS) is a type of PM detector used on FF to identify an increase in PM emissions resulting from a broken filter bag or other malfunction and sound an alarm.

Belt conveyor means a conveying device that transports *processed stone* from one location to another by means of an endless belt that is carried on a series of idlers and routed around a pulley at each end.

Bucket elevator means a *processed stone* conveying device consisting of a head and foot assembly which supports and drives an endless single or double strand chain or belt to which buckets are attached.

Building means any frame structure with a roof.

Capture system means the equipment (including enclosures, hoods, ducts, fans, dampers, etc.) used to capture and transport PM to a control device.

Control device means the air pollution control equipment used to reduce PM emissions released to the atmosphere from one or more process operations at an LMP.

Conveying system means a device for transporting *processed stone* from one piece of equipment or location to another location within a plant. Conveying systems include but are not limited to feeders, belt conveyors, bucket elevators and pneumatic systems.

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 (including any operating limit);

(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) Prior to the relevant compliance date for your source as specified in §63.7083(e), fails to meet any emission limitation (including any operating limit) in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is allowed by this subpart.

Emission limitation means any emission limit, opacity limit, operating limit, or VE limit.

Emission unit means a lime kiln, lime cooler, storage bin, conveying system transfer point, bulk loading or unloading operation, bucket elevator or belt conveyor at an LMP.

Fugitive emission means PM that is not collected by a capture system.

Hydrator means the device used to produce hydrated lime or calcium hydroxide via the chemical reaction of the lime product with water.

Lime cooler means the device external to the lime kiln (or part of the lime kiln itself) used to reduce the temperature of the lime produced by the kiln.

Lime kiln means the device, including any associated preheater, used to produce a lime product from stone feed by calcination. Kiln types include, but are not limited to, rotary kiln, vertical kiln, rotary hearth kiln, double-shaft vertical kiln, and fluidized bed kiln.

Lime manufacturing plant (LMP) means any plant which uses a lime kiln to produce lime product from limestone or other calcareous material by calcination.

Lime product means the product of the lime kiln calcination process including, calcitic lime, dolomitic lime, and dead-burned dolomite.

Limestone means the material comprised primarily of calcium carbonate (referred to sometimes as calcitic or high calcium limestone), magnesium carbonate, and/or the double carbonate of both calcium and magnesium (referred to sometimes as dolomitic limestone or dolomite).

Monovent means an exhaust configuration of a building or emission control device (e.g., positive pressure FF) that extends the length of the structure and has a width very small in relation to its length (i.e., length-to-width ratio is typically greater than 5:1). The exhaust may be an open vent with or without a roof, louvered vents, or a combination of such features.

On-specification Lime Product means lime product that has been sufficiently calcined to meet end use requirements.

Particulate matter (PM) detector means a system that is continuously capable of monitoring PM loading in the exhaust of FF or ESP in order to detect bag leaks, upset conditions, or control device malfunctions and sounds an alarm at a preset level. A PM detector system includes, but is not limited to, an instrument that operates on

triboelectric, light scattering, light transmittance, or other effects to continuously monitor relative particulate loadings. A BLDS is a type of PM detector.

Positive pressure FF or ESP means a FF or ESP with the fan(s) on the upstream side of the control device.

Process stone handling operations means the equipment and transfer points between the equipment used to transport *processed stone*, and includes, storage bins, conveying system transfer points, bulk loading or unloading systems, screening operations, bucket elevators, and belt conveyors.

Processed stone means limestone or other calcareous material that has been processed to a size suitable for feeding into a lime kiln.

Screening operation means a device for separating material according to size by passing undersize material through one or more mesh surfaces (screens) in series and retaining oversize material on the mesh surfaces (screens).

Shutdown means the cessation of kiln operation. Shutdown begins when feed to the kiln is reduced below planned production quantities and ends when stone feed is halted and fuel combustion from the main burner ceases.

Stack emissions means the PM that is released to the atmosphere from a capture system or control device.

Startup means the beginning of kiln operation. Startup begins when a shutdown kiln begins firing fuel in the main burner. Startup ends when the lime kiln first generates on-specification lime product or 12 hours following first discharge from the kiln, whichever is earlier.

Storage bin means a manmade enclosure for storage (including surge bins) of *processed stone* prior to the lime kiln.

Transfer point means a point in a conveying operation where the material is transferred to or from a belt conveyor.

Vent means an opening through which there is mechanically induced air flow for the purpose of exhausting from a building air carrying PM emissions from one or more emission units.

[69 FR 416, Jan. 5, 2004, as amended at 85 FR 44982, July 24, 2020]

Table 1 to Subpart AAAAA of Part 63—Emission Limits

As required in §63.7090(a), you must meet each emission limit in the following table that applies to you, except for kilns and coolers during startup and shutdown (See Table 2 for emission limits for kilns and coolers during startup and shutdown).

For . . .	You must meet the following emission limit
1. Existing lime kilns and their associated lime coolers that did not have a wet scrubber installed and operating prior to January 5, 2004	PM emissions must not exceed 0.12 pounds per ton of stone feed (lb/tsf).
2. Existing lime kilns and their associated lime coolers that have a wet scrubber, where the scrubber itself was installed and operating prior to January 5, 2004	PM emissions must not exceed 0.60 lb/tsf. If at any time after January 5, 2004 the kiln changes to a dry control system, then the PM emission limit in item 1 of this Table 1 applies, and the kiln is hereafter ineligible for the PM emission limit in item 2 of this Table 1 regardless of the method of PM control.
3. New lime kilns and their associated lime coolers	PM emissions must not exceed 0.10 lb/tsf.
4. All existing and new lime kilns and their associated coolers at your LMP, and you choose to average PM emissions, except that any kiln that is allowed to meet the 0.60 lb/tsf PM emission limit is ineligible for averaging	Weighted average PM emissions calculated according to Eq. 2 in §63.7112 must not exceed 0.12 lb/tsf (if you are averaging only existing kilns) or 0.10 lb/tsf (if you are averaging only new kilns). If you are averaging existing and new kilns, your weighted average PM emissions must not exceed the weighted average emission limit calculated according to Eq. 3 in §63.7112, except that no new kiln and its associated cooler considered alone may exceed an average PM emissions limit of 0.10 lb/tsf.
5. Stack emissions from all PSH operations at a new or existing affected source	PM emissions must not exceed 0.05 grams per dry standard cubic meter (g/dscm).
6. Stack emissions from all PSH operations at a new or existing affected source, unless the stack emissions are discharged through a wet scrubber control device	Emissions must not exceed 7 percent opacity.
7. Fugitive emissions from all PSH operations at a new or existing affected source, except as provided by item 8 of this Table 1	Emissions must not exceed 10 percent opacity.
8. All PSH operations at a new or existing affected source enclosed in a building	All of the individually affected PSH operations must comply with the applicable PM and opacity emission limitations in items 5 through 7 of this Table 1, or the building must comply with the following: There must be no VE from the building, except from a vent; and vent emissions must not exceed the stack emissions limitations in items 5 and 6 of this Table 1.
9. Each FF that controls emissions from only an individual, enclosed storage bin	Emissions must not exceed 7 percent opacity.
10. Each set of multiple storage bins at a new or existing affected source, with combined stack emissions	You must comply with the emission limits in items 5 and 6 of this Table 1.

[69 FR 416, Jan. 5, 2004, as amended at 85 FR 44982, July 24, 2020]

Table 2 to Subpart AAAAA of Part 63—Startup and Shutdown Emission Limits for Kilns and Coolers

As required in §63.7090(b), on and after the relevant compliance date for your source as specified in §63.7083(e), you must meet each emission limit in the following table that applies to you.

TABLE 2 TO SUBPART AAAAA OF PART 63—STARTUP AND SHUTDOWN EMISSION LIMITS FOR KILNS AND COOLERS

For . . .	You must meet the following emission limit	You have demonstrated compliance, if after following the requirements in §63.7112 . . .
1. All new and existing lime kilns and their associated coolers equipped with an FF or an ESP during each startup	Emissions must not exceed 15 percent opacity (based on startup period block average)	i. Installed, maintained, calibrated and operated a COMS as required by 40 CFR part 63, subpart A, General Provisions and according to PS-1 of appendix B to part 60 of this chapter, except as specified in §63.7113(g)(2);
		ii. Collected the COMS data at a frequency of at least once every 15 seconds, determining block averages for each startup period and demonstrating for each startup block period the average opacity does not exceed 15 percent.
2. All existing lime kilns and their associated coolers that have a wet scrubber during each startup	See item 2.b of Table 3 of subpart AAAAA for emission limit	See item 1 of Table 6 of subpart AAAAA for requirements for demonstrating compliance.
3. All new and existing lime kilns and their associated coolers equipped with an FF or an ESP during shutdown	Emissions must not exceed 15 percent opacity (based on 6-minute average opacity for any 6-minute block period does not exceed 15 percent)	i. Installed, maintained, calibrated and operated a COMS as required by 40 CFR part 63, subpart A, General Provisions and according to PS-1 of appendix B to part 60 of this chapter, except as specified in §63.7113(g)(2);
		ii. Collecting the COMS data at a frequency of at least once every 15 seconds, determining block averages for each 6-minute period and demonstrating for each 6-minute block period the average opacity does not exceed 15 percent.
4. All existing lime kilns and their associated coolers that have a wet scrubber during shutdown	See item 2.b of Table 3 of subpart AAAAA for emission limit	See item 1 of Table 6 of subpart AAAAA for requirements for demonstrating compliance.

Table 3 to Subpart AAAAA of Part 63—Operating Limits

As required in §63.7090(b), you must meet each operating limit in the following table that applies to you, except for kilns and coolers during startup and shutdown (See Table 2 for operating limits during startup and shutdown).

For . . .	You must . . .
1. Each lime kiln and each lime cooler (if there is a separate exhaust to the atmosphere from the associated lime cooler) equipped with an FF	Maintain and operate the FF such that the BLDS or PM detector alarm condition does not exist for more than 5 percent of the total operating time in a 6-month period; and comply with the requirements in §63.7113(d) through (f) and Table 6 to this subpart. In lieu of a BLDS or PM detector maintain the FF such that the 6-minute average opacity for any 6-minute block period does not exceed 15 percent; and comply with the requirements in §63.7113(f) and (g) and Table 6 to this subpart.
2. Each lime kiln equipped with a wet scrubber	a. Maintain the 3-hour block exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the most recent PM performance test; and b. Maintain the 3-hour block scrubbing liquid flow rate greater than the flow rate operating limit established during the most recent performance test.
3. Each lime kiln equipped with an electrostatic precipitator	Install a PM detector and maintain and operate the ESP such that the PM detector alarm is not activated and alarm condition does not exist for more than 5 percent of the total operating time in a 6-month period, and comply with §63.7113(e); or, maintain the ESP such that the 6-minute average opacity for any 6-minute block period does not exceed 15 percent, and comply with the requirements in §63.7113(g); and comply with the requirements in §63.7113(f) and Table 6 to this subpart.
4. Each PSH operation subject to a PM limit which uses a wet scrubber	Maintain the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the PM performance test; and maintain the 3-hour block average scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the performance test.
5. All affected sources	Prepare a written OM&M plan; the plan must include the items listed in §63.7100(d) and the corrective actions to be taken when required in Table 6 to this subpart.
6. Each emission unit equipped with an add-on air pollution control device	a. Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to an FF; and b. Operate each capture/collection system according to the procedures and requirements in the OM&M plan.

Table 4 to Subpart AAAAA of Part 63—Initial Compliance With Emission Limits

As required in §63.7114, you must demonstrate initial compliance with each emission limitation that applies to you, according to the following table.

For . . .	For the following emission limit . . .	You have demonstrated initial compliance, if after following the requirements in §63.7112 . . .
1. All new or existing lime kilns and their associated lime coolers (kilns/coolers)	PM emissions must not exceed 0.12 lb/tsf for all existing kilns/coolers with dry controls, 0.60 lb/tsf for existing kilns/coolers with wet scrubbers, 0.10 lb/tsf for all new kilns/coolers, or a weighted average calculated according to Eq. 3 in §63.7112	The kiln outlet PM emissions (and if applicable, summed with the separate cooler PM emissions), based on the PM emissions measured using Method 5 in appendix A to part 60 of this chapter and the stone feed rate measurement over the period of initial performance test, do not exceed the emission limit; if the lime kiln is controlled by an FF or ESP and you are opting to monitor PM emissions with a BLDS or PM detector, you have installed and are operating the monitoring device according to the requirements in §63.7113(d) or (e), respectively; and if the lime kiln is controlled by an FF or ESP and you are opting to monitor PM emissions using a COMS, you have installed and are operating the COMS according to the requirements in §63.7113(g).
2. Stack emissions from all PHS operations at a new or existing affected source	PM emissions must not exceed 0.05 g/dscm	The outlet PM emissions, based on Method 5 or Method 17 in appendix A to part 60 of this chapter, over the period of the initial performance test do not exceed 0.05 g/dscm; and if the emission unit is controlled with a wet scrubber, you have a record of the scrubber's pressure drop and liquid flow rate operating parameters over the 3-hour performance test during which emissions did not exceed the emissions limitation.
3. Stack emissions from all PSH operations at a new or existing affected source, unless the stack emissions are discharged through a wet scrubber control device	Emissions must not exceed 7 percent opacity	Each of the thirty 6-minute opacity averages during the initial compliance period, using Method 9 in appendix A to part 60 of this chapter, does not exceed the 7 percent opacity limit. At least thirty 6-minute averages must be obtained.
4. Fugitive emissions from all PSH operations at a new or existing affected source	Emissions must not exceed 10 percent opacity	Each of the 6-minute opacity averages during the initial compliance period, using Method 9 in appendix A to part 60 of this chapter, does not exceed the 10 percent opacity limit.
5. All PSH operations at a new or existing affected source, enclosed in building	All of the individually affected PSH operations must comply with the applicable PM and opacity emission limitations for items 2 through 4 of this Table 4, or the building must comply with the following: There must be no VE from the building, except from a vent, and vent emissions must not exceed the emission limitations in items 2 and 3 of this Table 4	All the PSH operations enclosed in the building have demonstrated initial compliance according to the applicable requirements for items 2 through 4 of this Table 4; or if you are complying with the building emission limitations, there are no VE from the building according to item 18 of Table 5 to this subpart and §63.7112(k), and you demonstrate initial compliance with applicable building vent emissions limitations according to the requirements in items 2 and 3 of this Table 4.

For . . .	For the following emission limit . . .	You have demonstrated initial compliance, if after following the requirements in §63.7112 . . .
6. Each FF that controls emissions from only an individual storage bin	Emissions must not exceed 7 percent opacity	Each of the ten 6-minute averages during the 1-hour initial compliance period, using Method 9 in appendix A to part 60 of this chapter, does not exceed the 7 percent opacity limit.
7. Each set of multiple storage bins with combined stack emissions	You must comply with emission limitations in items 2 and 3 of this Table 4	You demonstrate initial compliance according to the requirements in items 2 and 3 of this Table 4.

[85 FR 44983, July 24, 2020]

Table 5 to Subpart AAAAA of Part 63—Requirements for Performance Tests

As required in §63.7112, you must conduct each performance test in the following table that applies to you.

For . . .	You must . . .	Using . . .	According to the following requirements . . .
1. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler	Select the location of the sampling port and the number of traverse ports	Method 1 or 1A of appendix A to part 60 of this chapter; and §63.6(d)(1)(i)	Sampling sites must be located at the outlet of the control device(s) and prior to any releases to the atmosphere.
2. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler	Determine velocity and volumetric flow rate	Method 2, 2A, 2C, 2D, 2F, or 2G in appendix A to part 60 of this chapter	Not applicable.
3. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler	Conduct gas molecular weight analysis	Method 3, 3A, or 3B in appendix A to part 60 of this chapter	You may use ASME PTC 19.10-1981—Part 10 (available for purchase from Three Park Avenue, New York, NY 10016-5990) as an alternative to using the manual procedures (but not instrumental procedures) in Method 3B.
4. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler	Measure moisture content of the stack gas	Method 4 in appendix A to part 60 of this chapter	Not applicable.

For . . .	You must . . .	Using . . .	According to the following requirements . . .
5. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler, and which uses a negative pressure PM control device	Measure PM emissions	Method 5 in appendix A to part 60 of this chapter	Conduct the test(s) when the source is operating at representative operating conditions in accordance with §63.7(e) before the relevant compliance date for your source as specified in §63.7083(e) and §63.7112(b) on and after the relevant compliance date for your source as specified in §63.7083(e); the minimum sampling volume must be 0.85 dry standard cubic meter (dscm) (30 dry standard cubic foot (dscf)); if there is a separate lime cooler exhaust to the atmosphere, you must conduct the Method 5 test of the cooler exhaust concurrently with the kiln exhaust test.
6. Each lime kiln and each associated lime cooler, if there is a separate exhaust to the atmosphere from the associated lime cooler, and which uses a positive pressure FF or ESP	Measure PM emissions	Method 5D in appendix A to part 60 of this chapter	Conduct the test(s) when the source is operating at representative operating conditions in accordance with §63.7(e) before the relevant compliance date for your source as specified in §63.7083(e) and §63.7112(b) on and after the relevant compliance date for your source as specified in §63.7083(e); if there is a separate lime cooler exhaust to the atmosphere, you must conduct the Method 5 test of the separate cooler exhaust concurrently with the kiln exhaust test.
7. Each lime kiln	Determine the mass rate of stone feed to the kiln during the kiln PM emissions test	Any suitable device	Calibrate and maintain the device according to manufacturer's instructions; the measuring device used must be accurate to within ± 5 percent of the mass rate of stone feed over its operating range.
8. Each lime kiln equipped with a wet scrubber	Establish the operating limit for the average gas stream pressure drop across the wet scrubber	Data for the gas stream pressure drop measurement device during the kiln PM performance test	The continuous pressure drop measurement device must be accurate within plus or minus 1 percent; you must collect the pressure drop data during the period of the performance test and determine the operating limit according to §63.7112(j).
9. Each lime kiln equipped with a wet scrubber	Establish the operating limit for the average liquid flow rate to the scrubber	Data from the liquid flow rate measurement device during the kiln PM performance test	The continuous scrubbing liquid flow rate measuring device must be accurate within plus or minus 1 percent; you must collect the flow rate data during the period of the performance test and determine the operating limit according to §63.7112(j).
10. Each lime kiln equipped with a FF or ESP that is monitored with a PM detector	Have installed and have operating the BLDS or PM detector prior to the performance test	Standard operating procedures incorporated into the OM&M plan	According to the requirements in §63.7113(d) or (e), respectively.

For . . .	You must . . .	Using . . .	According to the following requirements . . .
11. Each lime kiln equipped with a FF or ESP that is monitored with a COMS	Have installed and have operating the COMS prior to the performance test	Standard operating procedures incorporated into the OM&M plan and as required by 40 CFR part 63, subpart A, General Provisions and according to PS-1 of appendix B to part 60 of this chapter, except as specified in §63.7113(g)(2)	According to the requirements in §63.7113(g).
12. Each stack emission from a PSH operation, vent from a building enclosing a PSH operation, or set of multiple storage bins with combined stack emissions, which is subject to a PM emission limit	Measure PM emissions	Method 5 or Method 17 in appendix A to part 60 of this chapter	The sample volume must be at least 1.70 dscm (60 dscf); for Method 5, if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters; and if the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter (Method 17 may be used only with exhaust gas temperatures of not more than 250 °F).
13. Each stack emission from a PSH operation, vent from a building enclosing a PSH operation, or set of multiple storage bins with combined stack emissions, which is subject to an opacity limit	Conduct opacity observations	Method 9 in appendix A to part 60 of this chapter	The test duration must be for at least 3 hours and you must obtain at least thirty, 6-minute averages.
14. Each stack emissions source from a PSH operation subject to a PM or opacity limit, which uses a wet scrubber	Establish the average gas stream pressure drop across the wet scrubber	Data for the gas stream pressure drop measurement device during the PSH operation stack PM performance test	The pressure drop measurement device must be accurate within plus or minus 1 percent; you must collect the pressure drop data during the period of the performance test and determine the operating limit according to §63.7112(j).
15. Each stack emissions source from a PSH operation subject to a PM or opacity limit, which uses a wet scrubber	Establish the operating limit for the average liquid flow rate to the scrubber	Data from the liquid flow rate measurement device during the PSH operation stack PM performance test	The continuous scrubbing liquid flow rate measuring device must be accurate within plus or minus 1 percent; you must collect the flow rate data during the period of the performance test and determine the operating limit according to §63.7112(j).
16. Each FF that controls emissions from only an individual, enclosed, new or existing storage bin	Conduct opacity observations	Method 9 in appendix A to part 60 of this chapter	The test duration must be for at least 1 hour and you must obtain ten 6-minute averages.

For . . .	You must . . .	Using . . .	According to the following requirements . . .
17. Fugitive emissions from any PSH operation subject to an opacity limit	Conduct opacity observations	Method 9 in appendix A to part 60 of this chapter	The test duration must be for at least 3 hours, but the 3-hour test may be reduced to 1 hour if, during the first 1-hour period, there are no individual readings greater than 10 percent opacity and there are no more than three readings of 10 percent during the first 1-hour period.
18. Each building enclosing any PSH operation, that is subject to a VE limit	Conduct VE check	The specifications in §63.7112(k)	The performance test must be conducted while all affected PSH operations within the building are operating; the performance test for each affected building must be at least 75 minutes, with each side of the building and roof being observed for at least 15 minutes.

[85 FR 44984, July 24, 2020]

Table 6 to Subpart AAAAA of Part 63—Continuous Compliance With Operating Limits

As required in §63.7121, you must demonstrate continuous compliance with each operating limit listed in Table 3 to subpart AAAAA that applies to you, according to the following table:

For . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
1. Each lime kiln controlled by a wet scrubber	Maintain the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the PM performance test; and maintain the 3-hour block average scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the performance test	Collecting the wet scrubber operating data according to all applicable requirements in §63.7113 and reducing the data according to §63.7113(a); maintaining the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the PM performance test; and maintaining the 3-hour block average scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the performance test (the continuous scrubbing liquid flow rate measuring device must be accurate within $\pm 1\%$ and the continuous pressure drop measurement device must be accurate within $\pm 1\%$).
2. Each lime kiln or lime cooler equipped with a FF and using a BLDS, and each lime kiln equipped with an ESP or FF using a PM detector	a. Maintain and operate the FF or ESP such that the bag leak or PM detector alarm, is not activated and alarm condition does not exist for more than 5 percent of the total operating time in each 6-month period	(i) Operating the FF or ESP so that the alarm on the bag leak or PM detection system is not activated and an alarm condition does not exist for more than 5 percent of the total operating time in each 6-month reporting period; and continuously recording the output from the BLD or PM detection system; and

For . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
		(ii) Each time the alarm sounds and the owner or operator initiates corrective actions within 1 hour of the alarm, 1 hour of alarm time will be counted (if the owner or operator takes longer than 1 hour to initiate corrective actions, alarm time will be counted as the actual amount of time taken by the owner or operator to initiate corrective actions); if inspection of the FF or ESP system demonstrates that no corrective actions are necessary, no alarm time will be counted.
3. Each stack emissions source from a PSH operation subject to an opacity limit, which is controlled by a wet scrubber	Maintain the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the PM performance test; and maintain the 3-hour block average scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the performance test	Collecting the wet scrubber operating data according to all applicable requirements in §63.7113 and reducing the data according to §63.7113(a); maintaining the 3-hour block average exhaust gas stream pressure drop across the wet scrubber greater than or equal to the pressure drop operating limit established during the PM performance test; and maintaining the 3-hour block average scrubbing liquid flow rate greater than or equal to the flow rate operating limit established during the performance test (the continuous scrubbing liquid flow rate measuring device must be accurate within $\pm 1\%$ and the continuous pressure drop measurement device must be accurate within $\pm 1\%$).
4. For each lime kiln or lime cooler equipped with a FF or an ESP that uses a COMS as the monitoring device	a. Maintain and operate the FF or ESP such that the average opacity for any 6-minute block period does not exceed 15 percent	i. Installing, maintaining, calibrating and operating a COMS as required by 40 CFR part 63, subpart A, General Provisions and according to PS-1 of appendix B to part 60 of this chapter, except as specified in §63.7113(g)(2); and
		ii. Collecting the COMS data at a frequency of at least once every 15 seconds, determining block averages for each 6-minute period and demonstrating for each 6-minute block period the average opacity does not exceed 15 percent.

[69 FR 416, Jan. 5, 2004. Redesignated and amended at 85 FR 44982, 44986, July 24, 2020]

Table 7 to Subpart AAAAA of Part 63—Periodic Monitoring for Compliance With Opacity and Visible Emissions Limits

As required in §63.7121 you must periodically demonstrate compliance with each opacity and VE limit that applies to you, according to the following table:

For . . .	For the following emission limitation . . .	You must demonstrate ongoing compliance . . .
1. Each PSH operation subject to an opacity limitation as required in Table 1 to this subpart, or any vents from buildings subject to an opacity limitation	a. 7-10 percent opacity, depending on the PSH operation, as required in Table 1 to this subpart	(i) Conducting a monthly 1-minute VE check of each emission unit in accordance with §63.7121(e); the check must be conducted while the affected source is in operation; (ii) If no VE are observed in 6 consecutive monthly checks for any emission unit, you may decrease the frequency of VE checking from monthly to semi-annually for that emission unit; if VE are observed during any semiannual check, you must resume VE checking of that emission unit on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks;
		(iii) If no VE are observed during the semiannual check for any emission unit, you may decrease the frequency of VE checking from semi-annually to annually for that emission unit; if VE are observed during any annual check, you must resume VE checking of that emission unit on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks; and
		(iv) If VE are observed during any VE check, you must conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to part 60 of this chapter; you must begin the Method 9 test within 1 hour of any observation of VE and the 6-minute opacity reading must not exceed the applicable opacity limit.
2. Any building subject to a VE limit, according to item 8 of Table 1 to this subpart	a. No VE	(i) Conducting a monthly VE check of the building, in accordance with the specifications in §63.7112(k); the check must be conducted while all the enclosed PSH operations are operating;
		(ii) The check for each affected building must be at least 5 minutes, with each side of the building and roof being observed for at least 1 minute;
		(iii) If no VE are observed in 6 consecutive monthly checks of the building, you may decrease the frequency of checking from monthly to semi-annually for that affected source; if VE are observed during any semi-annual check, you must resume checking on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks; and
		(iv) If no VE are observed during the semi-annual check, you may decrease the frequency of checking from semi-annually to annually for that affected source; and if VE are observed during any annual check, you must resume checking of that emission unit on a monthly basis and maintain that schedule until no VE are observed in 6 consecutive monthly checks (the source is in compliance if no VE are observed during any of these checks).

Table 8 to Subpart AAAAA of Part 63—Requirements for Reports

As required in §63.7131, you must submit each report in this table that applies to you.

You must submit a . . .	The report must contain . . .	You must submit the report . . .
1. Compliance report	a. If there are no deviations from any emission limitations (emission limit, operating limit, opacity limit, and VE limit) that applies to you, a statement that there were no deviations from the emission limitations during the reporting period;	Semiannually according to the requirements in §63.7131(b).
	b. If there were no periods during which the CMS, including any operating parameter monitoring system, 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;	Semiannually according to the requirements in §63.7131(b).
	c. If you have a deviation from any emission limitation (emission limit, operating limit, opacity limit, and VE limit) during the reporting period, the report must contain the information in §63.7131(d);	Semiannually according to the requirements in §63.7131(b).
	d. If there were periods during which the CMS, including any operating parameter monitoring system, was out-of-control, as specified in §63.8(c)(7), the report must contain the information in §63.7131(e); and	Semiannually according to the requirements in §63.7131(b).
	e. Before the relevant compliance date for your source as specified in §63.7083(e), if you had a startup, shutdown or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information in §63.10(d)(5)(i). On and after the relevant compliance date for your source as specified in §63.7083(e), if you had a startup, shutdown or malfunction during the reporting period and you failed to meet an applicable standard, the compliance report must include the information in §63.7131(c)(3)	Semiannually according to the requirements in §63.7131(b).
2. Before the relevant compliance date for your source as specified in §63.7083(e), an immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent with your SSMP	Actions taken for the event	By fax or telephone within 2 working days after starting actions inconsistent with the SSMP.
3. Before the relevant compliance date for your source as specified in §63.7083(e), an immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent with your SSMP	The information in §63.10(d)(5)(ii)	By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority. See §63.10(d)(5)(ii).

You must submit a . . .	The report must contain . . .	You must submit the report . . .
(4) Performance Test Report	The information required in §63.7(g)	According to the requirements of §63.7131.

[85 FR 44987, July 24, 2020]

Table 9 to Subpart AAAAA of Part 63—Applicability of General Provisions to Subpart AAAAA

As required in §63.7140, you must comply with the applicable General Provisions requirements according to the following table:

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§63.1(a)(1)–(4)	Applicability	Yes	
§63.1(a)(5)		No	
§63.1(a)(6)	Applicability	Yes	
§63.1(a)(7)–(a)(9)		No	
§63.1(a)(10)–(a)(14)	Applicability	Yes	
§63.1(b)(1)	Initial Applicability Determination	Yes	§§63.7081 and 63.7142 specify additional applicability determination requirements.
§63.1(b)(2)		No	
§63.1(b)(3)	Initial Applicability Determination	Yes	
§63.1(c)(1)	Applicability After Standard Established	Yes	
§63.1(c)(2)	Permit Requirements	No	Area sources not subject to subpart AAAAA, except all sources must make initial applicability determination.
§63.1(c)(3)–(4)		No	
§63.1(c)(5)	Area Source Becomes Major	Yes	
§63.1(c)(6)	Reclassification	Yes	
§63.1(d)		No	
§63.1(e)	Applicability of Permit Program	Yes	
§63.2	Definitions	Yes	Additional definitions in §63.7143.
§63.3(a)–(c)	Units and Abbreviations	Yes	
§63.4(a)(1)–(a)(2)	Prohibited Activities	Yes	
§63.4(a)(3)–(a)(5)		No	
§63.4(b)–(c)	Circumvention, Severability	Yes	
§63.5(a)(1)–(2)	Construction/Reconstruction	Yes	

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§63.5(b)(1)	Compliance Dates	Yes	
§63.5(b)(2)		No	
§63.5(b)(3)-(4)	Construction Approval, Applicability	Yes	
§63.5(b)(5)		No	
§63.5(b)(6)	Applicability	Yes	
§63.5(c)		No	
§63.5(d)(1)-(4)	Approval of Construction/Reconstruction	Yes	
§63.5(e)	Approval of Construction/Reconstruction	Yes	
§63.5(f)(1)-(2)	Approval of Construction/Reconstruction	Yes	
§63.6(a)	Compliance for Standards and Maintenance	Yes	
§63.6(b)(1)-(5)	Compliance Dates	Yes	
§63.6(b)(6)		No	
§63.6(b)(7)	Compliance Dates	Yes	
§63.6(c)(1)-(2)	Compliance Dates	Yes	
§63.6(c)(3)-(c)(4)		No	
§63.6(c)(5)	Compliance Dates	Yes	
§63.6(d)		No	
§63.6(e)(1)(i)	General Duty to Minimize Emissions	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	On and after the relevant compliance date for your source as specified in §63.7083(e), see §63.7100 for general duty requirement.
§63.6(e)(1)(ii)	Requirement to Correct Malfunctions ASAP	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	
§63.6(e)(1)(iii)	Operation and Maintenance Requirements	Yes	

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§63.6(e)(2)		No	[Reserved].
§63.6(e)(3)	Startup, Shutdown Malfunction Plan	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	On and after the relevant compliance date for your source as specified in §63.7083(e), the OM&M plan must address periods of startup and shutdown. See §63.7100(d).
§63.6(f)(1)	SSM exemption	No	See §63.7100. For periods of startup and shutdown, see §63.7090(c).
§63.6(f)(2)-(3)	Methods for Determining Compliance	Yes	
§63.6(g)(1)-(g)(3)	Alternative Standard	Yes	
§63.6(h)(1)	SSM exemption	No	See §63.7100. For periods of startup and shutdown, see §63.7090(c).
§63.6(h)(2)	Methods for Determining Compliance	Yes	
§63.6(h)(3)		No	
§63.6(h)(4)-(h)(5)(i)	Opacity/VE Standards	Yes	This requirement only applies to opacity and VE performance checks required in Table 4 to subpart AAAAA.
§63.6(h)(5) (ii)-(iii)	Opacity/VE Standards	No	Test durations are specified in subpart AAAAA; subpart AAAAA takes precedence.
§63.6(h)(5)(iv)	Opacity/VE Standards	No	
§63.6(h)(5)(v)	Opacity/VE Standards	Yes	
§63.6(h)(6)	Opacity/VE Standards	Yes	
§63.6(h)(7)	COM Use	Yes	
§63.6(h)(8)	Compliance with Opacity and VE	Yes	
§63.6(h)(9)	Adjustment of Opacity Limit	Yes	
§63.6(i)(1)-(i)(14)	Extension of Compliance	Yes	
§63.6(i)(15)		No	
§63.6(i)(16)	Extension of Compliance	Yes	
§63.6(j)	Exemption from Compliance	Yes	
§63.7(a)(1)-(a)(3)	Performance Testing Requirements	Yes	§63.7110 specifies deadlines; §63.7112 has additional specific requirements.
§63.7(b)	Notification	Yes	
§63.7(c)	Quality Assurance/Test Plan	Yes	

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§63.7(d)	Testing Facilities	Yes	
§63.7(e)(1)	Conduct of Tests	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	On and after the relevant compliance date for your source as specified in §63.7083(e), see §63.7112(b).
§63.7(e)(2)-(4)	Conduct of Tests	Yes	
§63.7(f)	Alternative Test Method	Yes	
§63.7(g)	Data Analysis	Yes	
§63.7(h)	Waiver of Tests	Yes	
§63.8(a)(1)	Monitoring Requirements	Yes	See §63.7113.
§63.8(a)(2)	Monitoring	Yes	
§63.8(a)(3)		No	
§63.8(a)(4)	Monitoring	No	Flares not applicable.
§63.8(b)(1)-(3)	Conduct of Monitoring	Yes	
§63.8(c)(1)(i)	CMS Operation/Maintenance	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	On and after the relevant compliance date for your source as specified in §63.7083(e), see §63.7100 for OM&M requirements.
§63.8(c)(1)(ii)	CMS Spare Parts	Yes	
§63.8(c)(1)(iii)	Requirement to Develop SSM Plan for CMS	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	On and after the relevant compliance date for your source as specified in §63.7083(e), no longer required.
§63.8(c)(2)-(3)	CMS Operation/Maintenance	Yes	
§63.8(c)(4)	CMS Requirements	No	See §63.7121.
§63.8(c)(4)(i)-(ii)	Cycle Time for COM and CEMS	Yes	No CEMS are required under subpart AAAAA; see §63.7113 for CPMS requirements.

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§63.8(c)(5)	Minimum COM procedures	Yes	COM not required.
§63.8(c)(6)	CMS Requirements	No	See §63.7113.
§63.8(c)(7)-(8)	CMS Requirements	Yes	
§63.8(d)(1)-(2)	Quality Control	Yes	See also §63.7113.
§63.8(d)(3)	Quality Control	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	
§63.8(e)	Performance Evaluation for CMS	Yes	See also §63.7113.
§63.8(f)(1)-(f)(5)	Alternative Monitoring Method	Yes	
§63.8(f)(6)	Alternative to Relative Accuracy Test for CEMS	No	No CEMS required in subpart AAAAA.
§63.8(g)(1)-(g)(5)	Data Reduction; Data That Cannot Be Used	No	See data reduction requirements in §§63.7120 and 63.7121.
§63.9(a)	Notification Requirements	Yes	See §63.7130.
§63.9(b)	Initial Notifications	Yes	
§63.9(c)	Request for Compliance Extension	Yes	
§63.9(d)	New Source Notification for Special Compliance Requirements	Yes	
§63.9(e)	Notification of Performance Test	Yes	
§63.9(f)	Notification of VE/Opacity Test	Yes	This requirement only applies to opacity and VE performance tests required in Table 5 to subpart AAAAA. Notification not required for VE/opacity test under Table 7 to subpart AAAAA.
§63.9(g)	Additional CMS Notifications	No	Not required for operating parameter monitoring.
§63.9(h)(1)-(h)(3)	Notification of Compliance Status	Yes	
§63.9(h)(4)		No	
§63.9(h)(5)-(h)(6)	Notification of Compliance Status	Yes	
§63.9(i)	Adjustment of Deadlines	Yes	
§63.9(j)	Change in Previous Information	Yes	

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§63.9(k)	Electronic reporting procedures	Yes	Only as specified in §63.9(j).
§63.10(a)	Recordkeeping/Reporting General Requirements	Yes	See §§63.7131 through 63.7133.
§63.10(b)(1)	Records	Yes	
§63.10(b)(2)(i)	Recordkeeping of Occurrence and Duration of Startups and Shutdowns	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	
§63.10(b)(2)(ii)	Recordkeeping of Failures to Meet a Standard	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	On and after the relevant compliance date for your source as specified in §63.7083(e), see §63.7132 for recordkeeping of (1) date, time and duration; (2) listing of affected source or equipment, and an estimate of the quantity of each regulated pollutant emitted over the standard; and (3) actions to minimize emissions and correct the failure.
§63.10(b)(2)(iii)	Maintenance Records	Yes	
§63.10(b)(2)(iv)-(v)	Actions Taken to Minimize Emissions During SSM	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	On and after the relevant compliance date for your source as specified in §63.7083(e), see §63.7100 for OM&M requirements.
§63.10(b)(2)(vi)-(xii)	Recordkeeping for CMS	Yes	
§63.10(b)(2)(xiii)	Records for Relative Accuracy Test	No	
§63.10(b)(2)(xiv)	Records for Notification	Yes	
§63.10(b)(3)	Applicability Determinations	Yes	
§63.10(c)	Additional CMS Recordkeeping	No	See §63.7132.
§63.10(d)(1)	General Reporting Requirements	Yes	
§63.10(d)(2)	Performance Test Results	Yes	

Citation	Summary of requirement	Am I subject to this requirement?	Explanations
§63.10(d)(3)	Opacity or VE Observations	Yes	For the periodic monitoring requirements in Table 7 to subpart AAAAA, report according to §63.10(d)(3) only if VE observed and subsequent visual opacity test is required.
§63.10(d)(4)	Progress Reports	Yes	
§63.10(d)(5)(i)	Periodic Startup, Shutdown, Malfunction Reports	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	On and after the relevant compliance date for your source as specified in §63.7083(e), see §63.7131 for malfunction reporting requirements.
§63.10(d)(5)(ii)	Immediate Startup, Shutdown, Malfunction Reports	Yes before the relevant compliance date for your source as specified in §63.7083(e) No on and after the relevant compliance date for your source as specified in §63.7083(e)	
§63.10(e)	Additional CMS Reports	No	See specific requirements in subpart AAAAA, see §63.7131.
§63.10(f)	Waiver for Recordkeeping/Reporting	Yes	
§63.11(a)-(b)	Control Device and Work Practice Requirements	No	Flares not applicable.
§63.12(a)-(c)	State Authority and Delegations	Yes	
§63.13(a)-(c)	State/Regional Addresses	Yes	
§63.14(a)-(b)	Incorporation by Reference	No	
§63.15(a)-(b)	Availability of Information and Confidentiality	Yes	
§63.16	Performance Track Provisions	Yes	

[85 FR 44988, July 24, 2020, as amended at 85 FR 73912, Nov. 19, 2020; 85 FR 84262, Dec. 28, 2020]

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Operating Permit
Renewal

Source Description and Location
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Source Name:	Carmeuse Lime, Inc.
Source Location:	1 North Carmeuse Drive, Gary, Indiana 46406
County:	Lake (Calumet Township)
SIC Code:	3274 (Lime)
Permit Renewal No.:	T 089-41162-00112
Permit Reviewer:	Aasim Noveer

On March 4, 2019, Carmeuse Lime, Inc. 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 Carmeuse Lime, Inc. relating to the operation of a stationary lime manufacturing plant. Carmeuse Lime, Inc. was issued its third Part 70 Operating Permit Renewal (T089-34191-00112) on December 3, 2014.

Source Definition

Carmeuse Lime, Inc. purchased Innofuel Energy Solutions, LLC (previously Vexor Engineered Fuel of Indiana, LLC) located at 6480 Airport Road, Gary, IN 46406, effective December 20, 2019. Innofuel Energy Solutions, LLC manufactured engineered fuel and consisted of a shredding and material transfer process. In November of 2020, the plant suffered a fire that resulted in damages to the building and emission units. As a result, the emission units have been permanently shut down and removed from the source.

Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. T 089-34191-00112 on December 3, 2014. The source has since received the following approval:

Permit Type	Permit Number	Issuance Date
Significant Permit Modification	089-35238-00112	June 11, 2015
Significant Permit Modification	089-35257-00112	June 30, 2015
Administrative Amendment	089-36577-00112	February 2, 2016
Significant Permit Modification	089-37507-00112	February 1, 2017
Significant Permit Modification	089-38256-00112	July 10, 2017
Significant Permit Modification	089-38894-00112	January 17, 2018
Significant Source Modification	089-39443-00112	April 12, 2018
Significant Permit Modification	089-39458-00112	April 27, 2018
Significant Source Modification	089-40060-00112	October 16, 2018
Significant Permit Modification	089-40148-00112	November 2, 2018
Minor Source Modification	089-41774-00112	September 6, 2019
Administrative Amendment	089-40929-00112	September 6, 2019

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:

Lime Production

- (a) One (1) Allis Chalmers Rotary Kiln equipped with a hot face dam and Contact Cooler; identified as EU-1; constructed in 1966, modified in 2010, 2014, and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour, emissions controlled by baghouse CE-1; exhausting to stacks S-1A through S-1F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (b) One (1) Allis Chalmers Rotary Kiln equipped with a Contact Cooler; identified as EU-2; constructed in 1966, modified in 2014 and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-2; exhausting to stacks S-2A through S-2F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (c) One (1) Allis Chalmers Rotary Kiln equipped with a hot face dam and Contact Cooler; identified as EU-3; constructed in 1968, modified in 2010, 2014 and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-3; exhausting to stacks S-3A through S-3F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (d) One (1) Allis Chalmers Rotary Kiln equipped with a Contact Cooler; identified as EU-4; constructed in 1972, modified in 2014 and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-4; exhausting to stacks S-4A through S-4F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (e) One (1) Allis Chalmers Rotary Kiln equipped with a Contact Cooler; identified as EU-5; constructed in 1972, modified in 2014 and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-5; exhausting to stacks S-5A through S-5F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (f) Processed stone handling operations, identified as EU-50, consisting of three (3) drop points into Stone Tanks 1, 2, and 3 (each with a maximum capacity of 1,600 tons), each enclosed within a building; three (3) drop points from the Stone Tanks to a conveyor, each enclosed within a building, and five (5) drop points from the stone belt to Kilns 1-5,

each enclosed within a building, constructed prior to 1970. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.

Lime Processing and Handling

- (g) One (1) Lime Grinder Handling System; identified as EU-15; constructed in 1972; a maximum capacity of 80 tons of lime per hour; includes bucket elevators K122 and K222 and conveyors with emissions controlled by baghouse CE-6 (ALG400); exhausting to stack S-6; and screens K123 and K223.
- (h) One (1) Grinding Mill Material Transfer Operation, identified as EU-15a, controlled by one (1) dust collector, CE-15a (ALG440), approved in 2013 for construction, exhausting to stack S-15a, and consisting of the following:
 - (1) One (1) lime tank, identified as Lime Tank 1, installed in 1966, with a maximum capacity of 224 tons, with a truck loading spout in the West Bay (also known as the Pulverized or Bland Bay), with emissions controlled by CE-15a (ALG440).
 - (2) Two (2) conveyors, installed in 1972 and replaced in 2011, with a maximum throughput of 80 tons/hr.
 - (3) Two (2) weigh belts, installed in 2011, with a maximum throughput of 80 tons/hr.
 - (4) One (1) surge bin, installed in 1972 and modified in 2011, with a maximum capacity of 46 tons.
 - (5) One (1) bucket elevator, installed in 2011, with a maximum throughput of 100 tons/hr.
- (i) One (1) Grinding Mill #1; identified as EU-13; constructed in 1972; a maximum capacity of 40 tons of lime per hour; emissions controlled by baghouse CE-8 (ALG450); exhausting to stack S-8.
- (j) One (1) Grinding Mill #2; identified as EU-12; constructed in 1972; a maximum capacity of 40 tons of lime per hour; emissions controlled by baghouse CE-7 (ALG460); exhausting to stack S-7.
- (k) One (1) Lime Handling System #1 (302 Belt); identified as EU-6; constructed in 1972; a maximum capacity of 100 tons of lime per hour; emissions controlled by baghouse CE-14 (ALG310); exhausting to stack S-14.
- (l) One (1) Lime Handling System #2 (301 Belt); identified as EU-7; constructed in 1966; a maximum capacity of 100 tons of lime per hour; emissions controlled by baghouse CE-15 (ALG300); exhausting to stack S-15.
- (m) [RESERVED]
- (n) One (1) Lime Transfer System #2, identified as EU-42/43, approved for construction in 2006, with a maximum capacity of 80 tons of lime per hour, consisting of a hopper, piping and storage tank T1B, for transporting lime using high pressure pneumatic conveyance methods, with emissions controlled by bin vent filter (ALG410), and exhausting to stack S-43.
- (o) One (1) engineered fuel (EF) feed and pneumatic delivery system, identified as EU-33, approved in 2014 for construction, with maximum capacity of 159 tons/hour, consisting of the following equipment:

- (1) One (1) EF Receiving Station, approved in 2014 for construction with a maximum capacity of 159 tons/hr, emissions vent inside the building.
- (2) Four (4) main storage bins with a maximum total capacity of 656 tons, each controlled by a dust vent filter.
- (3) Four (4) screw conveyors with a maximum capacity of 45 tons/hour each.
- (4) Five (5) storage bins, each with a maximum capacity of 50 tons each, each controlled by a dust vent filter.
- (5) Five (5) weigh feeders with a maximum capacity of 5.74 tons/hour each.

Lime Storage and Loadout

- (p) One (1) Lime Storage System (New Side); identified as EU-24; constructed prior to 1977; consisting of lime storage tanks 11, 12, 13, 14, 15 and 16; emissions controlled by baghouse CE-14 (ALG310); exhausting to stack S-14.
- (q) One (1) Lime Storage System (Old Side); identified as EU-14; constructed prior to 1977; consisting of lime storage tanks 2, 3, 4, 5, 6, and 7; emissions controlled by baghouse CE-6 (ALG400); exhausting to stack S-6; Tank 4 emissions are also controlled by bin vent ALG430. Tank 5 includes a truck loading spot in the Center Bay (also known as the Dolo Bay), with emissions controlled by CE-6 (ALG400).
- (r) One (1) Lime Loadout #2A (Center Bay, also known as the Dolo Bay); identified as EU-8; constructed in 1972; a maximum capacity of 200 tons of lime per hour; includes conveyor L357 with emissions controlled by baghouse CE-13 (ALG320), exhausting to stack S-13; emissions from truck loading sprouts are controlled by integral dust collectors. The EU-8 and EU-28 loadouts share a bay and cannot both be in operation at the same time due to truck space constraints.
- (s) One (1) Truck Flue Dust Loadout #2 and Flue Dust Tank #2; identified as EU-16; constructed in 1966; a maximum capacity of 28 tons of dust per hour; emissions controlled by baghouse CE-9 (AKG450); exhausting to stack S-9.
- (t) One (1) Truck Flue Dust Loadout #1 and Flue Dust Tank #1; identified as EU-17; constructed in 1966; a maximum capacity of 32 tons of dust per hour; emissions controlled by baghouse CE-10 (AKG141); exhausting to stack S-10.
- (u) One (1) Lime Loadout #2B/Dolo Rescreen (Center Bay, also known as the Dolo Bay); identified as EU-28; constructed in 1972; a maximum capacity of 200 tons of lime per hour; includes Rescreen L702 and conveyors emissions controlled by baghouse CE-13 (ALG320), exhausting to stack S-13, and a truck loading spout with integral dust collector. The EU-8 and EU-28 loadouts share a bay and cannot both be in operation at the same time due to truck space constraints.
- (v) One (1) Lime Loadout #1 (West Bay, also known as the Pulverized or Blend Bay); identified as EU-11; constructed prior to 1977; a maximum capacity of 200 tons of lime per hour; emissions from two truck loading spouts are controlled by baghouse CE-15a (ALG440); exhausting to stack S-15a; emissions from two additional truck loading spouts are controlled by integral dust collectors.
- (w) One (1) Lime Loadout #3/Rescreen (East Bay, also known as the Hi-Cal Bay); identified as EU-25; constructed in 1996 and modified in 2010; a maximum capacity of 200 tons of lime per hour; emissions from the rescreen, conveyors, and two (2) truck loading spouts are controlled by baghouse CE-25 (ALG600); exhausting to stack S-25; a third truck loading spout has an integral dust collector.

- (x) One (1) Truck Transfer Station Reclaim Hopper; identified as EU-32; constructed in 1972 and modified in 2003; a maximum capacity of 100 tons of lime per hour; emissions controlled by baghouse CE-32 (ALG606CA); exhausting to stack S-32.
- (y) One (1) lime fines transfer system identified as EU-6a, constructed 1972, conveying material from Tank 16, one (1) of the five (5) lime storage tanks collectively identified as EU-24, and from the baghouse ALG320 dust hopper, to Tank 1 in EU-15a. System includes bucket elevator L401 and conveyors L323, L400, L402, L403, L404; maximum overall transfer capacity of system is 25 tons per hour.
- (z) Reserved

Raw Material and Lime Storage and Handling (Fugitive)

- (aa) One (1) Coal Storage Pile, consisting of two (2) coal storage tents and one (1) coal pile, one tent constructed in 2009 and the second constructed in 2014 ; identified as EU-22; a capacity of greater than 7 acres; a source of fugitive emissions.
- (bb) One (1) coal storage pile, approved in 2014 for construction, identified as EU-21, with a capacity of 1 acres; a source of fugitive emissions.
- (cc) Two (2) Limestone Storage Piles; identified as EU-23 and EU-29; each a capacity of greater than 9.5 acres; a source of fugitive emissions.
- (dd) Coal Unloading and Processing operations; identified as EU-30; consisting of truck, barge/boat and rail unloading and assorted conveyors; a source of fugitive emissions.
- (ee) Limestone Unloading and Processing operations; identified as EU-31; consisting of barge unloading and assorted conveyors; a source of fugitive emissions.
- (ff) One (1) coal loading system, identified as EU-34, consisting of the following equipment:
 - (1) One (1) loader hopper loaded by a frontend loader from EU-22, constructed in 2014, identified as EU-34a, with a maximum capacity of 25 tons.
 - (2) One (1) long conveyor moving coal from EU-34a to EU-34d, constructed in 2014, identified as EU-34c, with a maximum capacity of 300 tons of coal per hour.
 - (3) One (1) 3-way gate moving coal to EU-34e and Coal Bin #2, constructed in 2014, identified as EU-34d, with a maximum capacity of 300 tons of coal per hour.
 - (4) Two (2) shorter reversible conveyors moving coal to Coal Bin #1 and Coal Bin #3, constructed in 2014, identified as EU-34e, with a maximum capacity of 300 tons of coal per hour.
 - (5) Coal grinding operations, identified as EU-34f, constructed prior to 1970, consisting of the following equipment that is enclosed within a building:
 - (i) Three (3) Coal Bins, identified as Coal Bins 1, 2, and 3, each with a maximum capacity of 750 tons
 - (ii) Five (5) coal mills fed by one of the coal bins and pneumatically transfers the pulverized coal to one of the five (5) Kilns, identified as Coal Mills 1, 2, 3, 4, and 5 each with a maximum capacity of 10.15 tons of coal per hour

- (gg) One (1) Kiln 1 exhaust dust chamber, identified as EU-44, consisting of two (2) unenclosed drop points for removal of lime dust from kiln exhaust (a source of fugitive emissions).
- (hh) One (1) Kiln 2 exhaust dust chamber, identified as EU-45, consisting of two (2) unenclosed drop points for removal of lime dust from kiln exhaust (a source of fugitive emissions).
- (ii) One (1) Kiln 3 exhaust dust chamber, identified as EU-46, consisting of two (2) unenclosed drop points for removal of lime dust from kiln exhaust; (a source of fugitive emissions).
- (jj) One (1) Kiln 4 exhaust dust chamber, identified as EU-47, consisting of two (2) unenclosed drop points for removal of lime dust from kiln exhaust (a source of fugitive emissions).
- (kk) One (1) Kiln 5 exhaust dust chamber, identified as EU-48, consisting of two (2) unenclosed drop points for removal of lime dust from kiln exhaust; (a source of fugitive emissions).
- (ll) One (1) lime dust storage pile, identified as EU-49, with a capacity of 18,000 tons; a source of fugitive emissions.

Lime Storage and Handling

- (mm) Lime storage bin system and associated conveying equipment at the Buffington Facility as follows:
 - (1) One (1) Run of Kiln (ROK) Lime Transfer System #1, identified as EU-51, approved in 2018 for construction, consisting of two (2) diverters, two (2) belt conveyors, and a bucket elevator, with a maximum capacity of 200 tons of lime per hour, emissions controlled by baghouse CE-51 (ALG304), and exhausting to stack S-51.
 - (2) One (1) ROK Lime Storage Bin #1, identified as EU-52, approved in 2018 for construction, with a maximum capacity of 2,000 tons, emissions controlled by a bin vent filter (CE-52/ALG620), and exhausting to S-52.
 - (3) One (1) ROK Lime Storage Bin #2, identified as EU-53, approved in 2018 for construction, with a maximum capacity of 2,000 tons, emissions controlled by a bin vent filter (CE-53/ALG630), and exhausting to S-53.
 - (4) One (1) ROK Lime Transfer System #2, identified as EU-54, approved in 2018 for construction, consisting of two (2) vibratory feeders and two (2) belt conveyors, with a maximum capacity of 200 tons of lime per hour, emissions controlled by baghouse CE-54 (ALG305), and exhausting to stack S-54.

Emission Units and Pollution Control Equipment Removed From the Source

The source has removed the following emission units:

Lime Storage and Loadout

- (y) One (1) pneumatic lime transfer system #1, approved in 2016 for construction, with a maximum capacity of 30 tons of lime per hour, consisting of the following equipment:

- (1) One (1) lime hopper, identified as EU-35, constructed in 2006, fed by Tank 16, which is one (1) of the five (5) lime storage tanks collectively identified as EU-24, using a dust collector CE-35 (ALG490) as control, exhausting to atmosphere.
- (2) Tank 1, which is one (1) of the eight (8) lime storage tanks making up EU-14, constructed prior to 1977, fed by the lime hopper (EU-35), and controlled by a bin vent filter.
- (z) One (1) pneumatic lime transfer system #2, approved in 2016 for construction, with a maximum capacity of 30 tons of lime per hour, consisting of the following equipment:
 - (1) One (1) vented inlet, fed by the re-screen, identified as L702, both part of EU-28, using a dust collector CE-13 (ALG320) as control, exhausting to atmosphere. The vented inlet feeds pneumatic lime transfer system #2 directly from the rotary valve with a cavity air purge.
 - (2) Tanks 1 and 6, which are two (2) of the eight (8) lime storage tanks making up EU-14, constructed prior to 1977, fed by the lime hopper, and each equipped with a bin vent filter.

Raw Material and Lime Storage and Handling (Fugitive)

- (ii) ...
 - (1) One (1) dust hopper and grizzly screen, identified as EU-46a, with a maximum capacity 1 ton/hr, approved in 2013, with a rotary valve and material transfer pneumatic piping system to direct the material to the Dust Tank D-2 (EU-16) tank.
- (kk) ...
 - (1) One (1) grizzly screen, hopper, rotary valve and crusher, identified as EU-48a, with a maximum capacity of 1 ton/hr, approved in 2014, with a material transfer pneumatic piping system to direct the material to Dust Tank D-2 (EU-16) tank.
 - (2) One (1) dust hopper and grizzly screen, identified as EU-48b, with a maximum capacity of 1 ton/hr, approved in 2013, with a rotary valve and material transfer pneumatic piping system to direct the material to the Dust Tank D-2 (EU-16) tank.

Lime Terminal Operation

- (mm) EU-100, consisting of the following:
 - (1) One (1) railcar unloading machine and conveyor, identified as T-100, approved in 2015 for construction, with a maximum throughput capacity of 200 tons per hour, controlled by baghouse ALG-1000, and exhausting to stack S-100.
 - (2) One (1) belt conveyor, identified as T-101, approved in 2015 for construction, with a maximum throughput capacity of 200 tons per hour, controlled by baghouse ALG-1000, and exhausting to stack S-100.
 - (3) One (1) surge bin, identified as Bin 101, approved in 2015 for construction, with a maximum storage capacity of 5 tons, controlled by baghouse ALG-1000, and exhausting to stack S-100.
- (nn) EU-101, consisting of the following:

- (1) One (1) Hi-Cal large pebble storage tank, identified as Bin 200, approved in 2015 for construction, with a maximum storage capacity of one thousand (1,000) tons, controlled by baghouse ALG-2000, and exhausting to stack S-101.
 - (2) One (1) Hi-Cal small pebble storage tank, identified as Bin 201, approved in 2015 for construction, with a maximum storage capacity of six hundred and fifty (650) tons, controlled by baghouse ALG-2000, and exhausting to stack S-101.
 - (3) One (1) continuous discharge bucket elevator, identified as T-103, approved in 2015 for construction, with a maximum throughput capacity of 200 tons per hour, controlled by baghouse ALG-2000, and exhausting to stack S-101.
 - (4) One (1) 2-Deck 6-foot by 16-foot screen, identified as T-201, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-2000, and exhausting to stack S-101.
 - (5) One (1) belt conveyor, identified as T-202, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-2000, and exhausting to stack S-101.
 - (6) One (1) belt conveyor, identified as T-203, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-2000, and exhausting to stack S-101.
- (oo) EU-102, consisting of the following:
- (1) One (1) Hi-Cal fines storage tank, identified as Bin 202, approved in 2015 for construction, with a maximum storage capacity of one thousand (1,000) tons, controlled by bin vent ALG-2001, and exhausting to stack S-102.
- (pp) EU-103, consisting of the following:
- (1) One (1) Dolo small pebble storage tank, identified as Bin 302, approved in 2015 for construction, with a maximum storage capacity of six hundred and fifty (650) tons, controlled by baghouse ALG-3000, and exhausting to stack S-103.
 - (2) One (1) Dolo large pebble storage tank, identified as Bin 303, approved in 2015 for construction, with a maximum storage capacity of one thousand (1,000) tons, controlled by baghouse ALG-3000, and exhausting to stack S-103.
 - (3) One (1) continuous discharge bucket elevator, identified as T-104, approved in 2015 for construction, with a maximum throughput capacity of 200 tons per hour, controlled by baghouse ALG-3000, and exhausting to stack S-103.
 - (4) One (1) 2-Deck 6-foot by 16-foot screen, identified as T-301, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-3000, and exhausting to stack S-103.
 - (5) One (1) belt conveyor, identified as T-302, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-3000, and exhausting to stack S-103.
 - (6) One (1) belt conveyor, identified as T-303, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-3000, and exhausting to stack S-103.
- (qq) EU-104, consisting of the following:

- (1) One (1) Dolo fines storage tank, identified as Bin 300, approved in 2015 for construction, with a maximum storage capacity of one thousand (1,000) tons, controlled by bin vent ALG-3001, and exhausting to stack S-104.
- (rr) EU-105, consisting of the following:
 - (1) One (1) belt conveyor, identified as T-400, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-4000, and exhausting to stack S-105.
 - (2) One (1) North rescreen belt conveyor, identified as T-403, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-4000, and exhausting to stack S-105.
 - (3) One (1) 2-Deck 6-foot by 16-foot screen, identified as T-404, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-4000, and exhausting to stack S-105.
- (ss) EU-106, consisting of the following:
 - (1) One (1) belt conveyor, identified as T-451, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-4500, and exhausting to stack S-106.
 - (2) One (1) South rescreen belt conveyor, identified as T-453, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-4500, and exhausting to stack S-106.
 - (3) One (1) 2-Deck 6-foot by 16-foot screen, identified as T-454, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-4500, and exhausting to stack S-106.
- (tt) EU-107, consisting of the following:
 - (1) One (1) additive bin, identified as Bin 700, approved in 2015 for construction, with a maximum storage capacity of one and one half (1.5) tons, controlled by baghouse ALG-7000, and exhausting to stack S-107.
 - (2) One (1) briquette bin, identified as Bin 702, approved in 2015 for construction, with a maximum storage capacity of four hundred (400) tons, controlled by baghouse ALG-7000, and exhausting to stack S-107.
 - (3) One (1) belt conveyor, identified as T-712, approved in 2015 for construction, with a maximum throughput capacity of twenty-five (25) tons per hour, controlled by baghouse ALG-7000, and exhausting to stack S-107.
 - (4) One (1) continuous discharge bucket elevator, identified as T-713, approved in 2015 for construction, with a maximum throughput capacity of twenty-five (25) tons per hour, controlled by baghouse ALG-7000, and exhausting to stack S-107.
 - (5) One (1) belt conveyor, identified as T-714, approved in 2015 for construction, with a maximum throughput capacity of twenty-five (25) tons per hour, controlled by baghouse ALG-7000, and exhausting to stack S-107.
- (uu) Truck loading spouts, approved in 2015 for construction, consisting of the following:

Emission Unit(s) ID	Facility ID	Control Device ID	Stack ID	Maximum Throughput (tons/hour)
EU-108	T-204	T-204	S-108	300
EU-109	T-205	T-205	S-109	300
EU-110	T-206	T-206	S-110	300
EU-111	T-207	T-207	S-111	300
EU-112	T-304	T-304	S-112	300
EU-113	T-305	T-305	S-113	300
EU-114	T-306	T-306	S-114	300
EU-115	T-307	T-307	S-115	300
EU-116	T-405	T-405	S-116	300
EU-117	T-455	T-455	S-117	300

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) Vehicular traffic on paved and unpaved roads, and parking lots with public access. [326 IAC 6-4][326 IAC 6.8-10];
- (b) Two (2) diesel fuel storage tanks, one (1) 10,000 gallon stationary tank and one (1) 300 gallon portable tank, both installed prior to 2001, handling less than or equal to three thousand five hundred (3,500) gallons, each with a capacity less than ten thousand five hundred (10,500) gallons [326 IAC 8-9-6(b)];
- (c) One (1) 550 gallon gasoline storage tank, installed prior to 2007, handling less than or equal to one thousand three hundred (1,300) gallons per day, with a capacity less than ten thousand five hundred (10,500) gallons [326 IAC 8-9-6(b)]; and
- (d) Two (2) parts washers without a remote solvent reservoir, installed May 2012, using solvents with vapor pressure less than two (2) kPa measured at thirty-eight degrees Centigrade (38°C) [326 IAC 8-3-2][326 IAC 8-3-8].
- (e) Five (5) emergency diesel pony engines, each with an output rating of 60 KW (80.5 hp) and 3.87 liter cylinder displacement volume, to provide torque to rotate the kiln in an emergency, operating no more than 500 hrs per year and venting to the atmosphere; emergency diesel pony engines, EG-1 and EG-2, were installed in 1966 for Rotary Kiln EU-1 and EU-2, respectively; emergency diesel pony engine EG-3 was installed in 1968 for Rotary Kiln EU-3, and; emergency diesel pony engines, EG-4 and EG-5, were installed in 1972 for Rotary Kiln EU-4 and EU-5, respectively; [40 CFR 63, Subpart ZZZZ]
- (f) One (1) natural gas-fired emergency generator engine (4SRB), identified as EG-NG1, permitted in 2017, with an output rating of 302 hp, operating no more than 500 hrs per year, and venting to the atmosphere. Under 40 CFR 60, Subpart JJJJ this is an affected unit. Under 40 CFR 63, Subpart ZZZZ this is a new affected unit.

- (g) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.

Location	Quantity	MMBTU/hr
Main Office	1	0.200
Maintenance	1	0.038
Maintenance Gas Heaters	2	0.300
Maintenance Gas Heaters	1	0.175
Receiving	1	0.125
Furnace Break Room	1	0.165
Mens Locker Room Furnace	1	0.500
Lab Furnace	1	0.100
Boathouse	1	0.250
Conveyor	1	0.450
Tunnel	1	0.175
Stone Feed Floor	5	1.250

- (h) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors, and electrostatic precipitators with a design grain loading of less than or equal to three one-hundredths (0.03) grains per actual cubic foot and a gas flow rate less than or equal to four thousand (4,000) actual cubic feet per minute.

The source also consists of the following insignificant activities:

- (a) A laboratory as defined in 326 IAC 2-7-1(21)(G).
- (b) Activities related to routine fabrication, maintenance, and repair of buildings, structures, equipment, or vehicles at the source where air emissions from those activities would not be associated with any commercial production process, including brazing, soldering, or welding operations and associated equipment.
- (c) The following sealed units, associated with the Lime Terminal:
- (1) Bins:

Emission Unit(s) ID	Facility ID	Maximum Storage Capacity (tons)
Hi-Cal ROC bin	Bin 203	1,000
Dolo ROC bin	Bin 301	1,000
Crushed Dolo fines surge lime bin	Bin 701	10

- (2) Two (2) enclosed Dolo fines screw conveyors, identified as T-700 and T-701, with a maximum throughput capacity of 25 tons per hour.
- (3) One (1) enclosed additive bin screw conveyor, identified as T-702, with a maximum throughput capacity of 0.1 tons per hour.

- (4) One (1) enclosed lime crusher, identified as T-703, with a maximum throughput capacity of 25 tons per hour.
- (5) Four (4) enclosed lime briquetter screw conveyors, identified as T-704, T-705, T-706, and T-707, respectively, with a maximum throughput capacity of five (5) tons per hour, each.
- (6) Four (4) enclosed lime briquetters, identified as T-708, T-709, T-710, and T-711, respectively, with a maximum throughput capacity of five (5) tons per hour, each.

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 Lake County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Attainment effective February 18, 2000, for the part of the city of East Chicago bounded by Columbus Drive on the north; the Indiana Harbor Canal on the west; 148 th Street, if extended, on the south; and Euclid Avenue on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of East Chicago and Lake County.
O ₃	Attainment effective May 20, 2022, for the 2008 8-hour ozone standard.
O ₃	Marginal nonattainment effective August 3, 2018, for the 2015 8-hour ozone standard for Calumet Township, Hobart Township, North Township, Ross Township, and St. John Township. Unclassifiable or attainment effective August 3, 2018, for the 2015 8-hour ozone standard for the remainder of the county.
PM _{2.5}	Unclassifiable or attainment effective January 28, 2019, for the 2012 annual PM _{2.5} standard.
PM _{2.5}	Unclassifiable or attainment effective December 13, 2009, for the 2006 24-hour PM _{2.5} standard.
PM ₁₀	Attainment effective March 11, 2003, for the cities of East Chicago, Hammond, Whiting, and Gary. Unclassifiable effective November 15, 1990, for the remainder of Lake County.
NO ₂	Unclassifiable or attainment effective January 29, 2012, for the 2010 NO ₂ standard.
Pb	Unclassifiable or attainment effective December 31, 2011, for the 2008 lead standard.

- (a) Ozone Standards
 U.S. EPA, in the Federal Register Notice 87 FR 60897 dated October 7, 2022, designated Lake County, Calumet Township, as moderate nonattainment for the 2015 8-hour ozone standard effective November 7, 2022. On December 15, 2022, the Environmental Rules Board issued an emergency rule adopting the U.S. EPA's designation. Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Therefore, VOC and NOx emissions were evaluated pursuant to the requirements of Emission Offset, 326 IAC 2-3.

- (b) **PM_{2.5}**
 Lake County has been classified as attainment for PM_{2.5}. Therefore, direct PM_{2.5}, SO₂, and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) **Other Criteria Pollutants**
 Lake 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 source is classified as a stationary lime manufacturing plant it is considered one (1) of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1), 326 IAC 2-3-2(g), or 326 IAC 2-7-1(22)(B). Therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

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

Greenhouse Gas (GHG) Emissions

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

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

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

	Unrestricted Potential Emissions (ton/year)								
	PM ¹	PM ₁₀ ¹	PM _{2.5} ^{1, 2}	SO ₂	NO _x	VOC	CO	Single HAP ³	Total HAPs
Total PTE of Entire Source Including Fugitives*	>100	>100	>100	>100	>100	>100	>100	>10	>25
Title V Major Source Thresholds	NA	100	100	100	100	100	100	10	25
PSD Major Source Thresholds	100	100	100	100	100	100	100	--	--
Emission Offset Major Source Thresholds	---	NA	NA	NA	100	100	NA	--	--

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 PM10, PM2.5, SO2, NOx, 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/or 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.

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 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)								
	PM ¹	PM ₁₀ ¹	PM _{2.5} ^{1, 2}	SO ₂	NO _x	VOC	CO	Single HAP ³	Total HAPs
Total PTE of Entire Source Including Fugitives*	>100	>100	>100	>100	>100	<100	>100	>10	>25
Title V Major Source Thresholds	NA	100	100	100	100	100	100	10	25
PSD Major Source Thresholds	100	100	100	100	100	100	100	NA	NA
Emission Offset Major Source Thresholds	---	NA	NA	NA	100	100	NA	NA	NA

¹Under the Part 70 Permit program (40 CFR 70), PM₁₀ and PM_{2.5}, not particulate matter (PM), are each considered as a "regulated air pollutant."

²PM_{2.5} listed is direct PM_{2.5}.

³Single highest source-wide HAP.

*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.

- (a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a PSD regulated pollutant, PM, PM₁₀, PM_{2.5}, SO₂, NO_x, and CO, is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).
- (b) This existing source is a major stationary source, under Emission Offset (326 IAC 2-3), because NO_x, a nonattainment regulated pollutant, is emitted at a rate of 100 tons per year or more.
- (c) This source is a major source of HAP, as defined in 40 CFR 63.2, because HAP emissions are equal to or greater than ten (10) tons per year for a single HAP and equal to or greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major 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 requirements of the New Source Performance Standard for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978, 40 CFR 60.6110, Subpart K, are not included in this permit for the two (2) insignificant diesel fuel and one (1) gasoline storage tanks because each tank has a capacity less than 40,000 gallons.
- (b) The requirements of the New Source Performance Standard Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984, 40 CFR 60.110a, Subpart Ka, are not included in this permit for the two (2) insignificant diesel fuel and one (1) gasoline storage tanks because each tank has a capacity less than 40,000 gallons.
- (c) The requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, 40 CFR 60.110b, Subpart Kb, are not included in this permit for the two (2) insignificant diesel fuel and one (1) gasoline storage tanks because construction of these units commenced prior to July 23, 1984.
- (d) This source is not subject to the requirements of the New Source Performance Standard for Lime Manufacturing Plants (40 CFR 60.340, Subpart HH), because the rotary lime kilns, identified as EU-1 through EU-5, were constructed prior to the applicability date of May 3, 1977. In addition, adding the use of natural gas fuel did not constitute a modification per Subpart HH. Therefore, the requirements of the NSPS are not included in the permit.
- (e) This source is not subject to the requirements of the New Source Performance Standards for Non-metallic Mineral Processing Plants (40 CFR Part 60, Subpart OOO) because the nonmetallic mineral processing plant was constructed prior to August 31, 1983 and the newer processing units only move lime, which is not a nonmetallic mineral pursuant to 40 CFR 60.671. Therefore, the requirements of the NSPS are not included in the permit.
- (f) The emergency generator, identified as EG-NG1, is subject to the New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines 40 CFR 60, Subpart JJJJ and 326 IAC 12, because pursuant to 40 CFR 60.4230(a)(4)(iv), owners and operators of stationary spark ignition internal combustion engines (SI ICE) constructed after June 12, 2006

where the SI ICE are manufactured on or after July 1, 2009 for emergency engines with a maximum power greater than 25 HP. The unit subject to this rule includes the following:

- (a) One (1) natural gas-fired emergency generator engine (4SRB), identified as EG-NG1, permitted in 2017, with an output rating of 302 hp, operating no more than 500 hrs per year, and venting to the atmosphere.

The emergency generator is subject to the following portions of Subpart JJJJ

- (1) 40 CFR 60.4230 (a)(4)(iv), (a)(6)
- (2) 40 CFR 60.4233(e)
- (3) 40 CFR 60.4234
- (4) 40 CFR 60.4236(a), (c)
- (5) 40 CFR 60.4237(b)
- (6) 40 CFR 60.4243 (b)(1), (b)(2)(i), (d)(1), (d)(2), (d)(2)(i), (d)(3)
- (7) 40 CFR 60.4245, (a), (b)
- (8) 40 CFR 60.4246
- (9) 40 CFR 60.4248
- (10) 40 CFR 60, Subpart JJJJ, Table 1
- (11) 40 CFR 60, Subpart JJJJ, Table 3

The requirements of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated as 326 IAC 12-1, apply to the emergency generator (EG-NG1) except as otherwise specified in 40 CFR 60, Subpart JJJJ.

- (g) This source is not subject to the requirements of the New Source Performance Standards for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60.4200, Subpart IIII), because the five (5) generators were installed prior to 2006. Therefore, the requirements of the NSPS are not included in the permit.
- (h) 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):

- (a) This source is subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63.6580, Subpart ZZZZ), which is incorporated by reference as 326 IAC 20-82. The units subject to this rule include the following:

Five (5) emergency diesel generators, each with an output rating of 60 KW (80.5 hp) and 3.87 liter cylinder displacement volume, utilized to supply emergency power to each of the kiln rotors, operating no more than 500 hrs per year and venting to the atmosphere. Emergency diesel generators, EG-1 and EG-2, were installed in 1966 for Rotary Kiln EU-1 and EU-2, respectively; emergency diesel generator EG-3 was installed in 1968 for Rotary Kiln EU-3, and emergency diesel generators EG-4 and EG-5, were installed in 1972 for Rotary Kilns EU-4 and EU-5, respectively;

One (1) natural gas-fired emergency generator engine (4SRB), identified as EG-NG1, permitted in 2017, with an output rating of 302 hp, operating no more than 500 hrs per year, and venting to the atmosphere.

This five (5) emergency diesel generators are subject to the following portions of Subpart ZZZZ:

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585(a), (b)
- (3) 40 CFR 63.6590(a)(1)(ii), (iv)
- (4) 40 CFR 63.6595(a)(1), (c)
- (5) 40 CFR 63.6602

- (6) 40 CFR 63.6605
- (7) 40 CFR 63.6625(e)(2), (f), (h), (i)
- (8) 40 CFR 63.6640(a), (b), (e), (f)
- (9) 40 CFR 63.6645(a)(5)
- (10) 40 CFR 63.6650(f)
- (11) 40 CFR 63.6655(a)(1), (d), (e)(2), (f)(1)
- (12) 40 CFR 63.6660
- (13) 40 CFR 63.6665
- (14) 40 CFR 63.6670
- (15) 40 CFR 63.6675
- (16) 40 CFR 63, Subpart ZZZZ, Table 2c
- (17) 40 CFR 63, Subpart ZZZZ, Table 6
- (18) 40 CFR 63, Subpart ZZZZ, Table 8

The following provisions are applicable to the one (1) natural gas-fired emergency generator unit, identified as EG-NG1:

- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585 (a), (b)
- (3) 40 CFR 63.6590 (a)(2)(ii), (c)(6)
- (4) 40 CFR 63.6595(a)(5), (c)
- (5) 40 CFR 63.6640 (f)(1), (f)(2)(i), (f)(3)
- (6) 40 CFR 63.6665
- (7) 40 CFR 63.6670
- (8) 40 CFR 63.6675

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

- (b) This source is subject to the National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants 40 CFR 63.7081, Subpart AAAAA, which is incorporated by reference as 326 IAC 20-91. The compliance date for the source is January 5, 2007. The Permittee operates a lime manufacturing plant that is a major source of hazardous air pollutant (HAP) emissions.

Pursuant to 40 CFR 63.7081, the affected source that is subject to the requirements of 40 CFR 63, Subpart AAAAA consists of the five (5) rotary kilns, identified as EU-1 through EU-5, and all processed stone handling (PSH) operations, identified as EU-50, including all equipment associated with PSH operations beginning at the processed stone storage bin(s) or open storage pile(s) and ending where the processed stone is fed into the kiln. The affected PSH operations include man-made processed stone storage bins (but not open processed stone storage piles), conveying system transfer points, bulk loading or unloading systems, screening operations, surge bins, bucket elevators, and belt conveyors. Any open storage piles, coal storage piles, or coal handling facilities are specifically excluded from the requirements of 40 CFR 63, Subpart AAAAA.

The facilities subject to this rule include the following:

- (a) One (1) Allis Chalmers Rotary Kiln equipped with a hot face dam and Contact Cooler; identified as EU-1; constructed in 1966, modified in 2010, 2014, and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour, emissions controlled by baghouse CE-1; exhausting to stacks S-1A through S-1F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (b) One (1) Allis Chalmers Rotary Kiln equipped with a Contact Cooler; identified as EU-2; constructed in 1966, modified in 2014 and 2016; with a maximum heat input capacity of

213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-2; exhausting to stacks S-2A through S-2F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.

- (c) One (1) Allis Chalmers Rotary Kiln equipped with a hot face dam and Contact Cooler; identified as EU-3; constructed in 1968, modified in 2010, 2014 and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-3; exhausting to stacks S-3A through S-3F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (d) One (1) Allis Chalmers Rotary Kiln equipped with a Contact Cooler; identified as EU-4; constructed in 1972, modified in 2014 and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-4; exhausting to stacks S-4A through S-4F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (e) One (1) Allis Chalmers Rotary Kiln equipped with a Contact Cooler; identified as EU-5; constructed in 1972, modified in 2014 and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-5; exhausting to stacks S-5A through S-5F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (f) Processed stone handling operations, identified as EU-50, consisting of three (3) drop points into Stone Tanks 1, 2, and 3 (each with a maximum capacity of 1,600 tons), each enclosed within a building; three (3) drop points from the Stone Tanks to a conveyor, each enclosed within a building, and five (5) drop points from the stone belt to Kilns 1-5, each enclosed within a building, constructed prior to 1970. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.

The five (5) rotary kilns, identified as EU-1 through EU-5 and the processed stone handling (PSH) operations, identified as EU-50, are subject to the following portions of Subpart AAAAA:

- (1) 40 CFR 63.7081
- (2) 40 CFR 63.7082(a), (e), (f), (g)
- (3) 40 CFR 63.7083(b), (d)
- (4) 40 CFR 63.7090
- (5) 40 CFR 63.7100
- (6) 40 CFR 63.7110(a), (d), (e)
- (7) 40 CFR 63.7111
- (8) 40 CFR 63.7112
- (9) 40 CFR 63.7113
- (10) 40 CFR 63.7114
- (11) 40 CFR 63.7120
- (12) 40 CFR 63.7121
- (13) 40 CFR 63.7130
- (14) 40 CFR 63.7131
- (15) 40 CFR 63.7132
- (16) 40 CFR 63.7133

- (17) 40 CFR 63.7140
- (18) 40 CFR 63.7141
- (19) 40 CFR 63.7143
- (20) 40 CFR 63, Subpart AAAAA, Tables 1
- (20) 40 CFR 63, Subpart AAAAA, Tables 2
- (20) 40 CFR 63, Subpart AAAAA, Tables 3
- (20) 40 CFR 63, Subpart AAAAA, Tables 4
- (20) 40 CFR 63, Subpart AAAAA, Tables 5
- (20) 40 CFR 63, Subpart AAAAA, Tables 6
- (20) 40 CFR 63, Subpart AAAAA, Tables 7

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63, Subpart AAAAA.

- (c) 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:

Unit ID	Control Device Used	Pollutant	Applicable Emission Limitation	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
EU-1	BH	PM	N	>100	<100	N	N
		PM10	326 IAC 6.8-2-22	>100	<100	Y	N
		PM2.5	N	>100	<100	N	N
EU-2	BH	PM	N	>100	<100	N	N
		PM10	326 IAC 6.8-2-22	>100	<100	Y	N
		PM2.5	N	>100	<100	N	N
EU-3	BH	PM	N	>100	<100	N	N
		PM10	326 IAC 6.8-2-22	>100	<100	Y	N
		PM2.5	N	>100	<100	N	N
EU-4	BH	PM	N	>100	<100	N	N
		PM10	326 IAC 6.8-2-	>100	<100	Y	N

Unit ID	Control Device Used	Pollutant	Applicable Emission Limitation	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
EU-5	BH		22				
		PM2.5	N	>100	<100	N	N
		PM	N	>100	<100	N	N
		PM10	326 IAC 6.8-2-22	>100	<100	Y	N
EU-17	BH	PM2.5	N	>100	<100	N	N
		PM	N	<100	<100	N	N
		PM10	326 IAC 6.8-2-22	<100	<100	N	N
		PM2.5	N	<100	<100	N	N
EU-7	BH	PM	N	<100	<100	N	N
		PM10	326 IAC 6.8-2-22	<100	<100	N	N
		PM2.5	N	<100	<100	N	N
		PM	N	<100	<100	N	N
EU-24 EU-6	BH	PM	N	>100	<100	N	N
		PM10	326 IAC 6.8-2-22	>100	<100	Y	N
		PM2.5	N	>100	<100	N	N
		PM	N	>100	<100	N	N
EU-28 EU-8	BH	PM10	326 IAC 6.8-2-22	>100	<100	Y	N
		PM2.5	N	>100	<100	N	N
		PM	N	>100	<100	N	N
		PM	N	>100	<100	N	N
EU-15 EU-14	BH	PM10	326 IAC 6.8-2-22	>100	<100	Y	N
		PM2.5	N	>100	<100	N	N
		PM	N	>100	<100	N	N
		PM	N	>100	<100	N	N
EU-15a	BH	PM	326 IAC 2-2	<100	<100	N	N
		PM10	326 IAC 2-2 326 IAC 6.8-10-3	<100	<100	N	N
		PM2.5	326 IAC 2-2	<100	<100	N	N
		PM	N	<100	<100	N	N
EU-13	BH	PM10	326 IAC 6.8-2-22	<100	<100	N	N
		PM2.5	N	<100	<100	N	N
		PM	N	<100	<100	N	N
		PM	N	<100	<100	N	N
EU-16	BH	PM10	326 IAC 6.8-2-22	<100	<100	N	N
		PM2.5	N	<100	<100	N	N
		PM	N	<100	<100	N	N
		PM	N	<100	<100	N	N
EU-12	BH	PM10	326 IAC 6.8-2-22	<100	<100	N	N
		PM2.5	N	<100	<100	N	N
		PM	N	<100	<100	N	N
		PM	N	<100	<100	N	N
EU-42/43	BV	PM	326 IAC 2-2	>100	<100	N ¹	N
		PM10	326 IAC 2-2 326 IAC 6.8-10-3	>100	<100	Y	N
		PM2.5	N	<100	<100	N	N
		PM	N	<100	<100	N	N

Unit ID	Control Device Used	Pollutant	Applicable Emission Limitation	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
EU-11	BH	PM	N	<100	<100	N	N
		PM10	326 IAC 6.8-10-3	<100	<100	N	N
		PM2.5	N	<100	<100	N	N
EU-25	BH	PM	326 IAC 2-2	>100	<100	N	N
		PM10	326 IAC 2-2 326 IAC 6.8-2-22	>100	<100	Y	N
		PM2.5	N	>100	<100	N	N
EU-32	BH	PM	N	<100	<100	N	N
		PM10	326 IAC 6.8-10-3	<100	<100	N	N
		PM2.5	N	<100	<100	N	N
EU-33	BV	PM	N	>100	<100	N	N
		PM10	326 IAC 6.8-10-3	>100	<100	Y	N
		PM2.5	N	<100	<100	N	N
EU-51	BH	PM	326 IAC 2-2	>100	<100	N ¹	N
		PM10	326 IAC 2-2 326 IAC 6.8-10-3	>100	<100	Y	N
		PM2.5	326 IAC 2-2	>100	<100	Y	N
EU-52	BV	PM	326 IAC 2-2	<100	<100	N ¹	N
		PM10	326 IAC 2-2 326 IAC 6.8-10-3	<100	<100	N	N
		PM2.5	326 IAC 2-2	<100	<100	N	N
EU-53	BV	PM	326 IAC 2-2	<100	<100	N ¹	N
		PM10	326 IAC 2-2 326 IAC 6.8-10-3	<100	<100	N	N
		PM2.5	326 IAC 2-2	<100	<100	N	N
EU-54	BH	PM	326 IAC 2-2	>100	<100	N ¹	N
		PM10	326 IAC 2-2 326 IAC 6.8-10-3	>100	<100	Y	N
		PM2.5	326 IAC 2-2	>100	<100	Y	N
Under the Part 70 Permit program (40 CFR 70), PM is not a regulated air pollutant.							
Uncontrolled PTE (tpy) and controlled PTE (tpy) are evaluated against the Major Source Threshold for each pollutant. Major Source Threshold for regulated air 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.							
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.						
N	The control device is not required to comply with the applicable emission limitation or standard. Therefore, based on this evaluation, the requirements of 40 CFR Part 64, CAM, are not applicable.						
N ¹	Under 326 IAC 2-2, PM is not a surrogate for a regulated air pollutant. Therefore, CAM does not apply to these emission units for the 326 IAC 2-2 PM limitation.						
Controls: BH = Baghouse, BV = Bin Vent							
Emission units without air pollution controls are not subject to CAM. Therefore, they are not listed.							

Based on this evaluation, the requirements of 40 CFR Part 64, CAM, are applicable to EU-1, EU-2, EU-3, EU-4, EU-5, EU-24, EU-6, EU-28, EU-8, EU-15, EU-14, EU-42/43, EU-25, and EU-33 for PM10. 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.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM, are applicable to EU-51 and EU-54 for PM₁₀ and PM_{2.5} upon issuance of the Title V Renewal. A CAM plan has been submitted as part of this 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.

This source was originally constructed in the 1960s and was an existing PSD and EO major source upon promulgation of 326 IAC 2-2 and 326 IAC 2-3, respectively. The source belongs to 1 of the 28 PSD source categories with a 100 ton per year threshold.

- (a) Pursuant to CP 089-5851-00112, issued December 9, 1996, the PM/PM₁₀ emissions from Lime Loadout #3 (East Bay) (EU-25) shall not exceed 3.4 pounds per hour and 15 tons per year.

Compliance with this limit will ensure that the potential to emit is less than twenty-five (25) tons of PM per year and less than fifteen (15) tons of PM₁₀ per year and therefore will render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable to this source.

- (b) In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-3 (Emission Offset (EO)) not applicable and Pursuant to MSM 089-23502-00112, issued on November 17, 2006, the Permittee shall comply with the following:

- (1) The PM emission rate from the lime transfer system, identified as EU-42/43 controlled by a bin vent filter and exhausting to stack S-43 (ALG410), shall not exceed 1.32 pounds per hour.
- (2) The PM₁₀ emission rate from the lime transfer system, identified as EU-42/43, controlled by a bin vent filter and exhausting to stack S-43 (ALG410), shall not exceed 1.32 pounds per hour.

IDEM has revised the existing PM and PM₁₀ emission limits since the lime transfer system (EU-42/43) are controlled by the same bin vent filter and exhaust to the same stack. Prior to this renewal EU-42 was limited to 0.05 lb/hr for PM and PM₁₀ and EU-43 was limited to 1.27 lb/hr for PM and PM₁₀.

Compliance with these emission limits will ensure that the potential to emit from the modification performed under MSM 089-23502-00112, issued on November 17, 2006, is less than twenty-five (25) tons of PM per year and less than fifteen (15) tons of PM₁₀ per year and therefore will render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable to this source.

- (c) In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable and pursuant to MSM 089-32593-00112, issued on May 22, 2013, the Permittee shall comply with the following:

- (1) The PM emissions the Grinding Mill Material Transfer Operation (EU-15a) shall not exceed 5.5 pounds per hour.
- (2) The PM₁₀ emissions the Grinding Mill Material Transfer Operation (EU-15a) shall not exceed 3.2 pounds per hour.
- (3) The PM_{2.5} emissions the Grinding Mill Material Transfer Operation (EU-15a) shall not exceed 2.1 pounds per hour.

Compliance with these emission limits will ensure that the potential to emit from the modification performed under MSM 089-32593-00112, is less than twenty-five (25) tons of PM per year, less than fifteen (15) tons of PM₁₀ per year and less than ten (10) tons of PM_{2.5} per year and therefore will render the requirements of 326 IAC 2-2 (PSD) not applicable to this source.

- (d) In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable and pursuant to SSM 089-40060-00112, issued on October 16, 2018, the Permittee shall comply with the following:

- (a) PM emissions from the ROK Lime Transfer System #1 (EU-51) shall not exceed 2.97 pounds per hour.
- (b) PM₁₀ emissions from the ROK Lime Transfer System #1 (EU-51) shall not exceed 1.61 pounds per hour.
- (c) PM_{2.5} emissions from the ROK Lime Transfer System #1 (EU-51) shall not exceed 0.85 pounds per hour.
- (d) PM emissions from the ROK Lime Storage Bin #1 (EU-52) shall not exceed 0.28 pounds per hour.
- (e) PM₁₀ emissions from the ROK Lime Storage Bin #1 (EU-52) shall not exceed 0.28 pounds per hour.
- (f) PM_{2.5} emissions from the ROK Lime Storage Bin #1 (EU-52) shall not exceed 0.28 pounds per hour.
- (g) PM emissions from the ROK Lime Storage Bin #2 (EU-53) shall not exceed 0.28 pounds per hour.
- (h) PM₁₀ emissions from the ROK Lime Storage Bin #2 (EU-53) shall not exceed 0.28 pounds per hour.
- (i) PM_{2.5} emissions from the ROK Lime Storage Bin #2 (EU-53) shall not exceed 0.28 pounds per hour.
- (j) PM emissions from the ROK Lime Transfer System #2 (EU-54) shall not exceed 2.07 pounds per hour.
- (k) PM₁₀ emissions from the ROK Lime Transfer System #2 (EU-54) shall not exceed 1.12 pounds per hour.
- (l) PM_{2.5} emissions from the ROK Lime Transfer System #2 (EU-54) shall not exceed 0.59 pounds per hour.

Compliance with these limits shall limit the potential to emit from Significant Source Modification No. 089-40060-00112 of PM to less than twenty-five (25) tons per twelve (12) consecutive month period, PM₁₀ to less than fifteen (15) tons per twelve (12) consecutive month period, PM_{2.5} to less than ten (10) tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (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).

Even though the Permittee is a major source of HAPs, the source is not subject to the requirements of 326 IAC 2-4.1 because none of its facilities were constructed after the applicability date of July 27, 1997. The operation of the emission units constructed after 1997 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.

326 IAC 2-6 (Emission Reporting)

This source is subject to the requirements of 326 IAC 2-6 (Emission Reporting), since it has the potential to emit NO_x equal to or greater than two thousand five hundred (2,500) tons per year and has the potential to emit PM₁₀ equal to or greater than two hundred fifty (250) tons per year. Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit annually, 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.

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(2)

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 is not subject to the requirements of 326 IAC 6-5, because it is not located in an area listed in 326 IAC 6-5-1(a), and does not contain any facilities with the potential to emit fugitive PM greater than twenty-five (25) tons per year which received a preconstruction approval after December 13, 1985.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)

Pursuant to 326 IAC 6.5-1-1(a), this source (located in Lake 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 6.8-1-2 (PM Limitations for Lake County)

This source is subject to 326 IAC 6.8 because it is located in Lake County, its PM PTE (or limited PM PTE) is equal to or greater than 100 tons/year or actual emissions are equal to or greater than 10 tons/year. This source is one of the sources specifically listed in 326 IAC 6.8-2-22, but there are also a

number of emission units at the source that are not specifically listed. 326 IAC 6.8-1-2(b)(2) applies to “steam generators”, which is defined in 326 IAC 6.8-1-1.5. This definition only includes furnaces and boilers used to burn fuels for the purpose of producing steam by heat transfer. The emission units listed here are direct fired and heat transfer does not occur through the production of steam.

Pursuant to 326 IAC 6.8-1-2(a), the following units shall comply with the below limits.

Facility	Unit ID	Particulate Limitation (gr/dscf)
Emergency diesel pony engines	EG-1, EG-2, EG-3, EG-4, EG-5	0.03,each
NG Fired Emergency Generator	EG-NG1	
Main Office	NA	
Maintenance	NA	
Maintenance Gas Heaters	NA	
Receiving	NA	
Furnace Break Room	NA	
Men's Locker Room Furnace	NA	
Lab Furnace	NA	
Boathouse	NA	
Conveyor	NA	
Tunnel	NA	
Stone Feed Floor	NA	
Grinding and machining operations	NA	

Pursuant to 326 IAC 6.8-1-1(a)(1), the following material processing facilities do not need to comply with the requirements of 326 IAC 6.8-1-2(a) because the source is specifically listed in 326 IAC 6.8-10-1(a)(2)(K):

Facility	Unit ID
Lime Fines Transfer System	EU-6a
Grinding Mill Material Transfer Operation	EU-15a
Lime Transfer System #2	EU-42/43
EF feed and pneumatic delivery system	EU-33
Lime Loadout #1 (West Bay)	EU-11
Truck Transfer Station Reclaim Hopper	EU-32
Run of Kiln (ROK) Lime Transfer #1	EU-51
ROK Lime Storage Bin #1	EU-52
ROK Lime Storage Bin #2	EU-53
ROK Lime Transfer System #2	EU-54

326 IAC 6.8-2 (Specifically Listed PM Limitations for Lake County)

This source is one of the sources specifically listed in 326 IAC 6.8-2-22. Pursuant to 326 IAC 6.8-2-22, the source shall follow the limit outlined below.

(a) The facilities listed in the chart below shall not exceed the respective PM₁₀ emission limits:

Facility (as listed in 326 IAC 6.8-2-22)	Emission Unit Description and ID (as listed in permit)	Control Device ID	PM10 Emission Limits	
			(lbs/ton)	(lbs/hr)
Lime rotary kiln number 1	Allis Chalmers Rotary Kiln (EU- 1)	CE-1	0.478	9.950
Lime rotary kiln number 2	Allis Chalmers Rotary Kiln (EU- 2)	CE-2	0.478	9.950
Lime rotary kiln number 3	Allis Chalmers Rotary Kiln (EU- 3)	CE-3	0.478	9.950

Facility (as listed in 326 IAC 6.8-2-22)	Emission Unit Description and ID (as listed in permit)	Control Device ID	PM10 Emission Limits	
			(lbs/ton)	(lbs/hr)
Lime rotary kiln number 4	Allis Chalmers Rotary Kiln (EU- 4)	CE-4	0.478	9.950
Lime rotary kiln number 5	Allis Chalmers Rotary Kiln (EU- 5)	CE-5	0.478	9.950
Flue dust loadout number 1 (MHL 14)	Truck Flue Dust Loadout #1 and Flue Dust Tank #1 (EU-17)	CE-10 AKG141	0.003	0.110
Flue dust loadout number 2 (MHL 15)	Truck Flue Dust Loadout #2 and Flue Dust Tank #2 (EU-16)	CE-9 AKG450	0.003	0.100
Lime grinder (MHL 13)	Lime Grinder Handling System (EU-15) Lime Storage System (Old Side) (EU-14)	CE-6 ALG- 400	0.015	0.44
Lime handling baghouse number 1 (MHL 6)	Lime Handling System #1 (302 Belt) (EU-6) Lime Storage System (New Side) (EU-24)	CE-14 ALG- 310	0.002	0.260
Lime handling baghouse number 2 (MHL 7)	Lime Handling System #2 (301 Belt) EU-7	CE-15 ALG- 300	0.002	0.180
Lime handling baghouse number 4 (MHL 9)	Lime Loadout #3/Rescreen (East Bay, also known as the Hi- Cal Bay) (EU-25)	CE-25 ALG- 600	0.001	0.13
Lime loadout baghouse number 3 (MHL 12)	Lime Loadout #2A (Center Bay, also known as the Dolo Bay) (EU-8) Lime Loadout #2B/Dolo Rescreen (Center Bay, also known as the Dolo Bay) (EU-28)	CE-13 ALG- 320	0.004	0.410

Facility (as listed in 326 IAC 6.8-2-22)	Emission Unit Description and ID (as listed in permit)	Control Device ID	PM10 Emission Limits	
			(lbs/ton)	(lbs/hr)
Lime loadout baghouse number 1 (MHL 10)	Grinding Mill #2 (EU-12)	CE-7 ALG- 460	0.0004	0.050
Lime loadout baghouse number 2 (MHL 11)	Grinding Mill #1 (EU-13)	CE-8 ALG- 450	0.0004	0.050

326 IAC 6.8-8 (Lake County: Continuous Compliance Plan)

This source (located in Lake County) is a source specifically listed in 326 IAC 6.8-8-1(1)(9). Therefore, this source is subject to the requirements of 326 IAC 6.8-8.

- (a) Pursuant to 326 IAC 6.8-8, the source shall implement the maintenance and inspection practices outlined in the Continuous Compliance Plan (CCP), dated March 1997. An updated CCP was submitted to IDEM in October of 2021.

326 IAC 6.8-10 (Lake County: Fugitive Particulate Matter)

This source (located in Lake County) is a source specifically listed in 326 IAC 6.8-10-1(2)(K). Therefore, this source is subject to the requirements of 326 IAC 6.8-10.

Pursuant to 326 IAC 6.8-10-3 (formerly 326 IAC 6-1-11.1) (Lake County Fugitive Particulate Matter Control Requirements), the particulate matter emissions from source wide activities shall meet the following requirements:

- (a) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).
- (b) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).
- (c) The opacity of fugitive particulate emissions from exposed areas shall not exceed ten percent (10%) on a six (6) minute average.
- (d) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.
- (e) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.
- (f) There shall be a zero (0) percent frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time.
- (g) The opacity of fugitive particulate emissions from the inplant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).
- (h) Material processing facilities shall include the following:
 - (1) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.
 - (2) The PM10 emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.

- (3) The PM10 stack emissions from a material processing facility shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
- (4) The opacity of fugitive particulate emissions from the material processing facilities, except a crusher at which a capture system is not used, shall not exceed ten percent (10%) opacity.
- (5) The opacity of fugitive particulate emissions from a crusher at which a capture system is not used shall not exceed fifteen percent (15%).
- (i) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).
- (j) Material transfer limits shall be as follows:
 - (1) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).
 - (2) Where adequate wetting of the material for fugitive particulate emissions control is prohibitive to further processing or reuse of the material, the opacity shall not exceed ten percent (10%), three (3) minute average.
 - (3) Slag and kish handling activities at integrated iron and steel plants shall comply with the following particulate emissions limits:
 - (A) The opacity of fugitive particulate emissions from transfer from pots and trucks into pits shall not exceed twenty percent (20%) on a six (6) minute average.
 - (B) The opacity of fugitive particulate emissions from transfer from pits into front end loaders and from transfer from front end loaders into trucks shall comply with the fugitive particulate emission limits in 326 IAC 6.8-10-3(9).
- (k) Any facility or operation not specified in 326 IAC 6.8-10-3 shall meet a twenty percent (20%), three (3) minute average opacity standard.

The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the attached Fugitive Dust Control Plan.

326 IAC 6.8-11-1 (Lake County: Particulate Matter Contingency Measures)

Pursuant to 326 IAC 6.8-11-1(1), the requirements of this rule are applicable because this source is listed in 326 IAC 6.8-2.

Commissioner's Order - SO2

Pursuant to Commissioner's Order 2016-04, issued November 16, 2016, the SO2 emission from Rotary Kilns EU-1, EU-2, EU-3, EU-4, and EU-5 shall not exceed nine and forty-eight hundredths (9.48) pounds per hour, each, calculated as a rolling seven hundred and twenty (720) operating hour average, per kiln.

State Rule Applicability – Individual Facilities

State rule applicability has been reviewed as follows:

326 IAC 6-2 (Particulate Matter Emission Limitations for Sources of Indirect Heating)

Pursuant to 326 IAC 6-2-1(e), if any limitation established in 326 IAC 6-2 is inconsistent with applicable limitations contained in 326 IAC 6.5 and 326 IAC 6.8, then the limitations contained in 325 IAC 6.5 and 6.8 shall prevail. The indirect heating facilities are subject to limitations established in 326 IAC 6.8. Therefore, the limitations of 326 IAC 6-2 are not applicable.

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

Pursuant to 326 IAC 6-3-1(c)(3), the rule does not apply if a particulate matter emission limitation is established in 326 IAC 6.8. This source is subject to the requirements of 326 IAC 6.8 and is therefore not subject to the requirements of 326 IAC 6-3.

326 IAC 6.8-10 (Lake County: Fugitive Particulate Matter)

Pursuant to 326 IAC 6.8-1-1(a)(1), the source shall comply with the requirements of 326 IAC 6.8-10 because the source is listed in 6.8-10-1(2)(K). The emission units identified in the table below are material processing facilities as defined at 326 IAC 6.8-10-2(12). The equipment used to handle dust collected by the baghouses, such as, but not limited to, a conveyor used to transfer dust from a control equipment hopper to a temporary storage container, is "dust handling equipment" as defined at 326 IAC 6.8-10-2(7).

Emission Unit	Unit ID
Lime Fines Transfer System	EU-6a
Grinding Mill Material Transfer Operation	EU-15a
Lime Transfer System #2	EU-42/43
EF feed and pneumatic delivery system	EU-33
Lime Loadout #1 (West Bay)	EU-11
Truck Transfer Station Reclaim Hopper	EU-32
Run of Kiln (ROK) Lime Transfer #1	EU-51
ROK Lime Storage Bin #1	EU-52
ROK Lime Storage Bin #2	EU-53
ROK Lime Transfer System #2	EU-54

- (a) Pursuant to 326 IAC 6.8-10-3(7), for each material processing facility identified in the table above:
- (1) The PM₁₀ stack emissions shall not exceed twenty-two thousandths (0.022) grain per dry standard cubic foot and ten percent (10%) opacity.
 - (2) The opacity of fugitive particulate emissions shall not exceed ten percent (10%)
 - (3) There shall be a zero percent (0%) frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.
 - (4) The PM₁₀ emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
- (b) Pursuant to 326 IAC 6.8-10-3(8), the opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).

326 IAC 7 (Sulfur Dioxide Rules)

Pursuant to 326 IAC 7-1.1-1(3), the rotary kilns, with the potential to emit twenty-five (25) tons per year or ten (10) pounds per hour of sulfur dioxide shall comply with the sulfur dioxide limitations under 326 IAC 7-4.1.

- (a) Pursuant to 326 IAC 7-4.1-6, Carmeuse Lime shall comply with the sulfur dioxide (SO₂) emission limits for Rotary Kilns EU-1 through EU-5 as follows:
- (1) When three (3) or fewer kilns are in operation at the same time, the sulfur dioxide emissions are not to exceed:

- (A) two and ninety-four thousandths (2.094) pounds per ton of lime based on a one (1) hour average; and
 - (B) forty-eight (48) pounds per hour per operating kiln.
 - (2) When four (4) kilns are in operation at the same time, the sulfur dioxide emissions are not to exceed:
 - (A) one and seven hundred forty-five thousandths (1.745) pounds per ton of lime based on a one (1) hour average; and
 - (B) forty (40) pounds per hour per operating kiln.
 - (3) When five (5) kilns are in operation at the same time, the sulfur dioxide emissions are not to exceed:
 - (A) one and four hundred eighty-three thousandths (1.483) pounds per ton of lime based on a one (1) hour average; and
 - (B) thirty-four (34) pounds per hour per operating kiln.
 - (4) The production of lime is not to exceed five hundred fifty (550) tons per day for each rotary kiln.
- (b) Sulfur dioxide emissions shall be vented from the kilns/kiln gas filter systems at the following heights above grade:
- (1) For Kiln No. 1, a stack height of seventy-nine and one-tenth (79.1) feet.
 - (2) For Kiln No. 2, a stack height of eighty-five and nine-tenths (85.9) feet.
 - (3) For Kiln No. 3, a stack height of eighty-six and zero-tenths (86.0) feet.
 - (4) For Kiln No. 4, a stack height of ninety-four and four-tenths (94.4) feet.
 - (5) For Kiln No. 5, a stack height of eighty-seven and four-tenths (87.4) feet.

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)

The PTE of VOC from the combustion units, generators and storage tanks is below 25 tons/yr and the remaining units, the kilns and part washers, that emit VOC are covered under other Article 8 rules. Therefore, the requirements of 326 IAC 8-1-6 are not applicable.

326 IAC 8-3 (Organic Solvent Degreasing Operations)

The degreasing operation shall comply with the following requirements:

- (a) Pursuant to 326 IAC 8-3-2(a), the owner or operator shall:
- (1) Equip the degreaser with a cover;
 - (2) Equip the degreaser with a facility for draining cleaned parts;
 - (3) Close the degreaser cover whenever parts are not being handled in the cleaner;
 - (4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
 - (5) Provide a permanent, conspicuous label summarizing the operation requirements;
 - (6) Store waste solvent only in covered containers; and
 - (7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.

- (b) Pursuant to 326 IAC 8-3-2(b), the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:
- (1) Equip the degreaser with one (1) of the following control devices if the solvent is heated to a temperature of greater than forty-eight and nine-tenths (48.9) degrees Celsius (one hundred twenty (120) degrees Fahrenheit):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent used is insoluble in, and heavier than, water.
 - (C) A refrigerated chiller.
 - (D) Carbon adsorption.
 - (E) An alternative system of demonstrated equivalent or better control as those outlined in this rule that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.
 - (2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.
 - (3) If used, solvent spray:
 - (A) must be a solid, fluid stream; and
 - (B) shall be applied at a pressure that does not cause excessive splashing.
- (c) Pursuant to 326 IAC 8-3-8, users, providers, and manufacturers of solvents for use in cold cleaning degreasers, except for solvents intended to be used to clean electronic components, shall ensure that the following operating requirements are met:
- (1) No person shall cause or allow the sale of solvents for use in cold cleaning degreasing operations with a VOC composite partial vapor pressure, when diluted at the manufacturer's recommended blend and dilution, that exceeds one (1) millimeters of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty degrees Celsius (20°C) (sixty-eight degrees Fahrenheit (68°F)) in an amount greater than five (5) gallons during any seven (7) consecutive days to an individual or business.
 - (2) No person shall operate a cold cleaning degreaser with a solvent that has a VOC composite partial vapor pressure that exceeds one (1) millimeters of mercury (nineteen-thousandths (0.019) measured at twenty degrees Celsius (20°C)(sixty-eight degrees Fahrenheit (68°F)).

326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)

The requirements of 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities) do not apply to the insignificant gasoline or diesel storage tanks because they each have a capacity of less than 39,000 gallons.

326 IAC 8-6 (Organic Solvent Emission Limitations)

This source is not subject to the requirements of 326 IAC 8-6 because it has no emission units that were constructed after October 7, 1974 have then a potential to emit of 100 or more tons of VOC per year.

326 IAC 8-7 (Specific VOC Reduction Requirements)

The total amount of lime produced from rotary kilns EU-1 through EU-5 shall not exceed 821,500 tons per twelve (12) consecutive month period with compliance determined at the end of each month. The VOC emissions from each kiln shall not exceed 0.06 pounds per ton of lime produced. Compliance with these

limits is equivalent to source-wide VOC emissions of less than twenty-five (25) tons per year and will render the requirements of 326 IAC 8-7 not applicable.

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)

The two (2) insignificant diesel storage tanks and the one (1) insignificant gasoline storage tank are subject 326 IAC 8-9-6 because the source is located in Lake County. The storage tanks have a capacity of less than 39,000 gallons, therefore they are subject to the following reporting and record keeping.

- (a) Pursuant to 326 IAC 8-9-6 (a)(Volatile Organic Compound Emission Limits), the records required by 326 IAC 8-9-6 (b) shall be maintained for the life of the vessel.
- (b) Pursuant to 326 IAC 8-9-6 (b)(Volatile Organic Compound Emission Limits), the Permittee shall maintain records and submit to IDEM, OAQ a report of the vessel identification number, the vessel dimensions, and the vessel capacity for the two (2) insignificant diesel storage tanks and the one (1) insignificant gasoline storage tank.

326 IAC 8-17 (Industrial Solvent Cleaning Operations)

This source is located in Lake County and emit over three (3) tons per year, but is still not subject to the requirements of 326 IAC 8-17 because the solvent cleaning operations are subject to 326 IAC 8-3 (Organic Solvent Degreasing Operations).

326 IAC 9 (Carbon Monoxide Emission Limits)

The source commenced operation before March 21, 1972 and any new emission units added to the facility after May 21, 1972 are not listed in section 2 of this rule. Therefore, 326 IAC 9 does not apply.

Compliance Determination and Monitoring Requirements

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

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

- (a) The Compliance Determination Requirements applicable to this source are as follows:

Particulate Matter

- (a) In order to ensure compliance with particulate matter limits, the baghouses and bin vent filters for particulate control shall be in operation and control particulate emissions from all facilities listed in this section at all times those respective facilities are in operation.
- (b) Pursuant to 326 IAC 6.8-10-3 (Lake County Fugitive Particulate Matter Emission Limitations), opacity from the activities (as applicable) shall be determined as follows:

Emission Unit/Control	How Determined
Paved Roads and Parking Lots	Average of twelve (12) instantaneous opacity readings, taken for four (4) vehicle passes, consisting of three (3) opacity readings for each vehicle pass
Unpaved Roads	
Batch Transfer into or out of Storage Piles	Average of three (3) opacity readings taken five (5) seconds, ten (10) seconds, and fifteen (15) seconds after the end of one (1) batch loading or unloading operation
In-Plant Material Transportation by Front End Loader or Skip Hoist	Average of three (3) opacity readings taken at five (5) second intervals
Building Vents	40 CFR 60, Appendix A, Method F
Dust Handling Equipment	40 CFR 60, Appendix A, Method 9
Continuous Transfer into or out of Storage Piles	
Storage Piles	
Exposed Areas	
In-Plant Material Transportation by Truck or Rail	
Buildings Enclosing All or Part of the Material Processing Equipment	40 CFR 60, Appendix A, Method 22

Sulfur Dioxide

(a) Pursuant to 326 IAC 7-4.1-2 and 326 IAC 2-7-6, the Permittee shall demonstrate compliance with the SO₂ limits using one of the following options:

(1) Sampling, Analysis, and Calculations.

(A) Each shipment of limestone, glycerin, EF, and coal is sampled and analyzed by an independent laboratory, utilizing American Society for Testing and Materials (ASTM) standards for sampling and chemical analysis. The certified analyses that accompany each shipment shall be the source of the data of the sulfur content in both the limestone and coal calculation of the hourly SO₂ emissions for reporting. Either a certificate of analysis or certification that the EF complies with the source's specifications will be the source of the data of the sulfur content in the EF for calculations of the hourly SO₂ emissions for reporting. Information concerning the sulfur content of pipeline quality natural gas shall be the source of the data of the sulfur content in the natural gas. Pursuant to 326 IAC 7-4.1-2(c), the current sampling and analysis protocol to be used in lieu of certified analyses, certificates of analysis, or certification of compliance with the source's specifications for limestone, coal, glycerin, and/or EF is as follows:

- (i) The sample acquisition points shall be at locations where representative samples of the respective material shipments may be obtained.
- (ii) Minimum sample size shall be in accordance with ASTM specifications for representative samples in the size fraction and quantity delivered.
- (iii) Samples shall be composited and analyzed in accordance with ASTM specifications.
 - For limestone, a sample shall be taken for each boat/barge load received and analyzed
 - For glycerin, a sample shall be taken for each truck load received and analyzed
 - For EF, analysis of a composite sample consisting of each truck load received per month

- For Coal, a sample shall be taken for each load received and analyzed
- (iv) Preparation of the sample and sulfur content, where applicable, analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d), and (e).
- (v) The limestone, glycerin, EF and coal utilized shall be reconciled monthly by means of the weigh slips and shipping documents.
- (B) For each kiln, the Permittee shall calculate the SO₂ scrubbing factor for each product type as follows:

$$\text{Scrubbing Factor (SF)}_{\text{Kiln}(i) / \text{Product}(i)} = 1 - [\text{SO}_{2, \text{stack test}(i)} / (\text{S}_{\text{input STest}(i)} * 2 * 2000)]$$

Where:

$$\text{S}_{\text{input STest}(i)} = [(\% \text{S}_{\text{limestone STest}(i)} \times \text{Usage}_{\text{limestone STest}(i)}) / 100] + [(\% \text{S}_{\text{coal STest}(i)} \times \text{Usage}_{\text{coal STest}(i)}) / 100] + [(\% \text{S}_{\text{glycerin STest}(i)} \times \text{Usage}_{\text{glycerin STest}(i)}) / 100] + [(\% \text{S}_{\text{EF STest}(i)} \times \text{Usage}_{\text{EF STest}(i)}) / 100] + [(S_{\text{natural gas STest}(i)} \times \text{Usage}_{\text{natural gas STest}(i)}) / (7000 \times 2000)]$$

%S_{STest(i)} = weight percent sulfur in limestone, coal, glycerin or EF inputs, as applicable, as determined by sampling and analysis for the respective material input during the most recent valid stack test for Kiln(i) for the applicable product type (Product(i)).

S_{natural gas STest(i)} = sulfur content of natural gas (grains/dscf) during the most recent valid stack test for Kiln(i) for the applicable product type (Product(i)).

Usage_{STest(i)} = average limestone, coal, glycerin, EF or natural gas input to the kiln during the most recent valid stack test for Kiln(i) for the applicable product type (Product(i)) in tons/hr or dscf/hr as applicable.

The Permittee shall recalculate the scrubbing factor not later than thirty (30) days after receiving the results of the most recent valid stack test for SO₂ for Kiln(i) for the applicable product type (Product(i)).

- (C) The Permittee shall calculate hourly SO₂ emissions (lb/hr) for each Rotary Kiln #1 through #5 (EU-1 through EU-5) by the following calculations using the input values determined in D.1.8(a)(1)(A) and D.1.8(a)(1)(B) above:

$$\text{SO}_2 \text{ Emissions}_{\text{Kiln}(i)} \text{ (lb/hr)} = (1 - \text{SF}_{\text{Kiln}(i) / \text{Product}(i)}) \times \text{S}_{\text{Input}} \times 2 \times 2000$$

Where:

$$\text{S}_{\text{Input}} = [(\% \text{S}_{\text{limestone}} \times \text{Hourly Input}_{\text{limestone}}) / 100] + [(\% \text{S}_{\text{coal}} \times \text{Hourly Input}_{\text{coal}}) / 100] + [(\% \text{S}_{\text{glycerin}} \times \text{Hourly Input}_{\text{glycerin}}) / 100] + [(\% \text{S}_{\text{EF}} \times \text{Hourly Input}_{\text{EF}}) / 100] + [(S_{\text{natural gas}} \times \text{Hourly Input}_{\text{natural gas}}) / (7000 \times 2000)]$$

SF_{Kiln(i)/Product(i)} = Scrubbing Factor value determined in Condition D.1.8(a)(1)(B) from the most recent valid stack test for Kiln(i) for the applicable product type (Product(i)) for which the total sulfur

input during the test was the same as or greater than the total sulfur input for the hour. If the total sulfur input for the hour is greater than the total sulfur input during the most recent valid stack test for Kiln(i) for the applicable product type (Product (i)), then the Scrubbing Factor value used shall be the value determined based on the results of the most recent prior valid stack test for Kiln(i) for the applicable product type (Product(i)) for which the total sulfur input during the test was the same or greater than the total sulfur input for the hour. When limestone or product is not present in the kiln, the SF shall be equal to zero

Hours of operation = any hour that fuel is being combusted within the affected kiln(s)

%S = weight percent sulfur in limestone, coal, glycerin, or EF inputs, as applicable, as determined by the most recent vendor analysis or sampling, in accordance with Condition D.1.8(a)(1)(A).

$S_{\text{natural gas}}$ = sulfur content of natural gas (grains/dscf)

Hourly Input = limestone, coal, glycerin, EF or natural gas input to the kiln in tons/hr or dscf/hr as applicable.

- (D) The source shall calculate the rolling seven hundred and twenty (720) operating hour average SO₂ emissions (lbs/hr) for each Rotary Kiln #1 through #5 (EU-1 through EU-5) by adding the hourly SO₂ emissions calculated in Condition D.1.8(a)(1)(C) for each Rotary Kiln to the preceding seven hundred and nineteen (719) hours of operation for each rotary kiln, then divide by seven hundred and twenty (720) to derive the rolling average emissions per kiln per averaging period.
- (2) Pursuant to 326 IAC 7-4.1-2(d), compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the kilns, using 40 CFR Part 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, which is conducted with such frequency as to generate the amount of information required by (a) above. IDEM, OAQ may also require that the Permittee conduct a stack test at any emissions unit within sixty (60) days of written notification by the department.
- (b) Pursuant to 326 IAC 2-7-6 and the Commissioner's Order 2016-04, issued November 16, 2016, the Permittee shall demonstrate compliance with the SO₂ limits in Condition D.1.4 as follows:
 - (1) Sampling, Analysis, and Calculations.
 - (A) Each shipment of limestone, glycerin, EF, and coal is sampled and analyzed by an independent laboratory, utilizing American Society for Testing and Materials (ASTM) standards for sampling and chemical analysis. The certified analyses that accompany each shipment shall be the source of the data of the sulfur content in both the limestone and coal calculation of the hourly SO₂ emissions for reporting. Either a certificate of analysis or certification that the EF complies with the source's specifications will be the source of the data of the sulfur content in the EF for calculations of the hourly SO₂ emissions for reporting. Information concerning the sulfur content of pipeline quality natural gas shall be the source of the data of the sulfur content in the natural gas. Pursuant to 326 IAC 7-4.1-2(c), the current sampling and analysis protocol to be used in lieu of certified analyses, certificates of analysis, or certification of compliance with the source's specifications for limestone, coal, glycerin, and/or EF is as follows:

- (i) The sample acquisition points shall be at locations where representative samples of the respective material shipments may be obtained.
- (ii) Minimum sample size shall be in accordance with ASTM specifications for representative samples in the size fraction and quantity delivered.
- (iii) Samples shall be composited and analyzed in accordance with ASTM specifications.
 - For limestone, a sample shall be taken for each boat/barge load received and analyzed
 - For glycerin, a sample shall be taken for each truck load received and analyzed
 - For EF, analysis of a composite sample consisting of each truck load received per month
 - For Coal, a sample shall be taken for each rail load received and analyzed
- (iv) Preparation of the sample and sulfur content, where applicable, analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d), and (e).
- (v) The limestone, glycerin, EF and coal utilized shall be reconciled monthly by means of the weigh slips and shipping documents.

- (B) For each kiln, the Permittee shall calculate the SO₂ scrubbing factor for each product type as follows:

$$\text{Scrubbing Factor (SF)}_{\text{Kiln}(i) / \text{Product}(i)} = 1 - [\text{SO}_{2, \text{stack test}(i)} / (\text{S}_{\text{input STest}(i)} * 2 * 2000)]$$

Where:

$$\text{S}_{\text{input STest}(i)} = \frac{[(\%S_{\text{limestone STest}(i)} \times \text{Usage}_{\text{limestone STest}(i)}) / 100] + [(\%S_{\text{coal STest}(i)} \times \text{Usage}_{\text{coal STest}(i)}) / 100] + [(\%S_{\text{glycerin STest}(i)} \times \text{Usage}_{\text{glycerin STest}(i)}) / 100] + [(\%S_{\text{EF STest}(i)} \times \text{Usage}_{\text{EF STest}(i)}) / 100] + [(S_{\text{natural gas STest}(i)} \times \text{Usage}_{\text{natural gas STest}(i)}) / (7000 \times 2000)]}{1}$$

%S_{STest(i)} = weight percent sulfur in limestone, coal, glycerin or EF inputs, as applicable, as determined by sampling and analysis for the respective material input during the most recent valid stack test for Kiln(i) for the applicable product type (Product(i)).

S_{natural gas STest(i)} = sulfur content of natural gas (grains/dscf) during the most recent valid stack test for Kiln(i) for the applicable product type (Product(i)).

Usage_{STest(i)} = average limestone, coal, glycerin, EF or natural gas input to the kiln during the most recent valid stack test for Kiln(i) for the applicable product type (Product(i)) in tons/hr or dscf/hr as applicable.

The Permittee shall recalculate the scrubbing factor not later than thirty (30) days after receiving the results of the most recent valid stack test for SO₂ for Kiln(i) for the applicable product type (Product(i)).

- (C) The Permittee shall calculate hourly SO₂ emissions (lb/hr) for each Rotary Kiln #1 through #5 (EU-1 through EU-5) by the following calculations using the input values determined in D.1.8(b)(1)(A) and D.1.8(b)(1)(B) above:

$$\text{SO}_2 \text{ Emissions}_{\text{Kiln}(i)} \text{ (lb/hr)} = (1 - \text{SF}_{\text{Kiln}(i)/\text{Product}(i)}) \times S_{\text{Input}} \times 2 \times 2000$$

Where:

$$S_{\text{Input}} = \left[\frac{(\%S_{\text{limestone}} \times \text{Hourly Input}_{\text{limestone}})}{100} \right] + \left[\frac{(\%S_{\text{coal}} \times \text{Hourly Input}_{\text{coal}})}{100} \right] + \left[\frac{(\%S_{\text{glycerin}} \times \text{Hourly Input}_{\text{glycerin}})}{100} \right] + \left[\frac{(\%S_{\text{EF}} \times \text{Hourly Input}_{\text{EF}})}{100} \right] + \left[\frac{(S_{\text{natural gas}} \times \text{Hourly Input}_{\text{natural gas}})}{(7000 \times 2000)} \right]$$

$\text{SF}_{\text{Kiln}(i)/\text{Product}(i)}$ = Scrubbing Factor value determined in Condition D.1.8(b)(1)(B) from the most recent valid stack test for Kiln(i) for the applicable product type (Product(i)) for which the total sulfur input during the test was the same as or greater than the total sulfur input for the hour. If the total sulfur input for the hour is greater than the total sulfur input during the most recent valid stack test for Kiln(i) for the applicable product type (Product(i)), then the Scrubbing Factor value used shall be the value determined based on the results of the most recent prior valid stack test for Kiln(i) for the applicable product type (Product(i)) for which the total sulfur input during the test was the same or greater than the total sulfur input for the hour. When limestone or product is not present in the kiln, the SF shall be equal to zero

Hours of operation = any hour that fuel is being combusted within the affected kiln(s)

%S = weight percent sulfur in limestone, coal, glycerin, or EF inputs, as applicable, as determined by the most recent vendor analysis or sampling, in accordance with Condition D.1.8(b)(1)(A).

$S_{\text{natural gas}}$ = sulfur content of natural gas (grains/dscf)

Hourly Input = limestone, coal, glycerin, EF or natural gas input to the kiln in tons/hr or dscf/hr as applicable.

- (D) The source shall calculate the rolling seven hundred and twenty (720) operating hour average SO₂ emissions (lbs/hr) for each Rotary Kiln #1 through #5 (EU-1 through EU-5) by adding the hourly SO₂ emissions calculated in Condition D.1.8(b)(1)(C) for each Rotary Kiln to the preceding seven hundred and nineteen (719) hours of operation for each rotary kiln, then divide by seven hundred and twenty (720) to derive the rolling average emissions per kiln per averaging period.

Testing Requirements:

Summary of Testing Requirements					
Emission Unit	Control Device	Timeframe for Testing or Date of Last Valid Demonstration)	Pollutant/ Parameter	Frequency of Testing	Authority
EU-1 through EU-5	Baghouse	7/13/2022 (EU-1) 6/30/2022 (EU-2) 8/30/2022 (EU-3) 4/12/2022 (EU-4) 4/21/2022 (EU-5)	PM10	every 30 months	326 IAC 6.8-2-22
	N/A		SO2	every 30 months	326 IAC 7-4.1-6 CO 2016-04
			VOC	every 5 years	326 IAC 8-7
EU-11	Baghouse	08/07/2019 (EU-11)	PM10	every 5 years	326 IAC 6.8-10
EU-12, EU-13, EU-6, EU-24, EU-25, EU-28, EU-16, EU-17, EU-15, EU-11, EU-14, EU-7, EU-8,	Baghouse	06/19/2019 (EU-12) 08/06/2019 (EU-13) 07/14/2022 (EU-6 & EU-24)* 03/30/2021 (EU-25) 10/24/2018 (EU-8 & EU-28) 04/07/2021 (EU-16) 03/31/2021 (EU-17) 10/23/2018 (EU7, EU-14 & EU-15)	PM10	every 5 years	326 IAC 2-2 326 IAC 2-3 326 IAC 6.8-2-22
EU-15a	Baghouse	08/07/2019 (EU-15a)	PM, PM10, and PM2.5	every 5 years	326 IAC 2-2 326 IAC 6.8-2-22
EU-51 and EU-54	Baghouse	04/06/2021	PM, PM10, and PM2.5	every 5 years	326 IAC 2-2 326 IAC 6.8-10
*The source tested on 07/14/2022 but compliance could not be determined. A retest for PM10 is required after repairs to the baghouse (CE-14 ALG 310 are completed).					

(b) The Compliance Monitoring Requirements applicable to this source are as follows:

Emission Unit/Control Device	Type of Parametric Monitoring	Frequency	Range or Specification
EU-1, EU-2, EU-3, EU-4 and EU-5 / Baghouse	Visible Emissions	Daily	Verify whether emissions are normal or abnormal
	Pressure Drop	Daily	Within normal range of 1.0 to 7.0 inches of water, unless a different upper or lower value is established in the most recent compliant stack test
EU-25, EU-15, EU-14, EU-6, EU-24, EU-28, EU-8, EU-33 and EU-42/43 EU-17, EU-16, EU-7, EU-11, EU-12, and EU-13 / Baghouses	Pressure Drop	Daily	Within normal range of 2.0 to 8.0 inches of water, unless a different upper or lower value is established in the most recent compliant stack test
EU-32 and EU-15a	Visible Emissions	Weekly	Verify whether emissions are normal or abnormal

Emission Unit/Control Device	Type of Parametric Monitoring	Frequency	Range or Specification
T-1B	Visible Emissions	Weekly	Verify whether emissions are normal or abnormal
EU-52 and EU-53 / Bin Vents	Visible Emissions	Daily	Verify whether emissions are normal or abnormal
EU-51 and EU-54 / Baghouses	Pressure Drop	Daily	Within normal range of 2.0 to 8.0 inches of water, unless a different upper or lower value is established in the most recent compliant stack test
All Baghouses in Sections D.1 and D.2	Inspections	Quarterly	Verify that it is operated and maintained per manufacturer's specifications

- (1) These monitoring conditions are necessary because the baghouses for the kilns must operate properly to assure compliance with 326 IAC 6.8-2, 326 IAC 6.8-8, and 40 CFR 64 (CAM).
- (2) These monitoring conditions are necessary because the baghouses and bin vent filters for the lime processing and handling and lime storage and loadout equipment must operate properly to assure compliance with the 326 IAC 2-2 (PSD) and 326 IAC 2-3 (EO) avoidance limits, 326 IAC 6.8-2, 326 IAC 6.8-8, and 40 CFR 64 (CAM).
- (3) These monitoring conditions are necessary because the baghouses and bin vent filters for the lime storage and handling equipment must operate properly to assure compliance with the 326 IAC 2-2 (PSD) avoidance limits, 326 IAC 6.8-8, 326 IAC 6.8-10, and 40 CFR 64 (CAM).

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) The emission unit descriptions in Sections A.3 and the respective D and E sections have been updated to reflect changes requested by the source and IDEM.
- (2) IDEM has re-evaluated the applicability of 326 IAC 6.8 for all emission units at the source.
- (3) IDEM has included potential to emit calculations for existing storage piles that were previously overlooked (see Appendix A).
- (4) IDEM has included new testing requirements for EU-25 in Section D.2.
- (5) IDEM has determined that conducting both daily visible emission notations and pressure drop reading for compliance monitoring are not necessary at this time for EU-25, EU-15, EU-14, EU-6, EU-24, EU-28, EU-8, EU-33, EU-42/43, EU-17, EU-16, EU-7, EU-11, EU-12, and EU-13. The source has opted to conducted daily pressure drop readings as compliance monitoring for these emission units in Section D.2.

...

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

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

Lime Production

- (a) One (1) Allis Chalmers Rotary Kiln equipped with a hot face dam and Contact Cooler; identified as EU-1; constructed in 1966, modified in 2010, 2014, and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of ~~470.4~~ **213** MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of ~~24.0~~ **23.3** tons of lime per hour, emissions controlled by baghouse CE-1; exhausting to stacks S-1A through S-1F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (b) One (1) Allis Chalmers Rotary Kiln equipped with a Contact Cooler; identified as EU-2; constructed in 1966, modified in 2014 and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of ~~470.4~~ **213** MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-2; exhausting to stacks S-2A through S-2F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (c) One (1) Allis Chalmers Rotary Kiln equipped with a **hot face dam and** Contact Cooler; identified as EU-3; constructed in 1968, modified in **2010**, 2014 and 2016; with a maximum heat input capacity of 213 MMBtu/hr, a rated maximum natural gas heat input capacity of ~~470.4~~ **213** MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-3; exhausting to stacks S-3A through S-3F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (d) One (1) Allis Chalmers Rotary Kiln equipped with a Contact Cooler; identified as EU-4; constructed in 1972, modified in 2014 and 2016; with a maximum heat input capacity of ~~470.4~~ **213** MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-4; exhausting to stacks S-4A through S-4F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.
- (e) One (1) Allis Chalmers Rotary Kiln equipped with a Contact Cooler; identified as EU-5; constructed in 1972, modified in 2014 and 2016; with a maximum heat input capacity of ~~470.4~~ **213** MMBtu/hr, a rated maximum natural gas heat input capacity of 213 MMBtu/hr, a maximum capacity of 8.2 tons of coal per hour, 4.46 tons of glycerin per hour, 5.74 tons of engineered fuel (EF) per hour, and a maximum production rate of 23.3 tons of lime per hour; emissions controlled by baghouse CE-5; exhausting to stacks S-5A through S-5F. Under 40 CFR Part 63, Subpart AAAAA, this is considered an existing affected facility.

...

Lime Processing and Handling

- (g) One (1) Lime Grinder Handling System; identified as EU-15; constructed in 1972; a maximum capacity of 80 tons of lime per hour; **includes bucket elevators K122 and K222 and conveyors with** emissions controlled by baghouse CE-6 (ALG400); exhausting to stack S-6; **and screens K123 and K223.**
- (h) One (1) Grinding Mill Material Transfer Operation, identified as EU-15a, controlled by one (1) dust collector, CE-15a (ALG440), approved in 2013 for construction, exhausting to stack ~~S-16~~ **S-15a**, and consisting of the following:
 - (1) One (1) lime tank, identified as Lime Tank 1, installed in 1966, with a maximum capacity of 224 tons, **with a truck loading spout in the West Bay (also known as the Pulverized or Bland Bay), with emissions controlled by CE-15a (ALG440).**

...

- (n) One (1) Lime Transfer System #2, identified as EU-42/43, approved for construction in 2006, with a maximum capacity of 80 tons of lime per hour, consisting of a hopper, piping and storage tank T1B, for transporting lime using high pressure pneumatic conveyance methods, with emissions controlled by bin vent filters (**ALG410**), and exhausting to stacks ~~S-42 (ALG470) and S-43 (ALG410), respectively~~ **S-43**.
- (o) One (1) engineered fuel (EF) feed and pneumatic delivery system, **identified as EU-33**, approved in 2014 for construction, with maximum capacity of 159 tons/hour, consisting of the following equipment:

...

Lime Storage and Loadout

- (p) One (1) Lime Storage System (New Side); identified as EU-24; constructed prior to 1977; consisting of lime storage tanks 11, 12, 13, **14**, 15 and 16; emissions controlled by baghouse CE-14 (ALG310); exhausting to stack S-14.
- (q) One (1) Lime Storage System (Old Side); identified as EU-14; constructed prior to 1977; consisting of lime storage tanks 4, ~~4B~~, 2, 3, **4**, 5, 6, **and 7** ~~and 14~~; emissions controlled by baghouse CE-6 (ALG400); exhausting to stack S-6; ~~and baghouse CE-13 (ALG3200 exhausting to stack S-13)~~. **Tank 4 emissions are also controlled by bin vent ALG430. Tank 5 includes a truck loading spot in the Center Bay (also known as the Dolo Bay), with emissions controlled by CE-6 (ALG400).**
- (r) One (1) Lime Loadout #2A (Center Bay, **also known as the Dolo Bay**); identified as EU-8; constructed in 1972; a maximum capacity of 200 tons of lime per hour; **includes conveyor L357 with** emissions controlled by baghouse CE-13 (ALG320), exhausting to stack S-13; **emissions from truck loading sprouts are controlled by integral dust collectors. The EU-8 and EU-28 loadouts share a bay and cannot both be in operation at the same time due to truck space constraints.**
- (s) One (1) Truck Flue Dust Loadout #2 **and Flue Dust Tank #2**; identified as EU-16; constructed in 1966; a maximum capacity of 28 tons of dust per hour; emissions controlled by baghouse CE-9 (~~ALG450~~ **AKG450**); exhausting to stack S-9.
- (t) One (1) Truck Flue Dust Loadout #1 **and Flue Dust Tank #1**; identified as EU-17; constructed in 1966; a maximum capacity of 32 tons of dust per hour; emissions controlled by baghouse CE-10 (~~ALG444~~ **AKG141**); exhausting to stack S-10.
- (u) One (1) **Lime Loadout #2B/Dolo Rescreen (Center Bay Loadout, also known as the Dolo Bay)**; identified as EU-28; constructed in 1972; a maximum capacity of ~~30~~ **200** tons of lime per hour; **includes Rescreen L702 and conveyors** emissions controlled by baghouse CE-13 (ALG320);, exhausting to stack S-13, **and a truck loading spout with integral dust collector. The EU-8 and EU-28 loadouts share a bay and cannot both be in operation at the same time due to truck space constraints.**
- (v) One (1) Lime Loadout #1 (West Bay, **also known as the Pulverized or Blend Bay**); identified as EU-11; constructed prior to 1977; a maximum capacity of 200 tons of lime per hour; emissions **from two truck loading spouts are** controlled by baghouse ~~CE-25 (ALG600)~~ **CE-15a (ALG440)**; exhausting to stack ~~S-25~~ **S-15a**; **emissions from two additional truck loading spouts are controlled by integral dust collectors.**
- (w) One (1) Lime Loadout #2 **#3/Rescreen (East Bay, also known as the Hi-Cal Bay)**; identified as EU-25; constructed in 1996 and modified in 2010; a maximum capacity of 200 tons of lime per hour; emissions **from the rescreen, conveyors, and two (2) truck loading spouts are** controlled by baghouse CE-25 (ALG600); exhausting to stack S-25; **a third truck loading spout has an integral dust collector.**

- (y) **One (1) lime fines transfer system identified as EU-6a, constructed 1972 , conveying material from Tank 16, one (1) of the five (5) lime storage tanks collectively identified as EU-24, and from the baghouse ALG320 dust hopper, to Tank 1 in EU-15a. System includes bucket elevator L401 and conveyors L323, L400, L402, L403, L404; maximum overall transfer capacity of system is 25 tons per hour.**

...

- ~~(y) — One (1) pneumatic lime transfer system #1, approved in 2016 for construction, with a maximum capacity of 30 tons of lime per hour, consisting of the following equipment:~~

~~(1) — One (1) lime hopper, identified as EU-35, constructed in 2006, fed by Tank 16, which is one (1) of the five (5) lime storage tanks collectively identified as EU-24, using a dust collector CE-35 (ALG490) as control, exhausting to atmosphere.~~

~~(2) — Tank 1, which is one (1) of the eight (8) lime storage tanks making up EU-14, constructed prior to 1977, fed by the lime hopper (EU-35), and controlled by a bin vent filter.~~

- ~~(z) — One (1) pneumatic lime transfer system #2, approved in 2016 for construction, with a maximum capacity of 30 tons of lime per hour, consisting of the following equipment:~~

~~(1) — One (1) vented inlet, fed by the re-screen, identified as L702, both part of EU-28, using a dust collector CE-13 (ALG320) as control, exhausting to atmosphere. The vented inlet feeds pneumatic lime transfer system #2 directly from the rotary valve with a cavity air purge.~~

~~(2) — Tanks 1 and 6, which are two (2) of the eight (8) lime storage tanks making up EU-14, constructed prior to 1977, fed by the lime hopper, and each equipped with a bin vent filter.~~

- (z) **[RESERVED]**

...

Raw Material and Lime Storage and Handling (Fugitive)

...

- (ee) Limestone Unloading and Processing operations; identified as EU-31; consisting of barge or boat unloading and assorted conveyors; a source of fugitive emissions.

- (gg) One (1) Kiln 1 exhaust dust chamber, identified as EU-44, consisting of two (2) **unenclosed** drop points, ~~modified in 2012 to directed to Truck Flue Dust Loadout #1's (EU-17) tank, and one (1) unenclosed drop points~~ for removal of lime dust from kiln exhaust (a source of fugitive emissions).

- (hh) One (1) Kiln 2 exhaust dust chamber, identified as EU-45, consisting of two (2) **unenclosed** drop points, ~~modified in 2012 to directed to Truck Flue Dust Loadout #1's (EU-17) tank, and one (1) unenclosed drop points~~ for removal of lime dust from kiln exhaust (a source of fugitive emissions).

- (ii) One (1) Kiln 3 exhaust dust chamber, identified as EU-46, consisting of two (2) **unenclosed** drop points for removal of lime dust from kiln exhaust; (a source of fugitive emissions), ~~with the following equipment approved for construction in 2013:~~

~~(1) — One (1) dust hopper and grizzly screen, identified as EU-46a, with a maximum capacity 1 ton/hr, approved in 2013, with a rotary valve and material transfer pneumatic piping system to direct the material to the Dust Tank D-2 (EU-16) tank.~~

- (jj) One (1) Kiln 4 exhaust dust chamber, identified as EU-47, consisting of two (2) **unenclosed** drop points for removal of lime dust from kiln exhaust (~~one (1) drop point is~~

a source of fugitive emissions); ~~one of these drop points is equipped with a dust collection system consisting of one (1) enclosed hopper, one (1) pressure blower, and pneumatic piping to flue dust tank #2 (EU-16).~~

- (kk) One (1) Kiln 5 exhaust dust chamber, identified as EU-48, consisting of two (2) **unenclosed** drop points for removal of lime dust from kiln exhaust; (a source of fugitive emissions), ~~with the following equipment:~~
- ~~(1) One (1) grizzly screen, hopper, rotary valve and crusher, identified as EU-48a, with a maximum capacity of 1 ton/hr, approved in 2014, with a material transfer pneumatic piping system to direct the material to Dust Tank D-2 (EU-16) tank.~~
 - ~~(2) One (1) dust hopper and grizzly screen, identified as EU-48b, with a maximum capacity of 1 ton/hr, approved in 2013, with a rotary valve and material transfer pneumatic piping system to direct the material to the Dust Tank D-2 (EU-16) tank.~~
- (ll) One (1) lime dust storage pile, identified as EU-49, with a capacity of 18,000 tons; a source of fugitive emissions.

Lime Terminal Operation

~~(mm) EU-100, consisting of the following:~~

- ~~(1) One (1) railcar unloading machine and conveyor, identified as T-100, approved in 2015 for construction, with a maximum throughput capacity of 200 tons per hour, controlled by baghouse ALG-1000, and exhausting to stack S-100.~~
- ~~(2) One (1) belt conveyor, identified as T-101, approved in 2015 for construction, with a maximum throughput capacity of 200 tons per hour, controlled by baghouse ALG-1000, and exhausting to stack S-100.~~
- ~~(3) One (1) surge bin, identified as Bin-101, approved in 2015 for construction, with a maximum storage capacity of 5 tons, controlled by baghouse ALG-1000, and exhausting to stack S-100.~~

~~(nn) EU-101, consisting of the following:~~

- ~~(1) One (1) Hi-Cal large pebble storage tank, identified as Bin-200, approved in 2015 for construction, with a maximum storage capacity of one thousand (1,000) tons, controlled by baghouse ALG-2000, and exhausting to stack S-101.~~
- ~~(2) One (1) Hi-Cal small pebble storage tank, identified as Bin-201, approved in 2015 for construction, with a maximum storage capacity of six hundred and fifty (650) tons, controlled by baghouse ALG-2000, and exhausting to stack S-101.~~
- ~~(3) One (1) continuous discharge bucket elevator, identified as T-103, approved in 2015 for construction, with a maximum throughput capacity of 200 tons per hour, controlled by baghouse ALG-2000, and exhausting to stack S-101.~~
- ~~(4) One (1) 2-Deck 6-foot by 16-foot screen, identified as T-201, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-2000, and exhausting to stack S-101.~~
- ~~(5) One (1) belt conveyor, identified as T-202, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-2000, and exhausting to stack S-101.~~

- ~~(6) — One (1) belt conveyor, identified as T-203, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-2000, and exhausting to stack S-101.~~

~~(oo) — EU-102, consisting of the following:~~

- ~~(1) — One (1) Hi-Cal fines storage tank, identified as Bin 202, approved in 2015 for construction, with a maximum storage capacity of one thousand (1,000) tons, controlled by bin vent ALG-2001, and exhausting to stack S-102.~~

~~(pp) — EU-103, consisting of the following:~~

- ~~(1) — One (1) Dolo small pebble storage tank, identified as Bin 302, approved in 2015 for construction, with a maximum storage capacity of six hundred and fifty (650) tons, controlled by baghouse ALG-3000, and exhausting to stack S-103.~~
- ~~(2) — One (1) Dolo large pebble storage tank, identified as Bin 303, approved in 2015 for construction, with a maximum storage capacity of one thousand (1,000) tons, controlled by baghouse ALG-3000, and exhausting to stack S-103.~~
- ~~(3) — One (1) continuous discharge bucket elevator, identified as T-104, approved in 2015 for construction, with a maximum throughput capacity of 200 tons per hour, controlled by baghouse ALG-3000, and exhausting to stack S-103.~~
- ~~(4) — One (1) 2-Deck 6 foot by 16 foot screen, identified as T-301, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-3000, and exhausting to stack S-103.~~
- ~~(5) — One (1) belt conveyor, identified as T-302, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-3000, and exhausting to stack S-103.~~
- ~~(6) — One (1) belt conveyor, identified as T-303, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-3000, and exhausting to stack S-103.~~

~~(qq) — EU-104, consisting of the following:~~

- ~~(1) — One (1) Dolo fines storage tank, identified as Bin 300, approved in 2015 for construction, with a maximum storage capacity of one thousand (1,000) tons, controlled by bin vent ALG-3001, and exhausting to stack S-104.~~

~~(rr) — EU-105, consisting of the following:~~

- ~~(1) — One (1) belt conveyor, identified as T-400, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-4000, and exhausting to stack S-105.~~
- ~~(2) — One (1) North rescreen belt conveyor, identified as T-403, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-4000, and exhausting to stack S-105.~~
- ~~(3) — One (1) 2-Deck 6 foot by 16 foot screen, identified as T-404, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-4000, and exhausting to stack S-105.~~

~~(ss) — EU-106, consisting of the following:~~

- (1) ~~One (1) belt conveyor, identified as T-451, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-4500, and exhausting to stack S-106.~~
- (2) ~~One (1) South rescreen belt conveyor, identified as T-453, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-4500, and exhausting to stack S-106.~~
- (3) ~~One (1) 2-Deck 6-foot by 16-foot screen, identified as T-454, approved in 2015 for construction, with a maximum throughput capacity of 300 tons per hour, controlled by baghouse ALG-4500, and exhausting to stack S-106.~~
- (tt) ~~EU-107, consisting of the following:~~
- (1) ~~One (1) additive bin, identified as Bin-700, approved in 2015 for construction, with a maximum storage capacity of one and one half (1.5) tons, controlled by baghouse ALG-7000, and exhausting to stack S-107.~~
- (2) ~~One (1) briquette bin, identified as Bin-702, approved in 2015 for construction, with a maximum storage capacity of four hundred (400) tons, controlled by baghouse ALG-7000, and exhausting to stack S-107.~~
- (3) ~~One (1) belt conveyor, identified as T-712, approved in 2015 for construction, with a maximum throughput capacity of twenty-five (25) tons per hour, controlled by baghouse ALG-7000, and exhausting to stack S-107.~~
- (4) ~~One (1) continuous discharge bucket elevator, identified as T-713, approved in 2015 for construction, with a maximum throughput capacity of twenty-five (25) tons per hour, controlled by baghouse ALG-7000, and exhausting to stack S-107.~~
- (5) ~~One (1) belt conveyor, identified as T-714, approved in 2015 for construction, with a maximum throughput capacity of twenty-five (25) tons per hour, controlled by baghouse ALG-7000, and exhausting to stack S-107.~~
- (uu) ~~Truck loading spouts, approved in 2015 for construction, consisting of the following:~~

Emission Unit(s) ID	Facility ID	Control Device ID	Stack ID	Maximum Throughput (tons/hour)
EU-108	T-204	T-204	S-108	300
EU-109	T-205	T-205	S-109	300
EU-110	T-206	T-206	S-110	300
EU-111	T-207	T-207	S-111	300
EU-112	T-304	T-304	S-112	300
EU-113	T-305	T-305	S-113	300

Emission Unit(s) ID	Facility ID	Control Device ID	Stack ID	Maximum Throughput (tons/hour)
EU-114	T-306	T-306	S-114	300
EU-115	T-307	T-307	S-115	300
EU-116	T-405	T-405	S-116	300
EU-117	T-455	T-455	S-117	300

Lime Storage and Handling

(~~vmm~~) Lime storage bin system and associated conveying equipment at the Buffington Facility as follows:

- (1) One (1) Run of Kiln (ROK) Lime Transfer System #1, identified as EU-51, approved in 2018 for construction, consisting of two (2) diverters, two (2) belt conveyors, and a bucket elevator, with a maximum capacity of 200 tons of lime per hour, emissions controlled by baghouse CE-51 (~~DC-620~~) (**ALG304**), and exhausting to stack S-51.
- (2) One (1) ROK Lime Storage Bin #1, identified as EU-52, approved in 2018 for construction, with a maximum capacity of 2,000 tons, emissions controlled by a bin vent filter (CE-52/**ALG620**), and exhausting to S-52.
- (3) One (1) ROK Lime Storage Bin #2, identified as EU-53, approved in 2018 for construction, with a maximum capacity of 2,000 tons, emissions controlled by a bin vent filter (CE-53/**ALG630**), and exhausting to S-53.
- (4) One (1) ROK Lime Transfer System #2, identified as EU-54, approved in 2018 for construction, consisting of two (2) vibratory feeders and two (2) belt conveyors, with a maximum capacity of 200 tons of lime per hour, emissions controlled by baghouse CE-54 (~~DC-621~~) (**ALG305**), and exhausting to stack S-54.

...

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on March 4, 2019.

The operation of this stationary lime manufacturing plant shall be subject to the conditions of the attached proposed Part 70 Operating Permit Renewal No. 089-41162-00112.

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

IDEM Contact

- (a) If you have any questions regarding this permit, please contact Aasim Noveer, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 234-1243 or (800) 451-6027, and ask for Aasim Noveer or (317) 234-1243.
- (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: <https://www.in.gov/idem/airpermit/public-participation/>; and the Citizens' Guide to IDEM on the Internet at: <https://www.in.gov/idem/resources/citizens-guide-to-idem/>.

Appendix A: Emission Calculations
PTE Summary

Company Name: Carmeuse Lime, Inc
Address City IN Zip: 1 North Carmeuse Dr, Gary, IN 46406
Permit Renewal No.: 089-41162-00112
Reviewer: Aasim Novaeer

Uncontrolled Potential to Emit (tons/yr)											
Facility	ID	Control Device	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Worst Single HAP (HCl)	Total HAP
Rotary Lime Kiln #1 ^{(a)(b)(c)}	EU-1	CE-1	2,965.67	2,965.67	2,965.67	551.09	630.49	612.32	514.20	43.10	48.62
Rotary Lime Kiln #2 ^{(a)(b)(c)}	EU-2	CE-2	1,734.29	1,734.29	1,734.29	551.09	630.49	612.32	514.20	43.10	48.62
Rotary Lime Kiln #3 ^{(a)(b)(c)}	EU-3	CE-3	1,098.55	1,098.55	1,098.55	551.09	630.49	612.32	514.20	43.10	48.62
Rotary Lime Kiln #4 ^{(a)(b)(c)}	EU-4	CE-4	860.53	860.53	860.53	551.09	630.49	612.32	514.20	43.10	48.62
Rotary Lime Kiln #5 ^{(a)(b)(c)}	EU-5	CE-5	1,578.61	1,578.61	1,578.61	551.09	630.49	612.32	514.20	43.10	48.62
Stone Handling Operations	EU-50	-	1.88	0.89	0.13	-	-	-	-	-	-
Truck Flue Dust Loadout #1 and Flue Dust Tank #1	EU-17	AKG-141	47.30	47.30	47.30	-	-	-	-	-	-
Lime Handling System #2	EU-7	ALG-300	79.97	79.97	79.97	-	-	-	-	-	-
Lime Storage System (New Side)	EU-24	ALG-310	137.41	137.41	137.41	-	-	-	-	-	-
Lime Handling System #1	EU-6	ALG-310	-	-	-	-	-	-	-	-	-
Lime Loadout #2B/Dolo Rescreen (Center Bay/Dolo Bay)	EU-28	ALG-320	563.14	563.14	563.14	-	-	-	-	-	-
Lime Loadout #2A (Center Bay/Dolo Bay)	EU-8	-	-	-	-	-	-	-	-	-	-
Lime Grinder Handling System	EU-15	ALG-400	184.71	184.71	184.71	-	-	-	-	-	-
Lime Storage System (Old Side)	EU-14	-	-	-	-	-	-	-	-	-	-
Lime Transfer System #2	EU-42/43	ALG-410	371.67	371.67	371.67	-	-	-	-	-	-
Grinding Mill Material Transfer Operation ^{(a)(b)(c)}	EU-15a	ALG-440	41.30	41.30	41.30	-	-	-	-	-	-
Lime Loadout #1 (West Bay)	EU-11	-	-	-	-	-	-	-	-	-	-
Grinding Mill #1	EU-13	ALG-450	29.73	29.73	29.73	-	-	-	-	-	-
Truck Flue Dust Loadout #2 and Flue Dust Tank #2	EU-16	AKG-450	40.55	40.55	40.55	-	-	-	-	-	-
Grinding Mill #2	EU-12	ALG-460	29.73	29.73	29.73	-	-	-	-	-	-
Lime Loadout #3/Rescreen (East Bay/Hi-Cal Bay)	EU-25	ALG-600	525.60	525.60	525.60	-	-	-	-	-	-
Truck Transfer Station Reclaim Hopper ^(d)	EU-32	ALG-606CA	75.09	75.09	75.09	-	-	-	-	-	-
EF feed and pneumatic delivery system ^(d)	EU-33	Bin Vent	162.19	162.19	162.19	-	-	-	-	-	-
Kiln 1 Exhaust Dust Chamber	EU-44	-	0.05	0.02	0.00	-	-	-	-	-	-
Kiln 2 Exhaust Dust Chamber	EU-45	-	0.05	0.02	0.00	-	-	-	-	-	-
Kiln 3 Exhaust Dust Chamber	EU-46	-	0.05	0.02	0.00	-	-	-	-	-	-
Kiln 4 Exhaust Dust Chamber	EU-47	-	0.05	0.02	0.00	-	-	-	-	-	-
Kiln 5 Exhaust Dust Chamber	EU-48	-	0.05	0.02	0.00	-	-	-	-	-	-
Lime storage & handling system	EU-51, EU-52, EU-53, EU-54	CE-51, CE-52, CE-53, CE-54	640.63	640.63	640.63	-	-	-	-	-	-
Natural Gas Combustion	-	-	0.03	0.12	0.12	0.01	1.60	0.09	1.34	-	0.03
Roads	-	-	8.57	1.73	0.42	-	-	-	-	-	-
Storage Tanks	-	-	-	-	-	-	-	0.18	-	-	0.18
Part Washer	-	-	-	-	-	-	-	0.97	-	-	0.00
Emergency Diesel Generators	EG-1 - EG-5	-	0.22	0.22	0.22	0.21	3.12	0.25	0.67	-	0.00
Emergency Natural Gas Generators	EG-NG1	-	0.01	0.01	0.01	3.17E-04	0.33	0.17	0.67	-	0.02
Marine - Coal transfer system	addition to EU-30	-	4.57	2.16	0.33	-	-	-	-	-	-
Marine - Coal storage pile	EU-21	-	0.37	0.22	0.03	-	-	-	-	-	-
Marine - Roads	-	-	0.51	0.10	0.03	-	-	-	-	-	-
Independent Coal - transfer system	EU-34	-	3.61	1.71	0.26	-	-	-	-	-	-
Independent Coal - storage pile	-	-	1.31	0.79	0.10	-	-	-	-	-	-
Coal Grinding - Coal Handling and Transfer	-	-	0.01	0.01	0.00	-	-	-	-	-	-
Coal Grinding - Coal Bins	EU-34f	-	6.01	6.01	6.01	-	-	-	-	-	-
Coal Grinding - Coal Mills	-	-	8.67	3.33	3.33	-	-	-	-	-	-
2009 Coal Storage Tent	-	-	1.31	0.79	0.10	-	-	-	-	-	-
Sandblaster	-	-	3.38	3.38	3.38	-	-	-	-	-	-
Crushed stone storage piles	EU-23, EU-29	-	6.76	2.37	0.36	-	-	-	-	-	-
Total PTE			11,214.15	11,190.62	11,181.52	2,755.67	3,157.60	3,063.28	2,573.68	215.50	243.35

Appendix A: Emission Calculations
PTE Summary

Company Name: Carneuse Lime, Inc
Address City IN Zip: 1 North Carneuse Dr, Gary, IN 46406
Permit Renewal No.: 089-41162-00112
Reviewer: Aasim Noveer

Potential to Emit After Issuance (tons/yr)											
Facility	ID	Control Device	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Worst Single HAP (HCl)	Total HAP
Rotary Lime Kiln #1 ^{(a)(b)(c)}	EU-1	CE-1	2,965.67	43.58	2,965.67	207.61	2,537.61	24.65	2,069.56	43.10	48.62
Rotary Lime Kiln #2 ^{(a)(b)(c)}	EU-2	CE-2	1,734.29	43.58	1,734.29					43.10	48.62
Rotary Lime Kiln #3 ^{(a)(b)(c)}	EU-3	CE-3	1,098.55	43.58	1,098.55					43.10	48.62
Rotary Lime Kiln #4 ^{(a)(b)(c)}	EU-4	CE-4	860.53	43.58	860.53					43.10	48.62
Rotary Lime Kiln #5 ^{(a)(b)(c)}	EU-5	CE-5	1,578.61	43.58	1,578.61					43.10	48.62
Stone Handling Operations	EU-50	-	1.88	0.89	0.13	-	-	-	-	-	-
Truck Flue Dust Loadout #1 and Flue Dust Tank #1	EU-17	AKG-141	47.30	4.82	47.30	-	-	-	-	-	-
Lime Handling System #2	EU-7	ALG-300	79.97	0.79	79.97	-	-	-	-	-	-
Lime Storage System (New Side)	EU-24	ALG-310	137.41	1.14	137.41	-	-	-	-	-	-
Lime Handling System #1	EU-6	ALG-310				-	-	-	-	-	-
Lime Loadout #2B/Dolo Rescreen (Center Bay/Dolo Bay)	EU-28	ALG-320	563.14	1.80	563.14	-	-	-	-	-	-
Lime Loadout #2A (Center Bay/Dolo Bay)	EU-8	ALG-400	184.71	1.93	184.71	-	-	-	-	-	-
Lime Grinder Handling System	EU-15					-	-	-	-	-	-
Lime Storage System (Old Side)	EU-14					-	-	-	-	-	-
Lime Transfer System #2	EU-42/43					-	-	-	-	-	-
Grinding Mill Material Transfer Operation ^{(a)(b)(i)}	EU-15a	ALG-440	24.09	14.02	9.20	-	-	-	-	-	-
Lime Loadout #1 (West Bay)	EU-11		41.30	41.30	41.30	-	-	-	-	-	-
Grinding Mill #1	EU-13		29.73	0.22	29.73	-	-	-	-	-	-
Truck Flue Dust Loadout #2 and Flue Dust Tank #2	EU-16	AKG-450		0.44		-	-	-	-	-	-
Grinding Mill #2	EU-12	ALG-460		0.22		-	-	-	-	-	-
Lime Loadout #3/Rescreen (East Bay/Hi-Cal Bay)	EU-25	ALG-600	14.89	0.57	14.89	-	-	-	-	-	-
Truck Transfer Station Reclaim Hopper ⁽ⁱ⁾	EU-32	ALG-606CA	75.09	75.09	75.09	-	-	-	-	-	-
EF feed and pneumatic delivery system ⁽ⁱ⁾	EU-33	Bin Vent	162.19	162.19	162.19	-	-	-	-	-	-
Kiln 1 Exhaust Dust Chamber	EU-44	-	0.05	0.02	0.00	-	-	-	-	-	-
Kiln 2 Exhaust Dust Chamber	EU-45	-	0.05	0.02	0.00	-	-	-	-	-	-
Kiln 3 Exhaust Dust Chamber	EU-46	-	0.05	0.02	0.00	-	-	-	-	-	-
Kiln 4 Exhaust Dust Chamber	EU-47	-	0.05	0.02	0.00	-	-	-	-	-	-
Kiln 5 Exhaust Dust Chamber	EU-48	-	0.05	0.02	0.00	-	-	-	-	-	-
Lime storage & handling system	EU-51, EU-52, EU-53, EU-54	CE-51, CE-52, CE-53, CE-54	24.55	14.46	8.79	-	-	-	-	-	-
Natural Gas Combustion	-	-	0.03	0.12	0.12	0.01	1.60	0.09	1.34	-	0.03
Roads	-	-	8.57	1.73	0.42	-	-	-	-	-	-
Storage Tanks	-	-	-	-	-	-	-	0.18	-	-	0.18
Part Washer	-	-	-	-	-	-	-	0.97	-	-	1.94E-03
Emergency Diesel Generators	EG-1 - EG-5	-	0.22	0.22	0.22	0.21	3.12	0.25	0.67	-	2.73E-03
Emergency Natural Gas Generators	EG-NG1	-	0.01	0.01	0.01	3.17E-04	0.33	0.17	0.67	-	0.02
Marine - Coal transfer system	addition to EU-30	-	4.57	2.16	0.33	-	-	-	-	-	-
Marine - Coal storage pile	EU-21	-	0.37	0.22	0.03	-	-	-	-	-	-
Marine - Roads	-	-	0.51	0.10	0.03	-	-	-	-	-	-
Independent Coal - transfer system	EU-34	-	3.61	1.71	0.26	-	-	-	-	-	-
Independent Coal - storage pile			1.31	0.79	0.10	-	-	-	-	-	-
Coal Grinding - Coal Handling and Transfer	EU-34f	-	0.01	0.01	0.00	-	-	-	-	-	-
Coal Grinding - Coal Bins			6.01	6.01	6.01	-	-	-	-	-	-
Coal Grinding - Coal Mills			8.67	3.33	3.33	-	-	-	-	-	-
2009 Coal Storage Tent	-	-	1.31	0.79	0.10	-	-	-	-	-	-
Sandblaster	-	-	3.38	3.38	3.38	-	-	-	-	-	-
Crushed stone storage piles	EU-23, EU-29	-	6.76	2.37	0.36	-	-	-	-	-	-
Total PTE			9,705.01	566.60	10,007.62	207.83	2,542.67	26.31	2,072.25	215.50	243.35

(a) The PM₁₀ emissions from these facilities are limited pursuant to 326 IAC 6.8-2-22. The emissions presented in the table above are based on the respective lb/hr limitations and 8760 hours per year.

(b) Pursuant to 326 IAC 7.4-1.1, the total SO₂ emissions from all kilns shall not exceed 240 lb/hr. This is equivalent to 1052 tons of SO₂ per year at 8760 hr/yr.

(c) The VOC emissions from each kiln shall not exceed 0.06 lb/ton of lime produced. Compliance with this limit is equivalent to less than 25 tons of VOC per year and will render the requirements of 326 IAC 8-7 not applicable.

(d) The PM emissions from EU-18 and EU-19 shall not exceed 25 tons per year in order to render the requirements of 326 IAC 2-2 not applicable. See the State Rule Applicability section for the specific lb/ton and production limits that

(e) The PM/PM₁₀ emissions from EU-9 shall not exceed 3.4 lb/hr and 15 tons per year in order to render the requirements of 326 IAC 2-2 and 326 IAC 2-3 not applicable.

(f) Pursuant to CP 089-5851-00112, issued December 9, 1996, the PM/PM₁₀ emissions from EU-25 shall not exceed 3.4 lb/hr and 15 tons per year in order to render the requirements of 326 IAC 2-2 and 326 IAC 2-3 not applicable.

(g) Pursuant to 326 IAC 6.8-2, the particulate matter emission from these facilities is limited to 0.03 gr/dscf. This is not an enforceable limit for PSD or Emission Offset.

(h) The follow equipment is controlled by the grinding mill dust collector: Lime Tank 1 installed in 1966, two (2) conveyors installed in 1972 and modified in 2011, two (2) weigh bins installed in 1972 and

(i) In order for this modification to be minor under PSD, the PM, PM₁₀ and PM_{2.5} emitted from EU-15a shall not exceed 5.5 lb/hr, 3.2 lb/hr, and 2.1 lb/hr respectively.

**Appendix A: Emissions Calculations
Fugitive Particulate Emissions from
Wind Erosion of Material Storage Piles**

Company Name: Carmeuse Lime, Inc
Address City IN Zip: 1 North Carmeuse Dr, Gary, IN 46406
Permit Renewal No.: 089-41162-00112
Reviewer: Aasim Noveer

A. Open pile diameter calculation

Unit	Material	Angle of Repose (degrees)	Bulk Density (lb/ft ³)	Pile Area (acre)	Pile Diameter (ft)	Pile Volume (ft ³)	Pile Capacity (tons)
EU-23	Crushed stone	30	100	10	745	31,215,910	1,560,796
EU-29	Crushed stone	30	100	10	745	31,215,910	1,560,796

Pile area (acres) from SPM No. 089-40148-00112, issued on September 6, 2019

Angle of repose and bulk density values from T. Glover, Pocket Ref. 3rd ed., Sequoia Publishing, Inc., Littleton, CO, 2008

Methodology

Pile Diameter (ft) = $2 \times ((\text{Pile Area (acres)} \times 43,560 \text{ (ft}^2\text{/acres)}) / \pi)^{0.5}$

for a conical pile, $V = \pi h R^2 / 3$, since $R = (D/2)$ then $V = 0.2618 h D^2$, and for any angle of repose, Θ , $\tan \Theta = h/(D/2) = 2h/D$,

thus $h = D \tan \Theta / 2$, and

Pile Volume (ft³) = $0.2618 \times (\tan \Theta) \times (\text{Pile Diameter (ft)})^3 / 2$

Pile Capacity (tons) = Pile Volume (ft³) x Bulk Density (lb/ft³) / 2,000 (lb/ton)

B. Pile Emissions

The following calculations determine the amount of fugitive particulate emissions created by wind erosion of material storage piles, based on 8,760 hours of use and USEPA's AP 42 (4th Ed., May 1983), Section 11.2.3 emission factor methodology. IDEM, OAQ considers this methodology to be a screening-level calculation.

$EF = 1.7 \times (s/1.5) \times ((365-p)/235) \times (f/15)$		(Eqn 3, English units)
where EF = Uncontrolled emission factor (lb/acre/day) for total suspended particulates (TSP)		
s = silt content of material (% by weight)		
p =	125	= number of days with greater than or equal to 0.01 inches of precipitation per year
f =	15	= % of time that the unobstructed wind speed exceeds 12 mph at the mean pile height

Material	Silt Content of Material ¹ (wt %)	Uncontrolled PM Emission Factor ² (lb/acre/day)	Pile Area (acres)	Uncontrolled Potential to Emit (tons/yr)		
				PM	PM ₁₀ ³	PM _{2.5} ³
EU-23	1.6	1.85	10.00	3.380	1.183	0.179
EU-29	1.6	1.85	10.00	3.380	1.183	0.179
Total				6.76	2.37	0.36

Notes:

1. Silt content value from AP 42 Section 13.2.4 (dated 11/2006) Table 13.2.4-1 (dated 11/2006)

2. PM emissions assumed equal to total suspended particulate (TSP) emissions.

3. Based on the aerodynamic particle size multiplier values for PM₁₀ and PM_{2.5} from AP 42 Section 13.2.4 (dated 11/2006)

for Aggregate Handling and Storage Piles, PM₁₀ and PM_{2.5} emissions were calculated as follows:

PM₁₀ emissions = 0.35 * PM emissions

PM_{2.5} emissions = 0.053 * PM emissions

Methodology

Uncontrolled PTE PM (tons/yr) = Uncontrolled PM Emission Factor (lb/acre/day) x Pile Area (acres) x 365 (days/yr) / 2,000 (lb/ton)

Uncontrolled PTE PM₁₀ (tons/yr) = Uncontrolled PTE PM (tons/yr) x 0.35

Uncontrolled PTE PM_{2.5} (tons/yr) = Uncontrolled PTE PM (tons/yr) x 0.053

Abbreviations

PM = Particulate Matter

PM₁₀ = Particulate Matter (<10 um)

PM_{2.5} = Particulate Matter (<2.5 um)

PTE = Potential to Emit

Appendix A: Emission Calculations
Run-of-Kiln Lime Storage & Handling System

Company Name: Carmeuse Lime, Inc
Address City IN Zip: 1 North Carmeuse Dr, Gary, IN 46406
Permit Renewal No.: 089-41162-00112
Reviewer: Aasim Noveer

Process	Emissions Unit ID	Control Device		Exhaust Air Flow Rate		Outlet Loading (gr/dscf)			Control Efficiency
		Type	ID	(dscfm)	(acfm)	PM	PM10	PM2.5	
ROK Lime Transfer System #1	EU-51	baghouse	CE-51	9,900	9,900	0.01	0.01	0.01	99%
ROK Lime Storage Bin #1	EU-52	bin vent	CE-52	132	132	0.01	0.01	0.01	99%
ROK Lime Storage Bin #2	EU-53	bin vent	CE-53	132	132	0.01	0.01	0.01	99%
ROK Lime Transfer System #2	EU-54	baghouse	CE-54	6,900	6,900	0.01	0.01	0.01	99%

Process	Emissions Unit ID	Uncontrolled Potential to Emit					
		(lb/hr)			(tons/yr)		
		PM	PM10	PM2.5	PM	PM10	PM2.5
ROK Lime Transfer System #1	EU-51	84.86	84.86	84.86	371.67	371.67	371.67
ROK Lime Storage Bin #1	EU-52	1.13	1.13	1.13	4.96	4.96	4.96
ROK Lime Storage Bin #2	EU-53	1.13	1.13	1.13	4.96	4.96	4.96
ROK Lime Transfer System #2	EU-54	59.14	59.14	59.14	259.05	259.05	259.05
Total		146.26	146.26	146.26	640.63	640.63	640.63

Process	Emissions Unit ID	Potential to Emit After Control					
		(lb/hr)			(tons/yr)		
		PM	PM10	PM2.5	PM	PM10	PM2.5
ROK Lime Transfer System #1	EU-51	0.85	0.85	0.85	3.72	3.72	3.72
ROK Lime Storage Bin #1	EU-52	0.01	0.01	0.01	0.05	0.05	0.05
ROK Lime Storage Bin #2	EU-53	0.01	0.01	0.01	0.05	0.05	0.05
ROK Lime Transfer System #2	EU-54	0.59	0.59	0.59	2.59	2.59	2.59
Total		1.46	1.46	1.46	6.41	6.41	6.41

Process	Emissions Unit ID	Potential to Emit After Issuance (326 IAC 2-2) ¹					
		(lb/hr) ²			(tons/yr)		
		PM	PM10	PM2.5	PM	PM10	PM2.5
ROK Lime Transfer System #1	EU-51 ³	2.97	1.61	0.85	13.01	7.06	3.72
ROK Lime Storage Bin #1	EU-52	0.28	0.28	0.28	1.24	1.24	1.24
ROK Lime Storage Bin #2	EU-53	0.28	0.28	0.28	1.24	1.24	1.24
ROK Lime Transfer System #2	EU-54 ⁴	2.07	1.12	0.59	9.07	4.92	2.59
Total					24.55	14.46	8.79

Notes:

1. Shaded cells indicate where limits are included in the permit

2. ROK Lime Storage Bin #1 and #2 are emissions are limited with a control efficiency expectation of 75%.

3. ROK Lime Transfer System #1 PM emissions are limited with a control efficiency expectation of 96.5%; PM10 emissions are limited to a control efficiency expectation of 98.1%; PM_{2.5} emissions are limited with a control efficiency expectation of 99%

4. ROK Lime Transfer System #2 PM emissions are limited with a control efficiency expectation of 96.5%; PM₁₀ emissions are limited to a control efficiency expectation of 98.1%; PM_{2.5} emissions are limited with a control efficiency expectation of 99%.

Methodology

Uncontrolled PTE (lb/hr) = Exhaust Air Flow Rate (dscfm) x Outlet Loading (gr/dscf) x 60 (min/hr) / 7,000 (gr/lb) / [1 - Control Efficiency (%) / 100]

PTE After Control (lb/hr) = Exhaust Air Flow Rate (dscfm) x Outlet Loading (gr/dscf) x 60 (min/hr) / 7,000 (gr/lb)

Limited PTE (lb/hr) = Exhaust Air Flow Rate (dscfm) x Applicable Limitation (gr/dscf) x 60 (min/hr) / 7,000 (gr/lb)

PTE (tons/yr) = PTE (lb/hr) x 8,760 (hr/yr) / 2,000 (lb/ton)

**Appendix A: Emission Calculations
Carmeuse Lime - Buffington Plant**

Company Name: Carmeuse Lime, Inc
Address City IN Zip: 1 North Carmeuse Dr, Gary, IN 46406
Permit Renewal No.: 089-41162-00112
Reviewer: Aasim Noveer

1. Pre-1970 Unpermitted Emissions - Coal Handling and Transfer

Facility	Number of drop points	Capacity	PM		PM10		PM2.5	
		tons/hr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Coal Bins to Coal Mills	5	10.15	1.56E-03	6.82E-03	7.37E-04	3.23E-03	1.12E-04	4.89E-04
Coal Mills to Kilns	5	10.15	1.56E-03	6.82E-03	7.37E-04	3.23E-03	1.12E-04	4.89E-04
Total			3.12E-03	1.36E-02	1.47E-03	6.46E-03	2.23E-04	9.78E-04

Notes:

The following calculations determine the amount of emissions created by material handling and storage (AP-42, Sec. 13.2.4, eq. 1):

$$\text{Emission Factor} = k * (0.0032) * (U/5)^{1.3} * (M/2)^{1.4}$$

where $k_{PM} = 0.74$ particle size multiplier
 $k_{PM10} = 0.35$ particle size multiplier
 $k_{PM2.5} = 0.053$ particle size multiplier
 $U = 1$ mean wind speed, mph
 $M = 10$ % material moisture content
Emission Factor (PM) = 3.07E-05 lb PM/ton
Emission Factor (PM₁₀) = 1.45E-05 lb PM₁₀/ton
Emission Factor (PM_{2.5}) = 2.20E-06 lb PM_{2.5}/ton

$$\text{Uncontrolled Emissions (tpy)} = \text{Rate (tons/hr)} * \text{Emission Factor (lb PM/ton)} * 8760 \text{ hr/yr} \div 2000 \text{ lb/ton}$$

2. Unpermitted Coal Bins

$$750 \text{ tons/hr} \times 6.10\text{E-}04 \text{ lb/ton} \times 8760 \text{ hr/yr} \div 2000 \text{ lb/ton} = 2.00 \text{ ton/yr} \times 3.00 \text{ number of bins} = 6.01 \text{ ton/yr}$$

Uncontrolled PM/PM10/PM2.5

Emission Factor for the surge bin: SCC 3-05-016-16

Methodology:

Uncontrolled PM Emissions (lbs/hr) = Uncontrolled PM Emissions (tons/yr) x (2000 lbs/ton) x (1 yr/8760 hrs)

Assume PM10/PM2.5 are equal to PM emission.

2. Unpermitted Coal Mills

Facility	Number of units	Capacity	PM			PM10			PM2.5		
		tons/hr	Emission Factor	lb/hr	ton/yr	Emission Factor	lb/hr	ton/yr	Emission Factor	lb/hr	ton/yr
Coal Mills	5	10.15	0.04	1.98	8.67	0.02	0.76	3.33	0.02	0.76	3.33

Emission Factor for the surge bin: SCC 3-05-020-03

Methodology:

PM Emissions (lbs/hr) = PM Emissions (tons/yr) x (2000 lbs/ton) x (1 yr/8760 hrs)

Assume PM2.5 are equal to PM10 emission.

4. Total Unpermitted PTE

Facility	ID	PM	PM10	PM2.5
Coal Handling and Transfer	-	0.01	0.01	0.00
Coal Bins	Bin 1, 2, 3	6.01	6.01	6.01
Coal Mills	Mile 1-5	8.67	3.33	3.33
Pre-1970 Unpermitted PTE		14.69	9.35	9.35

**Appendix A: Emission Calculations
Carmeuse Lime - Buffington Plant**

Company Name: Carmeuse Lime, Inc
Address City IN Zip: 1 North Carmeuse Dr, Gary, IN 46406
Permit Renewal No.: 089-41162-00112
Reviewer: Aasim Noveer

Facility	Capacity	PM		PM10		PM2.5	
	acre	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
2009 Coal Storage Tent	3.5	0.30	1.31	0.18	0.79	2.25E-02	0.10
Total		0.30	1.31	0.18	0.79	2.25E-02	0.10

The following calculations determine the amount of emissions created by wind erosion (AP-42, Sec. 13.2.5):

$$\text{Emission Factor} = k * N * P * 0.0022046 \text{ lbs/g} * 4046.825 \text{ m}^2/\text{acre}$$

where $k_{PM} = 1$ particle size multiplier

$k_{PM10} = 0.6$ particle size multiplier

$k_{PM2.5} = 0.075$ particle size multiplier

$P = 7$ g/m² erosion potential

$N = 12$ disturbances per year

Emission Factor (PM) = 749.42 lb PM/acre

Emission Factor (PM₁₀) = 449.65 lb PM₁₀/acre

Emission Factor (PM_{2.5}) = 56.21 lb PM_{2.5}/acre

$$\text{Uncontrolled Emissions (tpy)} = \text{Capacity (acre)} * \text{Emission Factor (lb/acre)} \div 2000 \text{ lb/ton}$$

Appendix A: Emission Calculations
Carmeuse Lime - Buffington Plant

Company Name: Carmeuse Lime, Inc
Address City IN Zip: 1 North Carmeuse Dr, Gary, IN 46406
Permit Renewal No.: 089-41162-00112
Reviewer: Aasim Noveer

1) Coal Handling and Transfer

Facility	Description	Capacity	PM		PM10		PM2.5	
		tons/hr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Transfer from Coal Storage Tent	Front end loader	300	0.14	0.60	0.07	0.28	0.01	0.04
Hopper	EU-34b	300	0.14	0.60	0.07	0.28	0.01	0.04
Conveyor #1	EU-34c	300	0.14	0.60	0.07	0.28	0.01	0.04
3-way Gate	EU-34d	300	0.14	0.60	0.07	0.28	0.01	0.04
Reversible Conveyor #2 & #3	EU-34e	600	0.27	1.20	0.13	0.57	0.02	0.09
Total			0.82	3.61	0.39	1.71	0.06	0.26

Notes:

The following calculations determine the amount of emissions created by material handling and storage (AP-42, Sec. 13.2.4, eq. 1):

$$\text{Emission Factor} = k * (0.0032) * (U/5)^{1.3} \div (M/2)^{1.4}$$

where $k_{PM} = 0.74$ particle size multiplier
 $k_{PM10} = 0.35$ particle size multiplier
 $k_{PM2.5} = 0.053$ particle size multiplier
 $U = 8$ mean wind speed, mph
 $M = 10$ % material moisture content

Emission Factor (PM) = 4.58E-04 lb PM/ton
Emission Factor (PM₁₀) = 2.17E-04 lb PM₁₀/ton
Emission Factor (PM_{2.5}) = 3.28E-05 lb PM_{2.5}/ton

$$\text{Uncontrolled Emissions (tpy)} = \text{Rate (tons/hr)} * \text{Emission Factor (lb PM/ton)} * 8760 \text{ hr/yr} \div 2000 \text{ lb/ton}$$

2) Coal Storage

Facility	Capacity	PM		PM10		PM2.5	
	acre	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Coal Storage	3.5	0.30	1.31	0.18	0.79	2.25E-02	9.84E-02
Total		0.30	1.31	0.18	0.79	2.25E-02	9.84E-02

The following calculations determine the amount of emissions created by wind erosion (AP-42, Sec. 13.2.5):

$$\text{Emission Factor} = k * N * P * 0.0022046 \text{ lbs/g} * 4046.825 \text{ m}^2/\text{acre}$$

where $k_{PM} = 1$ particle size multiplier
 $k_{PM10} = 0.6$ particle size multiplier
 $k_{PM2.5} = 0.075$ particle size multiplier
 $P = 7$ g/m² erosion potential
 $N = 12$ disturbances per year

Emission Factor (PM) = 749.42 lb PM/acre
Emission Factor (PM₁₀) = 449.65 lb PM₁₀/acre
Emission Factor (PM_{2.5}) = 56.21 lb PM_{2.5}/acre

$$\text{Uncontrolled Emissions (tpy)} = \text{Capacity (acre)} * \text{Emission Factor (lb/acre)} \div 2000 \text{ lb/ton}$$

3) Part 70 Source Modification Determination

	PM	PM10	PM2.5	VOC	NOX	SO2	CO	GHGs
Coal Handling & Transfer	3.61	1.71	0.26	-	-	-	-	-
Coal Storage	1.31	0.79	0.10	-	-	-	-	-
Change in PTE	4.92	2.50	0.36	-	-	-	-	-

Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads

Company Name: Carneuse Lime, Inc
Address City IN Zip: 1 North Carneuse Dr, Gary, IN 46406
Permit Renewal No.: 089-41162-00112
Reviewer: Asim Noveer

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)

Type	Number of one-way trips per day per vehicle	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Trucks	16.00	64.00	1024.00	0.50	8.00	2920.00

Average Vehicle Weight Per Trip = 51.5 tons/trip
Average Miles Per Trip = 128.00 miles/trip

Unmitigated Emission Factor, $E_f = [k * (sL)^{0.91} * (W)^{1.02}]$ (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	51.5	51.5	51.5	tons = average vehicle weight (provided by source)
sL =	0.6	0.6	0.6	g/m ² = silt loading value for paved roads at iron and steel production facilities - Table 13.2.1-3)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, $E_{ext} = E_f * [1 - (p/4N)]$ (Equation 2 from AP-42 13.2.1)

Mitigated Emission Factor, $E_{ext} = E_f * [1 - (p/4N)]$
where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, E_f =	0.385	0.077	0.0189	lb/mile
Mitigated Emission Factor, E_{ext} =	0.352	0.070	0.0173	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Vehicle (entering plant) (one-way trip)	5.62E-01	1.12E-01	2.76E-02	5.14E-01	1.03E-01	2.52E-02	2.57E-01	5.14E-02	1.26E-02

Methodology

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Controlled PTE (tons/yr) = [Mitigated PTE (tons/yr)] * [1 - Dust Control Efficiency]

Abbreviations

PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particle Matter (<2.5 um)
PTE = Potential to Emit

Appendix A: Emission Calculations
Carmeuse Lime - Buffington Plant

Company Name: Carmeuse Lime, Inc
Address City IN Zip: 1 North Carmeuse Dr, Gary, IN 46406
Permit Renewal No.: 089-41162-00112
Reviewer: Aasim Noveer

1) Coal Handling and Transfer

Facility	Description	Capacity	PM		PM10		PM2.5	
		tons/hr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Transfer from Marine Barge/Boat	Marine Barge/Boat Transloader	500	0.47	2.08	0.22	0.98	3.40E-02	0.15
Truck Loading		300	0.28	1.25	0.13	0.59	2.04E-02	8.93E-02
Truck Unloading	Transfer to Current Coal Handling System	300	0.28	1.25	0.13	0.59	2.04E-02	8.93E-02
Total			1.04	4.57	0.49	2.16	0.07	0.33

Notes:

The following calculations determine the amount of emissions created by material handling and storage (AP-42, Sec. 13.2.4, eq. 1):

$$\text{Emission Factor} = k * (0.0032) * (U/5)^{1.3} + (M/2)^{1.4}$$

where k_{PM} = 0.74 particle size multiplier
 k_{PM10} = 0.35 particle size multiplier
 $k_{PM2.5}$ = 0.053 particle size multiplier
 U = 14 mean wind speed, mph
 M = 10 % material moisture content
Emission Factor (PM) = 9.49E-04 lb PM/ton
Emission Factor (PM₁₀) = 4.49E-04 lb PM₁₀/ton
Emission Factor (PM_{2.5}) = 6.79E-05 lb PM_{2.5}/ton

$$\text{Uncontrolled Emissions (tpy)} = \text{Rate (tons/hr)} * \text{Emission Factor (lb PM/ton)} * 8760 \text{ hr/yr} \div 2000 \text{ lb/ton}$$

2) Coal Storage

Facility	Capacity	PM		PM10		PM2.5	
	acre	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Storage Pile	1	8.55E-02	3.75E-01	5.13E-02	2.25E-01	6.42E-03	2.81E-02
Total		8.55E-02	3.75E-01	5.13E-02	2.25E-01	6.42E-03	2.81E-02

The following calculations determine the amount of emissions created by wind erosion (AP-42, Sec. 13.2.5):

$$\text{Emission Factor} = k * N * P * 0.0022046 \text{ lbs/g} * 4046.825 \text{ m}^2/\text{acre}$$

where k_{PM} = 1 particle size multiplier
 k_{PM10} = 0.6 particle size multiplier
 $k_{PM2.5}$ = 0.075 particle size multiplier
 P = 7 g/m² erosion potential
 N = 12 disturbances per year
Emission Factor (PM) = 749.42 lb PM/acre
Emission Factor (PM₁₀) = 449.65 lb PM₁₀/acre
Emission Factor (PM_{2.5}) = 56.21 lb PM_{2.5}/acre

$$\text{Uncontrolled Emissions (tpy)} = \text{Capacity (acre)} * \text{Emission Factor (lb/acre)} \div 2000 \text{ lb/ton}$$

Appendix A: Emission Calculations Fugitive Dust Emissions - Paved Roads

Company Name: Carneuse Lime, Inc
Address City IN Zip: 1 North Carneuse Dr, Gary, IN 46406
Permit Renewal No.: 089-41162-00112
Reviewer: Asim Noveer

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)

Average Vehicle Weight Per Trip = 40.0 tons/trip
 Average Miles Per Trip = 55,884 miles/yr

Unmitigated Emission Factor, $E_f = [k * (sL)^{0.91} * (W)^{1.02}]$ (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	40.0	40.0	40.0	tons = average vehicle weight (provided by source)
sL =	0.6	0.6	0.6	g/m ³ = silt loading value for paved roads at iron and steel production facilities - Table 13.2.1-3)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, $E_{ext} = E_f * [1 - (p/4N)]$ (Equation 2 from AP-42 13.2.1)

Mitigated Emission Factor, $E_{ext} = E_f * [1 - (p/4N)]$

where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
 N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, $E_f =$	0.298	0.060	0.0146	lb/mile
Mitigated Emission Factor, $E_{ext} =$	0.272	0.054	0.0134	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Vehicle (entering plant) (one-way trip)	8.32	1.66	0.41	7.60	1.52	0.37	3.80	0.76	0.19

Methodology

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
 Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]
 Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
 Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
 Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
 Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
 Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
 Controlled PTE (tons/yr) = [Mitigated PTE (tons/yr)] * [1 - Dust Control Efficiency]

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 PM2.5 = Particle Matter (<2.5 um)
 PTE = Potential to Emit

Appendix A: Emission Calculations Fugitive Dust Emissions - Paved Roads

Company Name: Carmeuse Lime, Inc
Address City IN Zip: 1 North Carmeuse Dr, Gary, IN 46406
Permit Renewal No.: 089-41162-00112
Reviewer: Aasim Noveer

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)

Average Vehicle Weight Per Trip = 45.0 tons/trip
 Average Miles Per Trip = 5.500 miles/yr

Unmitigated Emission Factor, Ef = $[k * (sL)^{0.91} * (W)^{1.02}]$ (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	45.0	45.0	45.0	tons = average vehicle weight (provided by source)
sL =	0.6	0.6	0.6	g/m ³ = silt loading value for paved roads at iron and steel production facilities - Table 13.2.1-3)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * $[1 - (p/4N)]$ (Equation 2 from AP-42 13.2.1)

Mitigated Emission Factor, Eext = Ef * $[1 - (p/4N)]$

where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
 N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.336	0.067	0.0165	lb/mile
Mitigated Emission Factor, Eext =	0.307	0.061	0.0151	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Vehicle (entering plant) (one-way trip)	0.92	0.18	0.05	0.84	0.17	0.04	0.42	0.08	0.02

Methodology

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
 Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]
 Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
 Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
 Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
 Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
 Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
 Controlled PTE (tons/yr) = [Mitigated PTE (tons/yr)] * [1 - Dust Control Efficiency]

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 PM2.5 = Particle Matter (<2.5 um)
 PTE = Potential to Emit

Appendix A: Emission Calculations Unpaved Roads

Company Name: Carmeuse Lime, Inc
Address City IN Zip: 1 North Carmeuse Dr, Gary, IN 46406
Permit Renewal No.: 089-41162-00112
Reviewer: Aasim Noveer

Unpaved Roads at Industrial Site

The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (11/2006).

Vehicle Information (provided by source)

Average Vehicle Weight Per Trip = 30.00 tons/trip
 Average Miles Per Trip = 31.00 miles/yr

Unmitigated Emission Factor, $E_f = k[(s/12)^a][(W/3)^b]$ (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.90	1.50	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	10.00	10.00	10.00	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Sand/Gravel Processing Plant)
a =	0.70	0.90	0.90	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)
W =	30.00	30.00	30.00	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, $E_{ext} = E * [(365 - P)/365]$ (Equation 2 from AP-42 13.2.2)

Mitigated Emission Factor, $E_{ext} = E * [(365 - P)/365]$

where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, $E_f =$	12.16	3.59	0.36	lb/mile
Mitigated Emission Factor, $E_{ext} =$	7.99	2.36	0.24	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Process									
Trucks	0.19	0.06	0.01	0.12	0.04	0.00	0.06	0.02	0.00

Methodology

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
 Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]
 Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
 Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
 Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
 Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
 Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
 Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 PM2.5 = Particulate Matter (<2.5 um)
 PTE = Potential to Emit

**Appendix A: Emission Calculations
Kilns PTE**

Company Name: Carmeuse Lime, Inc
Address City IN Zip: 1 North Carmeuse Dr, Gary, IN 46406
Permit Renewal No.: 089-41162-00112
Reviewer: Asim Novver

Emission Units	Hours of Operation	Lime Production		Stone Feed Rate	Heat input Capacity/hr (per Kiln)			
		tons of lime/hr (unlimited)	tons of lime/hr (limited)	tons of stone/hr (unlimited)	tons of coal	tons of glycerin	tons of EF	MMBtu
EU-1	8,760.00	23.30	821,500	60.00	8.20	4.46	5.74	213.00
EU-2		23.30		60.00				
EU-3		23.30		60.00				
EU-4		23.30		60.00				
EU-5		23.30		60.00				

The five kilns have two federally enforceable limits. One limit is 550 tons of lime produced/day for each kiln. This is limit is in place for sulfur dioxide and results with a limited production of 1,003,750 tons of lime/yr. The other limit is a 326 IAC 8-7 avoidance limit. It limits the production to 821,500 tons/yr. The more strict limit was used to calculate the limited PTE of the kilns.

EF = Engineered Fuel

1) PM/PM₁₀/PM_{2.5} Kiln Emission

Emission Unit	Control Device	Outlet Grain Loading grains/dscf	Maximum Air Flow Rate dscfm	Uncontrolled PTE		Control Efficiency %	Controlled PTE	
				PM/PM ₁₀ /PM _{2.5} lbs/hr	TPY		PM/PM ₁₀ /PM _{2.5} lbs/hr	TPY
EU-1	CE-1	0.0136	56,064	677.09	2,965.67	99.0%	6.77	29.66
EU-2	CE-2	0.0062	74,508	365.96	1,734.29	99.0%	3.96	17.34
EU-3	CE-3	0.004	73,153	250.81	1,098.55	99.0%	2.51	10.99
EU-4	CE-4	0.0028	81,862	196.47	860.53	99.0%	1.96	8.61
EU-5	CE-5	0.003	140,161	360.41	1,578.61	99.0%	3.60	15.79
Total:				1,880.74	8,237.66		18.81	82.38

Methodology:

Conversion Factors: 7000 grains/pound; 60 minutes/hour; 8,760 hours/year; 2,000 pounds/ton
PTE of PM/PM₁₀ after Control (lbs/hr) = Grain Loading (gr/dscf) x Max. Air Flow Rate (dscfm) x 60 mins/hr x 1/7000 lb/gr
PTE of PM/PM₁₀ after Control (tons/yr) = Grain Loading (gr/dscf) x Max. Air Flow Rate (dscfm) x 60 mins/hr x 1/7000 lb/gr x 8760 hr/yr x 1 ton/2000 lbs
PTE of PM/PM₁₀ before Control (tons/yr) = PTE of PM/PM₁₀ after Control (tons/yr) / (1-Control Efficiency)

2) Unlimited PTE for SO₂, VOC, NO_x

Emission Factors	SO ₂	VOC	NO _x	CO
Coal (lb/ton of lime)	5.40	0.05	6.18	5.04
Glycerin (lb/ton of lime)	0.46	6.00	0.05	1.50
EF (lb/ton of lime)	0.14	0.04	3.02	1.33
Natural Gas (lb/ton of lime)**	0.05	0.01	--	--

Natural Gas Emission Factors (lb/ton of stone)***	SO ₂	VOC	NO _x	CO
Kiln 1	--	--	1.47	0.28
Kiln 2	--	--	1.55	0.19
Kiln 3	--	--	1.86	0.13
Kiln 4	--	--	1.56	0.22
Kiln 5	--	--	1.06	0.23

EU-1 (tons/yr)	SO ₂	VOC	NO _x	CO
Coal PTE	551.09	5.10	630.49	514.20
Glycerin PTE	46.64	612.32	4.80	152.88
EF PTE	14.79	4.50	308.61	136.09
NG PTE	4.59	1.33	386.32	73.58
Worst Case for EU-1	551.09	612.32	630.49	514.20

EU-2 (tons/yr)	SO ₂	VOC	NO _x	CO
Coal PTE	551.09	5.10	630.49	514.20
Glycerin PTE	46.64	612.32	4.80	152.88
EF PTE	14.79	4.50	308.61	136.09
NG PTE	4.59	1.33	407.34	49.93
Worst Case for EU-2	551.09	612.32	630.49	514.20

EU-3 (tons/yr)	SO ₂	VOC	NO _x	CO
Coal PTE	551.09	5.10	630.49	514.20
Glycerin PTE	46.64	612.32	4.80	152.88
EF PTE	14.79	4.50	308.61	136.09
NG PTE	4.59	1.33	488.81	34.16
Worst Case for EU-3	551.09	612.32	630.49	514.20

EU-4 (tons/yr)	SO ₂	VOC	NO _x	CO
Coal PTE	551.09	5.10	630.49	514.20
Glycerin PTE	46.64	612.32	4.80	152.88
EF PTE	14.79	4.50	308.61	136.09
NG PTE	4.59	1.33	409.97	57.62
Worst Case for EU-4	551.09	612.32	630.49	514.20

EU-5 (tons/yr)	SO ₂	VOC	NO _x	CO
Coal PTE	551.09	5.10	630.49	514.20
Glycerin PTE	46.64	612.32	4.80	152.88
EF PTE	14.79	4.50	308.61	136.09
NG PTE	4.59	1.33	278.57	60.44
Worst Case for EU-5	551.09	612.32	630.49	514.20

Total PTE (tons/yr)	SO ₂	VOC	NO _x	CO
Worst Case for EU-1	551.09	612.32	630.49	514.20
Worst Case for EU-2	551.09	612.32	630.49	514.20
Worst Case for EU-3	551.09	612.32	630.49	514.20
Worst Case for EU-4	551.09	612.32	630.49	514.20
Worst Case for EU-5	551.09	612.32	630.49	514.20
Total	2,755.46	3,061.62	3,152.45	2,571.00

3) Limited PTE for SO₂, VOC, NO_x

Emission Factors	VOC	NO _x	CO
Coal (lb/ton of lime)	0.060	6.18	5.04
Glycerin (lb/ton of lime)		0.05	1.50
AF (lb/ton of lime)		3.02	1.33

Based on permit limits, the VOC emission rate shall not exceed 0.06 regardless of the type of fuel used. This will be used to calculate the limited VOC PTE.

Total PTE (tons/yr)	SO ₂ *	VOC	NO _x	CO
Coal	207.61	24.65	2,537.61	2,069.56
Glycerin			19.31	615.30
AF			1,242.11	547.74
Worst Case Total	207.61	24.65	2,537.61	2,069.56

*Based on Commissioner's Order 2016-04, which limits SO₂ emissions from the rotary kilns (EU-1 through EU-5) to 9.48 lbs/720 hrs of operation, each.

**Other less stringent permit limits include: the SO₂ emission rate shall not exceed 2.094 lb/ton of lime when 3 kilns are running, 1.745 lb/ton of lime when 4 kilns are running, and 1.483 lb/ton of lime when all 5 kilns are running. This is independent to what type of fuel used.

There is a production limit of 550 tons of lime/day for each kiln, with maximum total production limited to no more than 821,000 tons/yr (the 326 IAC 8-7 avoidance limit).

Operating 4 kilns, the 550 tons of lime produced/day limit is more restrictive than the avoidance limit, since 4 kilns operated each day for a year could only produce 803,000 tons of lime.

1.754 lb/ton of lime x 803,000 tons/yr / 2000 lbs = 704.23 tons of SO₂/yr

In order to increase production at the avoidance limit maximum, the company would have to operate 5 kilns for at least 34 days and 4 kilns for the remainder of the year.

This scenario reduces the PTE, therefore, the PTE for SO₂ is 704.23 tons/yr.

***SO₂ and VOC emission factors from May 2016 stack test of Kiln 3 trial 80% NG and 20% coal (MSM No. 089-41774-00012, issued on 9/6/2019)

***Values determined based on testing for baseline value for kilns 1,2,4 & 5 and multiplying by ratio of Kiln 3 After Mod : Kiln 3 Before Mod (MSM No. 089-41774-00012, issued on 9/6/2019)

Appendix A: Emission Calculations
Kilns HAPs PTE

Company Name: Carmeuse Lime, Inc
Address City IN Zip: 1 North Carmeuse Dr, Gary, IN 46406
Permit Renewal No.: 089-41162-00112
Reviewer: Aasim Noveer

		Lime Production	Heat input Capacity/hr
Emission Units	Hours of Operation	tons of lime/hr	tons of coal / Kiln
EU-1	8,760	23.30	8.20
EU-2		23.30	
EU-3		23.30	
EU-4		23.30	
EU-5		23.30	

Emission Factor (lb/ton coal)	HCl	HF	Benzene	Cyanide	PCDD/ PCDF	Total
	1.2	0.15	1.30E-03	2.50E-03	2.44E-07	
EU-1	43.10	5.39	0.05	0.09	8.76E-06	48.62
EU-2	43.10	5.39	0.05	0.09	8.76E-06	48.62
EU-3	43.10	5.39	0.05	0.09	8.76E-06	48.62
EU-4	43.10	5.39	0.05	0.09	8.76E-06	48.62
EU-5	43.10	5.39	0.05	0.09	8.76E-06	48.62
Total	215.50	26.94	0.23	0.45	4.38E-05	243.12

Methodology

Carmeuse Lime agrees that they are major for HAPs. Coal is the worst case fuel at the kilns for HAPs.

1 lb bituminous coal = 13,000 Btu

PTE (tons/yr) = Production capacity (ton lime/hr) x Emission Factor (lb pollutant/ton lime) x 8,760 hr/yr x 1/2,000 ton/lb

Emission Factors from US EPA AP-42, Ch.1.1 (2/98)

Appendix A: Emissions Calculations
PM Emissions from Lime Processing Units

Company Name: Carmeuse Lime, Inc
Address City IN Zip: 1 North Carmeuse Dr, Gary, IN 46406
Permit Renewal No.: 089-41162-00112
Reviewer: Aasim Noveer

Facility	ID	Control Device	Grain Loading (gr/dscf)	Exhaust Flow Rate (dscfm)	Controlled PM/PM10/PM2.5		Control Efficiency	Uncontrolled PM/PM10/PM2.5	
					(lb/hr)	(ton/yr)		(lb/hr)	(ton/yr)
Truck Flue Dust Loadout #1 and Flue Dust Tank #1	EU-17	AKG141	0.003	4,200	0.11	0.47	99%	10.80	47.30
Truck Flue Dust Loadout #2 and Flue Dust Tank #2	EU-16	AKG450	0.003	3,600	0.09	0.41	99%	9.26	40.55
Lime Handling System #2	EU-7	ALG300	0.003	7,100	0.18	0.80	99%	18.26	79.97
Lime Storage System (New Side)	EU-24	ALG310	0.003	12,200	0.31	1.37	99%	31.37	137.41
Lime Handling System #1	EU-6								
Lime Loadout #2B/Dolo Rescreen (Center Bay/Dolo Bay)	EU-28	ALG320	0.01	15,000	1.29	5.63	99%	128.57	563.14
Lime Loadout #2A (Center Bay/Dolo Bay)	EU-8								
Lime Grinder Handling System	EU-15	ALG400	0.003	16,400	0.42	1.85	99%	42.17	184.71
Lime Storage System (Old Side)	EU-14								
Lime Transfer System #2	EU-42/43	ALG410	0.020	4,950	0.85	3.72	99%	84.86	371.67
Grinding Mill Material Transfer Operation	EU-15a	ALG440	0.010	5,500	0.47	2.06	95%	9.43	41.30
Lime Loadout #1 (West Bay)	EU-11								
Grinding Mill #1	EU-13	ALG450	0.003	2,640	0.07	0.30	99%	6.79	29.73
Grinding Mill #2	EU-12	ALG460	0.003	2,640	0.07	0.30	99%	6.79	29.73
Lime Loadout #3/Rescreen (East Bay/Hi-Cal Bay)	EU-25	ALG600	0.01	14,000	1.20	5.26	99%	120.00	525.60
Transfer Station Reclaim Hopper	EU-32	ALG606CA	0.004	5,000	0.17	0.75	99%	17.14	75.09
EF feed and pneumatic delivery system ¹	EU-33	Bin Vent	0.008	600	0.37	1.62	99%	37.03	162.19
Total					5.60	24.54		522.46	2,288.39

Note that the particulate emissions from the facilities above are controlled by baghouses.

The emissions calculations for several units are combined because they exhaust to the same control device.

METHODOLOGY

Controlled PTE (lb/hr) = Grain Loading (gr/dscf) x Exhaust Flow Rate (dscf/m) x 60 min/hr x 1/7000 lb/gr

Controlled PTE (tpy) = Controlled PTE (lb/hr) x 8760 hr/yr x 1/2000 ton/lb

Uncontrolled PTE (lb/hr) = Controlled PTE/(1 - 99%) (lb/hr)

Uncontrolled PTE (tpy) = Controlled PTE/(1 - 99%) (tpy)

EU-14 is made of eight lime storage tanks. A number of tanks are controlled by baghouse ALG-400 and the others controlled by ALG-320.

1) EF feed and pneumatic delivery system consists of the following equipment:

One (1) main storage bin rated at 656 tons, three (3) screw conveyors rated at 45 tons/hour, three (3) storage bins rated at 50 tons, and five (5) weigh feeder rated at 5 tons/hour. Each storage bin and weigh feeder is controlled by it's own dust vent filter, 9 total.

Appendix A: Emission Calculations
Carmeuse Lime - Buffington Plant

Company Name: Carmeuse Lime, Inc
Address City IN Zip: 1 North Carmeuse Dr, Gary, IN 46406
Permit Renewal No.: 089-41162-00112
Reviewer: Aasim Noveer

1) Transfer Systems

Facility	Equip. ID	Capacity	PM		PM10		PM2.5	
		tons/hr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
Stone Handling Operations	EU-50	80	0.43	1.88	0.20	0.89	0.03	0.13
Transfer from Ground to unenclosed dust chamber	Kiln #1 Dust Chamber	2	1.07E-02	4.70E-02	5.08E-03	2.23E-02	7.69E-04	3.37E-03
Transfer from Ground to unenclosed dust chamber	Kiln #2 Dust Chamber	2	1.07E-02	4.70E-02	5.08E-03	2.23E-02	7.69E-04	3.37E-03
Transfer from Ground to unenclosed dust chamber	Kiln #3 Dust Chamber	2	1.07E-02	4.70E-02	5.08E-03	2.23E-02	7.69E-04	3.37E-03
Transfer from Ground to unenclosed dust chamber	Kiln #4 Dust Chamber	2	1.07E-02	4.70E-02	5.08E-03	2.23E-02	7.69E-04	3.37E-03
Transfer from Ground to unenclosed dust chamber	Kiln #5 Dust Chamber	2	1.07E-02	4.70E-02	5.08E-03	2.23E-02	7.69E-04	3.37E-03
dust loading to the enclosed crusher hopper	EU-16	72	0.39	1.69	1.83E-01	0.80	2.77E-02	1.21E-01
crushed material loading to Flue Dust Loadout #2		72	0.39	1.69	1.83E-01	0.80	2.77E-02	1.21E-01
Total			1.26	5.50	0.59	2.60	0.09	0.39

Notes:

The following calculations determine the amount of emissions created by material handling and storage (AP-42, Sec. 13.2.4, eq. 1):

$$\text{Emission Factor} = k * (0.0032) * (U/5)^{1.3} \div (M/2)^{1.4}$$

where $k_{PM} = 0.74$ particle size multiplier
 $k_{PM10} = 0.35$ particle size multiplier
 $k_{PM2.5} = 0.053$ particle size multiplier
 $U = 1$ mean wind speed, mph
 $M = 0.25$ % material moisture content

Emission Factor (PM) = 5.37E-03 lb PM/ton
Emission Factor (PM₁₀) = 2.54E-03 lb PM₁₀/ton
Emission Factor (PM_{2.5}) = 3.85E-04 lb PM_{2.5}/ton

$$\text{Uncontrolled Emissions (tpy)} = \text{Rate (tons/hr)} * \text{Emission Factor (lb PM/ton)} * 8760 \text{ hr/yr} \div 2000 \text{ lb/ton}$$

2) Kiln Exhaust Dust Chamber Totals

		PM	PM10	PM2.5
Kiln #1 Dust Chamber	EU-44	4.70E-02	2.23E-02	3.37E-03
Kiln #2 Dust Chamber	EU-45	4.70E-02	2.23E-02	3.37E-03
Kiln #3 Dust Chamber	EU-46	4.70E-02	2.23E-02	3.37E-03
Kiln #4 Dust Chamber	EU-47	4.70E-02	2.23E-02	3.37E-03
Kiln #5 Dust Chamber	EU-48	4.70E-02	2.23E-02	3.37E-03

Kiln #3 has one grizzly screener with a capacity of 1 ton/hr and a dust hopper with no storage capacity.

Kiln #5 dust chamber has one dust hopper with no storage capacity and two 1 ton/hr grizzly screener.

Appendix A: Emissions Calculations Storage Tanks

Company Name: Carneuse Lime, Inc
Address City IN Zip: 1 North Carneuse Dr, Gary, IN 46406
Permit Renewal No.: 089-41162-00112
Reviewer: Aasim Noveer

Gasoline Fuel Storage Tanks

Storage Capacity:	550	gallons
Maximum Daily Throughput Capacity:	1,300	gal/day
Maximum Annual Throughput Capacity:	10,500	gal/yr
	875	gal/month
Maximum No. of Turnovers	1.59	turnovers/month
	19.09	turnovers/year

Emission Factors (AP 42 Section 5.2, "Transportation and Marketing of Petroleum Liquids", 6/08):

Displacement Losses (uncontrolled)	11.0	lb/ 1000 gal
Displacement Losses (controlled)	1.1	lb/ 1000 gal
Spillage	0.7	lb/ 1000 gal

VOC Emissions:

Displacement Losses (uncontrolled)	0.06	ton/yr
Spillage	0.00	ton/yr

Total Uncontrolled VOC: 0.06 ton/yr

Two (2) Diesel Fuel Storage Tanks

Storage Capacity:	10,300	gallons
Maximum Daily Throughput Capacity:	7,000	gal/day
Maximum Annual Throughput Capacity:	21,000	gal/yr
	1,750	gal/month
Maximum No. of Turnovers	0.17	turnovers/month
	2.04	turnovers/year

Emission Factors (AP 42 Section 5.2, "Transportation and Marketing of Petroleum Liquids", 6/08):

Displacement Losses (uncontrolled)	11.0	lb/ 1000 gal
Displacement Losses (controlled)	1.1	lb/ 1000 gal
Spillage	0.7	lb/ 1000 gal

VOC Emissions:

Displacement Losses (uncontrolled)	0.12	ton/yr
Spillage	0.01	ton/yr

Total Uncontrolled VOC: 0.12 ton/yr

Notes:

Emission Factors for VOC is also for total organic emissions because the methane and ethane content of gasoline evaporative emissions is negligible.

This gasoline tank is not equipped with vapor recovery; therefore, all emissions are uncontrolled.

Gasoline emission factors were used to conservatively estimate the emissions for the diesel storage tanks.

VOC Emissions (ton/yr) = Emission Factor (lb/1000 gal) x Annual Throughput (gal/yr) / 1000 / 2000 lb/ton

**Appendix A: Emissions Calculations
Insignificant Activities**

Company Name: Carmeuse Lime, Inc
Address City IN Zip: 1 North Carmeuse Dr, Gary, IN 46406
Permit Renewal No.: 089-41162-00112
Reviewer: Aasim Noveer

Degreaser

Based on a review of the solvents most widely supplied for the industry by Crystal Clean and Safety-Kleen, the following PTE is based on the following conservative estimates:

The solvent has a maximum density of 6.7 lb/gal.

The solvent used in the degreaser contains 100% VOC and up to 0.2% HAP (tetrachloroethylene).

Utilized MSDS for Safety-Kleen 105 Recycled Solvent as worse case HAP content: <http://www.safety-kleen.com/msds/82310rev8-21-09.pdf>

Uncontrolled Potential Emissions (per each degreaser)

6.7 lb/gal x 2 number of units x 100 % VOC x 145 gal/yr ÷ 2000 lb/ton = 0.97 tons VOC per year
 0.97 tpy VOC x 0.2 % HAP = 0.002 tons HAP per year

Sandblaster

Facility	Control Device	Grain Loading (gr/dscf)	Exhaust Flow Rate (dscfm)	Controlled PM/PM10/PM2.5		Control Efficiency	Uncontrolled PM/PM10/PM2.5	
				(lb/hr)	(ton/yr)		(lb/hr)	(ton/yr)
Sandblaster	fabric filter	0.01	90	7.71E-03	3.38E-02	99%	7.71	3.38

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)

Company Name: Carmeuse Lime, Inc
Address City IN Zip: 1 North Carmeuse Dr, Gary, IN 46406
Permit Renewal No.: 089-41162-00112
Reviewer: Aasim Noveer

Output Horsepower Rating (hp)	402.5
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	201,250

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Potential Emission in tons/yr	0.22	0.22	0.22	0.21	3.12	0.25	0.67

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

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
Potential Emission in tons/yr	6.57E-04	2.88E-04	2.01E-04	2.75E-05	8.31E-04	5.40E-04	6.52E-05	1.18E-04

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Potential Emission of Total HAPs (tons/yr)	2.73E-03
Potential Emission of Worst HAP (tons/yr)	8.31E-04

Methodology

Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2

CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Potential 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
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Carmeuse Lime, Inc
Address City IN Zip: 1 North Carmeuse Dr, Gary, IN 46406
Permit Renewal No.: 089-41162-00112
Reviewer: Aasim Noveer

	Heat Input Capacity	HHV	Potential Usage
	MMBtu/hr	MMBtu MMCF	MMCF/yr
Main Office	0.200	1020	1.718
Maintenance	0.038		0.326
Maintenance Gas Heaters (3 units)	0.475		4.079
Receiving	0.125		1.074
Furnace Break Room	0.165		1.417
Mens Locker Room Furnace	0.500		4.294
Lab Furnace	0.100		0.859
Boathouse	0.250		2.147
Conveyor	0.450		3.865
Tunnel	0.175		1.503
Stone Feed Floor (5 units)	1.250		10.735
Total	3.728		32.017

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	3.04E-02	1.22E-01	1.22E-01	9.61E-03	1.60E+00	8.80E-02	1.34E+00

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

PM2.5 emission factor is filterable and condensable PM2.5 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Total - Organics
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	3.362E-05	1.921E-05	1.201E-03	2.882E-02	5.443E-05	3.012E-02

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	Total - Metals
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	8.004E-06	1.761E-05	2.241E-05	6.083E-06	3.362E-05	8.773E-05
					Total HAPs	3.021E-02
					Worst HAP	2.882E-02

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

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

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Natural Gas
4-Stroke Rich-Burn (4SRB) Engines

Company Name: Carmeuse Lime, Inc
Address City IN Zip: 1 North Carmeuse Dr, Gary, IN 46406
Permit Renewal No.: 089-41162-00112
Reviewer: Aasim Noveer

Maximum Output Horsepower Rating (hp)	302
Brake Specific Fuel Consumption (BSFC) (Btu/hp-hr)	7600
Maximum Hours Operated per Year (hr/yr)	500
Potential Fuel Usage (MMBtu/yr)	1079
High Heat Value (MMBtu/MMscf)	1020
Potential Fuel Usage (MMcf/yr)	1.06

Criteria Pollutants	Pollutant						
	PM**	PM10**	PM2.5**	SO2	NOx	VOC	CO
Emission Factor* (g/hp-hr)					2.00	1.00	4.00
Emission Factor*** (lb/MMBtu)	9.50E-03	1.94E-02	1.94E-02	5.88E-04	2.21	0.03	3.72
Potential Emissions (tons/yr)	0.01	0.01	0.01	3.17E-04	0.33	0.17	0.67

*Emission Factors are from Table 1 of NSPS JJJJ for Emergency engines with horsepower greater than 130.

**PM emission factor is for filterable PM-10. PM10 emission factor is filterable PM10 + condensable PM.

PM2.5 emission factor is filterable PM2.5 + condensable PM.

***Emission Factors are from AP-42, Chapter 3.2, Table 3.2-3, assuming a 4-stroke rich burn engine.

Hazardous Air Pollutants (HAPs)*

Pollutant	Emission Factor (lb/MMBtu)	Potential Emissions (tons/yr)
Acetaldehyde	2.79E-03	1.51E-03
Acrolein	2.63E-03	1.42E-03
Benzene	1.58E-03	8.52E-04
1,3-Butadiene	6.63E-04	3.58E-04
Formaldehyde	0.02	1.11E-02
Methanol	3.06E-03	1.65E-03
Total PAH**	1.41E-04	7.61E-05
Toluene	5.58E-04	3.01E-04
Xylene	1.95E-04	1.05E-04
Total		1.73E-02

HAP pollutants consist of the nine highest HAPs included in AP-42 Table 3.2-3.

*Emission Factors are from AP 42, Chapter 3.2, Table 3.2-3. The five highest HAPs emission factors are provided.

**PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

Methodology

Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-3

Potential Fuel Usage (MMBtu/yr) = [Maximum Output Horsepower Rating (hp)] * [Brake Specific Fuel Consumption (Btu/hp-hr)] * [Maximum Hours Operated per Year (hr/yr)] / [1000000 Btu/MMBtu]

Potential Emissions (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2000 lb/ton]



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

April 4, 2023

Kris Milner
Carmeuse Lime Inc
1 N Carmeuse Dr
Gary, IN 46406

Re: Public Notice
Carmeuse Lime Inc
Permit Level: TV Renewal
Permit Number: 089-41162-00112

Dear Kris:

Enclosed is the Notice of 30-Day Period for Public Comment for your draft air permit.

Our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person. The Notice of 30-Day Period for Public Comment has also been sent to the OAQ Permits Branch Interested Parties List and, if applicable, your Consultant/Agent and/or Responsible Official/Authorized Individual.

The preliminary findings, including the draft permit, technical support document, emission calculations, and other supporting documents, **are available electronically at:**

IDEM's online searchable database: <http://www.in.gov/apps/idem/caats/> . Choose Search Option by **Permit Number**, then enter permit 41162

and

IDEM's Virtual File Cabinet (VFC): <https://www.IN.gov/idem>. Enter VFC in the search box, then search for permit documents using a variety of criteria, such as Program area, date range, permit #, Agency Interest Number, or Source ID.

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/public-notices/>

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 Gary Public Library - John F Kennedy Branch, 3953 Broadway in Gary, IN 46409. 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 draft permit 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 Aasim Noveer, 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 1243 or dial (317) 234-1243.

Sincerely,

Tracy Tomes
Tracy Tomes
Permits Branch
Office of Air Quality

Enclosures

PN Applicant Cover Letter access via website 8/10/2020



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Governor

Brian C. Rockensuess
Commissioner

April 4, 2023

To: Gary Public Library - John F Kennedy Branch

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: Carmeuse Lime Inc
Permit Number: 089-41162-00112

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 Smiddie-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



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Governor

Brian C. Rockensuess
Commissioner

Notice of Public Comment

April 4, 2023
Carmeuse Lime Inc
089-41162-00112

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/public-notices/>.

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 Joanne Smiddie-Brush with the Air Permits Administration Section at 1-800-451-6027, ext. 3-0185 or via e-mail at JBRUSH@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 2/28/2020



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Governor

Brian C. Rockensuess
Commissioner

AFFECTED STATE NOTIFICATION OF PUBLIC COMMENT PERIOD DRAFT INDIANA AIR PERMIT

April 4, 2023

A 30-day public comment period has been initiated for:

Permit Number: 089-41162-00112
Applicant Name: Carmeuse Lime Inc
Location: Gary, Lake 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

IDEM Staff	TTOMES 4/4/2023 Carmeuse Lime Inc 089-41162-00112 (draft)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: CERTIFICATE OF MAILING ONLY	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Kris Milner Carmeuse Lime Inc 1 N Carmeuse Dr Gary IN 46406 (Source CAATS)										
2		Jose Verastegui Site Manager Carmeuse Lime Inc 1 N Carmeuse Dr Gary IN 46406 (RO CAATS)										
3		Gary Mayors Office 401 Broadway #102 Gary IN 46402 (Local Official)										
4		Gary City Health Department 1145 W 5th Ave Gary IN 46402 (Health Department)										
5		Craig Hogarth 7901 W Morris St Indianapolis IN 46231 (Affected Party)										
6		Lake County Board of Commissioners 2293 N Main St, Bldg A, 3rd Floor Crown Point IN 46307 (Local Official)										
7		Anthony Copeland 2006 E 140th St East Chicago IN 46312 (Affected Party)										
8		Barbara G Perez 506 Lilac St East Chicago IN 46312 (Affected Party)										
9		Mr. Robert Garcia 3733 Parrish Ave East Chicago IN 46312 (Affected Party)										
10		Ms. Karen Kroccek 8212 Madison Ave Munster IN 46321-1627 (Affected Party)										
11		Joseph Hero 11723 S Oakridge Dr St. John IN 46373 (Affected Party)										
12		Gary City Council 401 Broadway #209 Gary IN 46402 (Local Official)										
13		City of Gary Dept. of Environmental Affairs 401 Broadway, Ste 304 Gary IN 46402 (Local Official)										
14		Mr. Larry Davis 268 S 600 W Hebron IN 46341 (Affected Party)										
15		Tony Schroeder Trinity Consultants 3601 Green Rd, Ste 102 Beachwood OH 44122 (Consultant)										

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Mail Code 61-53

IDEM Staff	TTOMES 4/4/2023 Carneuse Lime Inc 089-41162-00112 (draft)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: CERTIFICATE OF MAILING ONLY	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handling Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Brita Paralegal Holland & Hart LLP 222 S Main St, Ste 2200 Salt Lake City UT 84101 (Affected Party)										
2		Gary Public Library - John F Kennedy Branch 3953 Broadway Gary IN 46409 (Library)										
3		Jeff Mayes News-Dispatch 422 Franklin St Michigan City IN 46360 (Affected Party)										
4		Lake County Health Department 2900 W 93rd Ave Crown Point IN 46307 (Health Department)										
5		Menards 6300 Mississippi St Merrillville IN 46410 (Affected Party)										
6		Jesus A Gallegos II 6814 Prairie Path Ln Merrillville IN 46410 (Affected Party)										
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